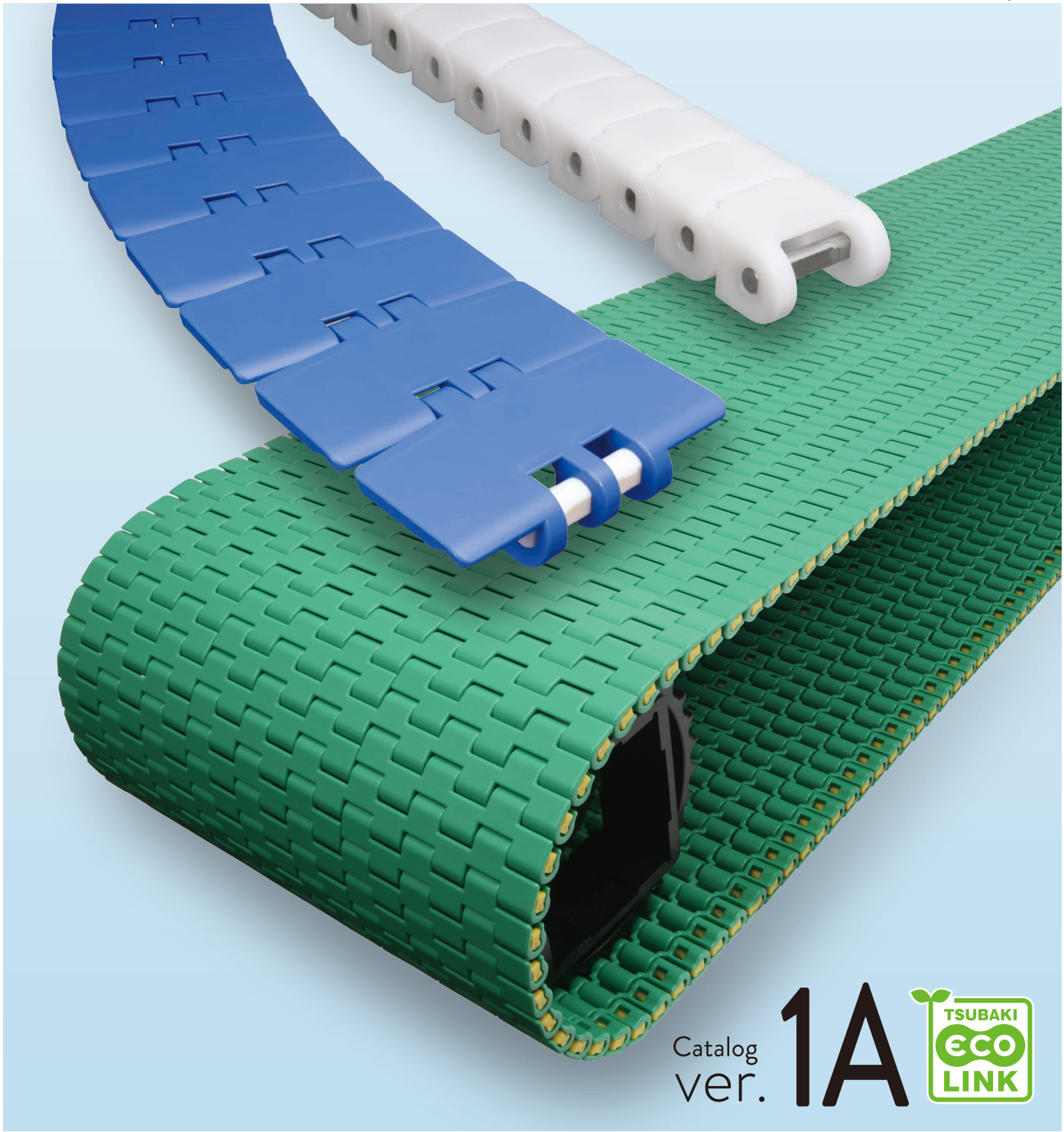
Innovation in Motion
TSUBAKI

TSUBAKI TOP CHAIN & SPROCKET

Chains for Conveyance



Catalog ver. 1A

TSUBAKI ECO LINK

For a Greater Connection with Customers and the World

You need a...

Tsubakimoto Advances Development with

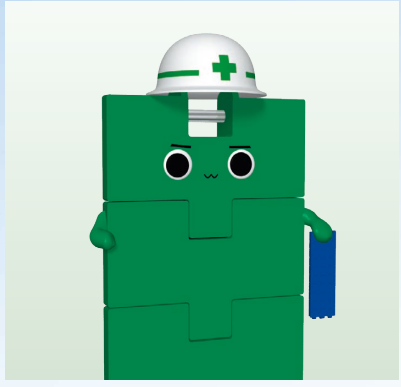
Updated points!

Top chain model numbering
has been rearranged.



Easy to get product information

Drawings are readily downloaded from our website.
This helps design and procurement.

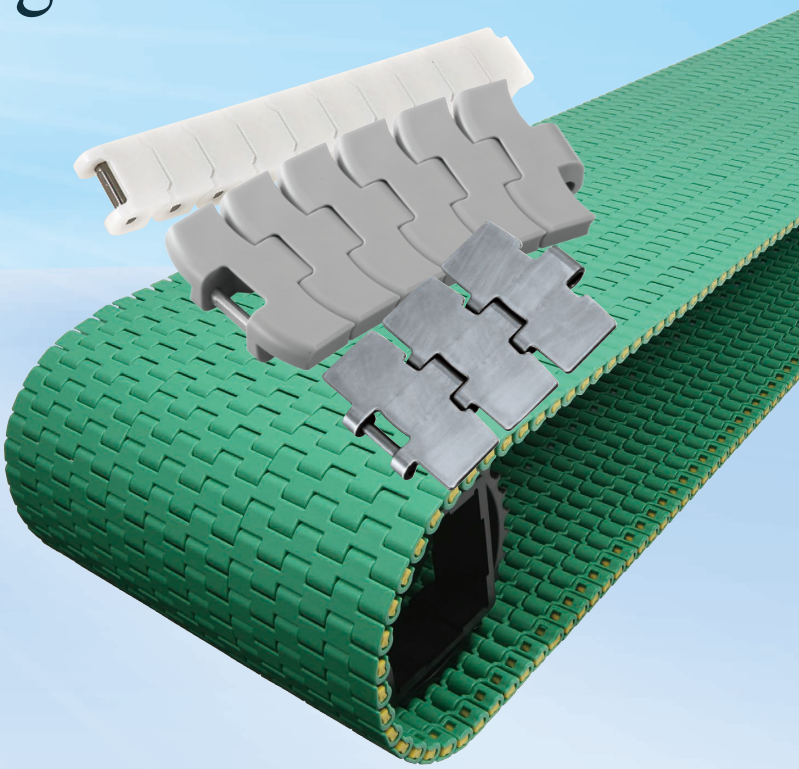


Identify the actual products using the model number

Concise model numbering make it easier to identify products.

LINK!

New Model Numbering and Order Methods



Ordering with the former model number

To order 20 links of the WT1515-W Low Friction/Anti-Wear (LFG), 300-mm-wide chain

Model number **WT1515-W300-LFG**

Quantity **20L**

Single-line model numbering makes ordering easy!

How to order using the new model numbering system

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit	Quantity	Unit
WT	**15**	**15**	**-**	**W300**	**-**	**LFG**	**+**	**20**	**L**	**1**	**H**
	15: 15 mm	5: Closed type		W300: 300 mm		LFG: Low friction/ anti-wear (Color: Green)		20: 20	L: Link		H: Piece

Note: Please see “How to Order” on page 3, and also refer to the relevant product page for details.
Please keep in mind that not all changes in model numbering and order methods apply to all chain types.

How to Order

Place orders using the basic structure of model numbers as specified below.

1. Basic structure of model numbers

The basic structure of top chain model numbers is shown as below.
Refer to the relevant product page to assure its arrangement because some numbers may have different arrangements.

1 Plastic Modular Chain

■ Chain

Model number

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit	Quantity	Unit
WT	15	15	–	W150	–	LFG	+	20	L	1	H
	15: 15 mm	5: Closed type		W150:150 mm		LFG: Low friction/ Wear resistant series (Link color: Green)		20: 20	L: Link		H: Piece

■ Sprockets

Model number

Chain type	Shape of sprocket		Chain series		Teeth	Bore diameter	Bore shape	Quantity	Unit
WT	– SW		1500	–	32T	40	S	1	K
	SW: Split						S:Square		K: Piece

2 Plastic Top Chain

■ Chain

Model number

Chain type	Top plate width	Pin type		Material mark		Number of links	Unit	Quantity	Unit
TTP	826	P	–	ALF	+	20	L	1	H
	826: 82.6 mm	P: Plastic pins		ALF: Advanced low friction/ Wear resistant series (Link color: Light blue)		20: 20	L: Link		H: Piece

■ Sprockets

Model number

Chain type		Teeth	Bore diameter	Quantity	Unit
TTP	–	21T	30	1	K
					K: Piece

3 Plastic Roller Table

Refer to page 5 for plastic roller table.

4 Plastic Block Chain

■ Chain

Model number

Chain type	Chain size	Pin type		Material mark		Number of links	Unit	Quantity	Unit
RSP	40	P	–	LFB	+	20	L	1	H
		P: Plastic pins		LFB: Low friction/ Wear resistant series (Link color: Brown)		20: 20	L: Link		H: Piece

5 Snap Cover Chain

Refer to page 5 for snap cover chain.

6 Stainless Steel Top Chain

Refer to page 5 for stainless steel top chain.

7 Top Chain Accessories

■ Plastic Rails

Model number

Plastic rail type	Rail thickness	Rail length		Material grade	Quantity	Unit
PR-PH	**5**	**20**	**–**	**W**	**1**	**H**
PH: PH rail	5: 5 mm	20: 20 mm		W: 10-100		H: Piece

■ Set Collar

Model number

Top chain components		Set collar	Keyway		Bore shape	Bore diameter	Quantity	Unit
TP-C	**–**	**SC**	**K**	**–**	**R**	**25M**	**1**	**K**
			None: Without keyway K: With keyway		R: Round S: Square	25M: 25 mm		K: Piece

■ Highly Rotational Return Roller

Model number

Top chain accessories		Code	Outside diameter	Quantity	Unit
TP	**–**	**IR**	**60**	**1**	**K**
		IR: Highly rotational return roller			K: Piece

■ Dedicated Rail

Model number

Top chain component	Code	Length	Unit	Quantity	Unit
TP-C	**19067VT-PR +**	**60**	**M**	**1**	**H**
			M: m		H: Piece

How to Order

Place orders using the basic structure of the model numbers as specified below.

1. Basic structure of model numbers

The basic structure of top chain model numbers is shown as below.
Refer to the relevant product page to assure its arrangement because some numbers may have different arrangements.
With regard to end links and options, see page 6.

3 Plastic Roller Table

■ Chain

Model number

Chain type		Material mark		Number of links		End link		Options	Quantity	Unit
ST305	–	SS	+	100L	–	JKR	–	P	1	H
		SS: SS series								H: Piece

5 Snap Cover Chain

■ Base chain

Model number

		Material mark							
Chain size	Base chain material mark	Snap cover chain	Material of plastic cover		Number of links	End link	Quantity	Unit
RS40	– SS	SC	A	+	20L	– JR	1	H
	SS: SS Series		Chain with plastic covers A: Standard (Color: White)					H: Piece

■ Joint link

Model number

	Material mark						
Chain size	Base chain material mark	Snap cover chain	Material of plastic cover	Joint link	Quantity	Unit
RS40	– SS	SC	A	– JL	1	K
	SS: SS series		Chain with plastic covers A: Standard (Color: Light blue)			K: Piece

6 Stainless Steel Top Chain

■ Chain

Model number

Chain type	Top plate width		Base chain material mark		Number of links	End link		Options	Quantity	Unit
TS	826	–	LMCNP	+	20L	– PKR	–	P	2	H
	826: 82.6 mm		LMCNP: Lambda series							H: Piece

2. End links and options

2-1 About the base chain material mark

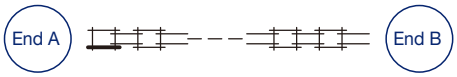
Base chain material marks that included "–" are no longer used in new model numbers.
No other changes have been made.

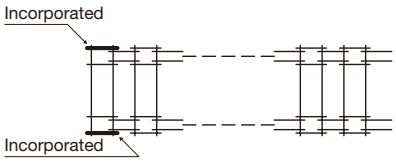
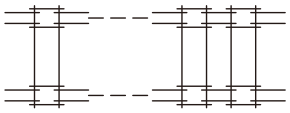
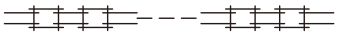
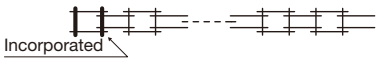
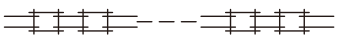
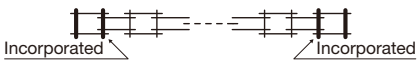
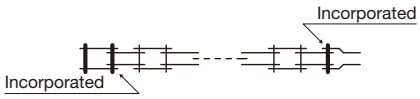
Old base chain material mark	LM–SC■	LMC–SC■	NP–SC■	SS–SC■	LMC–NP
New base chain material mark	LMSC■	LMCSC■	NPSC■	SSSC■	LMCNP

Note: Enter "A" or "E" in the box ■ for material of plastic cover. A: Standard E: Electroconductive

2-2 About the end links

Specify the end links for both ends of the chain referring to the table below.
The following shows the abbreviations of end links.
J: Joint link, R: Inner link, P: Outer link, O: Offset link, K: Pre-assembled



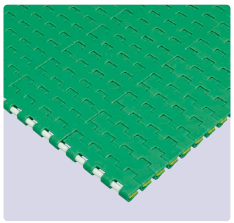
Chain type	End links	End A	End B	End links	End A	End B
Plastic Roller Table ST RT	JKR			RR		
Snap Cover Chain	JR			RR		
Stainless Steel Top Chain TS TSA	PKR			RR		
	PKPK			PKOK		

2-3 About the options

Option	Name of option	Description
P	Initial elongation mitigation	Mitigates chain elongation that occurs when operation is first initiated. Note: TN-PC, TNU, TRU, and TTKU are not included.
2 3 4	Matched and tagged chain	The length of top chains may vary within a scope of tolerance. Matched and tagged chains are available in order to minimize the relative difference within the total length of the parallel strands of chains. 2: Two parallel strands. Place orders in a quantity multiplied by two. 3: Three parallel strands. Place orders in a quantity multiplied by three. 4: Four parallel strands. Place orders in a quantity multiplied by four. Note: TO and TU are not included.

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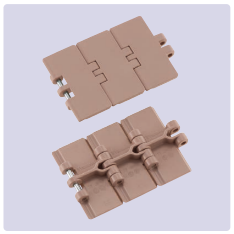
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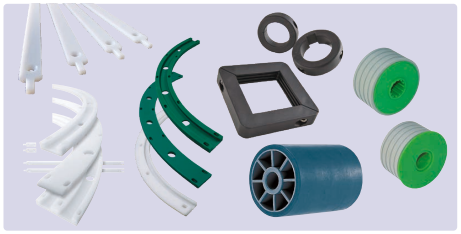


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Top Chain Engineering Manual

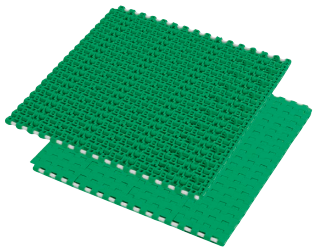
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Tree Layout of Our Lineup

Top Chain

Plastic Top Chain

Plastic Modular Chain



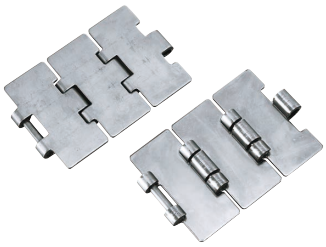
Plastic Top Chain



Plastic Block Chain



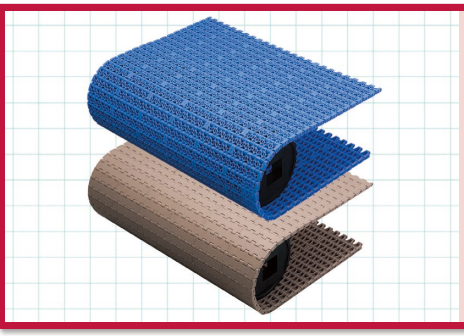
Stainless Steel Top Chain



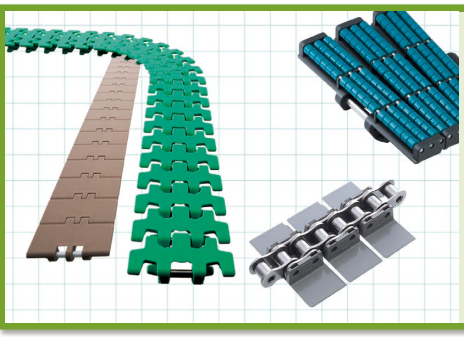
Top Chain Accessories



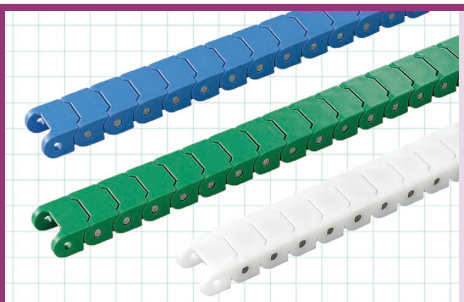
Tree Layout of Our Lineup



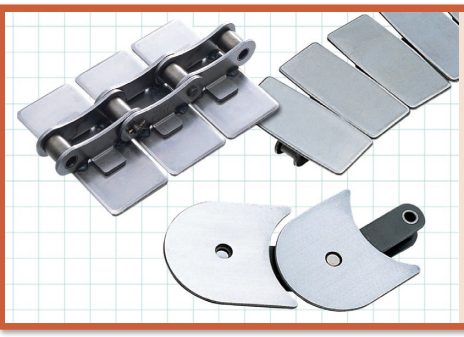
Plastic modular chains use an alternating combination of interconnected modular engineering plastic links to transport items in large quantities on wide, belt-shaped conveyors.
Chain-sprocket engagement ensures reliable drive without any slippage. Different link types are available according to application and type of conveyed products: closed, open, and net types. In addition, the lineup has been expanded to include magnetic, rubber, and flight types suitable for inclined conveyance.
Conveying surfaces are available in widths as narrow as 50 mm. Plastic modular chains offer a wider conveying surface than plastic block chains or plastic top chains.



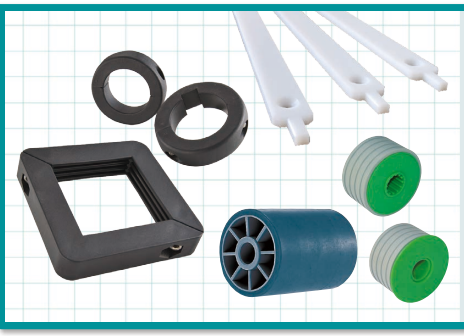
Top plates and chain parts are made of engineering plastic and are connected by pins. Another type features plates of engineering plastic combined with steel base chains. Another type includes rollers attached to a plastic top plate chain. The rollers rotate freely and reduce line pressure during accumulation.
Top plate width ranges from 48.5 mm to 304.8 mm, and can be selected to match the conveyed products.



Plastic block chains feature a simple structure in which block-shaped links are connected by connecting pins.
The small pitch (9.525 mm to 25.4 mm) of plastic block chain allows smaller-diameter sprockets to be used, reducing the dead space between conveyors and ensuring smooth transfer of conveyed products from one conveyor to another.
Link width is narrow, ranging from 13 mm to 63 mm, enabling plastic block chains to be installed in confined spaces.



Stainless steel top chains use highly corrosion-resistant stainless steel as key components. Two models are available: one in which top plates are integrated as a chain, and another model in which the two components are mechanically joined. Stainless steel top chains generally have greater maximum allowable load than plastic top chain products.

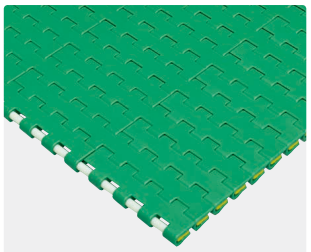
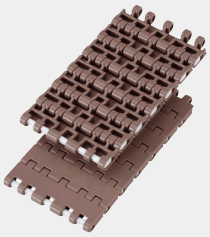
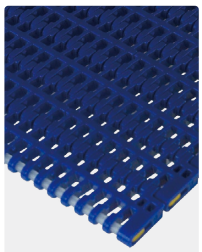
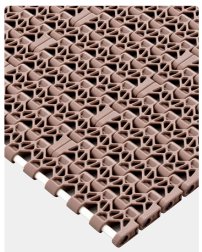
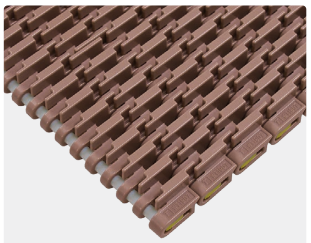
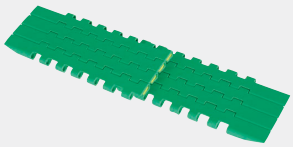
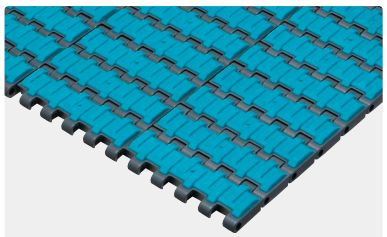
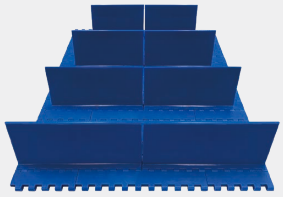
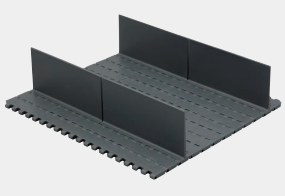


These items are used as peripheral devices for conveyors. They are available in a wide range of shapes and materials for the best combination to suit individual applications.
Various conveyor parts are available, such as plastic rails, set collars, chain guide parts, frame support parts, product guide parts, bearing units, and disconnecting and connecting tools for top chains.

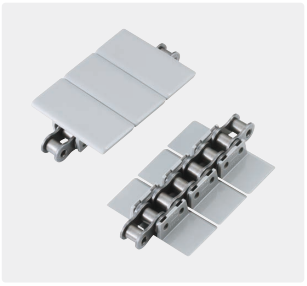
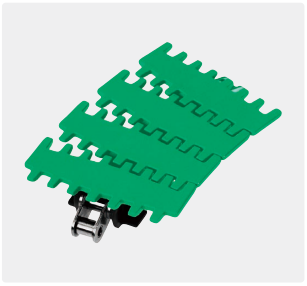
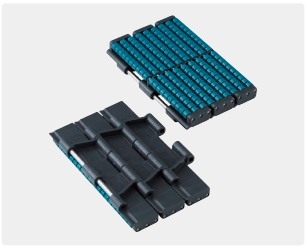
TSUBAKI ECOLINK
The Tsubaki Eco Link logo is used only on products that satisfy the standards for environmental friendliness set by the Tsubaki Group.

Description of Chain Type

Plastic Modular Chain

	Lineup	Description
Closed Type	【Wide type】  【Mold-to-width type】 	【Closed Type】 ● The wide type has a brickwork structure built by interconnecting the modular links. The mold-to-width type is made of single modules. These have no drainage openings on the surface of the flat plates, and are generally applied to a wide range of industries. ● Our additional product line includes models with tab guide attachments, float-preventive tabs, and surface with slippage prevention. Other models include magnetic types and flight types.
Open Type/Net Type	【Wide type】   【Mold-to-width type】 	【Open Type/Net Type】 ● The wide type has a brickwork structure built by interconnecting the modular links. The mold-to-width type is made of single modules. The surface of plates has openings for draining/cooling applications and has excellent washability in comparison with closed types. ● Hinged models with larger openings and models with large slits perforated on a closed type are also available.
Raised Rib Type	  Transfer plate	【Raised Rib Type】 ● Used together with transfer plates, this type is ideal for preventing conveyed products from getting jammed or tipping over during transfer onto other conveyors or machines. ● The plate structure with large openings yields greater drainage effects.
GTO & TOD	 	【GTO & TOD】 ● Possible to transfer orthgonally due to tapered side of the plate, thereby preventing conveyed products from getting jammed. ● Tapering is available for either the right or left side.
Rubber Type		【Rubber Type】 ● With the modular links made of a soft material combined into a brickwork structure, high friction is achieved on the surface of the plate, thereby preventing conveyed products from slipping during inclined conveyance.
Flight Type	 	【Flight Type】 ● With flights installed, items such as boxes, cases, and bulk loads can be conveyed on an inclined conveyor. ● The height of the flights and the intervals between them can be customized upon request.

Plastic Top Chain

Lineup		Description
Snap Top Chain	 	【Snap Top Chain】 ● Consists of snap top plates and base chain. The “legs” of the top plates are designed to snap the plates onto the outer links of the base chain. ● Suitable for heavy loads and long conveyor applications due to high allowable loads (except SS and PC series). ● It is also possible to replace top plates only. ● Treating the base chain with an anticorrosive is also available.
Gripper Chain	 	【Gripper Chain】 ● Gripper chains are used to hold products from both sides to convey them vertically. ● A selection of the grip rubber shape and material is available. ● Top plates and grip rubbers can be replaced.
Plastic Accumulation Chain	 	【Plastic Accumulation Chain】 ● The rolling of rollers prevents scratches on conveyed products. ● Suitable for applications with an accumulation to reduce damage on the bottom of the products and line pressure.
Plastic Universal Chain		【Plastic Universal Chain】 ● Small sideflex radius allows conveyor installation in confined spaces. ● With minimized spaces between chain links, stable conveyance is secured.
Plastic Crescent Chain		【Plastic Crescent Chain】 ● Allows horizontal circular conveyance. ● Stable conveyance is secured thanks to constant gap between chain links.
Plastic Roller Table		【Plastic Roller Table】 ● The rolling of rollers prevents scratches on conveyed products. ● The gap between plastic rollers does not change even when the chain bends because the rollers are aligned with the pitch line of the base chain.

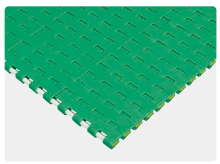
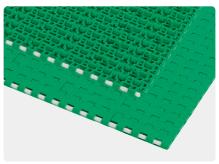
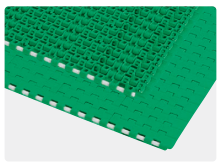
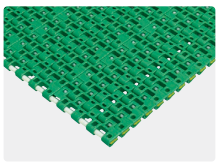
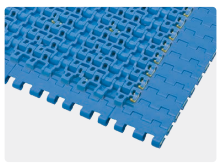
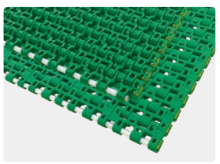
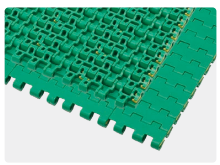
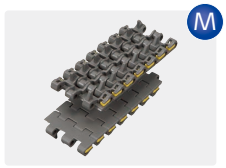
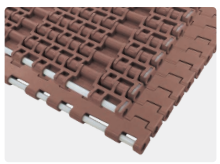
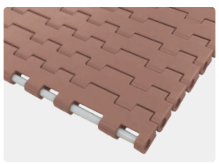
Plastic Block Chain

	Description
Snap Cover Chain	【Snap Cover Chain】 ● Higher maximum allowable load than plastic block chain. Ideal for long conveyors. ● Plastic covers prevent damage to the conveyed products.

Tsubaki Top Chain Lineup

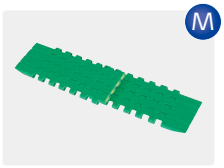
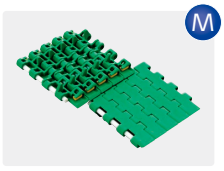
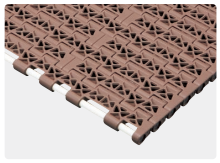
Plastic Modular Chain

Ⓜ Mold-to-Width Type

Chain Pitch mm	Chain Type					
	Closed Type			Open Type		
4.5	 WT0400 series WT0405-W…page 51	—	—	—	—	
7.5	 WT0700 series WT0705-W…page 53	—	—	—	—	
12.7	Ⓜ  BT4 series BTC4-M…page 125	—	—	—	—	
15	 WT1500 series WT1505-K…page 55	 WT1500 series WT1505G-K…page 57	 WT1500 series WT1505GTO-K…page 59	 WT1500 series WT1506-K…page 97	—	
	 WT1510 series WT1515-W…page 61	—	—	 WT1510 series WT1516-W…page 99	—	
	 WT1510 series WT1515G-W…page 63	Ⓜ  WT1500 series WT1505G-M…page 126	Ⓜ  WT1510 series WT1515G-M…page 127	—	—	
	 BT5 series BTC5…page 122	 BT5 series BTC5-A…page 122	—	—	—	

Tsubaki Top Chain Lineup

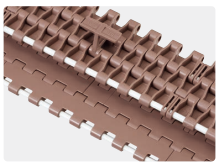
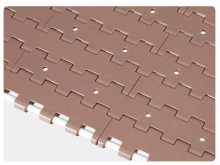
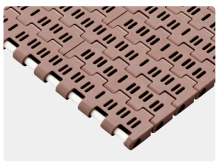
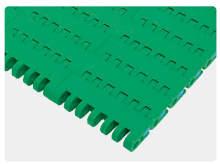
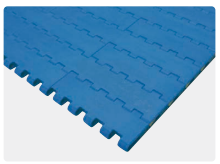
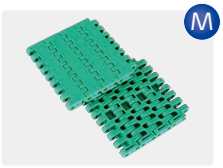
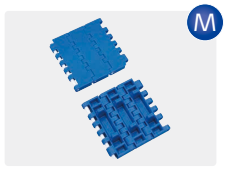
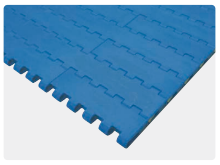
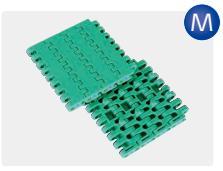
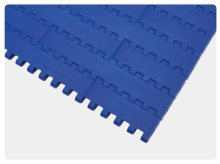
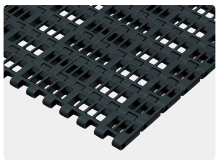
Ⓜ Mold-to-Width Type

Chain Type						Chain Pitch mm
	Net Type	Raised Rib Type	GTO & TOD	Rubber Type	Flight Type	
	——	——	——	——	——	4.5
	——	——	——	——	——	7.5
	——	——	——	——	——	12.7
	——	——	Ⓜ  WT1500 series WT1505TOD-M…page 139	——	——	15
	——	——	Ⓜ  WT1500 series WT1505GTO-M…page 138	——	——	
	——	——	——	——	——	
	 BT5 series BTN5…page 111	——	——	——	——	

Tsubaki Top Chain Lineup

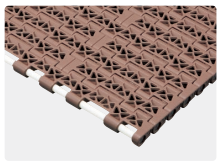
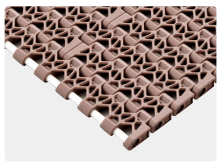
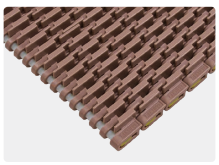
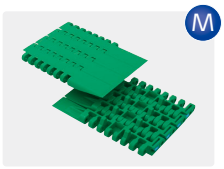
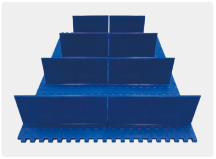
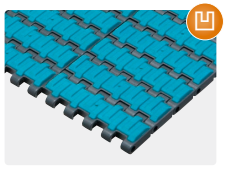
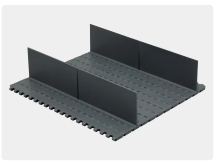
Plastic Modular Chain

Ⓜ Mold-to-Width Type

Chain Pitch mm	Chain Type					
	Closed Type			Open Type		
15	—	—	—	—	—	
19.05	 BT6 series BTC6…page 65	 BT6 series BTC6-T…page 67	—	 BT6 series BTCP6…page 103	 BT6 series BTO6…page 101	
	—	—	—	—	—	
25.4	 WT2500 series WT2505-K…page 71	 WT2510 series WT2515-W…page 73	 Ⓜ WT2500 series WT2505-M…page 131	 WT2500 series WT2506-K…page 106	—	
	 Ⓜ WT2510 series WT2515G-M…page 133	 WT2510 series WT2515G-W…page 75	 Ⓜ WT2500 series WT2505G-M…page 132	—	—	
	 WT2520 series WT2525-K…page 79	—	—	—	—	
	 WT2250 series WT2250FT…page 69	—	—	 WT2250 series WT2250FG…page 105	—	

Tsubaki Top Chain Lineup

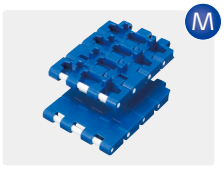
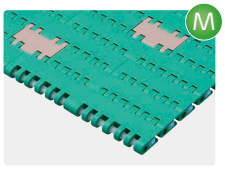
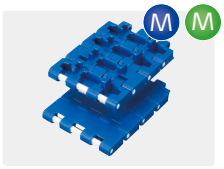
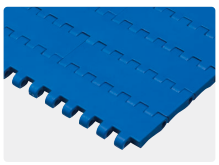
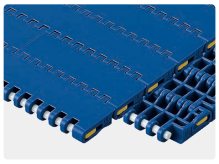
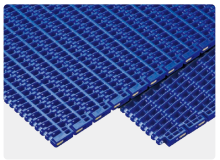
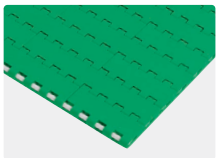
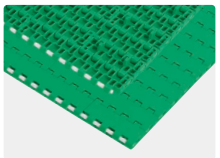
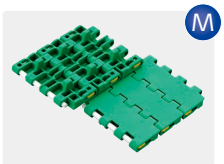
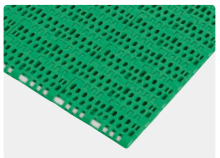
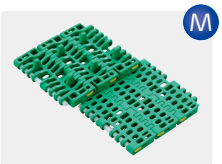
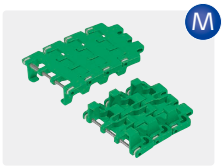
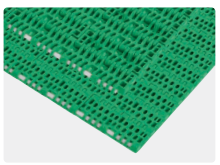
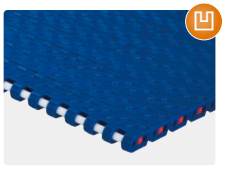
Mold-to-Width Type　Non Slip

Chain Type						Chain Pitch mm
	Net Type	Raised Rib Type	GTO & TOD	Rubber Type	Flight Type	
	 BT5 series BTN5-A…page 113	——	——	——	——	15
	 BT6 series BTN6…page 115	——	——	——	——	19.05
	——	 WT1900 series WT1907-K…page 117	——	——	——	
	——	——	 WT2500 series WT2505TOD-M…page 140	——	——	25.4
	——	——	——	——	 WT2510 series WT2515F-W…page 77	
	——	——	——	——	——	
	——	——	——	 WT2250 series WT2250VG…page 121	 WT2250 series WT2250FT flight type…page 123	

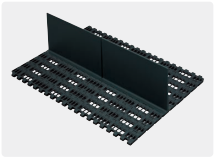
Tsubaki Top Chain Lineup

Plastic Modular Chain

Mold-to-Width Type　Magnetic Type　Non Slip

Chain Pitch mm	Chain Type					
	Closed Type			Open Type		
25.4	—	—	—	—	—	
	 BT8 series BTC8…page 81	 BT8 series BTC8H-M…page 129	 BT8 series BTM8H…page 86	 BT8 series BTO8-M…page 136	—	
	 BT8 series BTC8-A…page 83	 BT8 series BTM8H-M…page 129	 BT8 series BTC8S…page 85	—	—	
27.2	 WT2700 series WT2705-K…page 87	—	—	 WT2700 series WT2706-K…page 107	—	
30	 WT3000 series WT3005-K…page 89	 WT3000 series WT3005G-K…page 91	 WT3000 series WT3005G-M…page 134	 WT3080 series WT3086-K…page 108	 WT3080 series WT3086G-M…page 137	
	 WT3080 series WT3085-C…page 141	—	—	 WT3080 series WT3086G-K…page 109	—	
31.75	 WT3100 series WT3109-W…page 93	—	—	—	—	

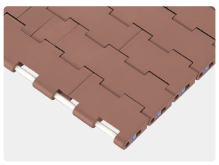
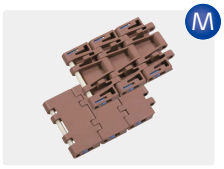
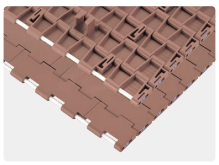
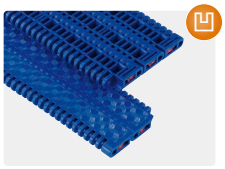
Tsubaki Top Chain Lineup

	Chain Type					Chain Pitch mm
	Net Type	Raised Rib Type	GTO & TOD	Rubber Type	Flight Type	
	——	——	——	——	 WT2250 series WT2250FG flight type…page 123	25.4
	——	——	——	——	——	
	——	——	——	——	——	
	——	——	——	——	——	27.2
	——	——	——	——	——	30
	——	——	——	——	——	
	——	——	——	——	——	31.75

Tsubaki Top Chain Lineup

Plastic Modular Chain

M Mold-to-Width Type　Non Slip

Chain Pitch mm	Chain Type					
	Closed Type			Open Type		
38	——	——	——	 WT3810 series WT3816-K…page 110	——	
38.1	 WT3830 series WT3835-K…page 94	 WT3830 series WT3835G-M…page 135	 WT3830 series WT3835-T…page 95	——	——	
50.8	 BT16 series BTH16…page 96	——	——	——	——	
57.15	——	——	——	——	——	

Tsubaki Top Chain Lineup

	Chain Type					Chain Pitch mm
	Net Type	Raised Rib Type	GTO & TOD	Rubber Type	Flight Type	
	——	——	——	——	——	38
	——	 WT3820 series WT3827-K...page 119	——	——	——	38.1
	——	——	——	——	——	50.8
	——	 WT5700 series WT5707-K...page 120	——	——	——	57.15

Tsubaki Top Chain Lineup

Plastic Top Chain

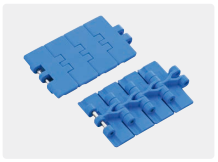
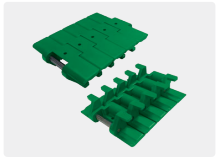
Chain Pitch mm	Chain Type					
	Plastic Top Chain–Straight Running			Snap Top Chain	Plastic Roller Table	
9.525	—	—	—	—	 ST300…page 245	
	—	—	—	—	 RT300…page 247	
12.7	—	—	—	—	 ST400…page 245	
	—	—	—	—	 RT400…page 247	
15.875	—	—	—	—	 ST500…page 245	
	—	—	—	—	 RT500…page 247	

Tsubaki Top Chain Lineup

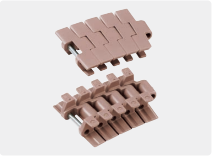
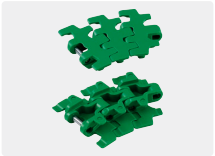
	Chain Type					Chain Pitch mm
	Plastic Top Chain–Sideflexing Running			Gripper Chain	Plastic Accumulation Chain	
	——	——	——	——	——	9.525
	——	——	——	——	——	
	 TTUPM-P (Plastic pins) …page 199	——	——	——	——	12.7
	 TTUPM-PC (Plastic pins) …page 200	——	——	——	——	
	——	——	——	——	——	15.875
	——	——	——	——	——	

Tsubaki Top Chain Lineup

Plastic Top Chain

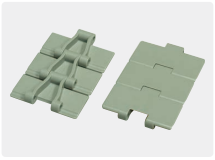
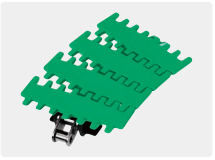
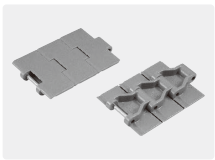
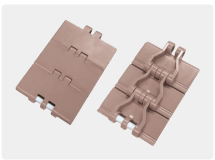
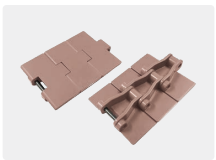
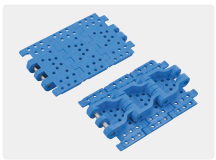
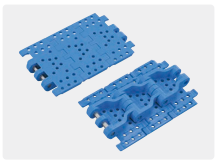
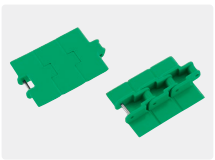
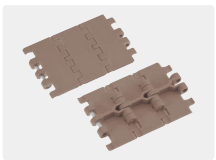
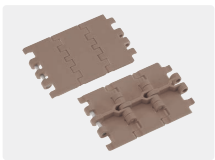
Chain Pitch mm	Chain Type					
	Plastic Top Chain–Straight Running			Snap Top Chain	Plastic Roller Table	
19.05	 TTPM (Stainless steel pins) …page 173	 TPM-SN (Stainless steel pins) …page 185	 TPM-SN (Plastic pins) …page 185	 TN…page 229	 RT600…page 247	
	——	——	——	 TNU…page 231	——	
19.23	 TP-YS (Stainless steel pins) …page 249	 TP-YST (Stainless steel pins) …page 250	——	——	——	
19.265	 TPM (Stainless steel pins) …page 184	——	——	——	——	
25.4	 TPRF TPRF2040 (Stainless steel pins)…page 187	——	——	——	——	
30	——	——	——	——	——	
31.75	——	——	——	——	——	

Tsubaki Top Chain Lineup

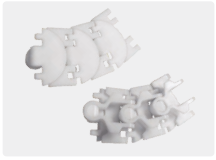
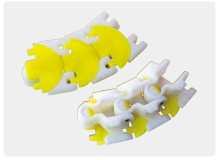
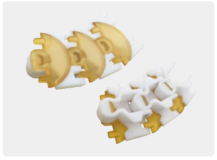
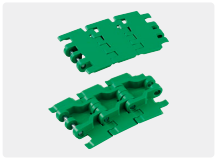
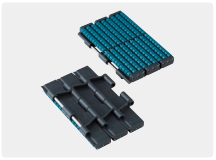
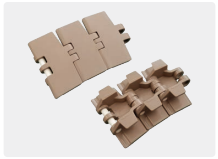
Chain Type					Chain Pitch mm
Plastic Top Chain–Sideflexing Running			Gripper Chain	Plastic Accumulation Chain	
—	—	—	—	—	19.05
—	—	—	—	—	
—	—	—	—	—	19.23
 TPUM (Stainless steel pins) …page 209	—	—	—	—	19.265
 TTUPS-H (Stainless steel pins)…page 207	 TTUPM838H (Special double-layer D-type plastic pins)...page 211	—	 TP-1843-G…page 236	—	25.4
—	—	—	—	 TP-30UTW-LAP (Stainless steel pins)...page 242	30
 TPUSR TPUSR550 (Stainless steel pins) (Plastic pins)...page 215	 TPUSR TPUSR826 (Stainless steel pins) (Plastic pins)...page 215	—	—	—	31.75

Tsubaki Top Chain Lineup

Plastic Top Chain

Chain Pitch mm	Chain Type					
	Plastic Top Chain–Straight Running			Snap Top Chain	Plastic Roller Table	
36	———	———	———	———	———	
	———	———	———	———	———	
38.1	 TTP (Stainless steel pins) …page 165	 TTP (Plastic pins) …page 167	 TP-OTD (Stainless steel pins) …page 177	 TP-PT…page 233	———	
	 TTPT (Stainless steel pins) …page 171	 TPS (Stainless steel pins) …page 179	 TPS (Plastic pins) …page 179	 TP-PTS…page 234	———	
	 TPF (Stainless steel pins) …page 175	 TTPDH (Stainless steel pins) …page 172	 TPSS (Stainless steel pins) …page 183	 TP-1873-T…page 235	———	
	 TPH (Stainless steel pins) …page 181	 TPH (Plastic pins) …page 181	 TPRF TPRF2060 (Stainless steel pins)…page 189	———	———	
	 TTPH (Stainless steel pins) …page 169	 TTPH (Plastic pins) …page 169	 TTPDH-Y (Stainless steel pins) …page 249	———	———	

Tsubaki Top Chain Lineup

Chain Type					Chain Pitch mm
Plastic Top Chain–Sideflexing Running			Gripper Chain	Plastic Accumulation Chain	
 TP-UB36 (Stainless steel pins) …page 217	 TP-UB36 (Plastic pins) …page 217	——	——	 TP-36UTW-LAP (Stainless steel pins)…page 243	36
 TP-36AK TP-36AK1 (Stainless steel pins)…page 226	 TP-36AK TP-36AK1-TMF (Stainless steel pins)…page 226	 TP-36AK TP-36AK2 (Stainless steel pins)…page 226	——	——	
 TTUP (Stainless steel pins) …page 191	 TTUP (Plastic pins) …page 193	 TTUP (T) -M (Stainless steel pins)…page 197	 TP-1873-G…page 237	——	38.1
 TTUPH (Stainless steel pins) …page 195	 TTUPS (Stainless steel pins) …page 198	 TPU-LH (Stainless steel pins) …page 204	——	 TTPDH-LBP (Stainless steel pins)…page 239	
 TPU (Stainless steel pins) …page 201	 TPU (Plastic pins) …page 203	 TP-880TAB (Stainless steel pins)…page 204	——	 TPUS-LBP (Stainless steel pins)…page 240	
 TPUT-LH (Stainless steel pins) …page 205	 TPUS (Stainless steel pins) …page 206	 TPU-USR (Stainless steel pins) …page 212	——	 TPUS-Y-LAP (Stainless steel pins)…page 241	
 TTUP-LLPC (Stainless steel pins)…page 213	 TPUH-BO (Stainless steel pins)…page 214	 TPUS-Y-T (Stainless steel pins)…page 250	——	——	

Tsubaki Top Chain Lineup

Plastic Top Chain

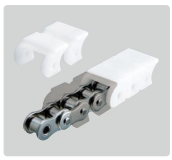
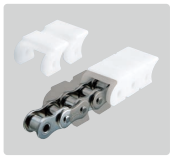
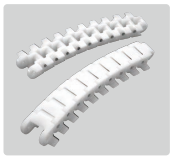
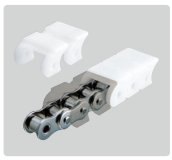
Chain Pitch mm	Chain Type					
	Plastic Top Chain–Straight Running			Snap Top Chain	Plastic Roller Table	
50	—	—	—	—	—	
	—	—	—	—	—	
63.5	—	—	—	—	—	
76.2	—	—	—	—	—	

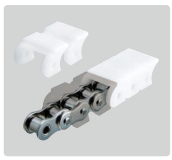
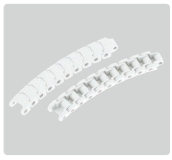
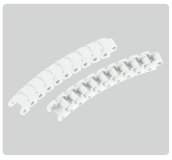
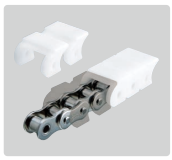
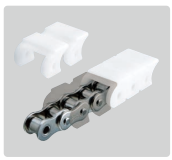
Tsubaki Top Chain Lineup

	Chain Type					Chain Pitch mm
	Plastic Top Chain–Sideflexing Running			Gripper Chain	Plastic Accumulation Chain	
	 TPUN (Stainless steel pins) …page 219	 TPUN-LH TPUN550 (Stainless steel pins)…page 221	 TPUN-LH TPUN535 (Stainless steel pins)…page 221	——	——	50
	 TP-50UNS (Stainless steel pins)…page 222	 TP-50UNS-D76 (Stainless steel pins)…page 223	 TP-50UN-T95 (Stainless steel pins)…page 224	——	——	
	 TPCC TPCC420 (Stainless steel pins)…page 225	 TPCC TPCC420-T (Stainless steel pins)…page 225	——	——	——	63.5
	 TORP (Stainless steel pins) …page 227	 TOSP (Stainless steel pins) …page 227	——	——	——	76.2

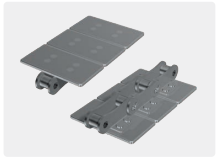
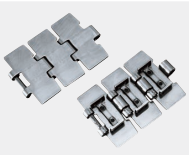
Tsubaki Top Chain Lineup

Plastic Block Chain

Chain Pitch mm	Chain Type		
	Plastic Block Chain		Snap Cover Chain
9.525	 RSP (Stainless steel pins) RSP35…page 281	—	 RF-SC RF06B-SC…page 297
12.7	 RSP (Stainless steel pins) RSP40…page 281	 RSP (Plastic pins) RSP40P…page 283	 RS-SC RS40-SC…page 297
	—	 RSP-SL (Stainless steel pins) RSP40-SL300…page 285	—
	 RSP-PO8PF (Stainless steel pins)...page 287	 RSP-PO8PFT (Stainless steel pins)...page 288	—
	 RSP40-T-CU (Stainless steel pins)...page 295	 RSP-PC082 steel pins (Unichrome)...page 299	—
15.875	 RSP (Stainless steel pins) RSP50…page 281	—	 RS-SC RS50-SC…page 297
	 RSP-SL (Stainless steel pins) RSP50-SL350…page 285	—	—

Chain Pitch mm	Chain Type		
	Plastic Block Chain		Snap Cover Chain
19.05	 RSP (Stainless steel pins) RSP60…page 281	 RSP (Plastic pins) RSP60P…page 283	 RS-SC RS60-SC…page 297
	 RSP60-CU (Stainless steel pins)...page 291	 RSP60P-CU (Stainless steel pins)...page 291	—
	 RSP-2 (Stainless steel pins)...page 290	 RSP-CU-2 (Stainless steel pins)...page 293	—
	—	 RSP-PO12-2S (Stainless steel pins)...page 289	—
	 RSP-PO12SB (Stainless steel pins)...page 299	—	—
25.4	 RSP (Stainless steel pins) RSP80…page 281	—	 RS-SC RS80-SC…page 297
31.75	—	—	 RS-SC RS100-SC…page 297

Stainless Steel Top Chain

Chain Pitch mm	Chain Type: Stainless Steel Top Chain				
38.1	 TT…page 305	 TS…page 307	 TSA…page 307	 TS-CTP…page 309	 TSA-HTP…page 309
	 TTU…page 310	 TTKU…page 311	 TRU…page 312	 TO…page 313	 TU…page 314

Tsubaki Top Chain Lineup

Top chain accessories are used in the locations shown on the conveyor drawing on the right.
Refer to the relevant product page for details.

Frame Support Parts page 369

A variety of accessories in a variety of shapes are available for supporting the conveyors and control panels.



Support Head
(BH)



Side Top Bracket
(STB)



Connecting Joint
(CJ)



Threaded Tube End
(SRB)



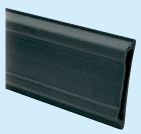
Support Base
(SB)



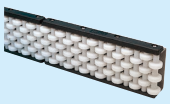
Universal foot
(UF)

Product Guide Parts page 379

Can be used as a necessary accessory for the conveyor to, for example, ensure stable transfer of conveyed products and prevent products from falling, and for things like guide adjustment and sensor setting.



Guide Rail
(GR)



Accumulation Roller Side Guide
(ARG)



Roller Module Side Guide
(ARG)



Guide Rail Clamp
(GRC, GHA, GHB)



T-shaped Clamp
(TC)



Cross Block
(CC)



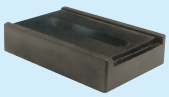
Photosensor Clamp
(FSC)



Clamp Lever
(CL)



Guide Bracket
(GRB)



Spacer
(SP)



Adjustable Head
(SH)



Knob
(HD)



Guide Pin
Clamp Pin
Bracket Pin
(GP, CP, BP)



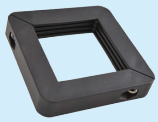
Tray Supporter
(TS)



Fixing Washer
(MP)

Tsubaki Top Chain Lineup

Set Collar ····· page 357



Set Collar
(SC)

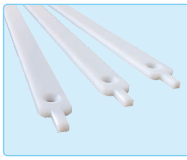
Bearing Units ····· page 395



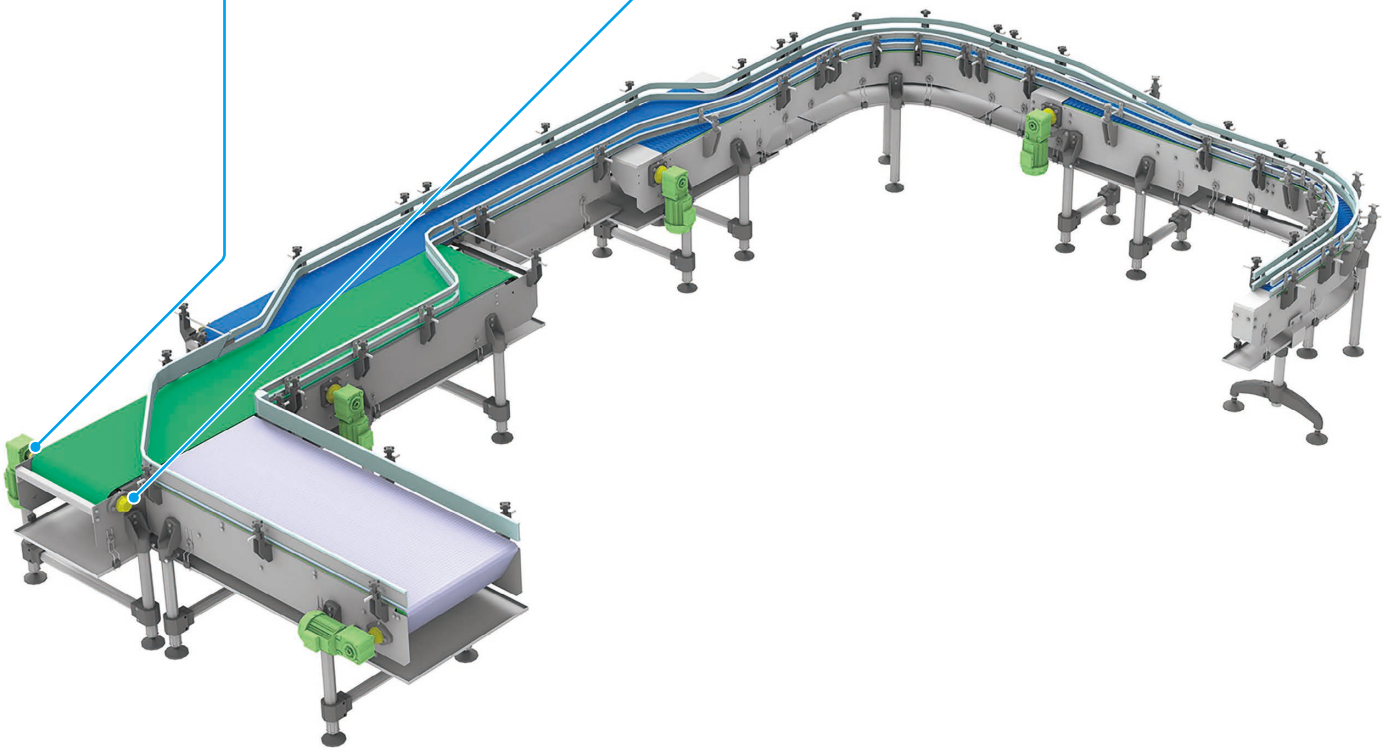
Bearing Units
- Diamond Flange
- Square Flange

(UCFL, UCF)

Plastic Rails ····· page 323



Plastic Rails
(PR)



Chain Guide Parts ····· page 359

Various accessories for the conveyor's return-way, conveyor-to-conveyor connection parts, and transfers are available.



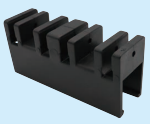
Guide Flange
(GF)



Return Roller
(RR)



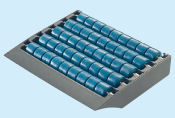
Sliding Shoe
(SD)



Spacer
(SP)

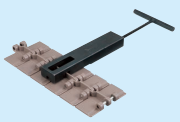


Washer
(WS)



Module Transfer Roller Plates
(MTRP)

Disconnecting and Connecting Tools for Top Chains ··· page 399



Disconnecting and Connecting Tools
(AST)

Plastic Top Chain Materials

Plastic Top Chain Materials

Standard Chain

- Standard Series [No material mark] ---- 34
- Low Friction/Wear Resistant Series [Material mark: LF] ---- 34
- Low Friction/Wear Resistant Series [Material mark: CB] ---- 35
- Advanced Low Friction/Wear Resistant Series [Material mark: ALF] ---- 35
- Low Friction Series [Material mark: NLF] ---- 36
- Low Friction Series [Material mark: WR] ---- 36

High-Function Chain

- Heat Resistant/High Speed Series (KV150: only for dry conditions) [Material mark: KV] ---- 37
- Low Friction/Wear Resistant Series [Material mark: HG] ---- 37
- High Temperature Series [Material mark: HTW] ---- 38
- High Speed Series (only for dry conditions) [Material mark: HS] ---- 38
- Freezer Series [Material mark: LTW] ---- 39
- Chemical Resistant Series [Material mark: Y] ---- 39
- Super Chemical Resistant Series [Material mark: SY] ---- 40
- Electroconductive Series [Material mark: E] ---- 40
- Impact Resistant Series (only for dry conditions) [Material mark: DIA] ---- 41
- Impact Resistant Series (for dry and wet conditions) [Material mark: DIY] ---- 41
- Antibacterial/Mold Resistant Series [Material mark: MWS] ---- 42
- Metal Detectable Series (only for dry conditions) [Material mark: MPD]
  Metal Detectable Series (for dry and wet conditions) [Material mark: MPW] ---- 43
- Electrostatic Preventive Series [Material mark: SE] ---- 43
- Middle Friction Series (only for dry conditions) [Material mark: MF] ---- 44
- Acid Resistant Series [Material mark: AR] ---- 44
- Ultraviolet Resistant Series [Material mark: UVR] ---- 45
- Food Conveying Series [Material mark: PFS] ---- 45

Special-Function Chain

- Heat Resistant/Radiation Resistant/Vacuum Resistant Series [Material mark: PK150] ---- 46
- Low Temperature/Chemical Resistant Series [Material mark: UPE] ---- 46

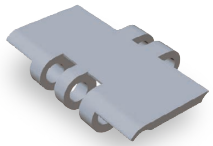
- Pin Type ---- 47
- Pin Shapes ---- 48

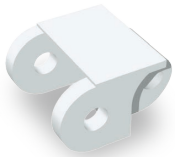
Note: Contact a Tsubaki representative for chain material not shown above.

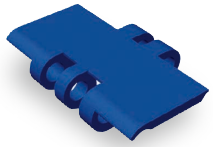
Standard Chain

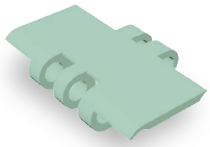
Standard Series

General-purpose polyacetal chain links


Link color: Gray


Link color: White


Link color: Blue


Link color: Sky blue

■ General-purpose type

Uses a commercial-grade polyacetal resin with excellent mechanical properties makes this chain ideal for general applications.

■ Electrostatic preventive

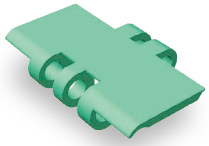
Features electrostatic properties to prevent adhesion of dust and wear dust from static electricity (Link color: gray, blue, green and sky blue).

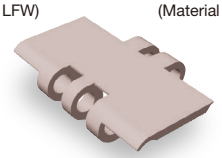
Note: 1. Refer to the chain material table on the relevant product page, since some products may have their own chain material mark.
2. For the product link colors, refer to the relevant product page.
3. Some products, such as plastic roller tables and plastic universal chain, do not use the description “Standard Series”.

LF Low Friction/Wear Resistant Series

Low-friction wear-resistant polyacetal chain links


Link color: White
(Material mark: LFW)


Link color: Green
(Material mark: LFG)


Link color: Brown
(Material mark: LFB)

Applications

- Versatile type of chain that can be used in a wide range of applications
- Ideal in harsh conditions (high speeds, high loads) where chain elongation is accelerated resulting in short chain replacement cycles
- Ideal in high line pressure conditions where conveyed products may be damaged

■ Protects conveyed products

Coefficient of friction is 15% to 45% lower than standard series, resulting in reduced line pressure during accumulation and minimizing potential scratching or other damage to conveyed products.

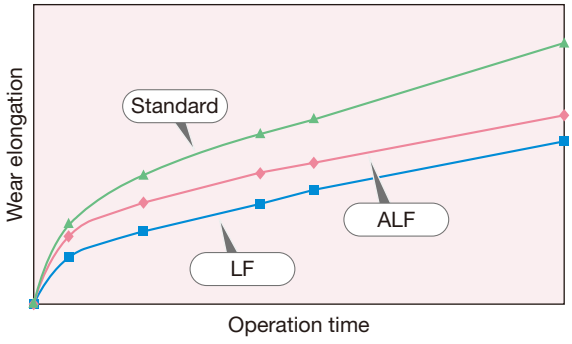
■ Long life (compared to standard series)

Chain life is 1.2 to 2 times longer than standard series because of lower chain load.

■ Smooth divergence and accumulation of conveyed products

■ Less required drive power

■ Wear elongation on standard/LF/ALF chain



Industry and Food Sanitation Act Compatibility Icons — Recommended industry

Can manufacturing · Beverages · Tires · Machined parts · Logistics · Pharmaceuticals · Bakery/Food · Batteries · Semiconductors and solar panels

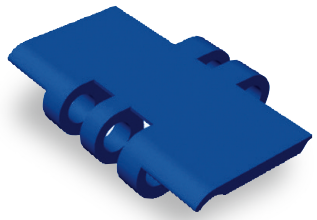
Food Sanitation Act — This icon indicates food sanitation act approval.

Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

CB Low Friction/Wear Resistant Series

Special low-friction wear-resistant polyacetal chain links



Link color: Blue
(Material mark: CB)

Applications

- Ideal in high line pressure conditions where conveyed products may be damaged

■ Protects conveyed products

Coefficient of friction is lower than standard series, resulting in reduced line pressure during accumulation. Minimizing potential scratching or other damage to conveyed products.

■ Smooth divergence and accumulation of conveyed products

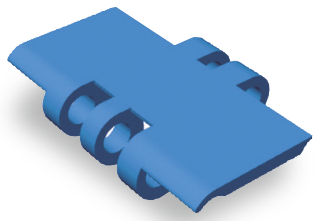
■ Less required drive power

Applicable chain:
WT2515G-M, WT2515-W, WT2515G-W, WT2515F-W, TTUPM838H

Note: As this chain uses a silicone-based lubricant, refrain from using it where there is a risk of peeling during the printing process, or in cases where silicone will have a harmful effect.

ALF Advanced Low Friction/Wear Resistant Series

Advanced low-friction wear-resistant polyacetal chain links



Link color: Light blue
(Material mark: ALF)

Applications

- Before the packaging process where lubricants cannot be used, and wear debris generation matters
- Dry lubricated processes in the beverage industry
- Accumulating conveyors
- High-speed conveyance such as printing press, single-file conveyors, inspection machinery, and conveyors in the beverage industry

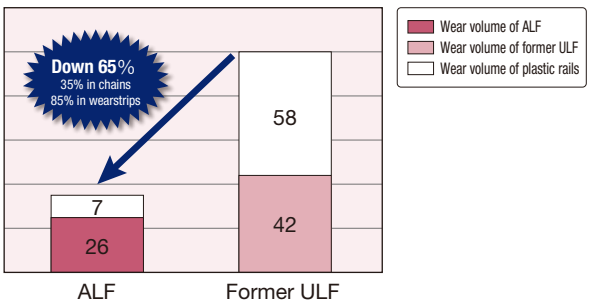
■ Protects conveyed products

This is our original material for dry conveyance treated with a silicone-based lubricant, which greatly minimizes wear debris in no-lube conditions while retaining the same friction coefficient with the former ULF series.

■ Smooth divergence and accumulation of conveyed products

■ Less required drive power

■ Comparison of wear volume with the former ULF series

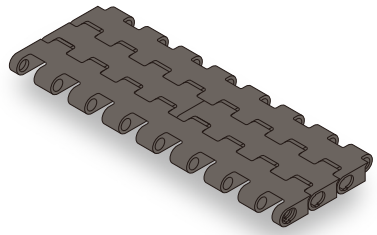


- The above graph shows the results of Tsubaki in-house tests. The wear volume of the former ULF series is represented as 100.
- Compared with the former ULF, wear debris is greatly reduced in ALF, especially for wearstrips. For further reduction of wear debris, we recommend using low friction/wear resistant PLF wearstrips.

Note: 1. As this chain uses a silicone-based lubricant, refrain from using it where there is a risk of repeling during the printing process, or in cases where silicone will have a harmful effect.
2. As of the end of September 2018, former ULF series is no longer available for sale.

NLF Low Friction Series

Low friction polyacetal chain links



Link color: Dark gray
(Material mark: NLF)

Applications

- Versatile type of chain that can be used in a wide range of applications
- Ideal in high line pressure conditions where conveyed products may be damaged

■ Protects conveyed products

Coefficient of friction is 10% to 30% lower than standard series, resulting in reduced line pressure during accumulation and minimizing potential scratching or other damage to conveyed products.

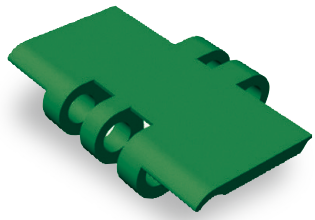
■ Smooth divergence and accumulation of conveyed products

■ Less required drive power

Note: Max. allowable load is equal to standard series.

WR Low Friction Series

Corrosion resistant polyacetal chain links



Link color: Dark green
(Material mark: WR)

Applications

- When using chemicals such as sodium hypochlorite
- Ideal in high line pressure conditions where conveyed products may be damaged

■ Protects conveyed products

Coefficient of friction is 7% to 28% lower than standard series, resulting in reduced line pressure during accumulation and minimizing potential scratching or other damage to conveyed products.

■ Corrosion resistant

Improved resistance to corrosion from sodium hypochlorite and similar chemicals. Ideal for food conveyors.

■ Smooth divergence and accumulation of conveyed products

■ Less required drive power

Note: Max. allowable load is equal to standard series.

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing, Beverages, Tires, Machined parts, Logistics, Pharmaceuticals, Bakery/Food, Batteries, Semiconductors and solar panels

Food Sanitation Act — This icon indicates food sanitation act approval.

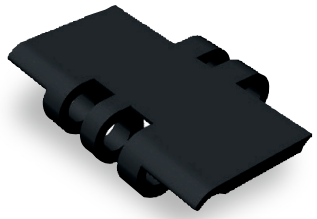
Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

High-Function Chain

KV Heat Resistant/High Speed Series

Special engineering plastic chain links



Link color: Black
(Material mark: KV150, KV180, KV250)

Applications

- Conveyance of solar panels after lamination process
- Conveyance of printed circuit boards after drying oven
- Conveyance in shrink tunnels
- Conveyance of rice cookers
- Conveyance at exit of baking oven
- Conveyance in various drying ovens
- Conveyance in washing process using hot water or high-concentrate chemicals
- Conveyance of syringes during ▶drying process
- High-speed conveyance at exit of seamer in beverage filling/capping machinery

■ Maximum usable temperature

Withstands temperatures up to 150°C (KV150 series), 180°C (KV180 series), or 250°C (KV250 series)

■ High conveyance speed

Can be used at speeds up to 200 m/min (for plastic top chain).

■ Chemical resistance

Excellent resistance to the chemicals used for cleaning and sterilization.

■ Electroconductive

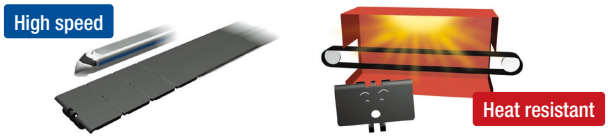
Surface electrical resistance is low (1 x $10^6\Omega$·cm) and the chain does not generate static electricity. Suitable for preventing dust adhesion and sparks.

■ Flame retardant

Conforms to UL standard V-0 classification (UL's highest flame-resistant classification). (Except KV150 series)

■ Noise

2 dB to 3 dB louder compared to standard series.

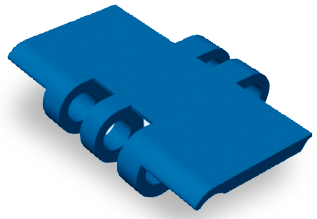


Applicable chain: BTC6, TPU826-T, RSP40, etc.

Note: 1. KV150 series does not conform to Japan's Food Sanitation Act.
2. KV150 series is only for dry conditions.
3. Also refer to page 417 regarding the use of KV series chain.
4. Operating temperature range: –20°C to 150°C for KV150 series, –20°C to 180°C for KV180 series, –20°C to 250°C for KV250 series.

HG Low Friction/Wear Resistant Series

Low-friction wear-resistant polyacetal chain links



Link color: Navy blue
(Material mark: HG)

Applications

- ▶Before the packaging process where lubricants cannot be used, and wear debris generation matters
- ▶High-speed conveyance such as printing process, single-file conveyors, inspection machinery, and conveyors in the beverage industry
- ▶Dry lubricated processes in the beverage industry

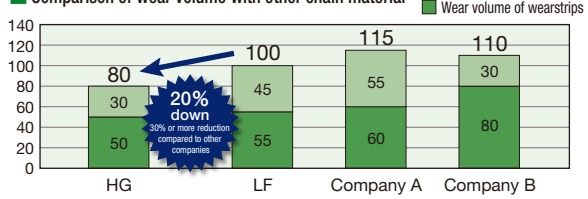
■ Solution to wear debris

Wear resistance increased by 20% compared with low friction/wear resistant (LF) series. Can be replaced with low friction/wear resistant (HG) series without modifying the conveyor or changing the sprockets. (When replacing the chain, we also recommend replacing the wearstrips. Low friction/wear resistant PLF/PMW plastic wearstrips are recommended.)

■ Protects conveyed products

Coefficient of friction is equal to low friction/wear resistant series (LF) and is 15% to 45% lower than standard series, resulting in line pressure reduction during accumulation and minimizing potential scratching or other damage to conveyed products.

■ Comparison of wear volume with other chain material

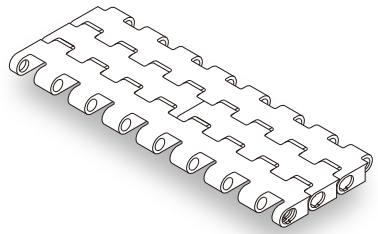


• The above graph shows the results of Tsubaki in-house tests. The wear volume of the LF series is represented as 100.
Chain type: TTP826 Chain speed: 60 m/min, normal temperature, dry conditions
Note: Company A: Wear-resistant specs, polyester links
Company B: Wear-resistant specs, polyacetal links

Applicable chain: WT1506-K, TTP826, RSP50, etc.

HTW High Temperature Series

Polypropylene chain links



Link color: White
(Material mark: HTW)

■ Maximum usable temperature: 105˚C
Ideal chain for use in coolers and warmers in beverage plants where hot water is used.

■ Chemical resistant
Excellent chemical resistance, including to acids and alkaline substances.

■ High friction
Coefficient of friction is 1.2 to 1.6 times the standard series. Can be used at a slight incline under dry conditions.

■ Lightweight
About 40% lighter than polyacetal chains. Easy to handle and can reduce drive power requirements.

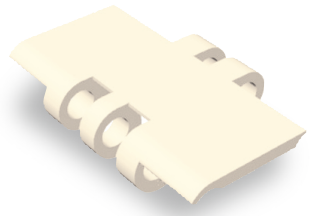
Applicable chain: WT1907-K, WT2506-K, TTPM500, etc.

Applications
- Chain for use in warmers and coolers in beverage plants
- Conveyors for batteries
- Slightly inclined conveyors

Note: 1. Max. allowable load is approx. 40% of standard series.
2. Operating temperature range: 5C˚ to 105˚C.

HS High Speed Series (only for dry conditions)

Special engineering plastic chain links



Link color: Beige
(Material mark: HS)

■ Maximum speed
High limiting PV value of 230 m/min (straight line). Prevents melting at high speed.

Applicable chain: TPU826-T, TP-OTD32, etc.

Applications
- High-speed conveyor for canning industry conveying empty cans

Note: 1. Max. allowable load is approx. 80% of standard series.
2. Available only with stainless steel pins.
3. Only for dry conditions.
4. Stainless steel rails (polished cold-rolled steel) should be used for high-speed applications. Use special polyamide (SJ-CNO) plastic rails depending on the application.
5. Operating temperature range: –20˚C to 50˚C

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing, Beverages, Tires, Machined parts, Logistics, Pharmaceuticals, Bakery/Food, Batteries, Semiconductors and solar panels

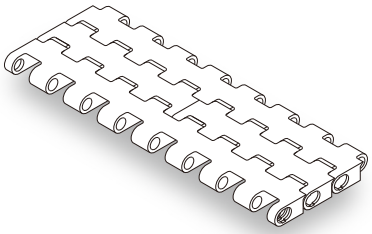
Food Sanitation Act — This icon indicates food sanitation act approval.

Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

LTW Freezer Series

Polyethylene chain links



Link color: White
(Material mark: LTW)

Applications
- Freezer conveyor for frozen foods
- Conveying dry ice

Low temperature environments
Can be used under temperatures as low as –70°C. (–20°C for standard series).

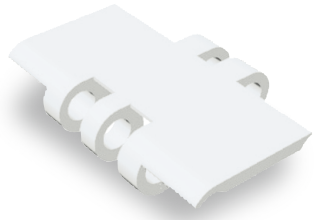
Chemical resistance
Excellent corrosion resistance to chemicals.

Applicable chain: BTN5, BTC6, BTN6, BTC8

Note: 1. Max. allowable load is approx. 33% of standard series.
2. For use under –20˚C, a special sprocket is required. Contact a Tsubaki representative.
3. Operating temperature range: –70˚C to 60˚C

Y Chemical Resistant Series

Special engineering plastic chain links



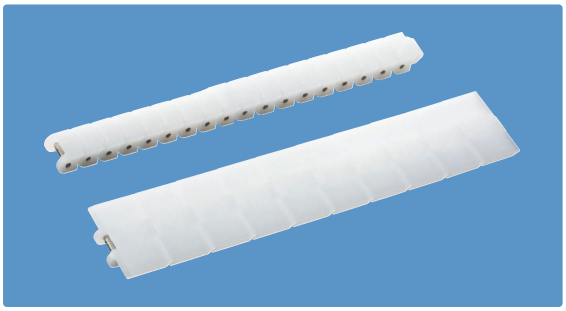
Link color: Matte white
(Material mark: Y)

Applications
- Conveyors for production lines for lithium-ion batteries and similar products
- Chemical cleaning processes for printed circuit boards and silicon wafers
- Conveyor at exit of aseptic filling room used in the beverage industry
- Conveyance in food processing lines that use chemical cleaning solutions

Chemical resistance
Shows corrosion resistance to most chemicals, including organic solvents, inorganic acids, alkalis, oxidizers, and acetic acid.

Impact resistance
Plastic has greater resistance to chipping and shattering than standard chain.

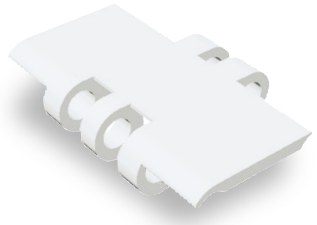
Applicable chain: TTP826, TPRF2040, RSP35, etc.



Note: 1. Max. allowable load is approx. 50% of standard series.
2. Coefficient of friction is equal to standard series.
3. Do not use in locations where open flames are present or in high-temperature environments.

SY Super Chemical Resistant Series

Special engineering plastic chain links



Link color: Matte white
(Material mark: SY)

Applications

- Conveyors for production lines for lithium-ion batteries and similar products
- Chemical cleaning processes for printed circuit boards and silicon wafers
- Conveyor at exit of aseptic filling room in the beverage industry
- Conveyance in food processing lines that use chemical cleaning solutions

■ Titanium pin

Y series pin replaced with titanium (diamond knurled), thereby enhancing chemical resistance.

■ Chemical resistance

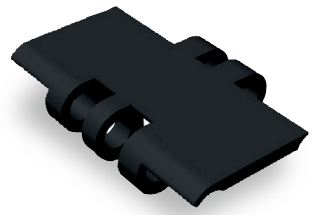
Shows stronger corrosion resistance to chemicals such as hydrochloric acid and sulfuric acid.

Applicable chain: TTP826, RSP40, etc.

Note: 1. Max. allowable load is approx. 50% of standard series.
2. Coefficient of friction is equal to standard series.
3. D pins and plastic pin type are not available.
4. Do not use in locations where open flames are present or in high-temperature environments.
5. Operating temperature range: –20˚C to 80˚C

E Electroconductive Series

Special engineering plastic chain links



Link color: Black
(Material mark: E)

Applications

- Conveying printed circuit boards after soldering
- Conveying solar panels to cutting machines before and after the lamination process
- Protection against electrostatic discharge at accumulation of can conveyance
- Protection against electrostatic discharge after washing/drying machines
- Conveying automotive parts (electrical components)

■ Excellent electroconductivity

Specific volume resistivity: 1 x $10^{6}\Omega$·cm
(Standard series: 1 x $10^{14\ to\ 15}\Omega$·cm)

■ Antistatic

Outstanding electroconductivity prevents electrical noise and sparking.

Note: Entire conveyor must be grounded, using steel sprockets and rails.

Applicable chain: WT0705-W, TTP826P, RSP35, etc.

Note: 1. Max. allowable load is approx. 70% of standard series.
2. Coefficient of friction is equal to standard series.

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing | Beverages | Tires | Machined parts | Logistics | Pharmaceuticals | Bakery/Food | Batteries | Semiconductors and solar panels

Food Sanitation Act — This icon indicates food sanitation act approval.

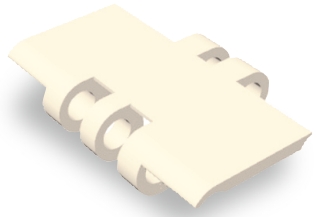
Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

Plastic Top Chain Materials

DIA Impact Resistant Series (only for dry conditions)

Special engineering plastic chain links



Link color: Cream
(Material mark: DIA)

Applications

- Conveying machine parts with moderate weights
- Transporting of trays in bakeries
- Transporting food products directly on the chain in dry condition
- Slightly inclined food transport conveyors

Super-high impact resistance

Plastic resists chipping even if the chain is subjected to mechanical impact. In addition, in the unlikely event that the chain breaks, the plastic tends not to shatter. Ideal for preventing contamination by foreign matter.

High friction

Coefficient of friction is 1.2 times the standard series. Can be used at a slight incline under dry conditions.

Lightweight

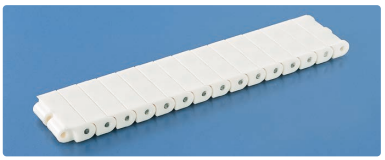
About 20% lighter than polyacetal top chain. Easy to handle and can reduce drive power requirements.

Impact resistance (resistance to chipping or shattering when subjected to mechanical impact)

DIA >> DIY > Standard series

Tougher ⟷ Less

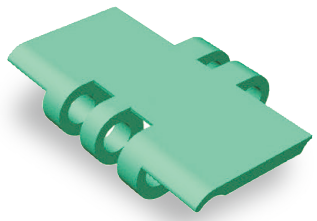
Applicable chain: BTC8H-826-M, TPUSR550-T, RSP60-2, etc.



Note: 1. Max. allowable load is approx. 75% of standard series.
2. Only for dry conditions.

DIY Impact Resistant Series (for dry and wet conditions)

Special engineering plastic chain links



Link color: Green
(Material mark: DIY)

Applications

- Conveying food products or containers under wet conditions
- Situations in which equipment is frequently sterilized
- Situations in which using polyacetal chain—where there is the chance of chipping or shattering—would be problematic

High impact resistance

Compared to polyacetal plastic chains, this plastic is more resistant to chipping or shattering even when the chain is subjected to mechanical impact.

Chemical resistance

Excellent resistance to chemicals used for cleaning and sterilization. Ideal for conveyors that are sterilized or cleaned frequently.

Non-sticky

Conveyed products tend not to stick to the chain.

Impact resistance (resistance to chipping or shattering when subjected to mechanical impact)

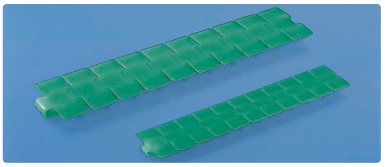
DIA >> DIY > Standard series

Tougher ⟷ Less

UV resistance

Excellent weatherability compared to polyacetal plastic chains.

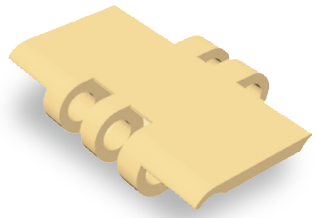
Applicable chain: BTC6, TPRF2040, RSP60, etc.



Note: 1. Max. allowable load is approx. 75% of standard series.
2. Coefficient of friction is equal to standard series.
3. Shattered fragments may scatter under certain conditions, such as during use at low temperatures.
4. Do not use in locations where open flames are present or in high-temperature environments.

MWS Antibacterial/Mold Resistant Series

Low-friction wear-resistant polyacetal chain links with antimicrobial formula



Link color: Cream
(Material mark: MWS)

Applications

- Suitable to use in bottling plants where conveyors should be washed
- For conveyors where food product is placed directly on the conveyor or before cans are sealed
- Ideal in wet conditions caused by moisture and dew condensation (especially the exit and entrance of shower equipment, retort unloader, etc.)
- Ideal for mold prevention and conditions where the conveyor becomes dirty easily from the surrounding condition

■ Antibacterial/Mold resistant

This chain employs a proprietary antimicrobial agent developed in collaboration with an antimicrobial agent manufacturer. As well as being effective against the most dangerous bacteria in the food industry, such as colon bacillus (E.coli), staphylococcus, and lactobacillus, its anti-mold properties are effective against blue and other forms of mold.

■ Long lasting

For long-lasting performance, the antimicrobial agent is inorganic. It is mixed uniformly into the plastic material during the manufacturing process. Even if wear eventually occurs on the chain surface, the antibacterial and anti-mold functions remain strong.

■ Safety

Highly safe antimicrobial agent. The base material complies with Japan's Food Sanitation Act (Japan's Ministry of Health Notification No.20). Additional antimicrobial and anti-mold functions ensure further safety.

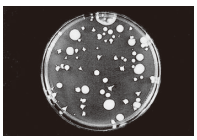
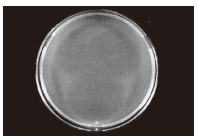
■ Advanced functions

Virtually no change in performance arises from the addition of the antimicrobial agent, ensuring superb low-friction and anti-wear properties. The link material is low friction/wear resistant series (LF).

Note: 1. Max. allowable load is equal to standard series.
2. Coefficient of friction is equal to low friction/wear resistant series (LF).

Antibacterial/Mold Resistant

■Status after 24 hours at 35°C (saccharomyces)

LF series equivalent	MWS series
	

*Test method
Antibacterial products: Test for Antimicrobial activity and efficacy I (1995), in accordance with film contact method
Organization contracted to perform test: Japan Food Research Laboratories
Issued date of certificate of analysis: August 6, 1997
Issued number of certificate of analysis: No. 397050652-002

Test Results for Antimicrobial Activity (Compared to LF series equivalent chain)

Test strain	Test specimen	Immediately after inoculation	After 24 hours at 35°C
E. coli	MWS series	2.4×10^5	Not detected
	(LF series equivalent)	2.4×10^5	2.0×10^7
Staphylococcus aureus	MWS series	1.4×10^5	Not detected
	(LF series equivalent)	1.4×10^5	2.9×10^4
Saccharomyces (a type of yeast)	MWS series	2.1×10^3	Not detected
	(LF series equivalent)	2.1×10^3	7.9×10^2
Lactobacillus	MWS series	1.2×10^4	Not detected
	(LF series equivalent)	1.2×10^4	50
Pathogenic E. coli O-157 (H7)	MWS series	6.0×10^4	Not detected
	(LF series equivalent)	6.0×10^4	1.8×10^3

Test Results for Fungal Growth (Compared to LF series equivalent chain)

Test fungus	Test specimen	After 7 days	After 14 days	After 21 days
Blue mold	MWS series	0	0	0
	(LF series equivalent)	1	1	3

●Method of Rating Test Results

Rating	Description
0	No fungus growth evident
1	Trace fungus growth evident (coverage of less than 10% of surface of test specimen)
2	Light fungus growth evident (coverage of 10% to 30% of surface of test specimen)
3	Moderate fungus growth evident (coverage of 30% to 60% of surface of test specimen)
4	Heavy fungus growth evident (coverage greater than 60% of surface of test specimen)

Test method Conforms to ASTM G21 (Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi)
• Organization contracted to perform test: Japan Food Research Laboratories
• Issued date of certificate of analysis: July 18, 1997 / Issued number of certificate of analysis: No. 397050653-001

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing, Beverages, Tires, Machined parts, Logistics, Pharmaceuticals, Bakery/Food, Batteries, Semiconductors and solar panels

Food Sanitation Act — This icon indicates food sanitation act approval.

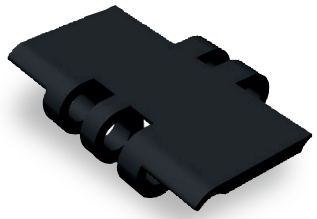
Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

Plastic Top Chain Materials

MPD/MPW Metal Detectable Series

Special engineering plastic chain links



Link color: Black
(Material mark: MPD/MPW)

Applications

- Conveying rubber compounds
- Conveyors on which food products are carried directly on the chain surface before entering packaging machine
- Food product (such as frozen noodles) can be placed directly on the chain surface (Material mark: MPW)
- Transporting of trays in bakeries (Material mark: MPD)

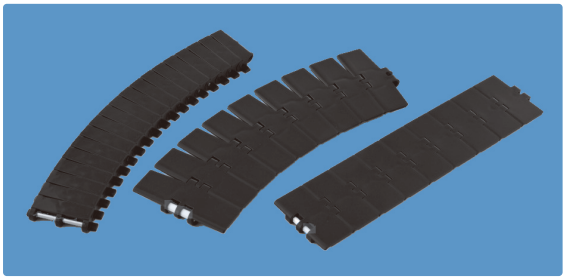
■ Detectable by a metal detector

Even if the chain is broken and entered into rubber compounds or food products, broken chips and fragments can be detected by metal detectors.

■ Impact resistance

Does not chip easily even when the chain is subjected to mechanical impact.

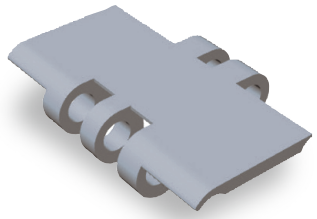
Applicable chain: TTUP826, RSP60-CU-2, etc.



Note: 1. MPD series is only for dry conditions.
MPW series is for dry and wet conditions.
2. Max. allowable load of MPD series is 80% of standard series and MPW series is 40% of standard series.
3. Operating temperature range: –20°C to 80°C (MPD series), –20°C to 60°C (MPW series)

SE Electrostatic Preventive Series

Special polyacetal chain links



Link color: Gray
(Material mark: SE)

■ Electrostatic Preventive

Specific volume resistivity: $1 \times 10^{13}\Omega \cdot$ cm
[Standard series (link color: white): $1 \times 10^{14 \text{ to } 15}\Omega \cdot$ cm]

■ Static electricity prevention

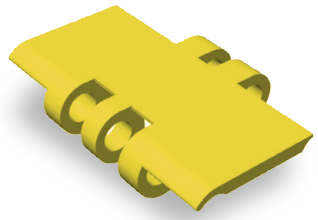
Counters dust and wear dust adhesion caused by static electricity. (counters static electricity when conveyance is dry)

Applicable chain: TPRF2040, RSP40, etc.

Note: 1. Electrostatic preventive properties have been added to standard series gray, blue, and green chain.
2. Max. allowable load and coefficient of friction are equal to those of standard series.
3. Entire conveyor must be grounded, using steel sprockets and rails.

MF Middle Friction Series (only for dry conditions)

Special polyacetal chain links



Link color: Yellow
(Material mark: MF)

Applications

- Inclined conveyance in a range of 3 to 5 degrees
- Prevents excessive slippage on printing press conveyors and inspection machines

Note: This depends on conveyed products.

■ Ideal for inclined conveyance

Material has a moderate degree of friction; ideal for incline conveyors.

■ Stable conveyance

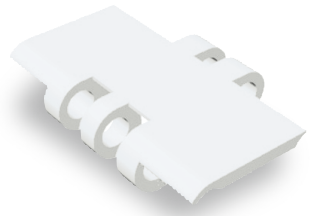
Prevents misalignment that occurs during startup and stoppage. Also prevents slippage as the chain accelerates.

Applicable chain: BTC6, TTUP826P, RSP40, etc.

Note: 1. Max. allowable load is approx. 75% of standard series.
2. Coefficient of friction is 1.1 times the standard series.
3. Only for dry conditions.
4. Operating temperature range: -20˚C to 80˚C

AR Acid Resistant Series

Special engineering plastic chain links



Link color: White
(Material mark: AR)

■ Corrosion resistance

Excellent corrosion resistance compared to standard and low friction/wear resistant (LF) series.

■ Corrosion prevention

Resists corrosion by soapy water containing sodium hypochlorite.

Applicable chain: TTP826, RSP35, etc.

Note: 1. If exposed to stronger acids or alkalis, use chemical resistant (Y) or a super chemical resistant (SY) series.
2. Max. allowable load is approx. 90% of standard series.
3. Coefficient of friction is equal to standard series.
4. Plastic pin type is not available.
5. Do not use where chains are exposed to hot water that exceeds 60˚C
6. Operating temperature range: –20˚C to (60) 80˚C
7. Operating temperature of (60) is for wet conditions.

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing | Beverages | Tires | Machined parts | Logistics | Pharmaceuticals | Bakery/Food | Batteries | Semiconductors and solar panels

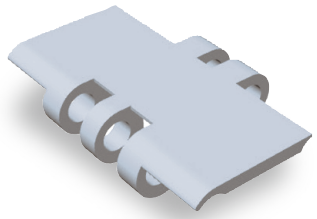
Food Sanitation Act — This icon indicates food sanitation act approval.

Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

UVR Ultraviolet Resistant Series

Special polyacetal chain links



Link color: Light gray
(Material mark: UVR)

Applications

- Conveyance in outdoor environments where items are exposed to UV rays
- As a measure against UV degradation for longer life than standard series

■ UV resistance

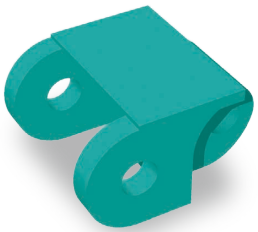
Excellent resistance to outdoor UV degradation (discoloration, loss of strength) compared to standard and low friction/wear resistant (LF) series.

Applicable chain: TTP826, TTPH826P, RSP50, etc.

Note: 1. Max. allowable load and coefficient of friction are equal to those of standard series.
2. Plastic pin type is available.
3. Operating temperature range: -20℃ to (60) 80℃
4. Operating temperature of (60) is for plastic pin type under wet condition.

PFS Food Conveying Series

Polyacetal chain links



Link color: Nile blue
(Material mark: PFS)

Applications

- Conveyance in a room temperature cooling process in bread production lines
- Other conveyor applications in food production lines

■ Compliance with PIM

Uses Tsubaki original material that comply with the EU's Plastic Implementation Measure (PIM).

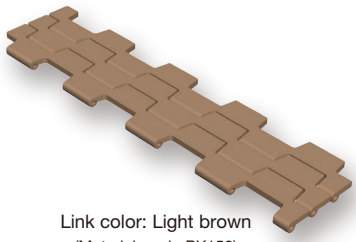
Applicable chain: TTP826, RSP40-T-CU, etc.

Note: 1. Max. allowable load and coefficient of friction are equal to those of standard series.
2. PIM (EU Plastics Implementation Measure) is essential regulation for offering plastic products in the EU that may come into direct contact with conveyed foods.
3. Plastic pin types do not conform to PIM (EU Plastics Implementation Measure).

Special-Function Chain

PK150 Heat/Radiation/Vacuum Resistant Series

PEEK polymer chain links and pins



Link color: Light brown
(Material mark: PK150)

Applications

- Use in high temperature environments such as drying furnaces and ovens. Use as transfer units to/from ovens
- Environment using chemicals for cleaning/sterilization
- Conveyors in vacuums conveyor

■ Maximum usable temperature: 150˚C

■ Chemical resistance

Excellent corrosion resistance to chemicals.

■ Radiation resistance

Radiation resistance marks the highest level among thermoplastics.

■ Low gas emission under vacuum conditions

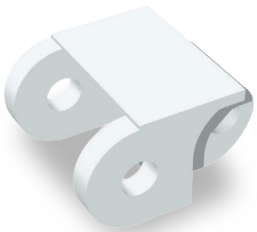
■ Uses materials certified by the United States' FDA (Food and Drug Administration)

Applicable chain: WT0405-W only

Note: Operating temperature range: -20˚C to 150˚C

UPE Low Temperature/Chemical Resistant Series

UHMW-PE chain links



Link color: Matte white
(Material mark: UPE)

Applications

- Conveyance in frozen food warehouses
- Freezer conveyor for frozen foods
- Food conveyors that use chemicals for cleaning and as a measure against foreign matter contamination
- Conveyance requiring chemical resistance, such as conveying rechargeable batteries
- Environment using chemicals for cleaning/sterilization

■ Low temperature environments

Can be used under temperatures as low as –70˚C (–20˚C for standard series)

■ Impact resistance

Has excellent impact resistance and minimizes contamination by foreign matter even under low temperatures. Compared to polyacetal chains, it has 13 times the impact resistance under ambient temperature and 26 times under low temperature.

■ Wear resistance

Under ambient temperatures, the amount of wear is reduced by approx. 80% compared to polyacetal chains.

■ Chemical resistance

Excellent corrosion resistance to chemicals.

■ Uses materials certified by the United States' FDA (Food and Drug Administration)

Applicable chain: RSP80 only

Note: 1. Max. allowable load is approx. 30% of standard series.
2. Operating temperature range: –70°C to 60°C.
3. For use under –20°C, a special sprocket is required. Contact a Tsubaki representative.
4. For wearstrip material, we recommend stainless steel (cold-rolled steel). UHMW-PE is not recommended because it is the same material as the chain.

Industry and Food Sanitation Act Compatibility Icons

Recommended industry

Can manufacturing, Beverages, Tires, Machined parts, Logistics, Pharmaceuticals, Bakery/Food, Batteries, Semiconductors and solar panels

Food Sanitation Act — This icon indicates food sanitation act approval.

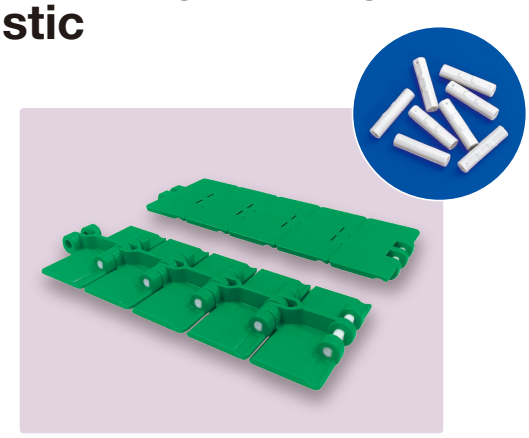
Food Sanitation Act (Japan's Ministry of Health Notification No.370)

Note: Use may be restricted under certain conditions such as speed, conveyed products, weight, environment, or application. Contact a Tsubaki representative for applications and conditions not indicated in this catalog.

Plastic Top Chain Materials

Pin Type Plastic Pins

Special engineering plastic



Applications

- **Easy disposal:** Reduced disposal costs
- **Electromagnetic waves:** Metal detectors, heating equipment, others
- **Water lubricant:** Ideal when wear life is shortened due to the use of stainless steel pins

■ Allowable load roughly equal to stainless steel pins (80% to 100%)

Improvements have been made to the structure of both the thick plastic pins and the hinges.

■ Long life

A combination of proprietary Tsubaki materials allows the chain to exhibit outstanding wear resistance between the pins and bushes under dry, soapy water, or wet conditions. The chain works particularly well when using water as the lubricant.

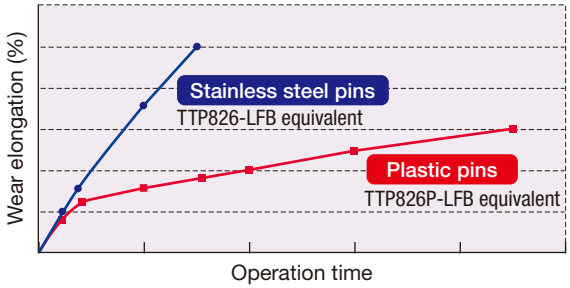
■ Lightweight

15% to 25% lighter than stainless steel pin top chains. Easy to handle and effective in reducing noise and required power.

■ Easy disposal

As the entire chain is made of engineering plastic, it can be disposed of as is.

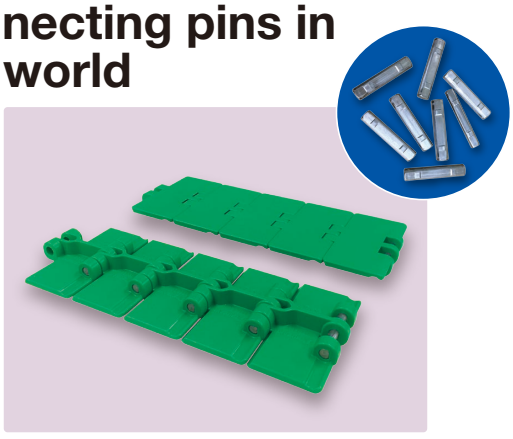
■ Wear Resistance Test with Water Lubrication



Note: 1. Also refer to page 420 regarding the use of plastic pin chain.
2. Operating temperature range: –20˚C to (60) 80˚C
3. Operating temperature of (60) is for wet conditions.

Pin Type Stainless Steel Pins

Most commonly used connecting pins in the world



Applications

- Ideal for situations that demand heat resistance, such as exposure to ambient hot temperatures or water temperatures greater than 60˚C

■ World standard

Most commonly used connecting pins in the world.

■ Assured allowable load

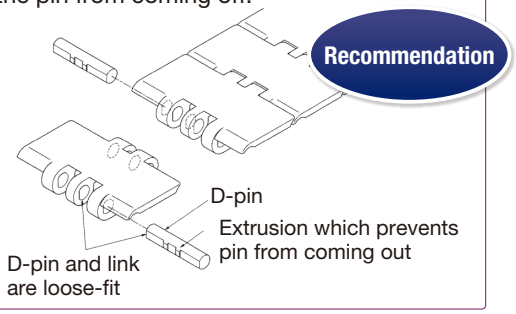
Supports top chain strength.

Pin Shapes

D-pins, knurled pins, and special double-layer D-type plastic pins are used in plastic top chains and plastic block chains. Slit pins (SP) and special engineering plastic pins (EP) are used in plastic modular chains and plastic top chains.

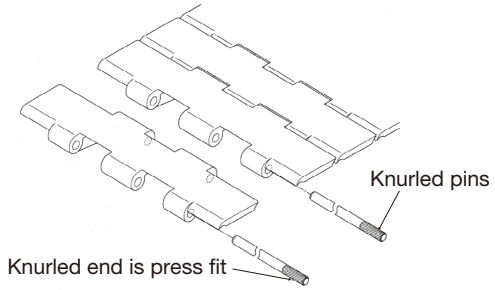
D-pins

The cross section is a protruding D-shape, which allows the pin to easily catch the base chain, and prevents the pin from coming off.



Knurled Pins

A knurling process is applied to one end of the connecting pin. The chain and the knurled part are fit together to prevent the pin from coming off.



■ Loose fit (D-pin)

- When the shafts and holes are fitted together, there is a continuous loose fit.
- The tolerance of the hole is larger than that of the shaft (pin or bush).

■ Press fit (knurled pin)

- When the shafts and holes are fit together, there is a continuous interferential fit.
- The tolerance of the hole is smaller than that of the shaft (pin or bush).

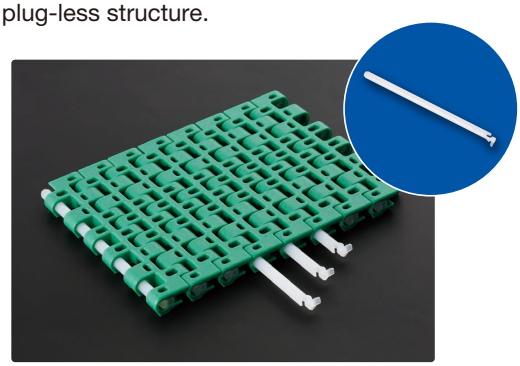
■ Knurled pins and D-pins

- Chain strength and other performance factors are identical.
- D-pins are particularly recommended for use in the following operating environments.
  - Operating temperatures are either higher or lower than normal.
  - When the chain will be exposed to chemicals. (Chemicals: those indicated by "○" or "△" in the corrosion resistance table on page 402.)
  - When the chain will be exposed to ultraviolet light (outdoor use).

Note: Usable chain shape will vary according to chain type and chain materials.

Slit pin (SP)

Pins which combine plugs and pins. Easy to handle with plug-less structure.



Applicable chain: WT0705-W, WT1515-W, WT1516-W, WT1515G-M

Note: 1. If there is no slit pin (SP) in the model numbering, the pin and plug system will be used.
2. For a chain width of 50 mm and 100 mm, the pin and plug system is available.

Special engineering plastic (EP) pin

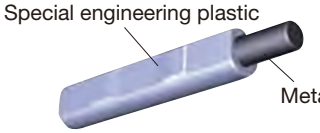
By using special engineering plastic pins, the wear elongation has been halved at the initial use stage compared to polypropylene pins. As a result, about 2 to 6 times longer life can be expected before reaching the wear elongation limit of 2.6%.

Applicable chain: WT2505 (G)-M

Special double layer D-type plastic pin

By combining both plastic and metal pins, the double layer D-type plastic pin possesses all the features of plastic while preventing floating through magnetism.

[Outside: Special engineering plastic (white)]
(Core: Metal)



Applicable chain: TTUPM838H only

Note: When connecting or disconnecting the chain, use punches with a 6 to 7.5 mm diameter. Punches with a smaller diameter may knock out the core metal pins.

Guide for Selecting Plastic Top Chain Materials

Refer to plastic top chain materials pages in detail.

Choose by chain material

	Chain material	Material mark	Page / Applications	General purpose	Reduce amount of wear dust	Low friction (slides easily)	High friction (does not slide easily)	Chemical resistant (will not easily corrode)	High-speed operation	
Standard Chain	Standard Note: 2	—	34	●	▲		●			
	Low friction/ Wear resistant	LFW	34	●	●	●				
		LFG	34	●	●	●				
		LFB	34	●	●	●				
	Low friction/Wear resistant	CB	35	●	●	●				
	Advanced low friction/Wear resistant	ALF	35		●	◎				
	Low friction	NLF	36	●		●				
	Low friction	WR	36			●		▲		
High-Function Chain	Heat resistant/ High speed	KV150 (dry)	37						●	
		KV180	37					●	●	
		KV250	37					●	●	
	Low friction/Wear resistant	HG	37		◎	●				
	High temperature	HTW	38				●	●		
	High speed (only for dry conditions)	HS	38						●	
	Freezer	LTW	39							
	Chemical resistant	Y	39					●		
	Super chemical resistant	SY	40					◎		
	Electroconductive	E	40							
	Impact resistant (only for dry conditions)	DIA	41				●			
	Impact resistant (for dry and wet conditions)	DIY	41					●		
	Antibacterial/Mold resistant	MWS	42		●	●				
	Metal detectable (only for dry conditions)	MPD	43				●			
	Metal detectable (for dry and wet conditions)	MPW	43							
	Electrostatic preventive	SE	43		▲					
	Middle friction (only for dry conditions)	MF	44				●			
	Acid resistant	AR	44					●		
	Ultraviolet resistant	UVR	45							
	Food conveying	PFS	45							
Special-Function Chain	Heat/Radiation/Vacuum resistant	PK150	46					●		
	Low temperature/ Chemical resistant	UPE	46		●			●		

Note: 1.“ ◎ ” Excellent “ ● ” Good “ ▲ ” Sufficient

2. Link color: Electrostatic preventive properties have been added to standard series gray, blue, and green chain.

Guide for Selecting Plastic Top Chain Materials

For high-temperature environments	For low-temperature environments	Only for dry conditions	Superior electroconductive	Highly impact resistant	Ultraviolent resistant	Prevent propagation of bacteria	Metal detachable	Material mark	Chain material	
								—	Standard Note: 2	Standard Chain
								LFW	Low friction/ Wear resistant	
								LFG		
								LFB		
								CB	Low friction/Wear resistant	
								ALF	Advanced low friction/Wear resistant	
								NLF	Low friction	
								WR	Low friction	
●		●	●					KV150 (dry)	Heat resistant/ High speed	High-Function Chain
●			●					KV180		
●			●					KV250		
								HG	Low friction/Wear resistant	
●								HTW	High temperature	
		●						HS	High speed (only for dry conditions)	
	●							LTW	Freezer	
				●	●			Y	Chemical resistant	
				●	●			SY	Super chemical resistant	
			●					E	Electroconductive	
		●		◎				DIA	Impact resistant (only for dry conditions)	
				●	●			DIY	Impact resistant (for dry and wet conditions)	
						●		MWS	Antibacterial/Mold resistant	
		●					●	MPD	Metal detectable (only for dry conditions)	
							●	MPW	Metal detectable (for dry and wet conditions)	
								SE	Electrostatic preventive	
		●						MF	Middle friction (only for dry conditions)	
								AR	Acid resistant	
					●			UVR	Ultraviolet resistant	
								PFS	Food conveying	
●								PK150	Heat/Radiation/Vacuum resistant	Special-Function Chain
	●			●				UPE	Low temperature/ Chemical resistant	

Plastic Modular Chain
WT0405-W

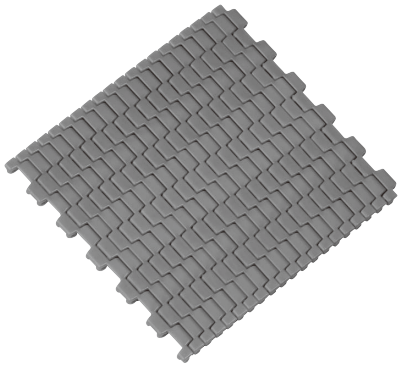
WT0400 Series

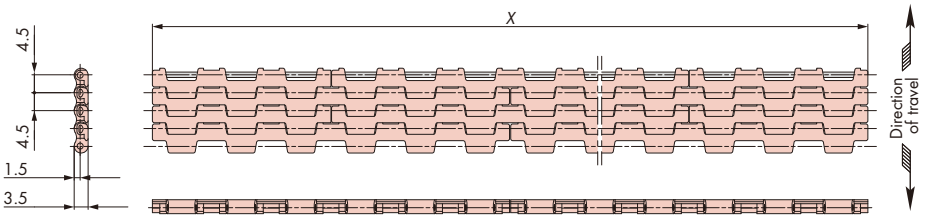
Straight Running (Wide Type)

Sprockets P.143 | Sprocket Pitch P.457 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. The smallest pitch of 4.5 mm in Tsubaki's all plastic top chain lineup enables compact conveyor layouts.
2. It can be used as in-line transfer unit between conveyors, due to the elimination of dead space.
3. Usable under vacuum conditions due to its superior radiation resistance and less outgassing.
4. Employed PEEK resin which excels in heat resistant (max. 150°C), chemical resistant, sliding property.





Chain pitch mm	Open area %	Backflex radius mm
4.5	1.4	5

Chain Material Table

Special-Function Chain		
Material		Heat resistant/Radiation resistant/ Vacuum resistant
Material mark		PK150
Link color		Light brown
Max. allowable load kN/m {kgf/m}		1.8{183}
Chain mass kg/m²		3
Max. allowable speed m/min	With lube	100
	No lube	60
Operating temperature range °C		–20 to 150
Pin material		PEEK
Available		○

Note: 1. "○": Made-to-order product. Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table left is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Refer to page 441 for the installation of wearstrip for a multi-strand application.
4. Number of links per unit (chain width): 200 (W90 to 945)

Tsubaki Model Table

Chain width *X* mm	Heat resistant/Radiation resistant/Vacuum resistant Chain type
90	WT0405-W90-PK150
135	WT0405-W135-PK150
180	WT0405-W180-PK150
225	WT0405-W225-PK150
270	WT0405-W270-PK150
315	WT0405-W315-PK150
360	WT0405-W360-PK150
405	WT0405-W405-PK150
450	WT0405-W450-PK150
495	WT0405-W495-PK150

Chain width *X* mm	Heat resistant/Radiation resistant/Vacuum resistant Chain type
540	WT0405-W540-PK150
585	WT0405-W585-PK150
630	WT0405-W630-PK150
675	WT0405-W675-PK150
720	WT0405-W720-PK150
765	WT0405-W765-PK150
810	WT0405-W810-PK150
855	WT0405-W855-PK150
900	WT0405-W900-PK150
945	WT0405-W945-PK150

Note: 1. Standard nominal widths are in increments of 45 mm. Custom widths are avail able. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.4% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature is 0.00006/°C at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**04**	**05**	**-**	**W180** Note: 2	**-**	**PK150**	**+**	**80** Note: 3	**L**
	04: 4.5 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

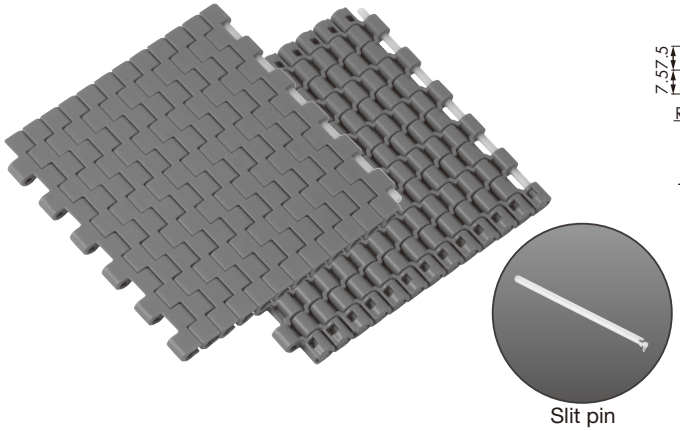
MEMO

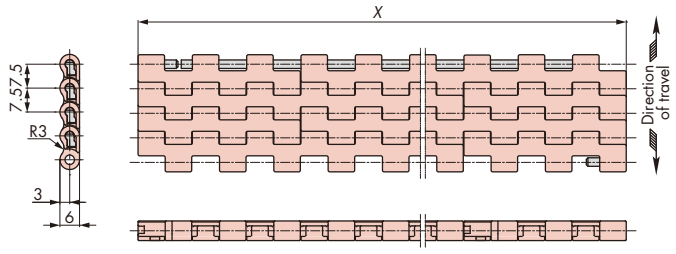
Plastic Modular Chain
WT0705-W

WT0700 Series
Straight Running (Wide Type)

Features

1. Suitable to convey unstable and small products due to its small pitch of 7.5 mm.
2. A dead space of 19 mm between conveyors is possible with use of an R3 nose bar.
3. Adopts slit pin system, all-in-one pin with a plug, to the chain width of 50 mm and 100 mm.
4. Reduces an average of 6.5 dB compared to 15 mm-pitch plastic modular chain.





Chain pitch mm	Open area %	Backflex radius mm
7.5	1	10

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		2.5{255}								
Chain mass kg/m²		5.9								
Max. allowable speed m/min	With lube	50(50)								
	No lube	50(30)								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	△	△	△	○	△	△	△	△

■High-Function Chain

High-Function Chain							
Material		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	E	MWS	SE	MF	UVR
Link color		Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		2.5{255}	1.75{179}	2.5{255}		1.85{189}	2.5{255}
Chain mass kg/m²		5.9					
Max. allowable speed m/min	With lube	50(50)				–	50(50)
	No lube	50(30)					
Operating temperature range °C		–20 to (60)80				–20 to 80	–20 to (60)80
Pin material		Special engineering plastic					
Plug material		Polyacetal					
Plug color		Yellow					
Available		△	△	△	△	△	△ Note: 5

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed indicated in (the value in parentheses) is the value when using UHMW-PE nose bar. No lubrication is allowed when using SJ-CNO nose bar.
4. Operating temperature of (the value in parentheses) is for wet conditions.
5. UVR series are not supported for slit-pin type products.
6. Number of links per unit (chain width): 200 (W50 to 1500).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Standard B
	Chain type	Chain type	Chain type
50	WT0705-W50-ALF-SP	WT0705-W50-LFG-SP	WT0705-W50-B-SP
100	WT0705-W100-ALF-SP	WT0705-W100-LFG-SP	WT0705-W100-B-SP
150	WT0705-W150-ALF	WT0705-W150-LFG	WT0705-W150-B
200	WT0705-W200-ALF	WT0705-W200-LFG	WT0705-W200-B
250	WT0705-W250-ALF	WT0705-W250-LFG	WT0705-W250-B
300	WT0705-W300-ALF	WT0705-W300-LFG	WT0705-W300-B
350	WT0705-W350-ALF	WT0705-W350-LFG	WT0705-W350-B
400	WT0705-W400-ALF	WT0705-W400-LFG	WT0705-W400-B
450	WT0705-W450-ALF	WT0705-W450-LFG	WT0705-W450-B
500	WT0705-W500-ALF	WT0705-W500-LFG	WT0705-W500-B
550	WT0705-W550-ALF	WT0705-W550-LFG	WT0705-W550-B
600	WT0705-W600-ALF	WT0705-W600-LFG	WT0705-W600-B
650	WT0705-W650-ALF	WT0705-W650-LFG	WT0705-W650-B
700	WT0705-W700-ALF	WT0705-W700-LFG	WT0705-W700-B
750	WT0705-W750-ALF	WT0705-W750-LFG	WT0705-W750-B
800	WT0705-W800-ALF	WT0705-W800-LFG	WT0705-W800-B
850	WT0705-W850-ALF	WT0705-W850-LFG	WT0705-W850-B
900	WT0705-W900-ALF	WT0705-W900-LFG	WT0705-W900-B
950	WT0705-W950-ALF	WT0705-W950-LFG	WT0705-W950-B
1000	WT0705-W1000-ALF	WT0705-W1000-LFG	WT0705-W1000-B
1050	WT0705-W1050-ALF	WT0705-W1050-LFG	WT0705-W1050-B
1100	WT0705-W1100-ALF	WT0705-W1100-LFG	WT0705-W1100-B
1150	WT0705-W1150-ALF	WT0705-W1150-LFG	WT0705-W1150-B
1200	WT0705-W1200-ALF	WT0705-W1200-LFG	WT0705-W1200-B
1250	WT0705-W1250-ALF	WT0705-W1250-LFG	WT0705-W1250-B
1300	WT0705-W1300-ALF	WT0705-W1300-LFG	WT0705-W1300-B
1350	WT0705-W1350-ALF	WT0705-W1350-LFG	WT0705-W1350-B
1400	WT0705-W1400-ALF	WT0705-W1400-LFG	WT0705-W1400-B
1450	WT0705-W1450-ALF	WT0705-W1450-LFG	WT0705-W1450-B
1500	WT0705-W1500-ALF	WT0705-W1500-LFG	WT0705-W1500-B

Note: 1. Standard nominal widths are in increments of 50 mm. Custom widths are available. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.9% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. Slit pin type for the chain width of W50 mm and W100 mm.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Pin retention system		Number of links	Unit
WT	**07**	**05**	**-**	**W100** Note: 2	**-**	**LFG** Note: 3	**-**	**SP**	**+**	**80** Note: 4	**L**
	07: 7.5 mm	5: Closed type						None: Pin and plug SP: Slit pin (all-in-one pin with a plug)			L: Link

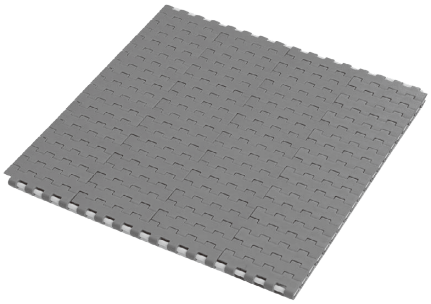
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

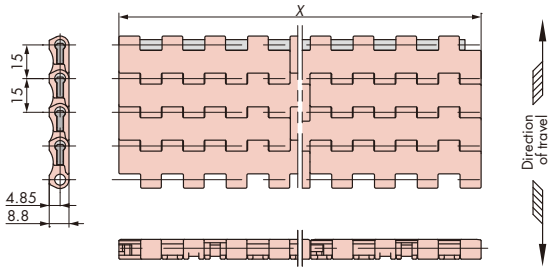
Plastic Modular Chain
WT1505-K

WT1500 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and lightweight containers.
3. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
4. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
15	2	15

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		10.5{1070}								
Chain mass kg/m²		6.7								
Max. allowable speed m/min	With lube	50(50)								
	No lube	50(30)								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	△	△	△	○ Note: 6	△	○ Note: 6	○ Note: 6	△

■High-Function Chain

High-Function Chain									
Material		Low friction/ Wear resistant	High temperature	Chemical resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	Y	E	MWS	SE	MF	UVR
Link color		Navy blue	White	Matte white	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		10.5{1070}	4.25 {434}	5.83 {594}	8.0{816}	10.5 {1070}		7.8{796}	10.5 {1070}
Chain mass kg/m²		6.7	4.5	6.7					
Max. allowable speed m/min	With lube	50(50)	50	50(50)				–	50(50)
	No lube	50(30)	30	50(30)					
Operating temperature range °C		–20 to (60)80	5 to 105	5 to 80	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material		Special engineering plastic	Polypropylene		Special engineering plastic				
Plug material		Polyacetal	Polypropylene		Polyacetal				
Plug color		Yellow	Blue		Yellow				
Available		○ Note: 6	△	△ Note: 7	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet condition.
5. Number of links per unit (chain width): 500 (K03 to 06), 400 (K09 to 18), 200 (K21 to 30), 160 (K33 to 39), 140 (K42 to 48), 120 (K51 to 60), 100 (over K63).
6. Chain widths from 1,600.2 mm (K63) to 1,828.8 mm (K72) : "△" Made-to-order products (RFQ).
7. Only a chain width of 76.2 mm (K03) is available.
8. Sprocket dedicated for the BT5 series cannot be used.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant HG	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type	Chain type
76.2	WT1505-K03-ALF	WT1505-K03-HG	WT1505-K03-LFG	WT1505-K03-NLF
152.4	WT1505-K06-ALF	WT1505-K06-HG	WT1505-K06-LFG	WT1505-K06-NLF
228.6	WT1505-K09-ALF	WT1505-K09-HG	WT1505-K09-LFG	WT1505-K09-NLF
304.8	WT1505-K12-ALF	WT1505-K12-HG	WT1505-K12-LFG	WT1505-K12-NLF
381.0	WT1505-K15-ALF	WT1505-K15-HG	WT1505-K15-LFG	WT1505-K15-NLF
457.2	WT1505-K18-ALF	WT1505-K18-HG	WT1505-K18-LFG	WT1505-K18-NLF
533.4	WT1505-K21-ALF	WT1505-K21-HG	WT1505-K21-LFG	WT1505-K21-NLF
609.6	WT1505-K24-ALF	WT1505-K24-HG	WT1505-K24-LFG	WT1505-K24-NLF
685.8	WT1505-K27-ALF	WT1505-K27-HG	WT1505-K27-LFG	WT1505-K27-NLF
762.0	WT1505-K30-ALF	WT1505-K30-HG	WT1505-K30-LFG	WT1505-K30-NLF
838.2	WT1505-K33-ALF	WT1505-K33-HG	WT1505-K33-LFG	WT1505-K33-NLF
914.4	WT1505-K36-ALF	WT1505-K36-HG	WT1505-K36-LFG	WT1505-K36-NLF
990.6	WT1505-K39-ALF	WT1505-K39-HG	WT1505-K39-LFG	WT1505-K39-NLF
1066.8	WT1505-K42-ALF	WT1505-K42-HG	WT1505-K42-LFG	WT1505-K42-NLF
1143.0	WT1505-K45-ALF	WT1505-K45-HG	WT1505-K45-LFG	WT1505-K45-NLF
1219.2	WT1505-K48-ALF	WT1505-K48-HG	WT1505-K48-LFG	WT1505-K48-NLF
1295.4	WT1505-K51-ALF	WT1505-K51-HG	WT1505-K51-LFG	WT1505-K51-NLF
1371.6	WT1505-K54-ALF	WT1505-K54-HG	WT1505-K54-LFG	WT1505-K54-NLF
1447.8	WT1505-K57-ALF	WT1505-K57-HG	WT1505-K57-LFG	WT1505-K57-NLF
1524.0	WT1505-K60-ALF	WT1505-K60-HG	WT1505-K60-LFG	WT1505-K60-NLF
1600.2	WT1505-K63-ALF	WT1505-K63-HG	WT1505-K63-LFG	WT1505-K63-NLF
1676.4	WT1505-K66-ALF	WT1505-K66-HG	WT1505-K66-LFG	WT1505-K66-NLF
1752.6	WT1505-K69-ALF	WT1505-K69-HG	WT1505-K69-LFG	WT1505-K69-NLF
1828.8	WT1505-K72-ALF	WT1505-K72-HG	WT1505-K72-LFG	WT1505-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,828.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.6% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,828.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,828.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**15**	**05**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	15:15 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT1505G-K

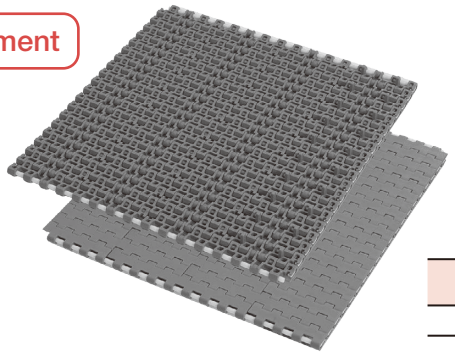
WT1500 Series

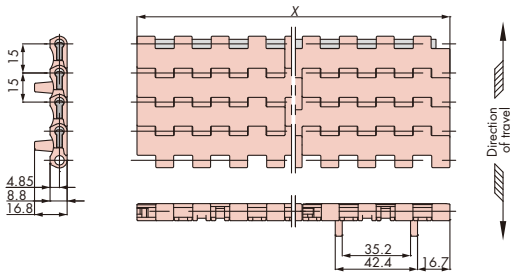
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. Suitable for the layout with side transfer between conveyors thanks to tab guide attachment.
4. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
5. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
15	2	15

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		10.5{1070}								
Chain mass kg/m^2		6.7								
Max. allowable speed m/min	With lube	50								
	No lube									
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	△	△	△	○ Note: 7	△	○ Note: 7	○ Note: 7	△

■High-Function Chain

High-Function Chain								
Material		Low friction/ Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	E	MWS	SE	MF	UVR
Link color		Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		10.5{1070}	4.25 {434}	8.0{816}	10.5 {1070}		7.8{796}	10.5 {1070}
Chain mass kg/m^2		6.7	4.5	6.7				
Max. allowable speed m/min	With lube	50	50	50			–	50
	No lube		30				50	
Operating temperature range °C		–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material		Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material		Polyacetal	Polypropylene	Polyacetal				
Plug color		Yellow	Blue	Yellow				
Available		△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 30 mm.
5. Cannot be used with nose bar.
6. Number of links per unit (chain width): 240 (K06 to 18), 120 (K21 to 48), 100 (over K51).
7. Chain widths from 1,600.2 mm (K63) to 1,828.8 mm (K72): "△" Made-to-order products (RFQ).
8. Sprocket dedicated for the BT5 series cannot be used.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
152.4	WT1505G-K06-ALF	WT1505G-K06-LFG	WT1505G-K06-NLF
228.6	WT1505G-K09-ALF	WT1505G-K09-LFG	WT1505G-K09-NLF
304.8	WT1505G-K12-ALF	WT1505G-K12-LFG	WT1505G-K12-NLF
381.0	WT1505G-K15-ALF	WT1505G-K15-LFG	WT1505G-K15-NLF
457.2	WT1505G-K18-ALF	WT1505G-K18-LFG	WT1505G-K18-NLF
533.4	WT1505G-K21-ALF	WT1505G-K21-LFG	WT1505G-K21-NLF
609.6	WT1505G-K24-ALF	WT1505G-K24-LFG	WT1505G-K24-NLF
685.8	WT1505G-K27-ALF	WT1505G-K27-LFG	WT1505G-K27-NLF
762.0	WT1505G-K30-ALF	WT1505G-K30-LFG	WT1505G-K30-NLF
838.2	WT1505G-K33-ALF	WT1505G-K33-LFG	WT1505G-K33-NLF
914.4	WT1505G-K36-ALF	WT1505G-K36-LFG	WT1505G-K36-NLF
990.6	WT1505G-K39-ALF	WT1505G-K39-LFG	WT1505G-K39-NLF
1066.8	WT1505G-K42-ALF	WT1505G-K42-LFG	WT1505G-K42-NLF
1143.0	WT1505G-K45-ALF	WT1505G-K45-LFG	WT1505G-K45-NLF
1219.2	WT1505G-K48-ALF	WT1505G-K48-LFG	WT1505G-K48-NLF
1295.4	WT1505G-K51-ALF	WT1505G-K51-LFG	WT1505G-K51-NLF
1371.6	WT1505G-K54-ALF	WT1505G-K54-LFG	WT1505G-K54-NLF
1447.8	WT1505G-K57-ALF	WT1505G-K57-LFG	WT1505G-K57-NLF
1524.0	WT1505G-K60-ALF	WT1505G-K60-LFG	WT1505G-K60-NLF
1600.2	WT1505G-K63-ALF	WT1505G-K63-LFG	WT1505G-K63-NLF
1676.4	WT1505G-K66-ALF	WT1505G-K66-LFG	WT1505G-K66-NLF
1752.6	WT1505G-K69-ALF	WT1505G-K69-LFG	WT1505G-K69-NLF
1828.8	WT1505G-K72-ALF	WT1505G-K72-LFG	WT1505G-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,828.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.6% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,828.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,828.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Chain width		Material mark		Number of links	Unit
WT	**15**	**05**	**G**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	15:15 mm	5: Closed type	G: Tab guide attachment							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT1505GTO-K

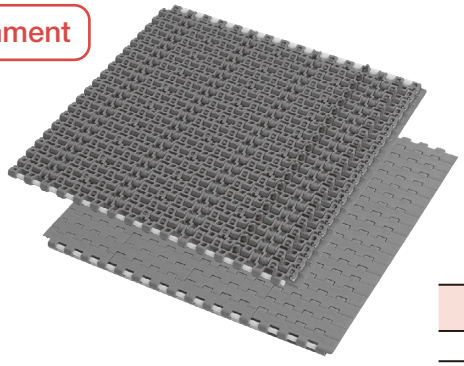
WT1500 Series

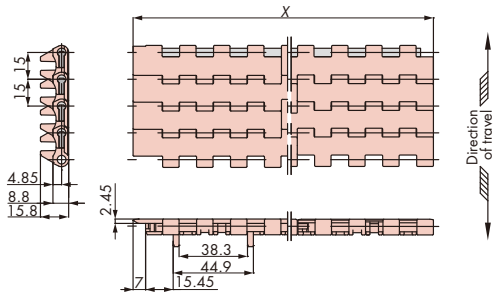
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. Extended plate edges facilitate smoother right-angle transfers.
4. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
15	2	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	6.7								
Max. allowable speed m/min With lube	50(50)								
Max. allowable speed m/min No lube	50(30)								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	○ Note: 7	△	○ Note: 7	○ Note: 7	△

■High-Function Chain

High-Function Chain								
Material	Low friction/ Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5{1070}	4.25{434}	8.0{816}	10.5{1070}		7.8{796}	10.5{1070}
Chain mass kg/m²	6.7	4.5	6.7				
Max. allowable speed m/min With lube	50(50)	50	50(50)			–	50(50)
Max. allowable speed m/min No lube	50(30)	30	50(30)			50(30)	50(30)
Operating temperature range °C	–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material	Polyacetal	Polypropylene	Polyacetal				
Plug color	Yellow	Blue	Yellow				
Available	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet condition.
5. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 30 mm.
6. Number of links per unit (chain width): 240 (K09 to 18) , 120 (K21 to 48), 100 (over K51).
7. Chain widths from 1,607.2 mm (K63) to 1,835.8 mm (K72) : "△" Made-to-order products (RFQ).
8. Sprocket dedicated for the BT5 series cannot be used.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
235.6	WT1505GTO-K09-ALF	WT1505GTO-K09-LFG	WT1505GTO-K09-NLF
311.8	WT1505GTO-K12-ALF	WT1505GTO-K12-LFG	WT1505GTO-K12-NLF
388.0	WT1505GTO-K15-ALF	WT1505GTO-K15-LFG	WT1505GTO-K15-NLF
464.2	WT1505GTO-K18-ALF	WT1505GTO-K18-LFG	WT1505GTO-K18-NLF
540.4	WT1505GTO-K21-ALF	WT1505GTO-K21-LFG	WT1505GTO-K21-NLF
616.6	WT1505GTO-K24-ALF	WT1505GTO-K24-LFG	WT1505GTO-K24-NLF
692.8	WT1505GTO-K27-ALF	WT1505GTO-K27-LFG	WT1505GTO-K27-NLF
769.0	WT1505GTO-K30-ALF	WT1505GTO-K30-LFG	WT1505GTO-K30-NLF
845.2	WT1505GTO-K33-ALF	WT1505GTO-K33-LFG	WT1505GTO-K33-NLF
921.4	WT1505GTO-K36-ALF	WT1505GTO-K36-LFG	WT1505GTO-K36-NLF
997.6	WT1505GTO-K39-ALF	WT1505GTO-K39-LFG	WT1505GTO-K39-NLF
1073.8	WT1505GTO-K42-ALF	WT1505GTO-K42-LFG	WT1505GTO-K42-NLF
1150.0	WT1505GTO-K45-ALF	WT1505GTO-K45-LFG	WT1505GTO-K45-NLF
1226.2	WT1505GTO-K48-ALF	WT1505GTO-K48-LFG	WT1505GTO-K48-NLF
1302.4	WT1505GTO-K51-ALF	WT1505GTO-K51-LFG	WT1505GTO-K51-NLF
1378.6	WT1505GTO-K54-ALF	WT1505GTO-K54-LFG	WT1505GTO-K54-NLF
1454.8	WT1505GTO-K57-ALF	WT1505GTO-K57-LFG	WT1505GTO-K57-NLF
1531.0	WT1505GTO-K60-ALF	WT1505GTO-K60-LFG	WT1505GTO-K60-NLF
1607.2	WT1505GTO-K63-ALF	WT1505GTO-K63-LFG	WT1505GTO-K63-NLF
1683.4	WT1505GTO-K66-ALF	WT1505GTO-K66-LFG	WT1505GTO-K66-NLF
1759.6	WT1505GTO-K69-ALF	WT1505GTO-K69-LFG	WT1505GTO-K69-NLF
1835.8	WT1505GTO-K72-ALF	WT1505GTO-K72-LFG	WT1505GTO-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm) with a 7 mm extension of the side of the chain. Custom widths or width wider than 1,835.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.6% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,835.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,835.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment	Link shape	Chain width	Material mark	Number of links	Unit
WT	**15**	**05**	**G**	**TO**	**- K24** Note: 2	**- LFG** Note: 3	**+ 80** Note: 4	**L**
	15:15 mm	5: Closed type	G: Tab guide attachment					L: Link

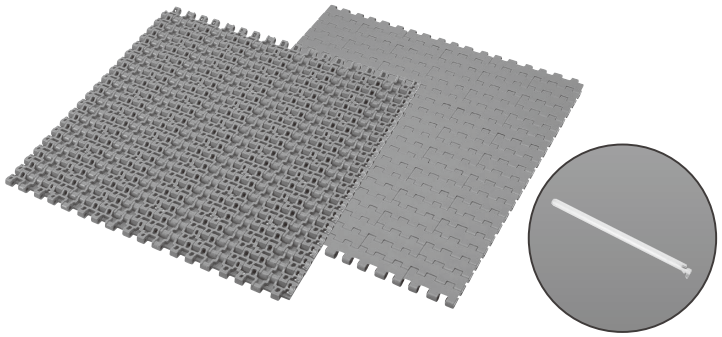
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT1515-W

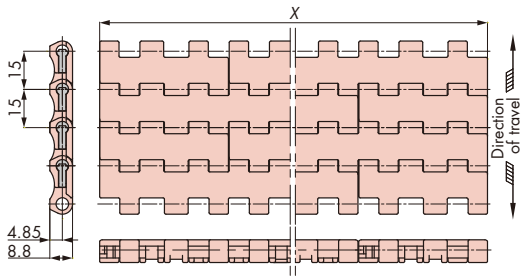
WT1510 Series
Straight Running (Wide Type)

Features

1. Can be a chosen width with 50 mm increments.
2. 15 mm pitch. Suitable for conveying small and lightweight containers.
3. Suitable not only for the conveyance of bottles in the beverage industry but also for machined parts.
4. Adopts slit pin system, all-in-one pin with a plug, to the chain width of 50 mm and 100 mm.
5. Possible to replace to the belt conveyor due to the standard nominal width of 50 mm and 100 mm.
6. In combination with a TOD chain, it is unnecessary to use a dead plate and is possible to transfer products between conveyors with less with fewer remaining products.



Slit pin



Chain pitch mm	Open area %	Backflex radius mm
15	2	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	6.7								
Max. allowable speed m/min With lube	50(50)								
Max. allowable speed m/min No lube	50(30)								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	○	△	○	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	
Material mark	HG	E	MWS	SE	MF	UVR	
Link color	Navy blue	Black	Cream	Gray	Yellow	Light gray	
Max. allowable load kN/m {kgf/m}	10.5{1070}	8{816}	10.5{1070}		7.8{796}	10.5{1070}	
Chain mass kg/m²	6.7						
Max. allowable speed m/min With lube	50(50)				—	50(50)	
Max. allowable speed m/min No lube	50(30)						
Operating temperature range °C	–20 to (60)80				–20 to 80	–20 to (60)80	
Pin material	Special engineering plastic						
Plug material	Polyacetal						
Plug color	Yellow						
Available	△	△	△	△	△	△ Note: 5	

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet conditions.
5. UVR series are not supported for slit-pin type products.
6. Number of links per unit (chain width): 500 (W50 to 150), 400 (W200 to 450), 200 (W500 to 750), 160 (W800 to 950), 140 (W1000 to 1200), 120 (W1250 to 1500), 100 (over W1550).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG
	Chain type	Chain type
50	WT1515-W50-ALF	WT1515-W50-LFG
	WT1515-W50-ALF-SP	WT1515-W50-LFG-SP
100	WT1515-W100-ALF	WT1515-W100-LFG
	WT1515-W100-ALF-SP	WT1515-W100-LFG-SP
150	WT1515-W150-ALF	WT1515-W150-LFG
200	WT1515-W200-ALF	WT1515-W200-LFG
250	WT1515-W250-ALF	WT1515-W250-LFG
300	WT1515-W300-ALF	WT1515-W300-LFG
350	WT1515-W350-ALF	WT1515-W350-LFG
400	WT1515-W400-ALF	WT1515-W400-LFG
450	WT1515-W450-ALF	WT1515-W450-LFG
500	WT1515-W500-ALF	WT1515-W500-LFG
550	WT1515-W550-ALF	WT1515-W550-LFG
600	WT1515-W600-ALF	WT1515-W600-LFG
650	WT1515-W650-ALF	WT1515-W650-LFG
700	WT1515-W700-ALF	WT1515-W700-LFG
750	WT1515-W750-ALF	WT1515-W750-LFG
800	WT1515-W800-ALF	WT1515-W800-LFG
850	WT1515-W850-ALF	WT1515-W850-LFG
900	WT1515-W900-ALF	WT1515-W900-LFG
950	WT1515-W950-ALF	WT1515-W950-LFG
1000	WT1515-W1000-ALF	WT1515-W1000-LFG

Note: 1. Standard nominal widths are in increments of 50 mm. Custom widths or width wider than 1,000 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.5% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,000 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,000 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Pin retention system		Number of links	Unit
WT	**15**	**15**	**-**	**W100** Note: 2	**-**	**LFG** Note: 3	**-**	**SP**	**+**	**80** Note: 4	**L**
	15:15 mm	5: Closed type						None: Pin and plug SP: Slit pin (all-in-one pin with a plug)			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

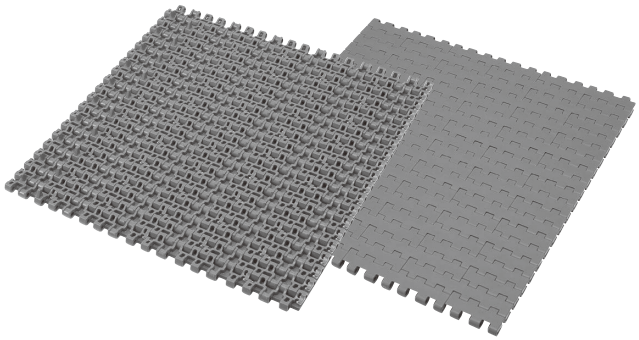
Plastic Modular Chain
WT1515G-W

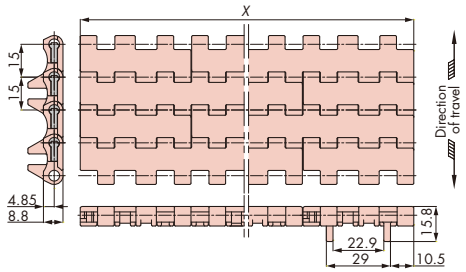
WT1510 Series
Straight Running (Wide Type)

Features

1. Can be a chosen width with 50 mm increments.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. Suitable not only for the conveyance of bottles in the beverage industry but also for machined parts.
4. Suitable for the layout with side transfer between conveyors thanks to tab guide attachment.
5. In combination with a TOD chain, it is unnecessary to use a dead plate and is possible to transfer products between conveyors with less with fewer remaining products.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
15	2	15

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		10.5{1070}								
Chain mass kg/m²		6.7								
Max. allowable speed m/min	With lube	50(50)								
	No lube	50(30)								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	△	△	△	○	△	○	△	△

■High-Function Chain

High-Function Chain							
Material		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	E	MWS	SE	MF	UVR
Link color		Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		10.5{1070}	8{816}	10.5{1070}		7.8{796}	10.5{1070}
Chain mass kg/m²		6.7					
Max. allowable speed m/min	With lube	50(50)				—	50(50)
	No lube	50(30)					
Operating temperature range °C		–20 to (60)80				–20 to 80	–20 to (60)80
Pin material		Special engineering plastic					
Plug material		Polyacetal					
Plug color		Yellow					
Available		△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet conditions.
5. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 20 mm.
6. When using WT-S1500 (machined types) solid sprocket, the hub needs to be machined to have a proper diameter.
7. Number of links per unit (chain width): 240 (W100 to 450), 120 (W500 to 1200), 100 (over W1250).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG
	Chain type	Chain type
100	WT1515G-W100-ALF	WT1515G-W100-LFG
150	WT1515G-W150-ALF	WT1515G-W150-LFG
200	WT1515G-W200-ALF	WT1515G-W200-LFG
250	WT1515G-W250-ALF	WT1515G-W250-LFG
300	WT1515G-W300-ALF	WT1515G-W300-LFG
350	WT1515G-W350-ALF	WT1515G-W350-LFG
400	WT1515G-W400-ALF	WT1515G-W400-LFG
450	WT1515G-W450-ALF	WT1515G-W450-LFG
500	WT1515G-W500-ALF	WT1515G-W500-LFG
550	WT1515G-W550-ALF	WT1515G-W550-LFG
600	WT1515G-W600-ALF	WT1515G-W600-LFG
650	WT1515G-W650-ALF	WT1515G-W650-LFG
700	WT1515G-W700-ALF	WT1515G-W700-LFG
750	WT1515G-W750-ALF	WT1515G-W750-LFG
800	WT1515G-W800-ALF	WT1515G-W800-LFG
850	WT1515G-W850-ALF	WT1515G-W850-LFG
900	WT1515G-W900-ALF	WT1515G-W900-LFG
950	WT1515G-W950-ALF	WT1515G-W950-LFG
1000	WT1515G-W1000-ALF	WT1515G-W1000-LFG

Note: 1. Standard nominal widths are in increments of 50 mm. Chain width wider than 1,000 mm is also available. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.5% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,000 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,000 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
4. Select mold-to-width type of WT1515G-M50 for WT1515G-W with a chain width of 50 mm.
5. The position of tab guide attachment of WT1515G-W100 is different from that of WT1515G-M100.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Chain width		Material mark		Number of links	Unit
WT	**15**	**15**	**G**	**-**	**W100** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	15:15 mm	5: Closed type	G: Tab guide attachment							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

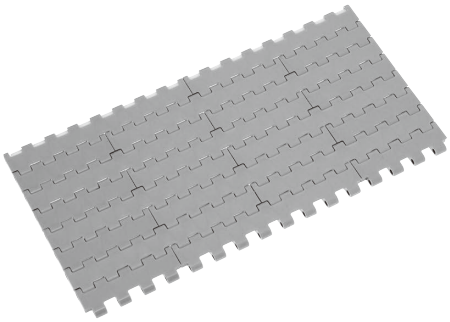
Plastic Modular Chain
BTC6

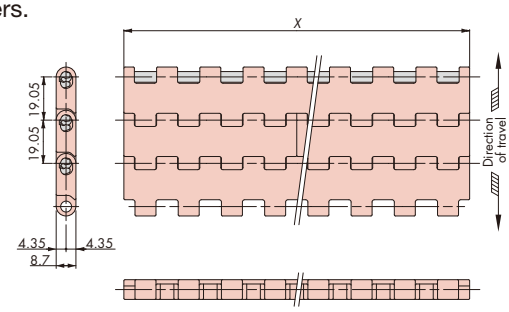
BT6 Series

Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 19.05 mm pitch. Suitable for conveying small and light weight containers.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
19.05	3	15

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR	
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	
Max. allowable load kN/m {kgf/m}	12.8{1300}									
Chain mass kg/m²	6.56									
Max. allowable speed m/min — With lube	50									
Max. allowable speed m/min — No lube	50									
Operating temperature range °C	–20 to (60)80									
Pin material	Special engineering plastic									
Snap attachment material	Polyacetal									
Snap attachment color	White									
Available	△	△	△	△	△	○	○	△	△	

■High-Function Chain

High-Function Chain													
Material	Heat resistant/ High speed		Low friction/ Wear resistant	High temperature	Freezer	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	KV150	KV250	HG	HTW	LTW	E	DIA	DIY	MWS	SE	MF	UVR
Link color	Black		Navy blue	White	White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1300}			5.1 {520}	4.22 {430}	9.0 {910}	9.8 {1000}		12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m²	13.12		6.56	4.40	4.50	6.56	5.25	8.55	6.56			
Max. allowable speed m/min — With lube	—	50	50		15	50	—	50			—	50
Max. allowable speed m/min — No lube	50						50				50	
Operating temperature range °C	–20 to 150	–20 to 250	–20 – (60)80	5 to 105	–70 to 60	–20 to (60)80	–20 to 80	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	SUS304		Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic						
Snap attachment material	Special engineering plastic		Polyacetal	Special engineering plastic	Polyethylene	Polyacetal						
Snap attachment color	Beige		White	Beige	Red	White						
Available	○	○	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length of the chain increases by about 1%, and the chain's approximate mass is the same as that of the KV250 series.
4. The surface finish of the module was changed from a mirror finish to a textured finish as of October 2013. (Except DIA/DIY, KV, LTW series)
5. Number of links per unit: 54.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76.2	BTC6-762-ALF	BTC6-762-LFB
152.4	BTC6-1524-ALF	BTC6-1524-LFB
228.6	BTC6-2286-ALF	BTC6-2286-LFB
304.8	BTC6-3048-ALF	BTC6-3048-LFB
381.0	BTC6-3810-ALF	BTC6-3810-LFB
457.2	BTC6-4572-ALF	BTC6-4572-LFB
533.4	BTC6-5334-ALF	BTC6-5334-LFB
609.6	BTC6-6096-ALF	BTC6-6096-LFB
685.8	BTC6-6858-ALF	BTC6-6858-LFB
762.0	BTC6-7620-ALF	BTC6-7620-LFB
838.2	BTC6-8382-ALF	BTC6-8382-LFB
914.4	BTC6-9144-ALF	BTC6-9144-LFB
990.6	BTC6-9906-ALF	BTC6-9906-LFB
1066.8	BTC6-10668-ALF	BTC6-10668-LFB
1143.0	BTC6-11430-ALF	BTC6-11430-LFB

Note: 1. Standard nominal widths are in increments of 76.2 mm. Custom widths or width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Number of links	Unit
BT	**C**	**6**	**-**	**7620** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	C: Closed type	6:19.05 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

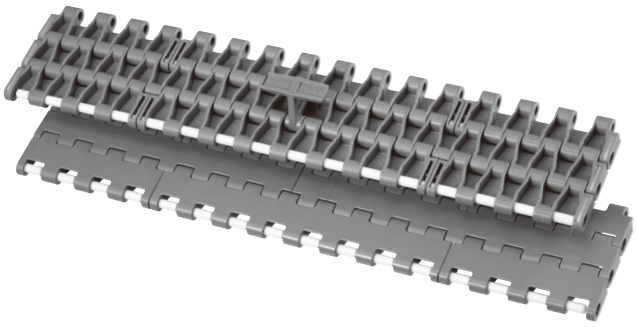
BTC6-T

BT6 Series

Straight Running (Wide Type)

Features

1. BTC6 with float-preventive tabs, which prevents chains from coming off the track.
2. The surface of the chain is free from scratching thanks to float-preventive tabs, which are suspended on the return-way.
3. Easy disconnecting/connecting and reduction of maintenance time due to adopting snap attachments.

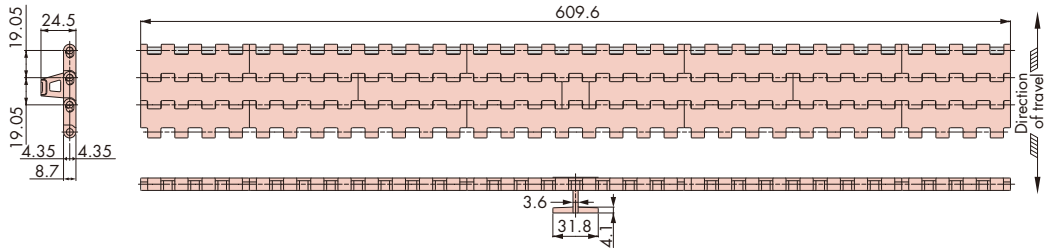


With Float-preventive Tab

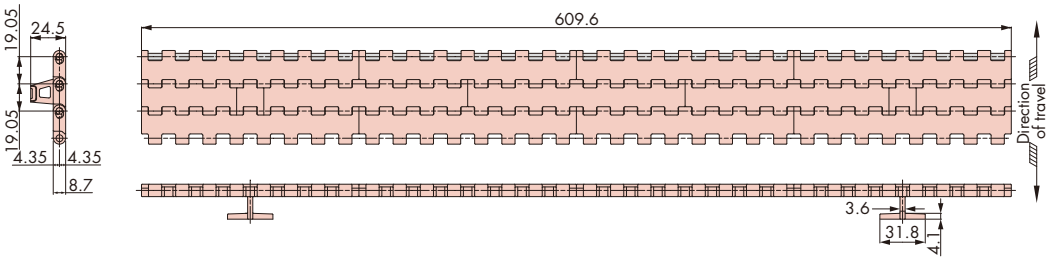
Chain pitch mm	Open area %	Backflex radius mm
19.05	3	15

Drawing (Reference)... chain width 609.6 mm

◆ Arrangement of float-preventive tabs in one row…center, 2 link intervals



◆ Arrangement of float-preventive tabs ... 76.2 mm from both ends



Note: The above is a reference diagram. To arrange float-preventive tabs other than those above, contact a Tsubaki representative.

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1300}								
Chain mass kg/m²	6.56								
Max. allowable speed m/min: With lube / No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Snap attachment material	Polyacetal								
Snap attachment color	White								
Available	△	△	△	△	△	△	△	△	△

■High-Function Chain

High-Function Chain										
Material	Low friction Wear resistant	High temperature	Freezer	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	LTW	E	DIA	DIY	MWS	SE	MF	UVR
Link color	Navy blue	White	White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8 {1300}	5.1 {520}	4.22 {430}	9.0 {910}	9.8 {1000}		12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m²	6.56	4.40	4.50	6.56	5.25	8.55	6.56			
Max. allowable speed m/min: With lube	50		15	50	–	50			–	50
Max. allowable speed m/min: No lube					50				50	
Operating temperature range °C	–20 to (60)80	5 to 105	–70 to 60	–20 to (60)80	–20 to 80	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic						
Snap attachment material	Polyacetal	Special engineering plastic	Polyethylene	Polyacetal						
Snap attachment color	White	Beige	Red	White						
Available	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length of the chain increases by about 1%, and the chain's approximate mass is the same as that of the BTC6 (KV series).
4. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
5. Compared to the chain specifications above, the approximate mass of the chain with float-preventive tabs increases by 0.1 kg/m for the 2-link spacing 1-row arrangement and 0.2 kg/m for the 2-link spacing 2-row arrangement.
6. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table above. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
7. Number of links per unit: 54.

Model Numbering

Chain type	Link shape	Chain pitch	Chain width	Tab	Material mark	Special configuration	Number of links	Unit
BT	**C**	**6**	**- 7620** Note: 2	**- T**	**- LFB** Note: 3	**- TK**	**+ 80** Note: 4	**L**
	C: Closed type	6:19.05 mm						L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT2250FT

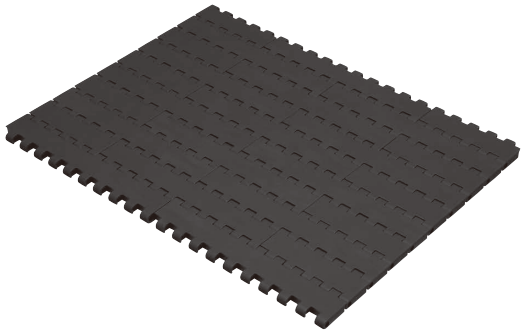
WT2250 Series

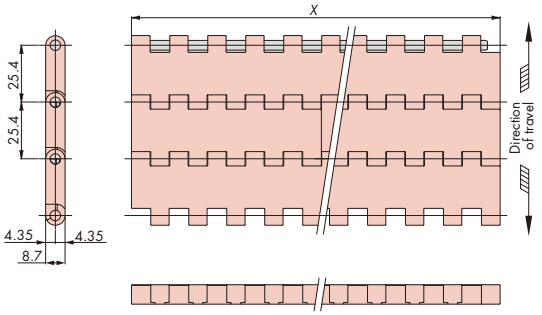
Straight Running (Wide Type)

Sprockets P.155 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	3	25

Chain Material Table

		Standard Chain	High-Function Chain
Material		Standard	High temperature
Material mark		G	HTW
Link color		Gray	White
Max. allowable load kN/m {kgf/m}		12.8{1305}	6.4{650}
Chain mass kg/m²		9.6	6.9
Max. allowable speed m/min	With lube	50	
	No lube		
Operating temperature range °C		–20 to (60)80	5 to 105
Pin material		Special engineering plastic	Polypropylene
Snap attachment material		Polyacetal	Polypropylene
Snap attachment color		Light blue	Brown
Available		△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table on the left is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit: 40.

Tsubaki Model Table

Chain width *X*	Standard G	High temperature HTW
	Chain type	Chain type
85	WT2250FT-W85-G	WT2250FT-W85-HTW
170	WT2250FT-W170-G	WT2250FT-W170-HTW
255	WT2250FT-W255-G	WT2250FT-W255-HTW
340	WT2250FT-W340-G	WT2250FT-W340-HTW
425	WT2250FT-W425-G	WT2250FT-W425-HTW
510	WT2250FT-W510-G	WT2250FT-W510-HTW
595	WT2250FT-W595-G	WT2250FT-W595-HTW
680	WT2250FT-W680-G	WT2250FT-W680-HTW
765	WT2250FT-W765-G	WT2250FT-W765-HTW
850	WT2250FT-W850-G	WT2250FT-W850-HTW

Chain width *X*	Standard G	High temperature HTW
	Chain type	Chain type
935	WT2250FT-W935-G	WT2250FT-W935-HTW
1020	WT2250FT-W1020-G	WT2250FT-W1020-HTW
1105	WT2250FT-W1105-G	WT2250FT-W1105-HTW
1190	WT2250FT-W1190-G	WT2250FT-W1190-HTW
1275	WT2250FT-W1275-G	WT2250FT-W1275-HTW
1360	WT2250FT-W1360-G	WT2250FT-W1360-HTW
1445	WT2250FT-W1445-G	WT2250FT-W1445-HTW
1530	WT2250FT-W1530-G	WT2250FT-W1530-HTW
1615	WT2250FT-W1615-G	WT2250FT-W1615-HTW

Note: 1. Standard nominal widths are in increments of 85 mm. Custom widths or width wider than 1,615 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width which expands and contracts due to temperature change. As a guideline, expansion and contraction are 0.00012/°C for the standard (G) series and 0.00011/°C for the HTW series at the basis of 20°C.

Model Numbering

Chain type	Link shape		Chain width		Material mark		Number of links	Unit
WT2250	**FT**	**-**	**W340** Note: 2	**-**	**G** Note: 3	**+**	**80** Note: 4	**L**
	FT: Closed type							L:Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Plastic Modular Chain

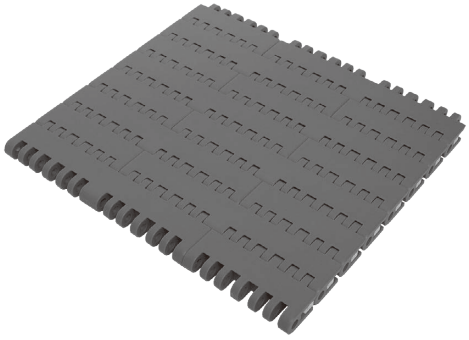
WT2505-K

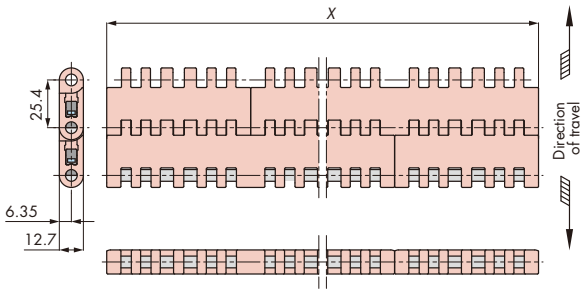
WT2500 Series

Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Improved strength of the chain is due to an increase in hinges and thicker joints of the modules.
3. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
4. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	3	20

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	29.4{3000}								
Chain mass kg/m²	12.6								
Max. allowable speed m/min: With lube	50								
Max. allowable speed m/min: No lube	50								
Operating temperature range °C	0 to 80			0 to (65)80			0 to 80	0 to (65)80	0 to 80
Pin material	Polypropylene								
Slide plug material	Polypropylene								
Slide plug color	Blue								
Available	△	△	△	△	○	△	○	△	△

■High-Function Chain

High-Function Chain						
Material	Low friction/ Wear resistant	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	E	MWS	SE	MF	UVR
Link color	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	29.4{3000}	20.6{2100}	29.4{3000}		21.8{2224}	29.4{3000}
Chain mass kg/m²	12.6					
Max. allowable speed m/min: With lube	50				–	50
Max. allowable speed m/min: No lube					50	
Operating temperature range °C	0 to (65)80	0 to 80	0 to (65)80	0 to 80		
Pin material	Polypropylene					
Slide plug material	Polypropylene					
Slide plug color	Blue					
Available	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. The link color of the slide plug was changed from yellow to blue as of December 2013.
5. Number of links per unit (chain width): 160 (K03 to 18), 100 (K21 to 27), 70 (K30 to 36), 50 (K39 to 48), 40 (over K51).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG
	Chain type	Chain type
76.2	WT2505-K03-ALF	WT2505-K03-LFG
152.4	WT2505-K06-ALF	WT2505-K06-LFG
228.6	WT2505-K09-ALF	WT2505-K09-LFG
304.8	WT2505-K12-ALF	WT2505-K12-LFG
381.0	WT2505-K15-ALF	WT2505-K15-LFG
457.2	WT2505-K18-ALF	WT2505-K18-LFG
533.4	WT2505-K21-ALF	WT2505-K21-LFG
609.6	WT2505-K24-ALF	WT2505-K24-LFG
685.8	WT2505-K27-ALF	WT2505-K27-LFG
762.0	WT2505-K30-ALF	WT2505-K30-LFG
838.2	WT2505-K33-ALF	WT2505-K33-LFG
914.4	WT2505-K36-ALF	WT2505-K36-LFG
990.6	WT2505-K39-ALF	WT2505-K39-LFG
1066.8	WT2505-K42-ALF	WT2505-K42-LFG
1143.0	WT2505-K45-ALF	WT2505-K45-LFG
1219.2	WT2505-K48-ALF	WT2505-K48-LFG
1295.4	WT2505-K51-ALF	WT2505-K51-LFG
1371.6	WT2505-K54-ALF	WT2505-K54-LFG
1447.8	WT2505-K57-ALF	WT2505-K57-LFG
1524.0	WT2505-K60-ALF	WT2505-K60-LFG

Note: 1. Standard nominal width are increments of 3 inches (76.2 mm). Custom widths or width wider than 1,524 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.3% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**25**	**05**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	25: 25.4 mm	5: Closed type							L: Link

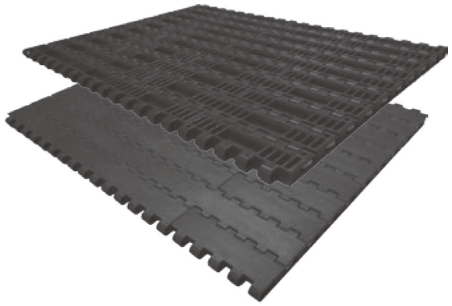
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

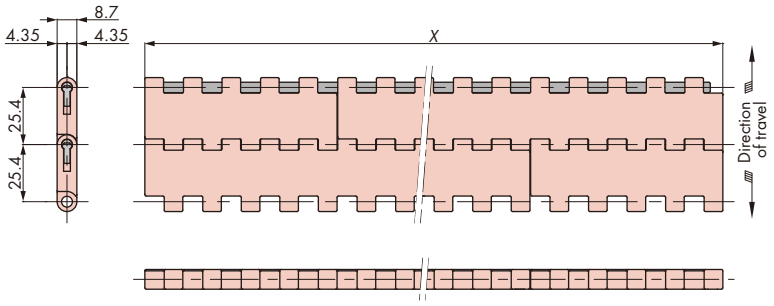
Plastic Modular Chain
WT2515-W

WT2510 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is the combination of a 170 mm module with a 85 mm module in a brick-layered array.
2. Suitable to convey beverage containers.
3. Easy disconnecting/connecting and reduction of maintenance time due to the adoption of a pin and plug system.





Chain pitch mm	Open area %	Backflex radius mm
25.4	2	25

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant				Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	CB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Blue	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1305}									
Chain mass kg/m^2	8.6									
Max. allowable speed m/min: With lube	50									
Max. allowable speed m/min: No lube	50									
Operating temperature range °C	–20 to (60)80									
Pin material	Special engineering plastic									
Plug material	Polyacetal									
Plug color	Yellow									
Available	△	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	High Temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1305}	6.4{650}	9.0{914}	12.8{1305}		9.47{966}	12.8{1305}
Chain mass kg/m^2	8.6	5.7	8.6				
Max. allowable speed m/min: With lube	50					–	50
Max. allowable speed m/min: No lube						50	
Operating temperature range °C	–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material	Polyacetal	Polypropylene	Polyacetal				
Plug color	Yellow	Blue	Yellow				
Available	○	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. Number of links per unit (chain width): 200 (W85 to 425), 100 (W510 to 935), 80 (W1020 to 1190), 50 (W1275 to 1785), 40 (over W1870).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant HG	Low friction/Wear resistant CB
	Chain type	Chain type	Chain type
85	WT2515-W85-ALF	WT2515-W85-HG	WT2515-W85-CB
170	WT2515-W170-ALF	WT2515-W170-HG	WT2515-W170-CB
255	WT2515-W255-ALF	WT2515-W255-HG	WT2515-W255-CB
340	WT2515-W340-ALF	WT2515-W340-HG	WT2515-W340-CB
425	WT2515-W425-ALF	WT2515-W425-HG	WT2515-W425-CB
510	WT2515-W510-ALF	WT2515-W510-HG	WT2515-W510-CB
595	WT2515-W595-ALF	WT2515-W595-HG	WT2515-W595-CB
680	WT2515-W680-ALF	WT2515-W680-HG	WT2515-W680-CB
765	WT2515-W765-ALF	WT2515-W765-HG	WT2515-W765-CB
850	WT2515-W850-ALF	WT2515-W850-HG	WT2515-W850-CB
935	WT2515-W935-ALF	WT2515-W935-HG	WT2515-W935-CB
1020	WT2515-W1020-ALF	WT2515-W1020-HG	WT2515-W1020-CB
1105	WT2515-W1105-ALF	WT2515-W1105-HG	WT2515-W1105-CB
1190	WT2515-W1190-ALF	WT2515-W1190-HG	WT2515-W1190-CB
1275	WT2515-W1275-ALF	WT2515-W1275-HG	WT2515-W1275-CB
1360	WT2515-W1360-ALF	WT2515-W1360-HG	WT2515-W1360-CB
1445	WT2515-W1445-ALF	WT2515-W1445-HG	WT2515-W1445-CB
1530	WT2515-W1530-ALF	WT2515-W1530-HG	WT2515-W1530-CB
1615	WT2515-W1615-ALF	WT2515-W1615-HG	WT2515-W1615-CB

Note: 1. Standard nominal widths are in increments of 85 mm. Custom widths or width wider than 1,615 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,615 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,615 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**25**	**15**	**-**	**W340** Note: 2	**-**	**CB** Note: 3	**+**	**80** Note: 4	**L**
	25: 25.4 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT2515G-W

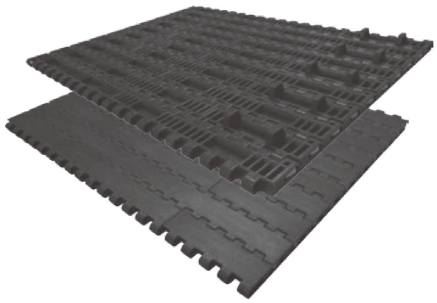
WT2510 Series

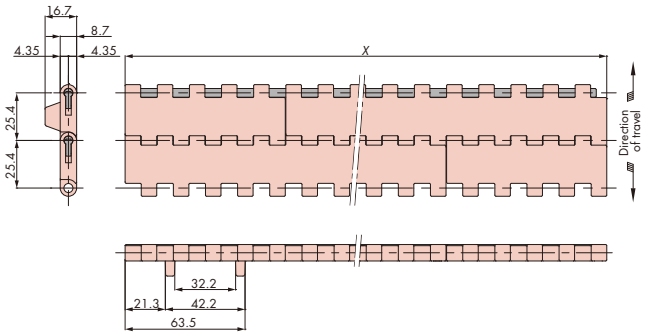
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is the combination of a 170 mm module with a 85 mm module in a brick-layered array.
2. Suitable to convey beverage containers.
3. Easy disconnecting/connecting and reduction of maintenance time due to the adoption of a pin and plug system.
4. Suitable for layouts with side transfer between conveyors thanks to tab guide attachment.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
25.4	2	25

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant				Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	CB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Blue	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1305}									
Chain mass kg/m^2	8.6									
Max. allowable speed m/min With lube / No lube	50									
Operating temperature range °C	–20 to (60) 80									
Pin material	Special engineering plastic									
Plug material	Polyacetal									
Plug color	Yellow									
Available	△	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1305}	6.4{650}	9.0{914}	12.8{1305}		9.47{966}	12.8{1305}
Chain mass kg/m^2	8.6	5.7	8.6				
Max. allowable speed m/min With lube	50					–	50
Max. allowable speed m/min No lube						50	
Operating temperature range °C	–20 to (60) 80	5 to 105	–20 to (60) 80			–20 to 80	–20 to (60) 80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material	Polyacetal	Polypropylene	Polyacetal				
Plug color	Yellow	Blue	Yellow				
Available	○	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 140 (W85 to 425), 60 (W510 to 1190), 40 (over W1275).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant HG	Low friction/Wear resistant CB
	Chain type	Chain type	Chain type
85	WT2515G-W85-ALF	WT2515G-W85-HG	WT2515G-W85-CB
170	WT2515G-W170-ALF	WT2515G-W170-HG	WT2515G-W170-CB
255	WT2515G-W255-ALF	WT2515G-W255-HG	WT2515G-W255-CB
340	WT2515G-W340-ALF	WT2515G-W340-HG	WT2515G-W340-CB
425	WT2515G-W425-ALF	WT2515G-W425-HG	WT2515G-W425-CB
510	WT2515G-W510-ALF	WT2515G-W510-HG	WT2515G-W510-CB
595	WT2515G-W595-ALF	WT2515G-W595-HG	WT2515G-W595-CB
680	WT2515G-W680-ALF	WT2515G-W680-HG	WT2515G-W680-CB
765	WT2515G-W765-ALF	WT2515G-W765-HG	WT2515G-W765-CB
850	WT2515G-W850-ALF	WT2515G-W850-HG	WT2515G-W850-CB
935	WT2515G-W935-ALF	WT2515G-W935-HG	WT2515G-W935-CB
1020	WT2515G-W1020-ALF	WT2515G-W1020-HG	WT2515G-W1020-CB
1105	WT2515G-W1105-ALF	WT2515G-W1105-HG	WT2515G-W1105-CB
1190	WT2515G-W1190-ALF	WT2515G-W1190-HG	WT2515G-W1190-CB
1275	WT2515G-W1275-ALF	WT2515G-W1275-HG	WT2515G-W1275-CB
1360	WT2515G-W1360-ALF	WT2515G-W1360-HG	WT2515G-W1360-CB
1445	WT2515G-W1445-ALF	WT2515G-W1445-HG	WT2515G-W1445-CB
1530	WT2515G-W1530-ALF	WT2515G-W1530-HG	WT2515G-W1530-CB
1615	WT2515G-W1615-ALF	WT2515G-W1615-HG	WT2515G-W1615-CB

Note: 1. Standard nominal widths are in increments of 85 mm. Custom widths or width wider than 1,615 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,615 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,615 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
4. Mold-to-width type of WT2515G-W can also be possible to use as 85 mm width of WT2515G-M330.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Chain width		Material mark		Number of links	Unit
WT	**25**	**15**	**G**	**-**	**W340** Note: 2	**-**	**CB** Note: 3	**+**	**80** Note: 4	**L**
	25: 25.4 mm	5: Closed type	G: Tab guide attachment							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

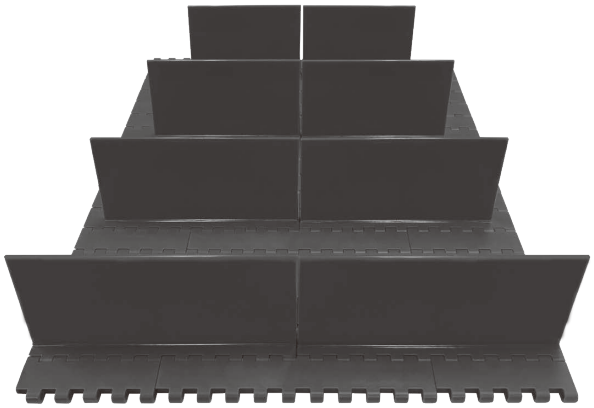
WT2515F-W

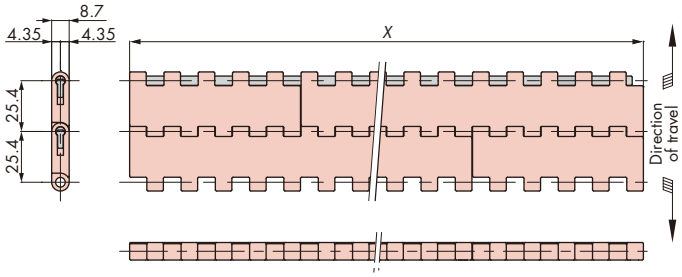
WT2510 Series

Straight Running/Flight Type (Wide Type)

Features

1. Plastic modular chains with flight can be possible for vertical transportation.
2. Enables conveyance of boxes, cases and bulk items vertically.
3. Easy disconnecting/connecting and reduction of maintenance time due to the adoption of a pin and plug system.





Chain pitch mm	Open area %	Backflex radius mm
25.4	2	Note

Note: Backflex radius depends on flight formation and height.

Chain Material Table

		Standard Chain	High-Function Chain
Material		Low friction/ Wear resistant	High temperature
Material mark		CB	HTW
Link color		Blue	White
Max. allowable load kN/m {kgf/m}		12.8{1305}	6.4{650}
Chain mass kg/m^2		8.6	5.7
Max. allowable speed m/min	With lube	50	50
	No lube		
Operating temperature range °C		–20 to (60) 80	5 to 105
Pin material		Special engineering plastic	Polypropylene
Plug material		Polyacetal	Polypropylene
Plug color		Yellow	Blue
Available		△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. The chain mass shown in the chain material table above indicates the mass without flight module. Contact a Tsubaki representative for more information.

Tsubaki Model Table

Chain width *X*	Low friction/Wear resistant CB	High temperature HTW
	Chain type	Chain type
170	WT2515F-W170-CB	WT2515F-W170-HTW
255	WT2515F-W255-CB	WT2515F-W255-HTW
340	WT2515F-W340-CB	WT2515F-W340-HTW
425	WT2515F-W425-CB	WT2515F-W425-HTW
510	WT2515F-W510-CB	WT2515F-W510-HTW
595	WT2515F-W595-CB	WT2515F-W595-HTW
680	WT2515F-W680-CB	WT2515F-W680-HTW
765	WT2515F-W765-CB	WT2515F-W765-HTW
850	WT2515F-W850-CB	WT2515F-W850-HTW

Note: 1. Standard nominal widths are in increments of 85 mm. Widths wider than 850 mm are available. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table above. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,615 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,615 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene. (HTW series not included.)
4. Please refer to the model numbering on the right for Tsubaki model numbers.

Flight Dimensions

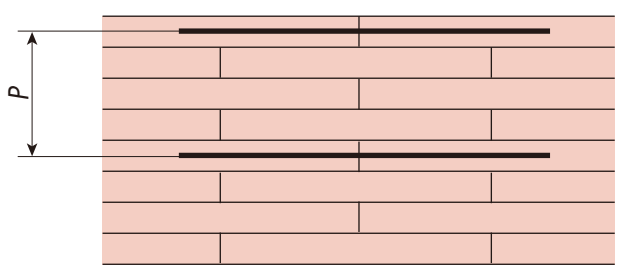
The following dimensions must be determined in order to install flights:

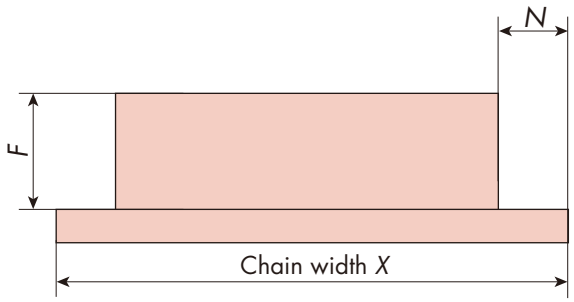
■P = flight mount spacing (It can be mounted starting as small as 50.8 mm. Contact a Tsubaki representative for more information.)

■F = flight height (Select from 50.8 mm, or 76.2 mm.)

■N = indent (Select from 17 mm, 34 mm, or 51 mm. Indents are necessary to support the chain on the return-way using rollers or the like.)

Note: With 0 mm indent, the chain cannot be received by the rollers on the return-way.





Model Numbering

■Standard Combinations

Chain type	Chain pitch	Link shape	Flight		Chain width		Material mark		Pitch of flight		Flight height	Indent		Number of links		Unit
WT	25	15	F	-	W340 Note: 2	-	HTW Note: 3	-	10L Note: 4	-	F2	N3	+	80 Note: 5		L
	25: 25.4 mm	5: Closed type							10L: Every 10 links		F2: 2 inches (50.8 mm) F3: 3 inches (76.2 mm)	N0: 0 mm N1: 17 mm N3: 34 mm N5: 51 mm				L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table on the left.
3. Please check the chain material and material marks in the chain material table on the left.
4. It can be installed as small as every 2 links.
5. Minimum quantity: 2, maximum quantity: 99999.

■Special Combinations

Chain type	Chain pitch	Link shape	Flight		Chain width		Material mark		Special configuration		Number of links		Unit
WT	25	15	F	-	W340 Note: 2	-	HTW Note: 4	-	TK	+	80 Note: 5		L
	25: 25.4 mm	5: Closed type											L: Link

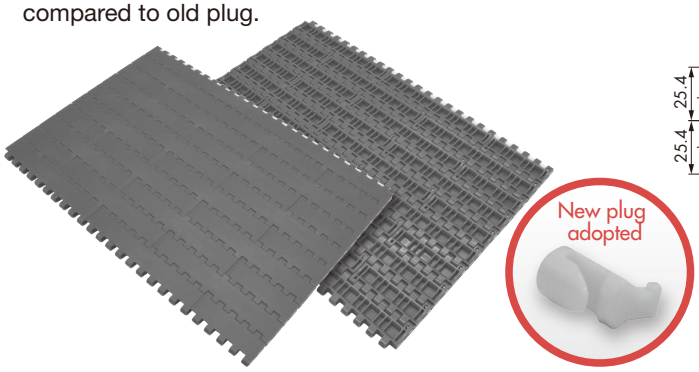
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table on the left.
3. Contact a Tsubaki representative if special elements other than the standard configuration, such as chain width, flight installation interval, flight height, indent interval, etc., are included.
4. Please check the chain material and material marks in the chain material table on the left.
5. Minimum quantity: 2, maximum quantity: 99999.

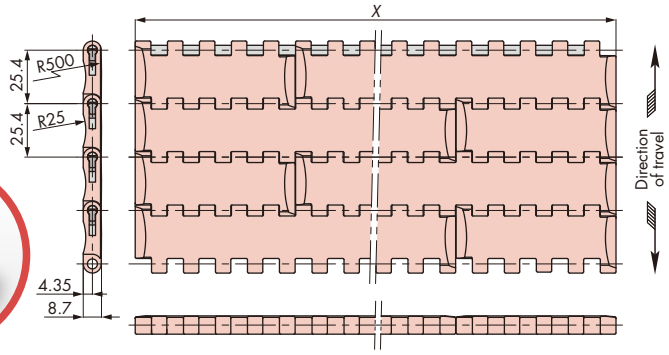
Plastic Modular Chain
WT2525-K

WT2520 Series
Straight Running (Wide Type)

Features

1. Suitable to convey stacked cardboard sheets.
2. The chain's top surface has a slightly convex shape where stacked heavy sheets slightly slip into, thereby preventing the sheets from slipping.
3. The backside surface has a rounded shape, which is suitable to wind around the round bar of 50 mm and minimize dead space between the conveyors.
4. Easy to disconnect/connect due to the adoption of new plug, of which the required force to insert plug decreased to 60%, compared to old plug.





Chain pitch mm	Open area %	Backflex radius mm
25.4	1	25

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1305}								
Chain mass kg/m²	8.6								
Max. allowable speed m/min With lube	50								
Max. allowable speed m/min No lube	50								
Operating temperature range °C	–20 to (60) 80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	○	△	△	△	△	△	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1305}	5.1{522}	9.0{914}	12.8{1305}		9.47 {966}	12.8 {1305}
Chain mass kg/m²	8.6	5.7	8.6				
Max. allowable speed m/min With lube	50					–	50
Max. allowable speed m/min No lube						50	
Operating temperature range °C	–20 to (60) 80	5 to 105	–20 to (60) 80			–20 to 80	–20 to (60) 80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material	Polyacetal	Polypropylene	Polyacetal				
Plug color	Yellow	Blue	Yellow				
Available	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 200 (K03 to 18), 100 (K21 to 36), 70 (K39 to 48), 50 (K51 to 72), 40 (over K75).
5. The plug has been updated to a new one as of October 2020. This new plug performs the same as the old one (prevents pin from coming out). Note that the new plug cannot be used for chains that use the old plug.

Tsubaki Model Table

Chain width *X*	Standard B Chain type
76.2	WT2525-K03-B
152.4	WT2525-K06-B
228.6	WT2525-K09-B
304.8	WT2525-K12-B
381.0	WT2525-K15-B
457.2	WT2525-K18-B
533.4	WT2525-K21-B
609.6	WT2525-K24-B

Chain width *X*	Standard B Chain type
685.8	WT2525-K27-B
762.0	WT2525-K30-B
838.2	WT2525-K33-B
914.4	WT2525-K36-B
990.6	WT2525-K39-B
1066.8	WT2525-K42-B
1143.0	WT2525-K45-B

Note: 1. Standard nominal width are increments of 3 inches (76.2 mm). Custom widths or width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**25**	**25**	**-**	**K24** Note: 2	**-**	**B** Note: 3	**+**	**80** Note: 4	**L**
	25: 25.4 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

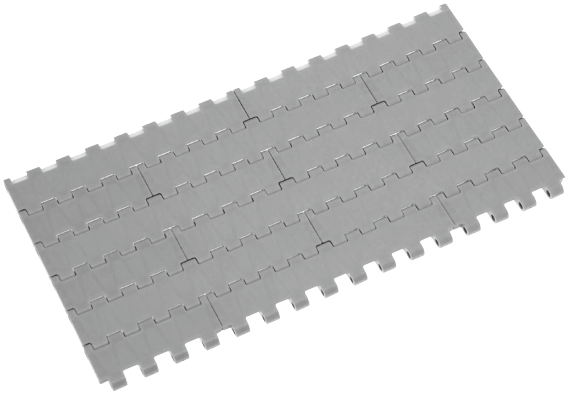
Plastic Modular Chain BTC8

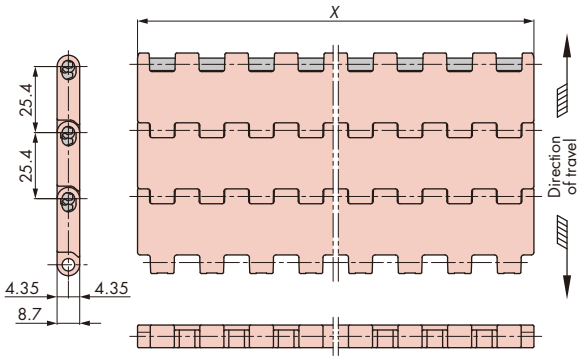
BT8 Series

Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 25.4 mm pitch. Suitable for conveying medium-sized containers.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	2.5	25

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR	
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	
Max. allowable load kN/m {kgf/m}	12.8{1300}									
Chain mass kg/m^2	5.90									
Max. allowable speed m/min: With lube	50									
Max. allowable speed m/min: No lube	50									
Operating temperature range °C	–20 to (60)80									
Pin material	Special engineering plastic									
Snap attachment material	Polyacetal									
Snap attachment color	White									
Available	△	△	△	△	△	○	○	△	△	

■High-Function Chain

High-Function Chain										
Material	Low friction Wear resistant	High temperature	Freezer	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	LTW	E	DIA	DIY	MWS	SE	MF	UVR
Link color	Navy blue	White	White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8 {1300}	5.1 {520}	4.22 {430}	9.0 {910}	9.8{1000}		12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m^2	5.90	4.10		5.90	5.25	7.90	5.90			
Max. allowable speed m/min: With lube	50		15	50	–	50	50		–	50
Max. allowable speed m/min: No lube					50				50	
Operating temperature range °C	–20 to (60)80	5 to 105	–70 to 60	–20 to (60) 80	–20 to 80	–20 to (60) 80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic						
Snap attachment material	Polyacetal	Special engineering plastic	Polyethylene	Polyacetal						
Snap attachment color	White	Beige	Red	White						
Available	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit: 40.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76.2	BTC8-762-ALF	BTC8-762-LFB
152.4	BTC8-1524-ALF	BTC8-1524-LFB
228.6	BTC8-2286-ALF	BTC8-2286-LFB
304.8	BTC8-3048-ALF	BTC8-3048-LFB
381.0	BTC8-3810-ALF	BTC8-3810-LFB
457.2	BTC8-4572-ALF	BTC8-4572-LFB
533.4	BTC8-5334-ALF	BTC8-5334-LFB
609.6	BTC8-6096-ALF	BTC8-6096-LFB
685.8	BTC8-6858-ALF	BTC8-6858-LFB
762.0	BTC8-7620-ALF	BTC8-7620-LFB
838.2	BTC8-8382-ALF	BTC8-8382-LFB
914.4	BTC8-9144-ALF	BTC8-9144-LFB
990.6	BTC8-9906-ALF	BTC8-9906-LFB
1066.8	BTC8-10668-ALF	BTC8-10668-LFB
1143.0	BTC8-11430-ALF	BTC8-11430-LFB

Note: 1. Standard nominal widths are in increments of 76.2 mm. Custom widths or width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about +0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Number of links	Unit
BT	**C**	**8**	**-**	**7620** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	C: Closed type	8: 25.4 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
BTC8-A

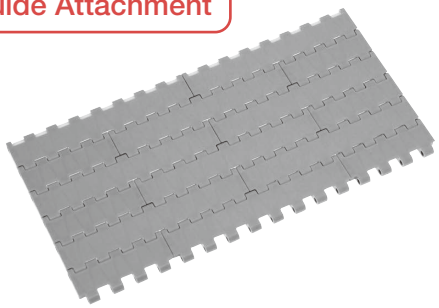
BT8 Series

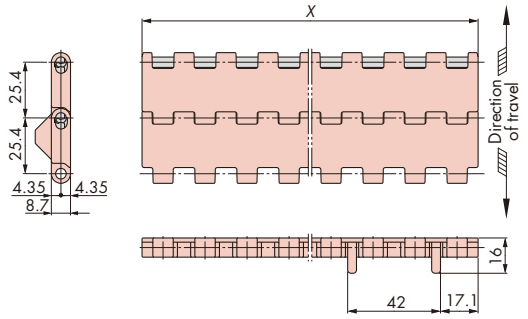
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 25.4 mm pitch. Suitable for conveying medium-sized containers.
3. Suitable for layouts with side transfer between conveyors thanks to tab guide attachment.
4. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
25.4	2.5	25

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		12.8{1300}								
Chain mass kg/m²		5.90								
Max. allowable speed m/min	With lube	50								
	No lube									
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Snap attachment material		Polyacetal								
Snap attachment color		White								
Available		△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain											
Material		Low friction Wear resistant	High temperature	Freezer	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	LTW	E	DIA	DIY	MWS	SE	MF	UVR
Link color		Navy blue	White	White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		12.8 {1300}	5.1 {520}	4.22 {430}	9.0 {910}	9.8{1000}		12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m²		5.90	4.10		5.90	5.25	7.90	5.90			
Max. allowable speed m/min	With lube	50		15	50	–	50	50		–	50
	No lube					50				50	
Operating temperature range °C		–20 to (60) 80	5 to 105	–70 to 60	–20 to (60)80	–20 to 80	–20 to (60) 80			–20 to 80	–20 to (60) 80
Pin material		Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic						
Snap attachment material		Polyacetal	Special engineering plastic	Polyethylene	Polyacetal						
Snap attachment color		White	Beige	Red	White						
Available		△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. The chain mass with tab guide attachment increases by 0.5 kg/m from the value specified in the chain material table above. (The attachments are installed for every two links on only one side of the chain.)
5. Number of links per unit: 40.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76.2	BTC8-762-A-ALF	BTC8-762-A-LFB
152.4	BTC8-1524-A-ALF	BTC8-1524-A-LFB
228.6	BTC8-2286-A-ALF	BTC8-2286-A-LFB
304.8	BTC8-3048-A-ALF	BTC8-3048-A-LFB
381.0	BTC8-3810-A-ALF	BTC8-3810-A-LFB
457.2	BTC8-4572-A-ALF	BTC8-4572-A-LFB
533.4	BTC8-5334-A-ALF	BTC8-5334-A-LFB
609.6	BTC8-6096-A-ALF	BTC8-6096-A-LFB
685.8	BTC8-6858-A-ALF	BTC8-6858-A-LFB
762.0	BTC8-7620-A-ALF	BTC8-7620-A-LFB
838.2	BTC8-8382-A-ALF	BTC8-8382-A-LFB
914.4	BTC8-9144-A-ALF	BTC8-9144-A-LFB
990.6	BTC8-9906-A-ALF	BTC8-9906-A-LFB
1066.8	BTC8-10668-A-ALF	BTC8-10668-A-LFB
1143.0	BTC8-11430-A-ALF	BTC8-11430-A-LFB

Note: 1. Standard nominal widths are in increments of 76.2 mm. Custom widths or width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Tab guide attachment		Material mark		Number of links	Unit
BT	**C**	**8**	**-**	**7620** Note: 2	**-**	**A**	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	C: Closed type	8: 25.4 mm				G: Tab guide attachment					L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain BTC8S

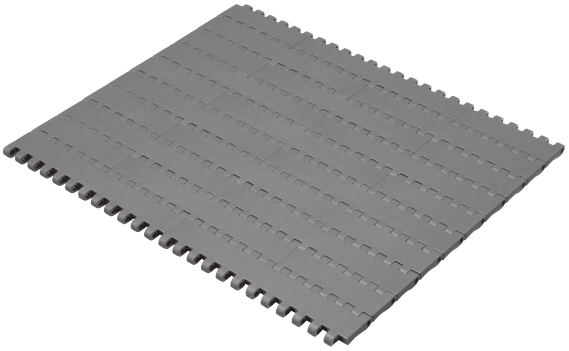
BT8 Series

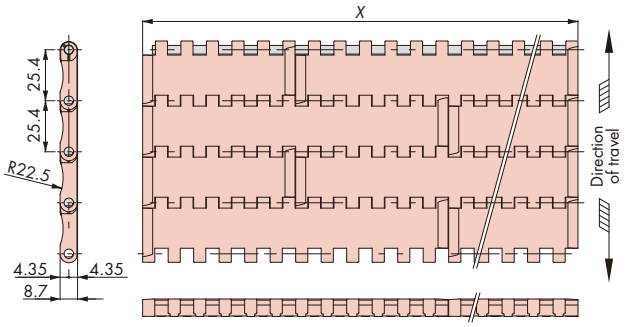
Straight Running (Wide Type)

Sprockets P.156 | Sprocket Pitch P.458 | Rails P.323 | Peripheral Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	3	25

Chain Material Table

Standard Chain		
Material		Standard
Material mark		B
Link color		Blue
Max. allowable load kN/m {kgf/m}		12.8{1305}
Chain mass kg/m^2		8.5
Max. allowable speed m/min	With lube	50
	No lube	
Operating temperature range °C		–20 to (60) 80
Pin material		Special engineering plastic
Snap attachment material		Polyacetal
Snap attachment color		Light blue
Available		△

Note: 1. "△": Made-to-order product (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width *X*): 120 (304.8 mm or less), 60 (381 to 1,676.4 mm), 40 (over 1,752.4 mm).

Tsubaki Model Table

Chain width *X*	Standard chain B
	Chain type
76.2	BTC8S-762-B
152.4	BTC8S-1524-B
228.6	BTC8S-2286-B
304.8	BTC8S-3048-B
381.0	BTC8S-3810-B
457.2	BTC8S-4572-B
533.4	BTC8S-5334-B
609.6	BTC8S-6096-B
685.8	BTC8S-6858-B

Chain width *X*	Standard chain B
	Chain type
762.0	BTC8S-7620-B
838.2	BTC8S-8382-B
914.4	BTC8S-9144-B
990.6	BTC8S-9906-B
1066.8	BTC8S-10668-B
1143.0	BTC8S-11430-B

Note: 1. Standard nominal width are increments of 3 inches (76.2 mm). Custom widths or width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width which expands and contracts due to temperature change. As a guideline, expansion and contraction specifications are 0.00012/°C based on 20°C.

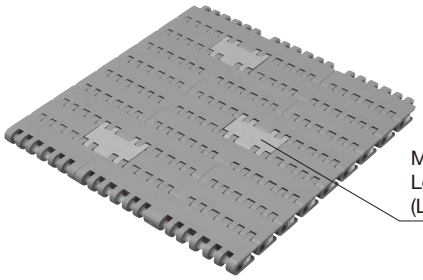
Model Numbering

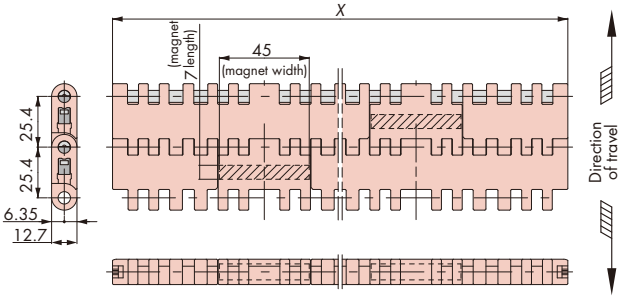
Chain type	Link shape	Chain pitch	Chain type		Chain width		Material mark		Number of links	Unit
BT	C	8	S	-	7620 Note: 2	-	B	+	80 Note: 3	L
	C: Closed type	8: 25.4 mm								L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999

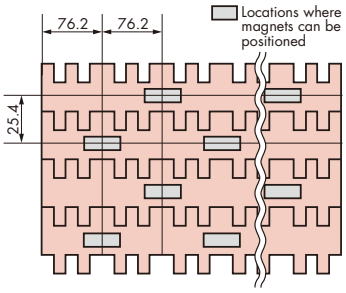
Features

1. Magnet embedded links can be convey magnetic products vertically.
2. It is free from damage caused by interfering product and flight module.





•Magnet Model Diagram
Locations where the magnets can be positioned can be selected as desired to match the application and conveyed products.



Chain pitch mm	Open area %	Backflex radius mm
25.4	3	25

Chain Material Table

	Standard Chain									High-Function Chain				
Material	Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow
Max. allowable load kN/m {kgf/m}	26.4 {2700}										18.5 {1890}	26.4 {2700}		19.5 {1998}
Chain mass kg/m²	12.6 Note: 4													
Max. allowable speed m/min — No lube	50													
Operating temperature range °C	0 to 80													
Pin material	Special engineering plastic													
Slide plug material	Polypropylene													
Slide plug color	Blue													
Available	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified when loads are evenly applied to the entire surface of the chain in a widthwise direction. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width.
3. Standard nominal width begins at 6 inches (152.4 mm) with increments of 76.2 mm. Magnet links are configured every 2 links or larger for a chain width of 152.4 mm.
4. The chain mass shown in the chain material table above indicate the mass without magnet. Add 0.02 kg per magnet.
5. The BTM8H is only for dry conditions. For inclined conveyance applications, the conveyor must be designed to accommodate usage conditions, such as the kind of objects to be conveyed and inclination angle. Please fill out the inquiry sheet on page 486 and contact a Tsubaki representative.
6. The color of the slide plug was changed from yellow to blue as of December 2013.
7. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.3% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table above which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
8. Number of links per unit: 40.

Model Numbering

Chain type	Link shape	Chain pitch	Chain type	Chain width	Material mark	Special configuration	Number of links	Unit
BT	M	8	H	- 3048 Note: 2	- LFG Note: 3	- TK Note: 4	+ 80 Note: 5	L
	M: Magnetic type	8: 25.4 mm						L: Link

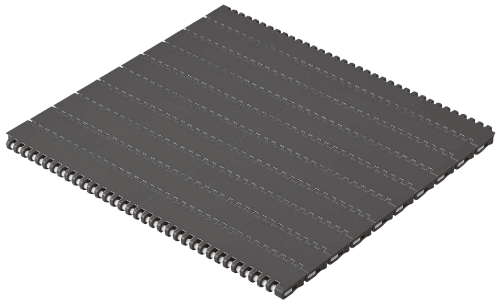
Note: 1. Do not leave space between letters and symbols.
2. 3048: 304.8 mm. Chain width is indicated up to the first decimal place.
3. Please check the chain material and material marks in the chain material table above.
4. Magnet-mounting positions should be designed according to operational conditions.
5. Minimum quantity: 2, maximum quantity: 99999.

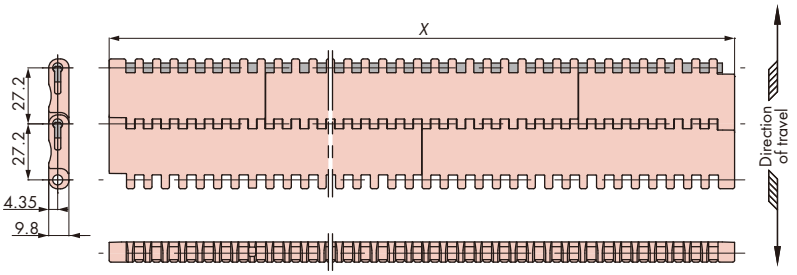
Plastic Modular Chain
WT2705-K

WT2700 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable to convey containers, foods and rubber sheets.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
27.2	1.2	30

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		15.4{1570}								
Chain mass kg/m²		7.6								
Max. allowable speed m/min	With lube	50								
	No lube									
Operating temperature range °C		–20 to (60) 80	0 to 80	–20 to (60) 80						
Pin material		Special engineering plastic	Polypropylene	Special engineering plastic						
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	○ Note: 5	△	△	△	○ Note: 5	△	△	△

■High-Function Chain

High-Function Chain								
Material		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	E	MWS	SE	MF	UVR
Link color		Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		15.4{1570}	10.8{1100}	10.8{1099}	15.4{1570}		11.4{1162}	15.4{1570}
Chain mass kg/m²		7.6	5.2	7.6				
Max. allowable speed m/min	With lube	50					–	50
	No lube						50	
Operating temperature range °C		–20 to (60) 80	5 to 105	–20 to (60) 80			–20 to 80	–20 to (60) 80
Pin material		Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material		Polyacetal	Polypropylene	Polyacetal				
Plug color		Yellow	Blue	Yellow				
Available		△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. Number of links per unit (chain width): 200 (K09 to 18), 100 (K21 to 36), 80 (K39 to 48), 50 (over K51).
5. Chains with widths of 1,600.2 mm (K63) to 1,905.0 mm (K75) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Standard B	Low friction/Wear resistant LFB
	Chain type	Chain type
228.6	WT2705-K09-B	WT2705-K09-LFB
304.8	WT2705-K12-B	WT2705-K12-LFB
381.0	WT2705-K15-B	WT2705-K15-LFB
457.2	WT2705-K18-B	WT2705-K18-LFB
533.4	WT2705-K21-B	WT2705-K21-LFB
609.6	WT2705-K24-B	WT2705-K24-LFB
685.8	WT2705-K27-B	WT2705-K27-LFB
762.0	WT2705-K30-B	WT2705-K30-LFB
838.2	WT2705-K33-B	WT2705-K33-LFB
914.4	WT2705-K36-B	WT2705-K36-LFB
990.6	WT2705-K39-B	WT2705-K39-LFB
1066.8	WT2705-K42-B	WT2705-K42-LFB
1143.0	WT2705-K45-B	WT2705-K45-LFB
1219.2	WT2705-K48-B	WT2705-K48-LFB
1295.4	WT2705-K51-B	WT2705-K51-LFB
1371.6	WT2705-K54-B	WT2705-K54-LFB
1447.8	WT2705-K57-B	WT2705-K57-LFB
1524.0	WT2705-K60-B	WT2705-K60-LFB
1600.2	WT2705-K63-B	WT2705-K63-LFB
1676.4	WT2705-K66-B	WT2705-K66-LFB
1752.6	WT2705-K69-B	WT2705-K69-LFB
1828.8	WT2705-K72-B	WT2705-K72-LFB
1905.0	WT2705-K75-B	WT2705-K75-LFB

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Chain width wider than 1,905 mm. Contact a Tsubaki representative for more information.
2. The minimum width begins at 50.8 mm with increments of 1/3 inches, by using cut modules.
3. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
4. The chain with a width narrower than 1,905 mm must be used when ambient temperature is higher than 40°C. A chain width wider than 1,905 mm is available in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**27**	**05**	**-**	**K24** Note: 2	**-**	**B** Note: 3	**+**	**80** Note: 4	**L**
	27: 27.2 mm	5: Closed type							L: Link

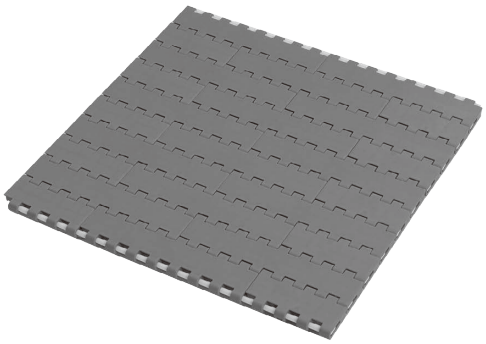
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

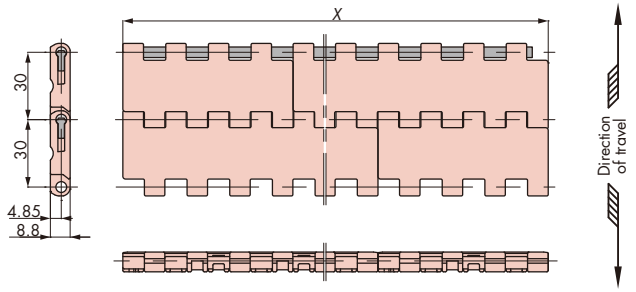
Plastic Modular Chain
WT3005-K

WT3000 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Can be possible to drive coaxially with the WT1500 series due to a 30 mm pitch.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
30	4	30

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	6.3								
Max. allowable speed m/min: With lube	50								
Max. allowable speed m/min: No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	○ Note: 5	△	○ Note: 5	○ Note: 5	△

■High-Function Chain

High-Function Chain						
Material	Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	E	MWS	SE	MF	UVR
Link color	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5{1070}	8.0{816}	10.5{1070}		7.8{796}	10.5{1070}
Chain mass kg/m²	6.3					
Max. allowable speed m/min: With lube	50				–	50
Max. allowable speed m/min: No lube					50	
Operating temperature range °C	–20 to (60) 80				–20 to 80	–20 to (60) 80
Pin material	Special engineering plastic					
Plug material	Polyacetal					
Plug color	Yellow					
Available	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. Number of links per unit (chain width): 200 (K03 to 18), 100 (K21 to 36), 70 (K39 to 48), 50 (K51 to 72), 40 (over K75)
5. Chains with widths of 1,600.2 mm (K63) to 1,828.8 mm (K72) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
76.2	WT3005-K03-ALF	WT3005-K03-LFG	WT3005-K03-NLF
152.4	WT3005-K06-ALF	WT3005-K06-LFG	WT3005-K06-NLF
228.6	WT3005-K09-ALF	WT3005-K09-LFG	WT3005-K09-NLF
304.8	WT3005-K12-ALF	WT3005-K12-LFG	WT3005-K12-NLF
381.0	WT3005-K15-ALF	WT3005-K15-LFG	WT3005-K15-NLF
457.2	WT3005-K18-ALF	WT3005-K18-LFG	WT3005-K18-NLF
533.4	WT3005-K21-ALF	WT3005-K21-LFG	WT3005-K21-NLF
609.6	WT3005-K24-ALF	WT3005-K24-LFG	WT3005-K24-NLF
685.8	WT3005-K27-ALF	WT3005-K27-LFG	WT3005-K27-NLF
762.0	WT3005-K30-ALF	WT3005-K30-LFG	WT3005-K30-NLF
838.2	WT3005-K33-ALF	WT3005-K33-LFG	WT3005-K33-NLF
914.4	WT3005-K36-ALF	WT3005-K36-LFG	WT3005-K36-NLF
990.6	WT3005-K39-ALF	WT3005-K39-LFG	WT3005-K39-NLF
1066.8	WT3005-K42-ALF	WT3005-K42-LFG	WT3005-K42-NLF
1143.0	WT3005-K45-ALF	WT3005-K45-LFG	WT3005-K45-NLF
1219.2	WT3005-K48-ALF	WT3005-K48-LFG	WT3005-K48-NLF
1295.4	WT3005-K51-ALF	WT3005-K51-LFG	WT3005-K51-NLF
1371.6	WT3005-K54-ALF	WT3005-K54-LFG	WT3005-K54-NLF
1447.8	WT3005-K57-ALF	WT3005-K57-LFG	WT3005-K57-NLF
1524.0	WT3005-K60-ALF	WT3005-K60-LFG	WT3005-K60-NLF
1600.2	WT3005-K63-ALF	WT3005-K63-LFG	WT3005-K63-NLF
1676.4	WT3005-K66-ALF	WT3005-K66-LFG	WT3005-K66-NLF
1752.6	WT3005-K69-ALF	WT3005-K69-LFG	WT3005-K69-NLF
1828.8	WT3005-K72-ALF	WT3005-K72-LFG	WT3005-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,828.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.6% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,828.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,828.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**30**	**05**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	30: 30 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT3005G-K

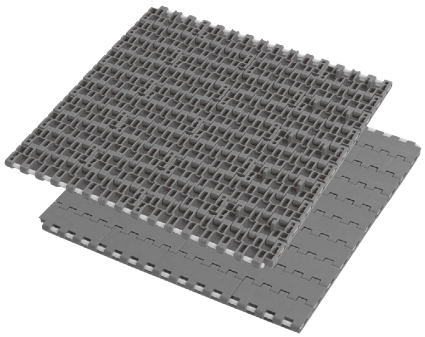
WT3000 Series

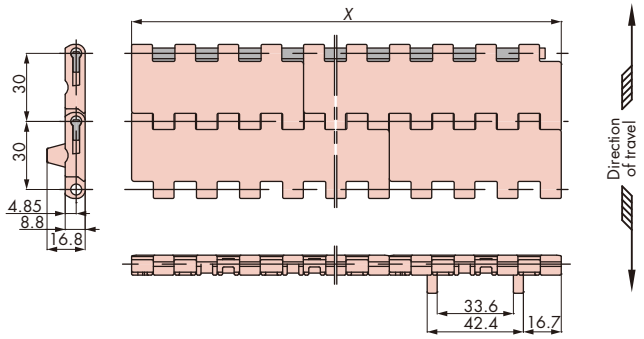
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Can be possible to drive coaxially with the WT1500 series due to 30 mm pitch.
3. Suitable for layouts with side transfer between conveyors thanks to tab guide attachment.
4. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
30	4	30

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	6.3								
Max. allowable speed m/min: With lube / No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	○ Note: 5	△	○ Note: 5	○ Note: 5	△

■High-Function Chain

High-Function Chain						
Material	Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	E	MWS	SE	MF	UVR
Link color	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5{1070}	8.0{816}	10.5{1070}		7.8{796}	10.5{1070}
Chain mass kg/m²	6.3					
Max. allowable speed m/min: With lube	50				–	50
Max. allowable speed m/min: No lube					50	
Operating temperature range °C	–20 to (60) 80				–20 to 80	–20 to (60) 80
Pin material	Special engineering plastic					
Plug material	Polyacetal					
Plug color	Yellow					
Available	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. Number of links per unit (chain width): 140 (K06 to 18), 60 (K21 to 48), 40 (over K51).
5. Chains with widths of 1,600.2 mm (K63) to 1,828.8 mm (K72) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
152.4	WT3005G-K06-ALF	WT3005G-K06-LFG	WT3005G-K06-NLF
228.6	WT3005G-K09-ALF	WT3005G-K09-LFG	WT3005G-K09-NLF
304.8	WT3005G-K12-ALF	WT3005G-K12-LFG	WT3005G-K12-NLF
381.0	WT3005G-K15-ALF	WT3005G-K15-LFG	WT3005G-K15-NLF
457.2	WT3005G-K18-ALF	WT3005G-K18-LFG	WT3005G-K18-NLF
533.4	WT3005G-K21-ALF	WT3005G-K21-LFG	WT3005G-K21-NLF
609.6	WT3005G-K24-ALF	WT3005G-K24-LFG	WT3005G-K24-NLF
685.8	WT3005G-K27-ALF	WT3005G-K27-LFG	WT3005G-K27-NLF
762.0	WT3005G-K30-ALF	WT3005G-K30-LFG	WT3005G-K30-NLF
838.2	WT3005G-K33-ALF	WT3005G-K33-LFG	WT3005G-K33-NLF
914.4	WT3005G-K36-ALF	WT3005G-K36-LFG	WT3005G-K36-NLF
990.6	WT3005G-K39-ALF	WT3005G-K39-LFG	WT3005G-K39-NLF
1066.8	WT3005G-K42-ALF	WT3005G-K42-LFG	WT3005G-K42-NLF
1143.0	WT3005G-K45-ALF	WT3005G-K45-LFG	WT3005G-K45-NLF
1219.2	WT3005G-K48-ALF	WT3005G-K48-LFG	WT3005G-K48-NLF
1295.4	WT3005G-K51-ALF	WT3005G-K51-LFG	WT3005G-K51-NLF
1371.6	WT3005G-K54-ALF	WT3005G-K54-LFG	WT3005G-K54-NLF
1447.8	WT3005G-K57-ALF	WT3005G-K57-LFG	WT3005G-K57-NLF
1524.0	WT3005G-K60-ALF	WT3005G-K60-LFG	WT3005G-K60-NLF
1600.2	WT3005G-K63-ALF	WT3005G-K63-LFG	WT3005G-K63-NLF
1676.4	WT3005G-K66-ALF	WT3005G-K66-LFG	WT3005G-K66-NLF
1752.6	WT3005G-K69-ALF	WT3005G-K69-LFG	WT3005G-K69-NLF
1828.8	WT3005G-K72-ALF	WT3005G-K72-LFG	WT3005G-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,828.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.6% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,828.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,828.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Chain width		Material mark		Number of links	Unit
WT	**30**	**05**	**G**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	30: 30 mm	5: Closed type	G: Tab guide attachment							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT3109-W

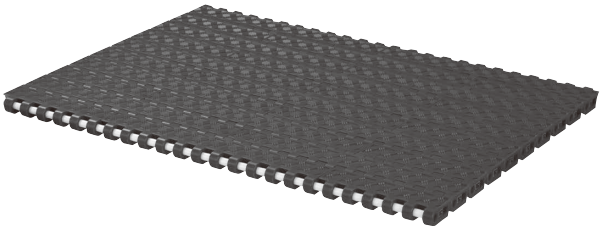
WT3100 Series

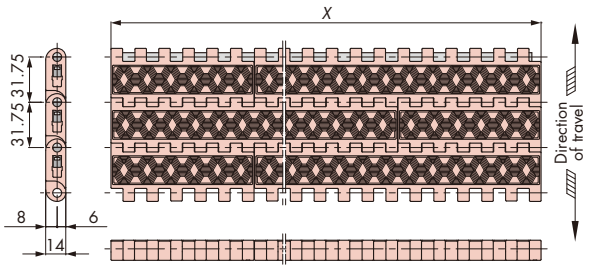
Straight Running (Wide Type)

Sprockets P.161

Features

1. Possible to make low-height conveyor, height 220 mm at the lowest, by using chain with a smaller pitch than BTH16 of which the chain pitch is 50.8 m.
2. Special uneven surface can prevent products from slipping.
3. Suitable for human conveyor due to its non-slippery surface.
4. It is possible to extend the wear life of the lower surface of the chain link by making the thickness of the lower surface 2 mm thicker than that of the upper surface and thus increasing the wear margin.
5. A slide plug type pin stopper is adopted to allow the easy connection and disconnection of the chain with just a screwdriver.





Chain pitch mm	Open area %	Backflex radius mm
31.75	0.1	35

Chain Material Table

		Standard Chain		High-Function Chain	
Material		Standard	Low friction Wear resistant	Low friction Wear resistant	Electroconductive
Material mark		B	LFB	HG	E
Link color		Blue	Brown	Navy blue	Black
Max. allowable load kN/m {kgf/m}		25{2540}			17.5{1778}
Chain mass kg/m²		13.8			
Max. allowable speed m/min	With lube	15			
	No lube				
Operating temperature range °C		–20 to (60) 80			
Pin material		Special engineering plastic			
Slide plug material		Polyacetal			
Slide plug color		Red			
Available		△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. Fill out the inquiry sheet on page 488 and contact a Tsubaki representative.
3. Values for max. allowable load assume that tension acts uniformly over the entire chain width. Values for max. allowable load in the table left are for chain that is one meter (1 m) in width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
4. Operating temperature of (60) is for wet conditions.
5. Number of links per unit (chain width): 120 (W300 to 400), 60 (W500 to 900), 40 (W1000 to 1200), 30 (over W1300).

Tsubaki Model Table

Chain width *X*	Standard B Chain type
300	WT3109-W300-B
400	WT3109-W400-B
500	WT3109-W500-B

Chain width *X*	Standard B Chain type
600	WT3109-W600-B
700	WT3109-W700-B
800	WT3109-W800-B

Chain width *X*	Standard B Chain type
900	WT3109-W900-B
1000	WT3109-W1000-B
1100	WT3109-W1100-B

Chain width *X*	Standard B Chain type
1200	WT3109-W1200-B

Note: 1. Standard nominal widths are in increments of 100 mm. Chain width wider than 1,200 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.3% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table above which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. Safety interlock should be necessary for human-conveying equipment.
4. In case of using chains for human conveyor, Product Liability Act should be considered. In addition, it is necessary to acquire detailed information for the appropriate usage and to exchange safety confirmation sheet.

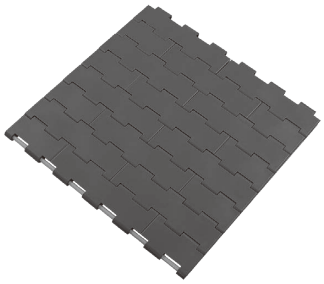
Model Numbering

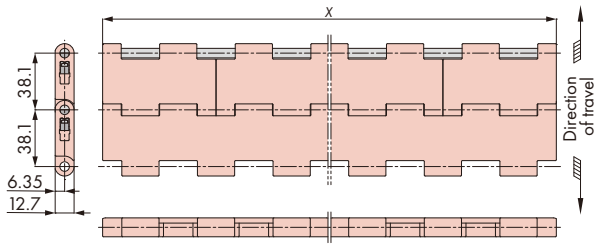
Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	31	09	-	W1200 Note: 2	-	B Note: 3	+	80 Note: 4	L
	31: 31.75 mm	9: Slip-preventive surface							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Lightweight and easy-handling due to all plastic-made chain.
3. A slide plug type pin stopper is adopted to allow the easy connection and disconnection of the chain with just a screwdriver.





Chain pitch mm	Open area %	Backflex radius mm
38.1	2	40

Chain Material Table

	Standard Chain									High-Function Chain						
Material	Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1300}										6.5 {663}	9.0 {910}	12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m²	9.5										7.0	9.5				
Max. allowable speed m/min With lube	50														–	50
Max. allowable speed m/min No lube															50	
Operating temperature range °C	0 to (60)80										5 to 105	0 to (60)80			0 to 80	
Pin material	Special engineering plastic										Polypropylene	Special engineering plastic				
Slide plug material	Polypropylene															
Slide plug color	Blue															
Available	△	△	△	△	△	○	△	○	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. The color of the slide plug was changed from yellow to blue as of December 2013.
5. Number of links per unit (chain width): 80 (K06 to 18), 50 (K21 to 36), 40 (K39 to 48), 30 (over K51).

Tsubaki Model Table

Chain width X	Low friction/Wear resistant LFB Chain type	Low friction NLF Chain type
152.4	WT3835-K06-LFB	WT3835-K06-NLF
228.6	WT3835-K09-LFB	WT3835-K09-NLF
304.8	WT3835-K12-LFB	WT3835-K12-NLF
381.0	WT3835-K15-LFB	WT3835-K15-NLF
457.2	WT3835-K18-LFB	WT3835-K18-NLF
533.4	WT3835-K21-LFB	WT3835-K21-NLF
609.6	WT3835-K24-LFB	WT3835-K24-NLF

Chain width X	Low friction/Wear resistant LFB Chain type	Low friction NLF Chain type
685.8	WT3835-K27-LFB	WT3835-K27-NLF
762.0	WT3835-K30-LFB	WT3835-K30-NLF
838.2	WT3835-K33-LFB	WT3835-K33-NLF
914.4	WT3835-K36-LFB	WT3835-K36-NLF
990.6	WT3835-K39-LFB	WT3835-K39-NLF
1066.8	WT3835-K42-LFB	WT3835-K42-NLF
1143.0	WT3835-K45-LFB	WT3835-K45-NLF

Chain width X	Low friction/Wear resistant LFB Chain type	Low friction NLF Chain type
1219.2	WT3835-K48-LFB	WT3835-K48-NLF
1295.4	WT3835-K51-LFB	WT3835-K51-NLF
1371.6	WT3835-K54-LFB	WT3835-K54-NLF
1447.8	WT3835-K57-LFB	WT3835-K57-NLF
1524.0	WT3835-K60-LFB	WT3835-K60-NLF

Note: 1. Standard nominal width are increments of 3 inches (76.2 mm). Custom widths or width wider than 1,524 mm.
2. The chain width *X* is the nominal width and the actual width is about –0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table above . The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**38**	**35**	**-**	**K24** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	38: 38.1 mm	5: Closed type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT3835-T

WT3830 Series

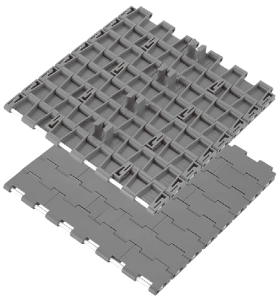
Straight Running (Wide Type)

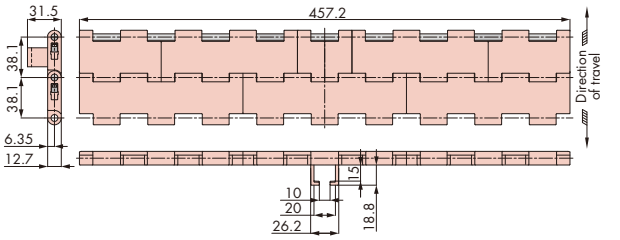
Sprockets P.163 | Sprocket Pitch P.458 | Rails P.323 | Peripheral Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.473, 474

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. WT3835 with float-preventive tabs, which prevents chains from floating, is suitable for vacuum conveyors.
3. Lightweight and easy-handling due to all plastic-made chain.
4. A slide plug type pin stopper is adopted to allow the easy connection and disconnection of the chain with just a screwdriver.

With float-preventive tab





*The above is a reference diagram. BTC6 chain with float-preventive tabs or holes for vacuum operation are also available. Contact a Tsubaki representative for more information.

Chain pitch mm	Open area %	Backflex radius mm
38.1	2	40

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction	
Material mark	–	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1300}								
Chain mass kg/m²	9.5								
Max. allowable speed m/min: With lube	50								
Max. allowable speed m/min: No lube	50								
Operating temperature range °C	0 to (60)80								
Pin material	Special engineering plastic								
Slide plug material	Polypropylene								
Slide plug color	Blue								
Available	△	△	△	△	△	△	△	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction/Wear resistant	High temperature	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1300}	6.5{663}	9.0{910}	12.8{1300}		9.5{962}	12.8{1300}
Chain mass kg/m²	9.5	7.0	9.5				
Max. allowable speed m/min: With lube	50					–	50
Max. allowable speed m/min: No lube						50	
Operating temperature range °C	0 to (60) 80	5 to 105	0 to (60) 80			0 to 80	0 to (60) 80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Slide plug material	Polypropylene						
Slide plug color	Blue						
Available	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. The chain mass shown in the chain specification above is the mass without float-preventive tabs. If there are float-preventive tabs, add 0.2 kg every 2 links.
5. The color of the slide plug was changed from yellow to blue as of December 2013.
6. The chain width *X* is the nominal width and the actual width is about –0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table above. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
7. Number of links per unit (chain width): 20 (over K18).

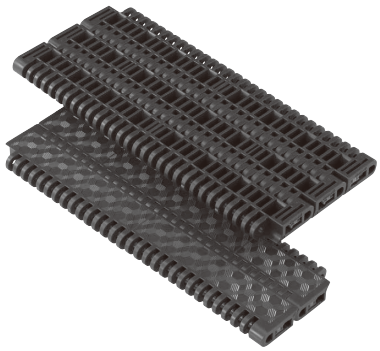
Model Numbering

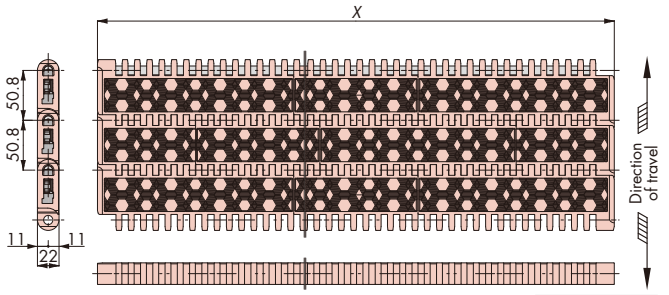
Chain type	Chain pitch	Link shape	Tab		Chain width		Material mark		Special configuration		Number of links	Unit
WT	38	35	T	-	K18	-	LFB Note: 2	-	TK	+	80 Note: 3	L
	38: 38.1 mm	5: Closed type			K18: 457.2 mm							L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Plastic modular chains with the highest allowable load of 62kN/m and high rigidity.
2. Suitable for mass handling and for conveying heavy product such as vehicles and carts.
3. Special uneven surface can prevent products from slipping.
4. Suitable for human conveyor due to its non-slipper surface.
5. A slide plug type pin stopper is adopted to allow the easy connection and disconnection of the chain with just a screwdriver.





Patent registered

Chain pitch mm	Open area %	Backflex radius mm
50.8	0.1	60

Chain Material Table

	Standard Chain		High-Function Chain	
Material	Standard	Low friction/ Wear resistant	Low friction/ Wear resistant	Electroconductive
Material mark	B	LFB	HG	E
Link color	Blue	Brown	Navy blue	Black
Max. allowable load kN/m {kgf/m}	62{6330}			43.4{4431}
Chain mass kg/m²	21.7			
Max. allowable speed m/min: With lube / No lube	15			
Operating temperature range °C	–20 to (60) 80			
Pin material	Special engineering plastic			
Slide plug material	Polyacetal			
Slide plug color	Red			
Available	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. Fill out the inquiry sheet on page 489 and contact a Tsubaki representative.
3. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table on the left. is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
4. Operating temperature of (the value in parentheses) is for wet condition.

Tsubaki Model Table

Chain width *X*	Standard B Chain type
400	BTH16-4000-B
500	BTH16-5000-B
600	BTH16-6000-B
700	BTH16-7000-B
800	BTH16-8000-B

Chain width *X*	Standard B Chain type
900	BTH16-9000-B
1000	BTH16-10000-B
1100	BTH16-11000-B
1200	BTH16-12000-B
1300	BTH16-13000-B

Note: 1. Safety interlock should be necessary for human-conveying equipment.
2. In case of using chains for human conveyor the Product Liability Act should be considered. In addition, it is necessary to acquire detailed information offor the appropriate usage and to provide the safety confirmation sheet.
3. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.3% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table above which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Number of links	Unit
BT	H	16	-	13000 Note: 2	-	B Note: 3	+	80 Note: 4	L
	H: High-strength type	16: 50.8 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. 13000: 1,300 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

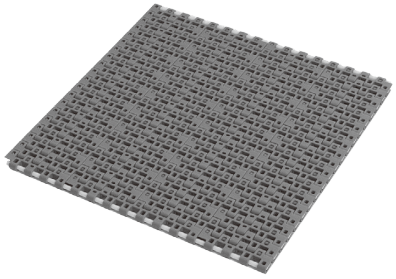
WT1506-K

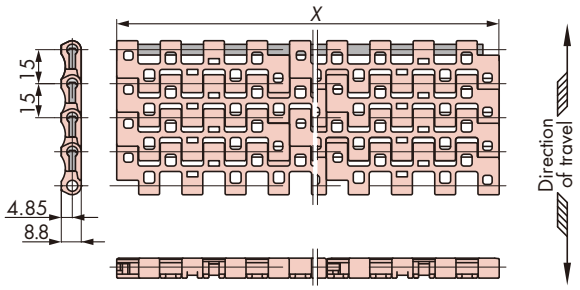
WT1500 Series

Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. The perforated surface is effective to drain excess water and lubricant.
4. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
15	26	15

Chain Material Table

■Standard Chain

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}		10.5{1070}								
Chain mass kg/m²		6.7								
Max. allowable speed m/min	With lube	50{50}								
	No lube	50{30}								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Plug material		Polyacetal								
Plug color		Yellow								
Available		△	△	△	△	○ Note: 6	△	○ Note: 6	○ Note: 6	△

■High-Function Chain

High-Function Chain								
Material		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	E	MWS	SE	MF	UVR
Link color		Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}		10.5{1070}	4.25{434}	8.0{816}	10.5{1070}		7.8{796}	10.5{1070}
Chain mass kg/m²		6.7	4.5	6.7				
Max. allowable speed m/min	With lube	50{50}	50	50{50}			—	50{50}
	No lube	50{30}	30	50{30}				
Operating temperature range °C		–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material		Special engineering plastic	Polypropylene	Special engineering plastic				
Plug material		Polyacetal	Polypropylene	Polyacetal				
Plug color		Yellow	Blue	Yellow				
Available		△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet condition.
5. Number of links per unit (chain width): 500 (K03 to 06), 400 (K09 to 18), 200 (K21 to 30), 160 (K33 to 39), 140 (K42 to 48), 120 (K51 to 60), 100 (over K63).
6. Chains with widths of 1,600.2 mm (K63) to 1,828.8 mm (K72) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
76.2	WT1506-K03-ALF	WT1506-K03-LFG	WT1506-K03-NLF
152.4	WT1506-K06-ALF	WT1506-K06-LFG	WT1506-K06-NLF
228.6	WT1506-K09-ALF	WT1506-K09-LFG	WT1506-K09-NLF
304.8	WT1506-K12-ALF	WT1506-K12-LFG	WT1506-K12-NLF
381.0	WT1506-K15-ALF	WT1506-K15-LFG	WT1506-K15-NLF
457.2	WT1506-K18-ALF	WT1506-K18-LFG	WT1506-K18-NLF
533.4	WT1506-K21-ALF	WT1506-K21-LFG	WT1506-K21-NLF
609.6	WT1506-K24-ALF	WT1506-K24-LFG	WT1506-K24-NLF
685.8	WT1506-K27-ALF	WT1506-K27-LFG	WT1506-K27-NLF
762.0	WT1506-K30-ALF	WT1506-K30-LFG	WT1506-K30-NLF
838.2	WT1506-K33-ALF	WT1506-K33-LFG	WT1506-K33-NLF
914.4	WT1506-K36-ALF	WT1506-K36-LFG	WT1506-K36-NLF
990.6	WT1506-K39-ALF	WT1506-K39-LFG	WT1506-K39-NLF
1066.8	WT1506-K42-ALF	WT1506-K42-LFG	WT1506-K42-NLF
1143.0	WT1506-K45-ALF	WT1506-K45-LFG	WT1506-K45-NLF
1219.2	WT1506-K48-ALF	WT1506-K48-LFG	WT1506-K48-NLF
1295.4	WT1506-K51-ALF	WT1506-K51-LFG	WT1506-K51-NLF
1371.6	WT1506-K54-ALF	WT1506-K54-LFG	WT1506-K54-NLF
1447.8	WT1506-K57-ALF	WT1506-K57-LFG	WT1506-K57-NLF
1524.0	WT1506-K60-ALF	WT1506-K60-LFG	WT1506-K60-NLF
1600.2	WT1506-K63-ALF	WT1506-K63-LFG	WT1506-K63-NLF
1676.4	WT1506-K66-ALF	WT1506-K66-LFG	WT1506-K66-NLF
1752.6	WT1506-K69-ALF	WT1506-K69-LFG	WT1506-K69-NLF
1828.8	WT1506-K72-ALF	WT1506-K72-LFG	WT1506-K72-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,828.8 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.6% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,828.8 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,828.8 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**15**	**06**	**-**	**K24** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**
	15:15 mm	6: Open type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

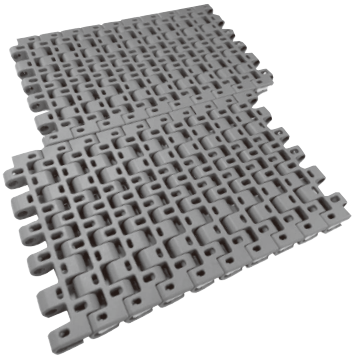
WT1516-W

WT1510 Series

Straight Running (Wide Type)

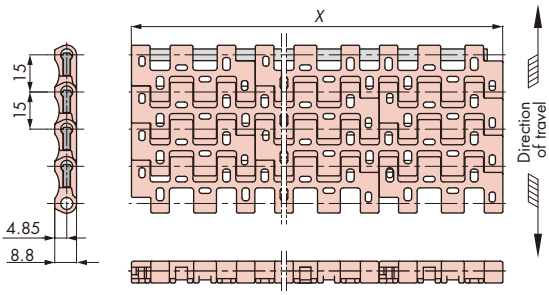
Features

1. Can be a chosen width with 50 mm increments.
2. Suitable not only for the conveyance of bottles in the beverage industry but also for machined parts.
3. Adopts slit pin system, all-in-one pin with a plug, to the chain width of 50 mm and 100 mm.
4. The perforated surface is effective to drain excess water and lubricant.
5. Possible to replace the belt conveyor due to a standard nominal width of 50 mm and 100 mm.
6. In combination with a TOD chain, it is unnecessary to use a dead plate and is possible to transfer products between conveyors with less with fewer remaining products.





Slit pin



Chain pitch mm	Open area %	Backflex radius mm
15	25	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	6.7								
Max. allowable speed m/min With lube	50(50)								
Max. allowable speed m/min No lube	50(30)								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	○	△	○	△	△

■High-Function Chain

High-Function Chain								
Material	Low friction/ Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	
Material mark	HG	HTW	E	MWS	SE	MF	UVR	
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray	
Max. allowable load kN/m {kgf/m}	10.5{1070}	4.25{434}	8.0{816}	10.5{1070}		7.8{796}	10.5{1070}	
Chain mass kg/m²	6.7	4.5	6.7					
Max. allowable speed m/min With lube	50(50)					—	50(50)	
Max. allowable speed m/min No lube	50(30)	30	50(30)					
Operating temperature range °C	–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80	
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic					
Plug material	Polyacetal	Polypropylene	Polyacetal					
Plug color	Yellow	Blue	Yellow					
Available	△	△ Note: 5	△	△	△	△	△ Note: 5	

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
4. Operating temperature of (the value in parentheses) is for wet condition.
5. HTW and UVR series are not supported for slit-pin type products.
6. Number of links per unit (chain width): 500 (W50 to 150), 400 (W200 to 450), 200 (W500 to 750), 160 (W800 to 950), 140 (W1000 to 1200), 120 (W1250 to 1500), 100 (over W1550).

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG
	Chain type	Chain type
50	WT1516-W50-ALF	WT1516-W50-LFG
	WT1516-W50-ALF-SP	WT1516-W50-LFG-SP
100	WT1516-W100-ALF	WT1516-W100-LFG
	WT1516-W100-ALF-SP	WT1516-W100-LFG-SP
150	WT1516-W150-ALF	WT1516-W150-LFG
200	WT1516-W200-ALF	WT1516-W200-LFG
250	WT1516-W250-ALF	WT1516-W250-LFG
300	WT1516-W300-ALF	WT1516-W300-LFG
350	WT1516-W350-ALF	WT1516-W350-LFG
400	WT1516-W400-ALF	WT1516-W400-LFG
450	WT1516-W450-ALF	WT1516-W450-LFG
500	WT1516-W500-ALF	WT1516-W500-LFG
550	WT1516-W550-ALF	WT1516-W550-LFG
600	WT1516-W600-ALF	WT1516-W600-LFG
650	WT1516-W650-ALF	WT1516-W650-LFG
700	WT1516-W700-ALF	WT1516-W700-LFG
750	WT1516-W750-ALF	WT1516-W750-LFG
800	WT1516-W800-ALF	WT1516-W800-LFG
850	WT1516-W850-ALF	WT1516-W850-LFG
900	WT1516-W900-ALF	WT1516-W900-LFG
950	WT1516-W950-ALF	WT1516-W950-LFG
1000	WT1516-W1000-ALF	WT1516-W1000-LFG

Note: 1. Standard nominal widths are in increments of 50 mm. Custom widths or width wider than 1,000 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.4% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,000 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,000 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Pin retention system		Number of links	Unit
WT	**15**	**16**	**-**	**W100** Note: 2	**-**	**ALF** Note: 3	**-**	**SP**	**+**	**80** Note: 4	**L**
	15: 15 mm	6: Open type						Blank: Pin and plug SP: Slit pin (all-in-one pin with a plug)			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

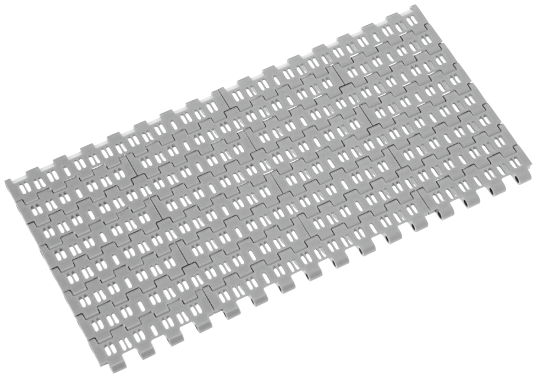
Plastic Modular Chain BTO6

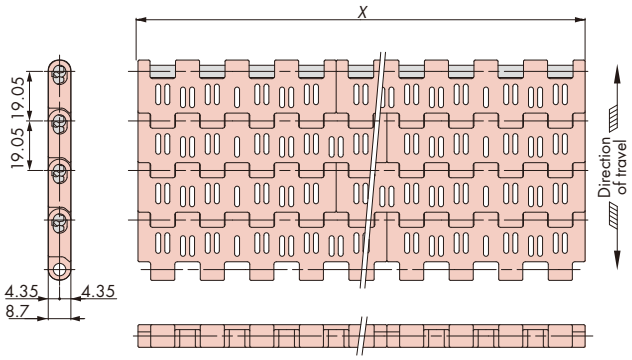
BT6 Series

Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 19.05 mm pitch. Suitable for conveying small and light weight containers.
3. The perforated surface is effective to drain excess water and lubricant.
4. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
19.05	17	15

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction		
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	
Max. allowable load kN/m {kgf/m}	12.8{1300}									
Chain mass kg/m^2	6.56									
Max. allowable speed m/min With lube	50									
Max. allowable speed m/min No lube	50									
Operating temperature range °C	–20 to (60)80									
Pin material	Special engineering plastic									
Snap attachment material	Polyacetal									
Snap attachment color	White									
Available	△	△	△	△	△	○	○	△	△	

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8{1300}	5.1{520}	9.0{910}	12.8{1300}		9.47{962}	12.8{1300}
Chain mass kg/m^2	6.56	4.40	6.56				
Max. allowable speed m/min With lube	50					—	50
Max. allowable speed m/min No lube						50	
Operating temperature range °C	–20 to (60)80	5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic				
Snap attachment material	Polyacetal	Special engineering plastic	Polyacetal				
Snap attachment color	White	Beige	White				
Available	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length of the chain increases by about 1%, and the chain's approximate mass is the same as that of the KV250series of BTC6.
4. Number of links per unit: 54.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76.2	BTO6-762-ALF	BTO6-762-LFB
152.4	BTO6-1524-ALF	BTO6-1524-LFB
228.6	BTO6-2286-ALF	BTO6-2286-LFB
304.8	BTO6-3048-ALF	BTO6-3048-LFB
381.0	BTO6-3810-ALF	BTO6-3810-LFB
457.2	BTO6-4572-ALF	BTO6-4572-LFB
533.4	BTO6-5334-ALF	BTO6-5334-LFB
609.6	BTO6-6096-ALF	BTO6-6096-LFB
685.8	BTO6-6858-ALF	BTO6-6858-LFB
762.0	BTO6-7620-ALF	BTO6-7620-LFB
838.2	BTO6-8382-ALF	BTO6-8382-LFB
914.4	BTO6-9144-ALF	BTO6-9144-LFB
990.6	BTO6-9906-ALF	BTO6-9906-LFB
1066.8	BTO6-10668-ALF	BTO6-10668-LFB
1143.0	BTO6-11430-ALF	BTO6-11430-LFB

Note: 1. Standard nominal widths are in increments of 76.2 mm. Widths wider than 1,143 mm are available. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about +0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Number of links	Unit
BT	**O**	**6**	**-**	**7620** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	O: Open type	6: 19.05 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

BTCP6

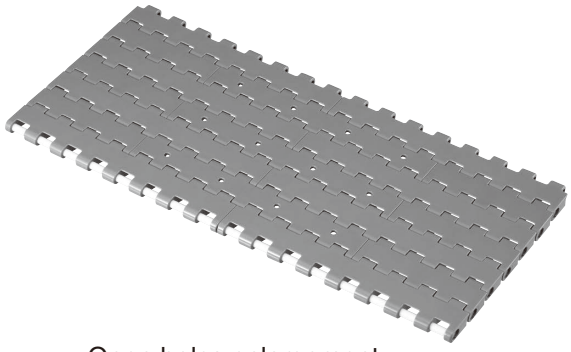
BT6 Series

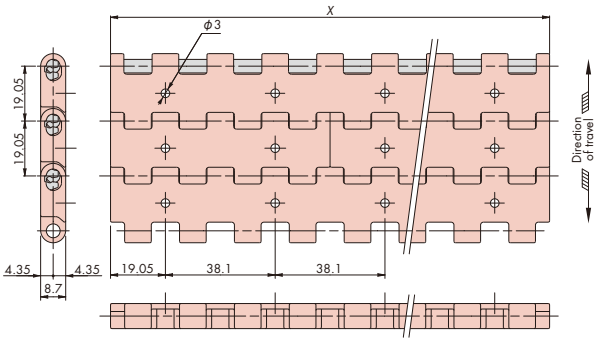
Straight Running (Wide Type)

Features

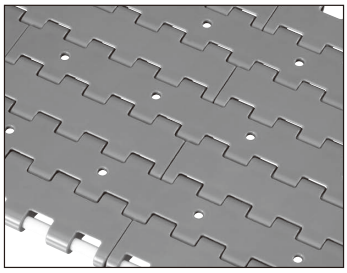
1. Perforated type of BTC6. Possible to use for vacuum conveyors. Flights can be fixed using these holes.
2. Easy disconnecting/connecting and reduction of maintenance time due to adopting snap attachments.

Drawing (Reference)





Open holes enlargement



Note: Contact a Tsubaki representative if a holed position other than shown in this drawing is required.

Chain pitch mm	Open area %	Backflex radius mm
19.05	When there is no hole 3%	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	12.8{1300}								
Chain mass kg/m²	6.56								
Max. allowable speed m/min With lube / No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Snap attachment material	Polyacetal								
Snap attachment color	White								
Available	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain										
Material	Low friction Wear resistant	High temperature	Freezer	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	LTW	E	DIA	DIY	MWS	SE	MF	UVR
Link color	Navy blue	White	White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	12.8 {1300}	5.1 {520}	4.22 {430}	9.0 {910}	9.8 {1000}		12.8{1300}		9.5 {962}	12.8 {1300}
Chain mass kg/m²	6.56	4.40	4.50	6.56	5.25	8.55	6.56			
Max. allowable speed m/min With lube	50		15	50	—	50			—	50
Max. allowable speed m/min No lube					50				50	
Operating temperature range °C	–20 to (60)80	5 to 105	–70 to 60	–20 to (60)80					–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic						
Snap attachment material	Polyacetal	Special engineering plastic	Polyethylene	Polyacetal						
Snap attachment color	White	Beige	Red	White						
Available	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length of the chain increases by about 1%, and the chain's approximate mass is the same as that of the KV250 series of BTC6.
4. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
5. Contact a Tsubaki representative for informtaion about the diameter of holes other than ϕ3 (up to ϕ6) and positions other than those shown in the drawing.
6. The chain width *X* is the nominal width and the actual width is about +0.1% (at the ambient temperature of 20°C) for the standard chain listed in chain material table above. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
7. Number of links per unit: 54.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Special configuration		Number of links	Unit
BT	**CP**	**6**	**-**	**7620** Note: 2	**-**	**LFB** Note: 3	**-**	**TK** Note: 4	**+**	**80** Note: 5	**L**
	CP: Hole	6: 19.05 mm									L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Contact a Tsubaki representative for chain width.
3. Please check the chain material and material marks in the chain material table above.
4. You will need to include a drawing in order to specify hole positioning.
5. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT2250FG

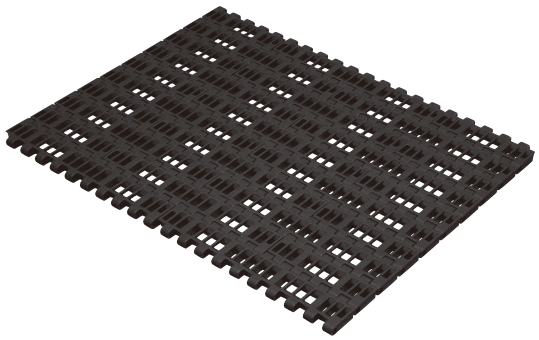
WT2250 Series

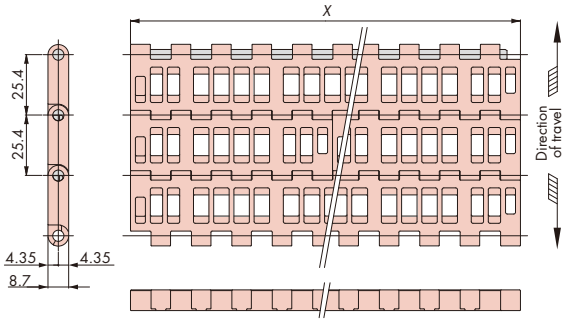
Straight Running (Wide Type)

Sprockets P.155 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 25.4 mm pitch. Suitable for conveying medium-sized containers.
3. The perforated surface is effective to drain excess water and lubricant.
4. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	23	25

Chain Material Table

		Standard Chain	High-Function Chain
Material		Standard	High temperature
Material mark		G	HTW
Link color		Gray	White
Max. allowable load kN/m {kgf/m}		12.8{1305}	6.4{650}
Chain mass kg/m^2		7.9	5.6
Max. allowable speed m/min	With lube	50	50
	No lube		
Operating temperature range°C		–20 to (60)80	5 to 105
Pin material		Special engineering plastic	Polypropylene
Snap attachment material		Polyacetal	Polypropylene
Snap attachment color		Light blue	Brown
Available		△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table on the left is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit: 40.

Tsubaki Model Table

Chain width *X*	Standard G Chain type	High temperature HTW Chain type
85	WT2250FG-W85-G	WT2250FG-W85-HTW
170	WT2250FG-W170-G	WT2250FG-W170-HTW
255	WT2250FG-W255-G	WT2250FG-W255-HTW
340	WT2250FG-W340-G	WT2250FG-W340-HTW
425	WT2250FG-W425-G	WT2250FG-W425-HTW
510	WT2250FG-W510-G	WT2250FG-W510-HTW
595	WT2250FG-W595-G	WT2250FG-W595-HTW
680	WT2250FG-W680-G	WT2250FG-W680-HTW
765	WT2250FG-W765-G	WT2250FG-W765-HTW
850	WT2250FG-W850-G	WT2250FG-W850-HTW

Chain width *X*	Standard G Chain type	High temperature HTW Chain type
935	WT2250FG-W935-G	WT2250FG-W935-HTW
1020	WT2250FG-W1020-G	WT2250FG-W1020-HTW
1105	WT2250FG-W1105-G	WT2250FG-W1105-HTW
1190	WT2250FG-W1190-G	WT2250FG-W1190-HTW
1275	WT2250FG-W1275-G	WT2250FG-W1275-HTW
1360	WT2250FG-W1360-G	WT2250FG-W1360-HTW
1445	WT2250FG-W1445-G	WT2250FG-W1445-HTW
1530	WT2250FG-W1530-G	WT2250FG-W1530-HTW
1615	WT2250FG-W1615-G	WT2250FG-W1615-HTW

Note: 1. Standard nominal widths are in increments of 85 mm. Custom widths or width wider than 1,615 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width which expands and contracts due to temperature change. As a guideline, expansion and contraction are 0.00012/°C for the standard (G) series and 0.00011/°C for the HTW series at the basis of 20°C.

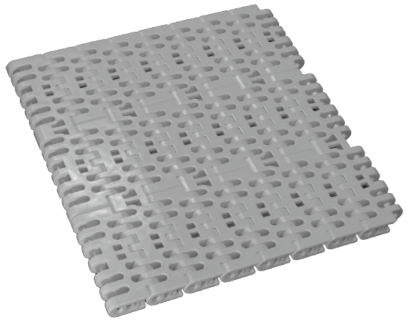
Model Numbering

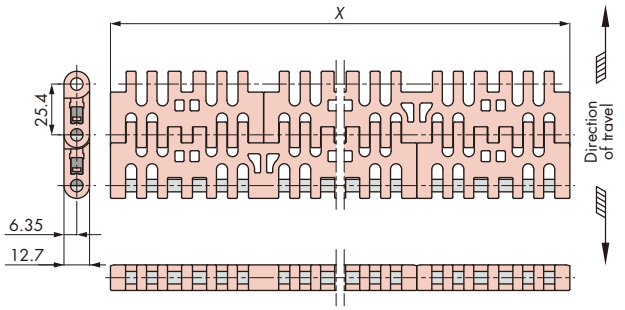
Chain type	Link shape		Chain width		Material mark		Number of links	Unit
WT2250	**FG**	**-**	**W340** Note: 2	**-**	**G** Note: 3	**+**	**80** Note: 4	**L**
	FG: Open type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. The perforated surface is effective to drain excess water and lubricant which is remained and also suitable for showering units.
3. Improved strength of the chain is due to an increase in hinges and thicker joints of the modules
4. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
25.4	16	20

Chain Material Table

High-Function Chain		
Material		High temperature
Material mark		HTW
Link color		White
Max. allowable load kN/m {kgf/m}		26.2{2675}
Chain mass kg/m^2		8.1
Max. allowable speed m/min	With lube	50
	No lube	
Operating temperature range°C		5 to 105
Pin material		Polypropylene
Snap attachment material		Polypropylene
Snap attachment color		Blue
Available		△

Note: 1. "△": Made-to-order product (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table on the left. is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The color of the slide plug was changed from yellow to blue as of December 2013.
4. Number of links per unit (chain width): 160 (K09 to 18), 100 (K21 to 27), 70 (K30 to 36), 50 (K39 to 48), 40 (over K51).

Tsubaki Model Table

Chain width *X*	High temperature HTW Chain type
76.2	WT2506-K03-HTW
152.4	WT2506-K06-HTW
228.6	WT2506-K09-HTW
304.8	WT2506-K12-HTW
381.0	WT2506-K15-HTW
457.2	WT2506-K18-HTW
533.4	WT2506-K21-HTW
609.6	WT2506-K24-HTW
685.8	WT2506-K27-HTW
762.0	WT2506-K30-HTW

Chain width *X*	High temperature HTW Chain type
838.2	WT2506-K33-HTW
914.4	WT2506-K36-HTW
990.6	WT2506-K39-HTW
1066.8	WT2506-K42-HTW
1143.0	WT2506-K45-HTW
1219.2	WT2506-K48-HTW
1295.4	WT2506-K51-HTW
1371.6	WT2506-K54-HTW
1447.8	WT2506-K57-HTW
1524.0	WT2506-K60-HTW

Chain width *X*	High temperature HTW Chain type
1600.2	WT2506-K63-HTW
1676.4	WT2506-K66-HTW
1752.6	WT2506-K69-HTW
1828.8	WT2506-K72-HTW
1905.0	WT2506-K75-HTW
1981.2	WT2506-K78-HTW
2057.4	WT2506-K81-HTW
2133.6	WT2506-K84-HTW
2209.8	WT2506-K87-HTW
2286.0	WT2506-K90-HTW

Chain width *X*	High temperature HTW Chain type
2362.2	WT2506-K93-HTW
2438.4	WT2506-K96-HTW
2514.6	WT2506-K99-HTW
2590.8	WT2506-K102-HTW
2667.0	WT2506-K105-HTW
2743.2	WT2506-K108-HTW
2819.4	WT2506-K111-HTW
2895.6	WT2506-K114-HTW
2971.8	WT2506-K117-HTW
3048.0	WT2506-K120-HTW

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 3,048 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.6% (at the ambient temperature of 20°C) for the HTW series. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the HTW series is 0.00011/°C for at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape	Chain width		Material mark		Number of links	Unit
WT	**25**	**06**	**-** **K24** Note: 2	**-**	**HTW**	**+**	**80** Note: 3	**L**
	25: 25.4 mm	6: Open type						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT2706-K

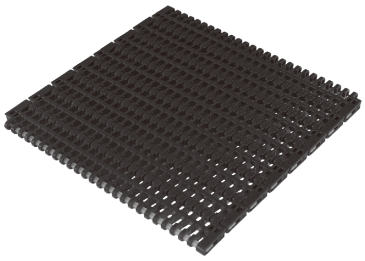
WT2700 Series

Straight Running (Wide Type)

Sprockets P.160 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.473

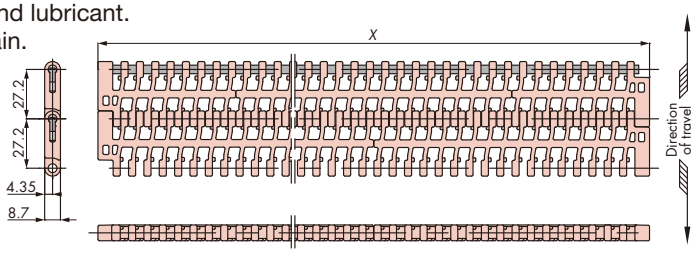
Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable to convey containers, foods and rubber sheets.
3. The perforated surface is effective to drain excess water and lubricant.
4. Lightweight and easy-handling due to all plastic-made chain.





Metal detection plug
(color: dark blue)



Chain pitch mm	Open area %	Backflex radius mm
27.2	38	20

Chain Material Table

	Standard Chain									High-Function Chain						
Material	Standard			Low friction/Wear resistant			Advanced low friction/wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	15.4{1570}										7.7 {785}	10.8 {1099}	15.4{1570}		11.4 {1162}	15.4 {1570}
Chain mass kg/m²	5.8										4.0	5.8				
Max. allowable speed m/min: With lube	50														—	50
Max. allowable speed m/min: No lube															50	
Operating temperature range °C	–20 to (60)80	0 to 80	–20 to (60)80								5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic								Polypropylene	Special engineering plastic				
Plug material	Polyacetal										Polypropylene	Polyacetal				
Plug color	Yellow										Blue	Yellow				
Available	△	○ Note: 5	△	△	△	○ Note: 5	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 200 (K09 to 18), 100 (K21 to 36), 80 (K39 to 48), 50 (over K51).
5. Chains with widths of 1,600.2 mm (K63) to 1,905.0 mm (K75) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Standard B	Low friction/Wear resistant LFB
	Chain type	Chain type
228.6	WT2706-K09-B	WT2706-K09-LFB
304.8	WT2706-K12-B	WT2706-K12-LFB
381.0	WT2706-K15-B	WT2706-K15-LFB
457.2	WT2706-K18-B	WT2706-K18-LFB
533.4	WT2706-K21-B	WT2706-K21-LFB
609.6	WT2706-K24-B	WT2706-K24-LFB
685.8	WT2706-K27-B	WT2706-K27-LFB
762.0	WT2706-K30-B	WT2706-K30-LFB
838.2	WT2706-K33-B	WT2706-K33-LFB
914.4	WT2706-K36-B	WT2706-K36-LFB
990.6	WT2706-K39-B	WT2706-K39-LFB
1066.8	WT2706-K42-B	WT2706-K42-LFB
1143.0	WT2706-K45-B	WT2706-K45-LFB
1219.2	WT2706-K48-B	WT2706-K48-LFB
1295.4	WT2706-K51-B	WT2706-K51-LFB
1371.6	WT2706-K54-B	WT2706-K54-LFB
1447.8	WT2706-K57-B	WT2706-K57-LFB
1524.0	WT2706-K60-B	WT2706-K60-LFB
1600.2	WT2706-K63-B	WT2706-K63-LFB
1676.4	WT2706-K66-B	WT2706-K66-LFB
1752.6	WT2706-K69-B	WT2706-K69-LFB
1828.8	WT2706-K72-B	WT2706-K72-LFB
1905.0	WT2706-K75-B	WT2706-K75-LFB

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Chain width wider than 1,905 mm. Contact a Tsubaki representative for more information.
2. The minimum width begins at 50.8 mm with increments of 1/3 inches, by using cut modules.
3. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.4% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
4. The chain with a width narrower than 1,905 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,905 mm is available chain tension in case of replacing the pins with those made of polypropylene.

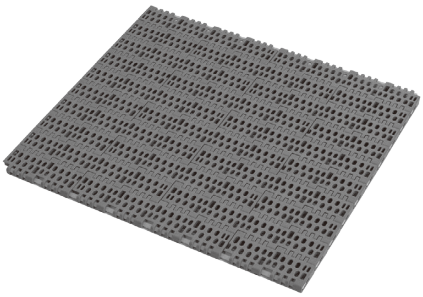
Model Numbering

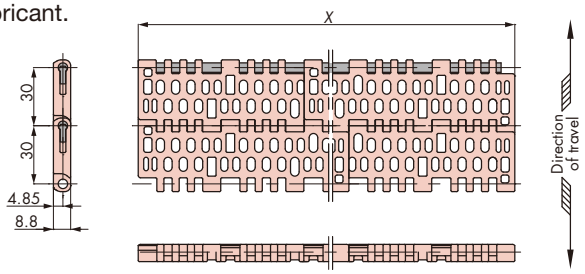
Chain type	Chain pitch	Link shape		Chain width		Material mark		Special configuration		Number of links	Unit
WT	27	06	-	K24 Note: 2	-	B Note: 3	-	TK Note: 5	+	80 Note: 4	L
	27: 27.2 mm	6: Open type									L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above. 4. Minimum quantity: 2, maximum quantity: 99999.
5. The metal detection plug method is a made-to-order product (RFQ). Please specify "metal detection plug method". (Not available for HTW series)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Can be possible to drive coaxially with the WT1500 series due to a 30 mm pitch.
3. The simple structure consisting of four components facilitates component replacements and reduces the maintenance time.
4. The perforated surface is effective to drain excess water and lubricant.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
30	27	30

Chain Material Table

	Standard Chain									High-Function Chain					
Material	Standard			Low friction/Wear resistant			Advanced low friction/wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5 {1070}										8.0 {816}	10.5 {1070}		7.8 {796}	10.5 {1070}
Chain mass kg/m²	6.0														
Max. allowable speed m/min With lube	50													—	50
Max. allowable speed m/min No lube														50	
Operating temperature range °C	0 to 80			0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80		
Pin material	Polypropylene														
Plug material	Polyacetal														
Plug color	Yellow														
Available	△	△	△	△	○	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 200 (K170 to 425), 100 (K510 to 850), 70 (K935 to 1190), 50 (K1275 to 1785), 40 (over K1870).

Tsubaki Model Table

Chain width *X*	Low friction/Wear resistant LFG Chain type
170	WT3086-K170-LFG
255	WT3086-K255-LFG
340	WT3086-K340-LFG
425	WT3086-K425-LFG
510	WT3086-K510-LFG
595	WT3086-K595-LFG

Chain width *X*	Low friction/Wear resistant LFG Chain type
680	WT3086-K680-LFG
765	WT3086-K765-LFG
850	WT3086-K850-LFG
935	WT3086-K935-LFG
1020	WT3086-K1020-LFG
1105	WT3086-K1105-LFG

Chain width *X*	Low friction/Wear resistant LFG Chain type
1190	WT3086-K1190-LFG
1275	WT3086-K1275-LFG
1360	WT3086-K1360-LFG
1445	WT3086-K1445-LFG
1530	WT3086-K1530-LFG

Note: 1. Standard nominal widths are in increments of 85 mm. Custom widths or width wider than 1,530 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.7% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table above which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape	Chain width		Material mark		Number of links	Unit
WT	30	86	- K340 Note: 2	-	LFG Note: 3	+	80 Note: 4	L
	30: 30 mm	6: Open type						L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above. 4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT3086G-K

WT3080 Series

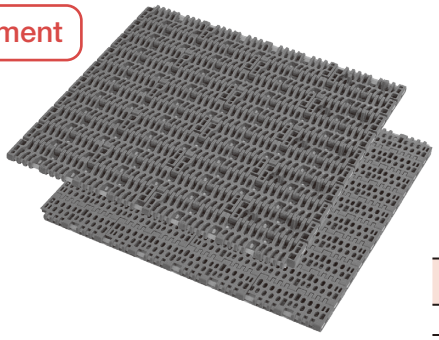
Straight Running (Wide Type)

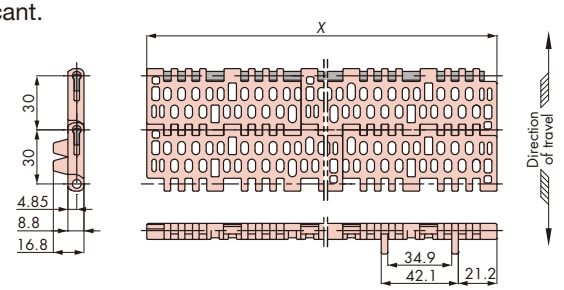
Sprockets P.147, 148 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Can be possible to drive coaxially with the WT1500 series due to a 30 mm pitch.
3. The simple structure consisting of five components facilitates component replacements and reduces the maintenance time.
4. Suitable for layouts with side transfer between conveyors thanks to tab guide attachment.
5. The perforated surface is effective to drain excess water and lubricant.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
30	27	30

Chain Material Table

	Standard Chain									High-Function Chain					
Material	Standard			Low friction/ Wear resistant			Advanced low friction/wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5 {1070}										8.0 {816}	10.5 {1070}		7.8 {796}	10.5 {1070}
Chain mass kg/m²	6.0														
Max. allowable speed m/min With lube	50													—	50
Max. allowable speed m/min No lube														50	
Operating temperature range °C	0 to 80			0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80		
Pin material	Polypropylene														
Plug material	Polyacetal														
Plug color	Yellow														
Available	△	△	△	△	○	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 140 (K170 to 425), 60 (K510 to 1190), 40 (over K1275).

Tsubaki Model Table

Chain width X	Low friction/Wear sistant LFG Chain type
170	WT3086G-K170-LFG
255	WT3086G-K255-LFG
340	WT3086G-K340-LFG
425	WT3086G-K425-LFG
510	WT3086G-K510-LFG

Chain width X	Low friction/Wear sistant LFG Chain type
595	WT3086G-K595-LFG
680	WT3086G-K680-LFG
765	WT3086G-K765-LFG
850	WT3086G-K850-LFG
935	WT3086G-K935-LFG

Chain width X	Low friction/Wear sistant LFG Chain type
1020	WT3086G-K1020-LFG
1105	WT3086G-K1105-LFG
1190	WT3086G-K1190-LFG
1275	WT3086G-K1275-LFG
1360	WT3086G-K1360-LFG

Chain width X	Low friction/Wear sistant LFG Chain type
1445	WT3086G-K1445-LFG
1530	WT3086G-K1530-LFG

Note: 1. Standard nominal width is inclements of 85 mm. Chain width wider than 1,530 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.7% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table above which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.

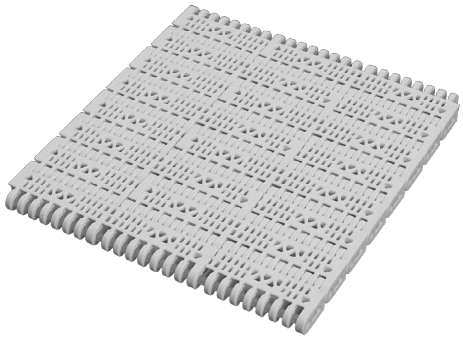
Model Numbering

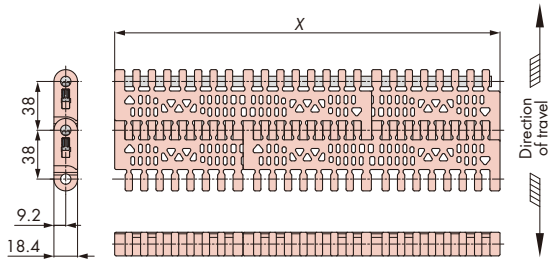
Chain type	Chain pitch	Link shape	Tab guide attachment		Chain width		Material mark		Number of links		Unit
WT	**30**	**86**	**G**	**-**	**K340** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4		**L**
	30: 30 mm	6: Open type	G: Tab guide attachment								L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above. 4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable for heavy-loaded conveyor.
3. The perforated surface is effective to drain excess water and lubricant which is remained and also suitable for showering units.
4. In combination with TOD chains used in the WT1500 and WT2500 series, it is unnecessary to use a dead plate and is possible to transfer products with fewer remaining products.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
38	28	40

Chain Material Table

High-Function Chain		
Material		High temperature
Material mark		HTW
Link color		White
Max. allowable load kN/m {kgf/m}		30{3058}
Chain mass kg/m^2		9.8
Max. allowable speed m/min	With lube	50
	No lube	
Operating temperature range °C		5 to 105
Pin material		Polypropylene
Slide plug material		Polypropylene
Slide plug color		Blue
Available		△

Note: 1. "△": Made-to-order product (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the chain material table on the left is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. The color of the slide plug was changed from yellow to blue as of December 2013.
4. Number of links per unit (chain width): 80 (K200 to 400), 40 (K500 to 1200), 20 (over K1300)

Tsubaki Model Table

Chain width *X*	High temperature HTW Chain type
200	WT3816-K200-HTW
300	WT3816-K300-HTW
400	WT3816-K400-HTW
500	WT3816-K500-HTW
600	WT3816-K600-HTW
700	WT3816-K700-HTW
800	WT3816-K800-HTW
900	WT3816-K900-HTW
1000	WT3816-K1000-HTW

Chain width *X*	High temperature HTW Chain type
1100	WT3816-K1100-HTW
1200	WT3816-K1200-HTW
1300	WT3816-K1300-HTW
1400	WT3816-K1400-HTW
1500	WT3816-K1500-HTW
1600	WT3816-K1600-HTW
1700	WT3816-K1700-HTW
1800	WT3816-K1800-HTW
1900	WT3816-K1900-HTW

Chain width *X*	High temperature HTW Chain type
2000	WT3816-K2000-HTW
2100	WT3816-K2100-HTW
2200	WT3816-K2200-HTW
2300	WT3816-K2300-HTW
2400	WT3816-K2400-HTW
2500	WT3816-K2500-HTW
2600	WT3816-K2600-HTW
2700	WT3816-K2700-HTW
2800	WT3816-K2800-HTW

Chain width *X*	High temperature HTW Chain type
2900	WT3816-K2900-HTW
3000	WT3816-K3000-HTW
3100	WT3816-K3100-HTW
3200	WT3816-K3200-HTW
3300	WT3816-K3300-HTW
3400	WT3816-K3400-HTW
3500	WT3816-K3500-HTW

Note: 1. Standard nominal widths are in increments of 100 mm. Chain width wider than 3,500 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the HTW series. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the HTW series is 0.00011/°C for at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape	Chain width		Material mark		Number of links	Unit
WT	**38**	**16**	**K300** Note: 2	**-**	**HTW**	**+**	**80** Note: 3	**L**
	38: 38 mm	6: Open type						L: Link

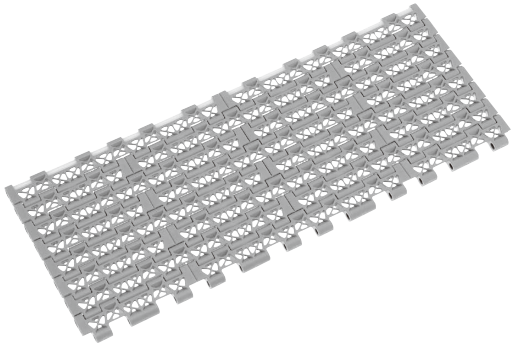
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

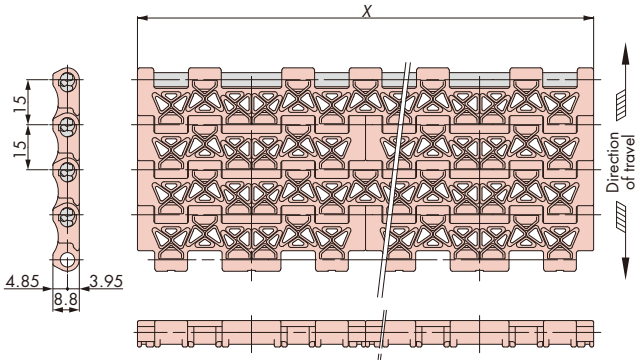
Plastic Modular Chain
BTN5

BT5 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. Easy to wash with 30% open area.
4. In combination with a TOD chain, it is unnecessary to use a dead plate and is possible to transfer products between conveyors with fewer remaining products.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
15	30	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5}1070}								
Chain mass kg/m²	5.9								
Max. allowable speed m/min With lube / No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Snap attachment material	Polyacetal								
Snap attachment color	White								
Available	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	Freezer	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	LTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5 {1070}	3.43 {350}	7.4 {750}	10.5 {1070}		7.8 {792}	10.5 {1070}
Chain mass kg/m²	5.9	4.1	5.9				
Max. allowable speed m/min With lube	50	15	50			—	50
Max. allowable speed m/min No lube						50	
Operating temperature range °C	–20 to (60)80	–70 to 60	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polyethylene	Special engineering plastic				
Snap attachment material	Polyacetal	Polyethylene	Polyacetal				
Snap attachment color	White	Red	White				
Available	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length and chain mass increase slightly. Contact a Tsubaki representative for more information.
4. Number of links per unit: 68.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76	BTN5-760-ALF	BTN5-760-LFB
152	BTN5-1520-ALF	BTN5-1520-LFB
228	BTN5-2280-ALF	BTN5-2280-LFB
304	BTN5-3040-ALF	BTN5-3040-LFB
380	BTN5-3800-ALF	BTN5-3800-LFB
456	BTN5-4560-ALF	BTN5-4560-LFB
532	BTN5-5320-ALF	BTN5-5320-LFB
608	BTN5-6080-ALF	BTN5-6080-LFB
684	BTN5-6840-ALF	BTN5-6840-LFB
760	BTN5-7600-ALF	BTN5-7600-LFB
836	BTN5-8360-ALF	BTN5-8360-LFB
912	BTN5-9120-ALF	BTN5-9120-LFB
988	BTN5-9880-ALF	BTN5-9880-LFB
1064	BTN5-10640-ALF	BTN5-10640-LFB
1140	BTN5-11400-ALF	BTN5-11400-LFB
1216	BTN5-12160-ALF	BTN5-12160-LFB
1292	BTN5-12920-ALF	BTN5-12920-LFB
1368	BTN5-13680-ALF	BTN5-13680-LFB
1444	BTN5-14440-ALF	BTN5-14440-LFB
1520	BTN5-15200-ALF	BTN5-15200-LFB
1596	BTN5-15960-ALF	BTN5-15960-LFB
1672	BTN5-16720-ALF	BTN5-16720-LFB
1748	BTN5-17480-ALF	BTN5-17480-LFB
1824	BTN5-18240-ALF	BTN5-18240-LFB

Note: 1. Standard nominal widths are in increments of 76 mm. Chain width wider than 1,824 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.2% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,824 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,824 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
4. Sprockets for WT1500 series can be used.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Material mark		Number of links	Unit
BT	**N**	**5**	**-**	**7600** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	N: Net type	5: 15 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7600: 760 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

BTN5-A

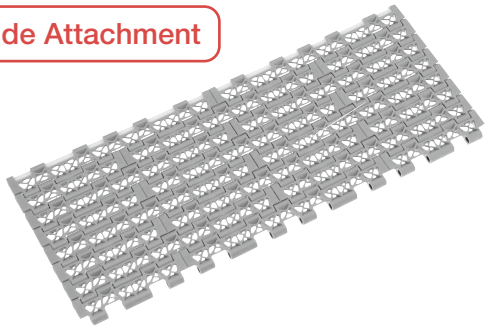
BT5 Series

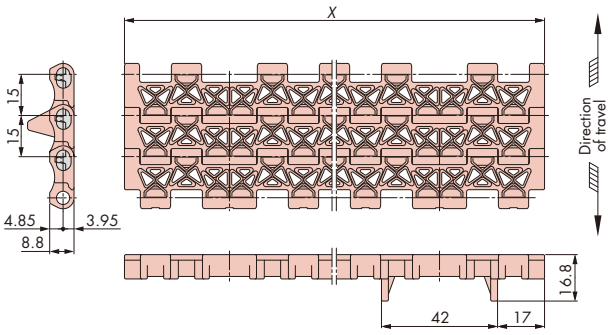
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 15 mm pitch. Suitable for conveying small and light weight containers.
3. Easy to wash with 30% open area.
4. Suitable for layouts with side transfer between conveyors thanks to tab guide attachment.
5. In combination with TOD chains, it is unnecessary to use dead plates and is possible to transfer products between conveyors with less with fewer remaining products.
6. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm
15	30	15

Chain Material Table

■Standard Chain

Standard Chain										
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	10.5{1070}								
Chain mass kg/m²	5.9								
Max. allowable speed m/min (With lube / No lube)	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Snap attachment material	Polyacetal								
Snap attachment color	White								
Available	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain							
Material	Low friction Wear resistant	Freezer	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	LTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	10.5 {1070}	3.43 {350}	7.4 {750}	10.5 {1070}		7.8 {792}	10.5 {1070}
Chain mass kg/m²	5.9	4.1	5.9				
Max. allowable speed m/min (With lube / No lube)	50	15	50			— / 50	50
Operating temperature range °C	–20 to (60)80	–70 to 60	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polyethylene	Special engineering plastic				
Snap attachment material	Polyacetal	Polyethylene	Polyacetal				
Snap attachment color	White	Red	White				
Available	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length and chain mass increase slightly. Contact a Tsubaki representative for more information.
4. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 30 mm.
5. With tab guide attachment, the approximate chain weight will be 0.5 kg/m higher than the approximate chain weight in the chain material table above. (Tab guide attachments are attached every two links and only on one side of the chain.)
6. Number of links per unit: 68.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76	BTN5-760-A-ALF	BTN5-760-A-LFB
152	BTN5-1520-A-ALF	BTN5-1520-A-LFB
228	BTN5-2280-A-ALF	BTN5-2280-A-LFB
304	BTN5-3040-A-ALF	BTN5-3040-A-LFB
380	BTN5-3800-A-ALF	BTN5-3800-A-LFB
456	BTN5-4560-A-ALF	BTN5-4560-A-LFB
532	BTN5-5320-A-ALF	BTN5-5320-A-LFB
608	BTN5-6080-A-ALF	BTN5-6080-A-LFB
684	BTN5-6840-A-ALF	BTN5-6840-A-LFB
760	BTN5-7600-A-ALF	BTN5-7600-A-LFB
836	BTN5-8360-A-ALF	BTN5-8360-A-LFB
912	BTN5-9120-A-ALF	BTN5-9120-A-LFB
988	BTN5-9880-A-ALF	BTN5-9880-A-LFB
1064	BTN5-10640-A-ALF	BTN5-10640-A-LFB
1140	BTN5-11400-A-ALF	BTN5-11400-A-LFB
1216	BTN5-12160-A-ALF	BTN5-12160-A-LFB
1292	BTN5-12920-A-ALF	BTN5-12920-A-LFB
1368	BTN5-13680-A-ALF	BTN5-13680-A-LFB
1444	BTN5-14440-A-ALF	BTN5-14440-A-LFB
1520	BTN5-15200-A-ALF	BTN5-15200-A-LFB
1596	BTN5-15960-A-ALF	BTN5-15960-A-LFB
1672	BTN5-16720-A-ALF	BTN5-16720-A-LFB
1748	BTN5-17480-A-ALF	BTN5-17480-A-LFB
1824	BTN5-18240-A-ALF	BTN5-18240-A-LFB

Note: 1. Standard nominal widths are in increments of 76 mm. Chain width wider than 1,824 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.2% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction of the standard chain listed in chain material table on the left which will be affected by the ambient temperature is 0.00012/°C at the basis of 20°C.
3. The chain with a width narrower than 1,824 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,824 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
4. Sprockets for WT1500 series can be used.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Tab guide attachment		Material mark		Number of links	Unit
BT	**N**	**5**	**-**	**7600** Note: 2	**-**	**A**	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	N: Net type	5: 15 mm				A: Tab guide attachment					L: Link

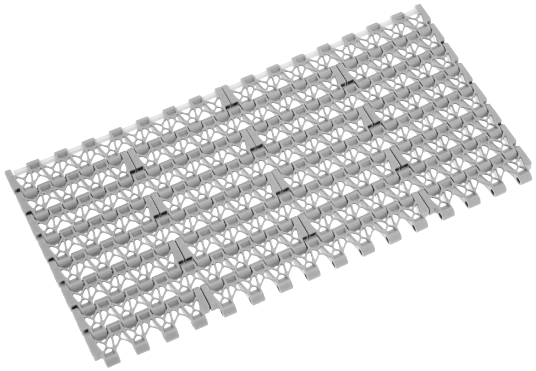
Note: 1. Do not leave space between letters and symbols.
2. 7600: 760 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

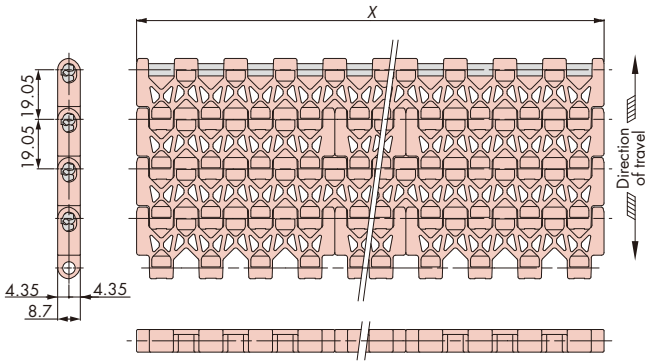
Plastic Modular Chain
BTN6

BT6 Series
Straight Running (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. 19.05 mm pitch. Suitable for conveying small and light weght containers.
3. The simple structure consisting of four components facilitates component replacements and reduces the maintenance time.
4. Easy to wash with 53% open area.
5. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
19.05	53	15

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	11.6{1180}								
Chain mass kg/m²	5.58								
Max. allowable speed m/min (With lube / No lube)	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Snap attachment material	Polyacetal								
Snap attachment color	White								
Available	△	△	△	△	△	○	○	△	△

■High-Function Chain

High-Function Chain								
Material	Low friction Wear resistant	High temperature	Freezer	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	LTW	E	MWS	SE	MF	UVR
Link color	Navy blue	White	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	11.6 {1180}	4.6 {472}	3.82 {390}	8.1 {830}	11.6{1180}		8.6 {873}	11.6 {1180}
Chain mass kg/m²	5.58	3.70	3.80	5.58				
Max. allowable speed m/min (With lube / No lube)	50		15	50			— / 50	50
Operating temperature range °C	–20 to (60)80	5 to 105	–70 to 60	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Polyethylene	Special engineering plastic				
Snap attachment material	Polyacetal	Special engineering plastic	Polyethylene	Polyacetal				
Snap attachment color	White	Beige	Red	White				
Available	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet condition at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length of the chain increases by about 1%. Contact a Tsubaki representative as the chain's approximate mass of the chain will increase.
4. Number of links per unit: 54.

Tsubaki Model Table

Chain width *X*	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFB
	Chain type	Chain type
76.2	BTN6-762-ALF	BTN6-762-LFB
152.4	BTN6-1524-ALF	BTN6-1524-LFB
228.6	BTN6-2286-ALF	BTN6-2286-LFB
304.8	BTN6-3048-ALF	BTN6-3048-LFB
381.0	BTN6-3810-ALF	BTN6-3810-LFB
457.2	BTN6-4572-ALF	BTN6-4572-LFB
533.4	BTN6-5334-ALF	BTN6-5334-LFB
609.6	BTN6-6096-ALF	BTN6-6096-LFB
685.8	BTN6-6858-ALF	BTN6-6858-LFB
762.0	BTN6-7620-ALF	BTN6-7620-LFB
838.2	BTN6-8382-ALF	BTN6-8382-LFB
914.4	BTN6-9144-ALF	BTN6-9144-LFB
990.6	BTN6-9906-ALF	BTN6-9906-LFB
1066.8	BTN6-10668-ALF	BTN6-10668-LFB
1143.0	BTN6-11430-ALF	BTN6-11430-LFB

Note: 1. Standard nominal widths are in increments of 76.2 mm. Chain width wider than 1,143 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the standard chain listed in chain material table on the left. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,143 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,143 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width	Material mark		Number of links	Unit
BT	**N**	**6**	**-**	**7620** Note: 2	**-** **LFB** Note: 3	**+**	**80** Note: 4	**L**
	N: Net type	6: 19.05 mm						L: Link

Note: 1. Do not leave space between letters and symbols.
2. 7620: 762 mm. Chain width is indicated up to the first decimal place. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

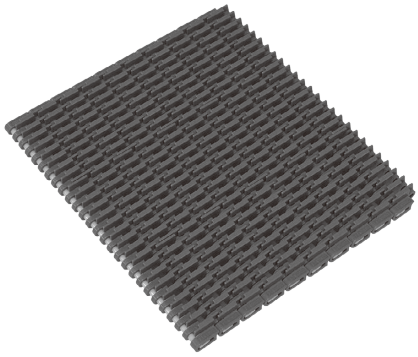
Plastic Modular Chain
WT1907-K

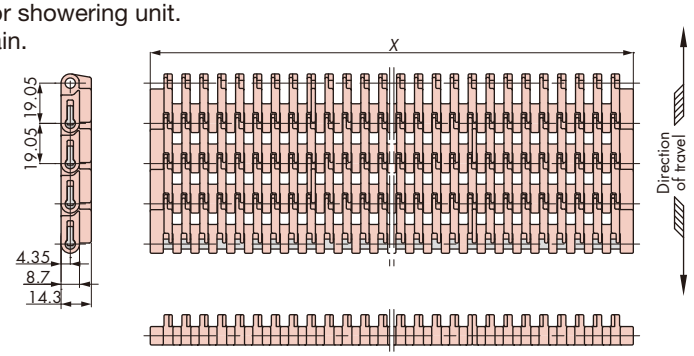
WT1900 Series

Straight Running/Raised-Rib Type (Wide Type)

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable for conveying small products, rubber sheet and for showering unit.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
19.05	20	90

Chain Material Table

■Standard Chain

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN/m {kgf/m}	22.2{2265}								
Chain mass kg/m²	11.0								
Max. allowable speed m/min With lube / No lube	50								
Operating temperature range °C	–20 to (60)80								
Pin material	Special engineering plastic								
Plug material	Polyacetal								
Plug color	Yellow								
Available	△	△	△	△	△	○	△	○	△

■High-Function Chain

High-Function Chain						
Material	Low friction Wear resistant	High temperature	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	HG	HTW	MWS	SE	MF	UVR
Link color	Navy blue	White	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	22.2{2265}	12.8{1306}	22.2{2265}		16.4{1676}	22.2{2265}
Chain mass kg/m²	11.0	7.5	11.0			
Max. allowable speed m/min With lube	50				—	50
Max. allowable speed m/min No lube					50	
Operating temperature range °C	–20 to (60)80	5 to 105	–20 to (60)80		–20 to 80	–20 to (60)80
Pin material	Special engineering plastic	Polypropylene	Special engineering plastic			
Plug material	Polyacetal	Polypropylene	Polyacetal			
Plug color	Yellow	Blue	Yellow			
Available	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Number of links per unit (chain width): 200 (K09 to K18), 100 (K21 to K36), 80 (K39 to K48), 60 (over K51).

Tsubaki Model Table

Chain width *X*	Low friction/Wear resistant LFB	Low friction NLF
	Chain type	Chain type
228.6	WT1907-K09-LFB	WT1907-K09-NLF
304.8	WT1907-K12-LFB	WT1907-K12-NLF
381.0	WT1907-K15-LFB	WT1907-K15-NLF
457.2	WT1907-K18-LFB	WT1907-K18-NLF
533.4	WT1907-K21-LFB	WT1907-K21-NLF
609.6	WT1907-K24-LFB	WT1907-K24-NLF
685.8	WT1907-K27-LFB	WT1907-K27-NLF
762.0	WT1907-K30-LFB	WT1907-K30-NLF
838.2	WT1907-K33-LFB	WT1907-K33-NLF
914.4	WT1907-K36-LFB	WT1907-K36-NLF
990.6	WT1907-K39-LFB	WT1907-K39-NLF
1066.8	WT1907-K42-LFB	WT1907-K42-NLF
1143.0	WT1907-K45-LFB	WT1907-K45-NLF
1219.2	WT1907-K48-LFB	WT1907-K48-NLF
1295.4	WT1907-K51-LFB	WT1907-K51-NLF
1371.6	WT1907-K54-LFB	WT1907-K54-NLF
1447.8	WT1907-K57-LFB	WT1907-K57-NLF
1524.0	WT1907-K60-LFB	WT1907-K60-NLF
1600.2	WT1907-K63-LFB	WT1907-K63-NLF
1676.4	WT1907-K66-LFB	WT1907-K66-NLF
1752.6	WT1907-K69-LFB	WT1907-K69-NLF
1828.8	WT1907-K72-LFB	WT1907-K72-NLF
1905.0	WT1907-K75-LFB	WT1907-K75-NLF

Note: 1. Standard nominal widths are in increments of 3 inches (76.2 mm). Custom widths or width wider than 1,905 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table on the left is about –0.5% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table on the left is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.
3. The chain with a width narrower than 1,905 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,905 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.

Model Numbering

Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**19**	**07**	**-**	**K24** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	19: 19.05 mm	7: Raised rib							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table on the left.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT3827-K

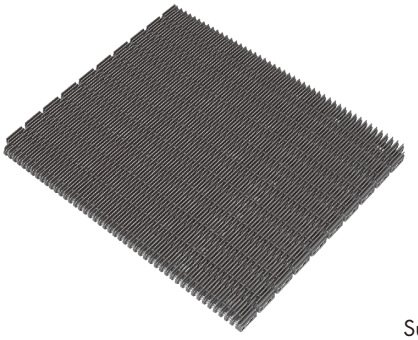
WT3820 Series

Straight Running/Raised-Rib Type (Wide Type)

Sprockets P.162 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.162, 369 | Return-Way Parts P.359 | Allowable Load Graph P.473

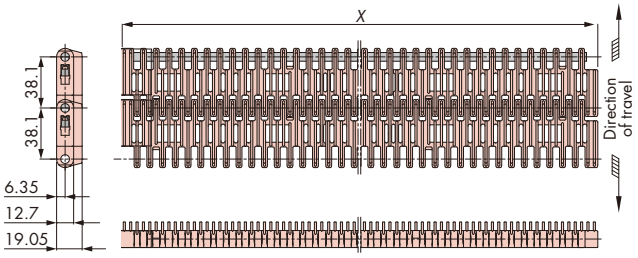
Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable for showering units.
3. Lightweight and easy-handling due to all plastic-made chain.





Surface enlargement



Chain pitch mm	Open area %	Backflex radius mm
38.1	17	50

Chain Material Table

	Standard Chain									High-Function Chain					
Material	Standard			Low friction/Wear resistant			Advanced low friction/wear resistant	Low friction		Low friction Wear resistant	High temperature	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	30.9{3153}										15.6 {1592}	30.9{3153}		22.9 {2333}	30.9 {3153}
Chain mass kg/m²	12.7										8.7	12.7			
Max. allowable speed m/min With lube	50													—	50
Max. allowable speed m/min No lube														50	
Operating temperature range °C	0 to 80			0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	5 to 105	0 to (65)80	0 to 80		
Pin material	Polypropylene														
Slide plug material	Polypropylene														
Slide plug color	Blue														
Available	△	△	△	△	△	○ Note: 6	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. The color of the slide plug was changed from yellow to blue as of December 2013.
5. Number of links per unit (chain width): 80 (K18), 30 (K24 to 48), 20 (over K54).
6. Chains with widths of 1,676.4 mm (K66) to 2,438.4 mm (K96) are "△": made-to-order products (RFQ).

Tsubaki Model Table

Chain width *X*	Low friction/Wear resistant LFB Chain type
457.2	WT3827-K18-LFB
609.6	WT3827-K24-LFB
762.0	WT3827-K30-LFB
914.4	WT3827-K36-LFB
1066.8	WT3827-K42-LFB

Chain width *X*	Low friction/Wear resistant LFB Chain type
1219.2	WT3827-K48-LFB
1371.6	WT3827-K54-LFB
1524.0	WT3827-K60-LFB
1676.4	WT3827-K66-LFB
1828.8	WT3827-K72-LFB

Chain width *X*	Low friction/Wear resistant LFB Chain type
1981.2	WT3827-K78-LFB
2133.6	WT3827-K84-LFB
2286.0	WT3827-K90-LFB
2438.4	WT3827-K96-LFB

Note: 1. Standard nominal widths are in increments of 152.4 mm (6 inches). Custom widths or width wider than 2,438.4 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width of the standard chain listed in chain material table above is about –0.4% (at an ambient temperature of 20°C). The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.

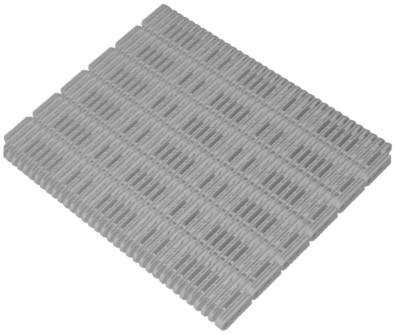
Model Numbering

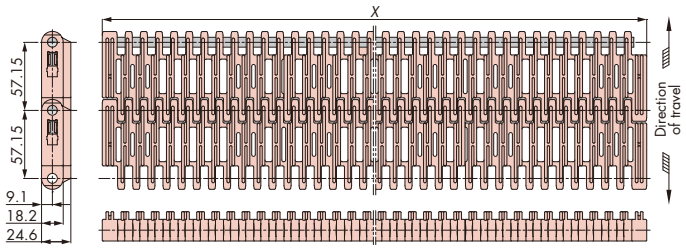
Chain type	Chain pitch	Link shape		Chain width		Material mark		Number of links	Unit
WT	**38**	**27**	**-**	**K24** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
	38: 38.1 mm	7: Raised rib							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Mass handling is possible due to the wide carry-way, which is a combination of a wide module with a narrow module in a brick-layered array.
2. Suitable for mass handling showering units due to the highest allowable load in raised-rib series.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm
57.15	23	70

Chain Material Table

	Standard Chain									High-Function Chain					
Material	Standard			Low friction/Wear resistant			Advanced low friction/wear resistant	Low friction		Low friction Wear resistant	High temperature	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	MWS	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Cream	Gray	Yellow	Light gray
Max. allowable load kN/m {kgf/m}	51{5204}										35 {3571}	51{5204}		38 {3851}	51 {5204}
Chain mass kg/m²	17.2										11.3	17.2			
Max. allowable speed m/min With lube	50													—	50
Max. allowable speed m/min No lube														50	
Operating temperature range °C	0 to 80			0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	5 to 105	0 to (65)80	0 to 80		
Pin material	Polypropylene														
Slide plug material	Polypropylene														
Slide plug color	Blue														
Available	△	△	△	△	△	○	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. The color of the slide plug was changed from yellow to blue as of December 2013.
5. Number of links per unit (chain width): 40 (K18), 20 (K24 to 36), 10 (over K42).

Tsubaki Model Table

Chain width *X*	High temperature HTW Chain type
457.2	WT5707-K18-HTW
609.6	WT5707-K24-HTW
762.0	WT5707-K30-HTW
914.4	WT5707-K36-HTW
1066.8	WT5707-K42-HTW
1219.2	WT5707-K48-HTW

Chain width *X*	High temperature HTW Chain type
1371.6	WT5707-K54-HTW
1524.0	WT5707-K60-HTW
1676.4	WT5707-K66-HTW
1828.8	WT5707-K72-HTW
1981.2	WT5707-K78-HTW
2133.6	WT5707-K84-HTW

Chain width *X*	High temperature HTW Chain type
2286.0	WT5707-K90-HTW
2438.4	WT5707-K96-HTW
2590.8	WT5707-K102-HTW
2743.2	WT5707-K108-HTW
2895.6	WT5707-K114-HTW
3048.0	WT5707-K120-HTW

Note: 1. Standard nominal widths are in increments of 152.4 mm (6 inches). Custom widths or width wider than 3,048 mm. Contact a Tsubaki representative for more information.
2. The chain width *X* is the nominal width and the actual width is about –0.3% (at the ambient temperature of 20°C) for the HTW series. The width will expand or contract due to temperature change. The ratio of both expansion and contraction which will be affected by the ambient temperature of the standard chain listed in chain material table above is 0.00012/°C and 0.00011/°C for HTW series at the basis of 20°C.

Model Numbering

Chain type	Chain pitch	Link shape	Chain width		Material mark		Number of links	Unit
WT	57	07	K24 Note: 2	-	LFB Note: 3	+	80 Note: 4	L
	57: 57.15 mm	*7*: Raised rib						L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain width in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above. 4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT2250VG

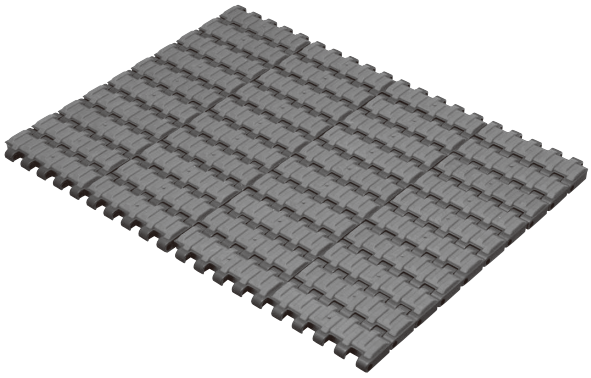
WT2250 Series

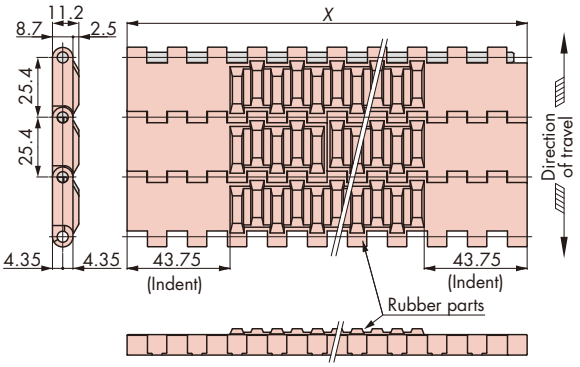
Straight Running/Rubber Type (Wide Type)

Sprockets P.155 | Sprocket Pitch P.458 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.471

Features

1. Possible to convey boxes and items in bulk vertically due to friction created by the rubber surface.





Chain pitch mm	Open area %	Backflex radius mm
25.4	3	30

Chain Material Table

Standard Chain		
Material		Standard
Material mark		G
Link color	Chain body	Gray
	Rubber parts	Blue
Max. allowable load kN/m {kgf/m}		12.8{1305}
Max. allowable load kg/m^2		11.3
Max. allowable speed m/min	With lube	50
	No lube	
Operating temperature range °C		–20 to (60)80
Pin material		Special engineering plastic
Snap attachment material		Polyacetal
Snap attachment color		Light blue
Available		△

Note: 1. "△": Made-to-order product (RFQ). Not available for other chain materials that are not listed in the chain material table on the left.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. Base chain material: polyacetal. Rubber part material: thermoplastic rubber.
5. Number of links per unit: 40.

Tsubaki Model Table

Chain width *X*	Standard G Chain type
85	WT2250VG-W85-G
170	WT2250VG-W170-G
255	WT2250VG-W255-G
340	WT2250VG-W340-G
425	WT2250VG-W425-G
510	WT2250VG-W510-G
595	WT2250VG-W595-G
680	WT2250VG-W680-G
765	WT2250VG-W765-G
850	WT2250VG-W850-G

Chain width *X*	Standard G Chain type
935	WT2250VG-W935-G
1020	WT2250VG-W1020-G
1105	WT2250VG-W1105-G
1190	WT2250VG-W1190-G
1275	WT2250VG-W1275-G
1360	WT2250VG-W1360-G
1445	WT2250VG-W1445-G
1530	WT2250VG-W1530-G
1615	WT2250VG-W1615-G

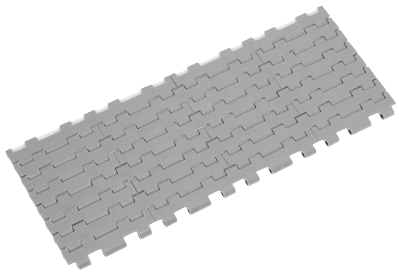
Note: 1. Standard nominal widths are in increments of 85 mm. Chain width wider than 1,615 mm. Contact a Tsubaki representative for more information.
2. Chain width *X* is the nominal width which expands and contracts due to temperature change. As a guideline, expansion and contraction specifications are 0.00012/°C based on 20 °C.
3. Indent, where rubber is not attached, should be necessary to support the chain on the return-way when using return rollers.
4. No indent is available for the chain widths of 85 mm and 170 mm.

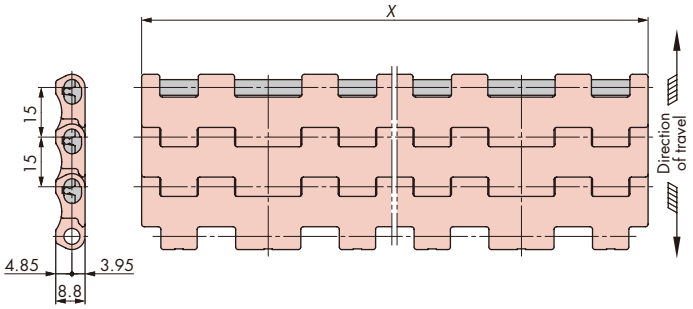
Model Numbering

Chain type	Link shape		Chain width		Material mark		Number of links	Unit
WT2250	**VG**	**-**	**W340** Note: 2	**-**	**G**	**+**	**80** Note: 3	**L**
	VG: Rubber type							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain width in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

■BTC5





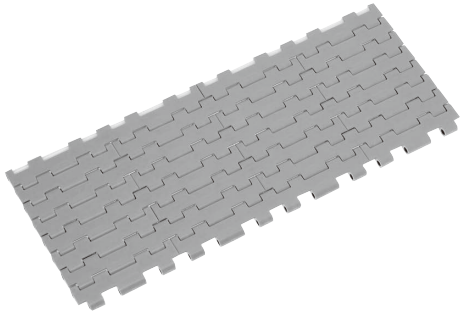
Chain Material Table

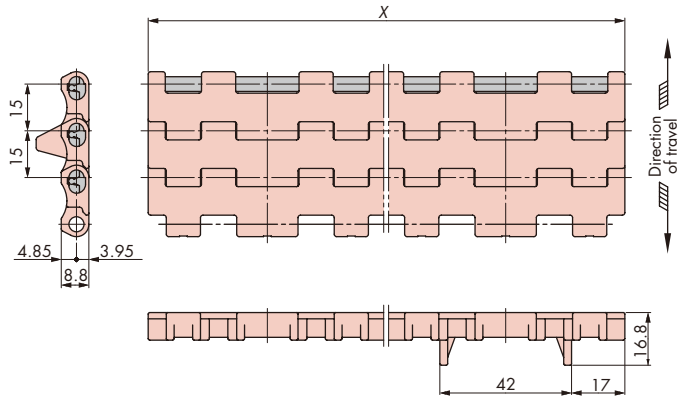
Material	Chain pitch mm	Link color	Open area %	Max. allowable load kN/m {kgf/m}	Chain mass kg/m²	Operating temperature range °C	Pin material
LFB	15	Brown	2.5	10.5{1072}	7.90	–20 to (60)80	Special engineering plastic
MWS		Cream					
ALF		Light blue					

Note: 1. Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length and chain mass increase slightly. Contact a Tsubaki representative for more information.
4. The chain with a width narrower than 1,824 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,824 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
5. Number of links per unit: 68.

■BTC5-A

Tab Guide Attachment





Chain Material Table

Material	Chain pitch mm	Link color	Open area %	Max. allowable load kN/m {kgf/m}	Chain mass kg/m²	Operating temperature range °C	Pin material
LFB	15	Brown	2.5	10.5{1072}	7.90	–20 to (60)80	Special engineering plastic
MWS		Cream					
ALF		Light blue					

Note: 1. Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The maximum allowable load indicates the value specified for a normal temperature (20°C) when loads are evenly applied to the entire surface of the chain in a widthwise direction. The value differs depending on use conditions (temperature, speed, etc.). Refer to the load diagram of the chain. The maximum allowable load shown in the above chain material table is specified in a unit of 1 m chain width. Calculate the maximum allowable load of the chain to be examined by multiplying the maximum value per meter by its width *X*.
3. Operating temperature of (the value in parentheses) is for wet condition. This product can be used in wet conditions at 60 to 80°C if the pin material is changed to stainless steel. In this case, the initial length and chain mass increase slightly. Contact a Tsubaki representative for more information.
4. The chain with a width narrower than 1,824 mm must be used when ambient temperatures are higher than 40°C. A chain width wider than 1,824 mm is available under 80% of the maximum chain tension in case of replacing the pins with those made of polypropylene.
5. With tab guide attachments, the approximate chain weight will be 0.5 kg/m higher than the approximate chain weight in the chain material table above. (tab guide attachments are attached every two links and only on one side of the chain.)
6. Number of links per unit: 68.

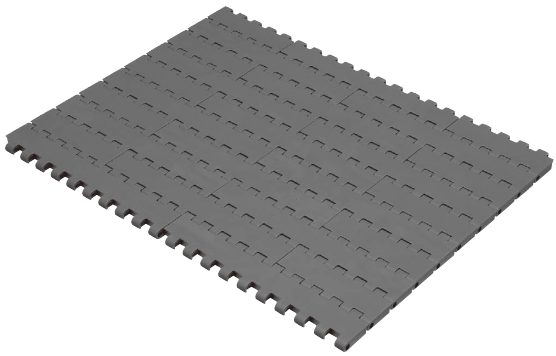
■WT2250FT Flight Type and WT2250FG Flight Type

Plastic modular chain that allows inclined conveyance of bulk materials.

■Flight-Attachable Chain

●WT2250FT-G and WT2250FT-HTW

(Refer to page 69 for maximum allowable load and other parameters)

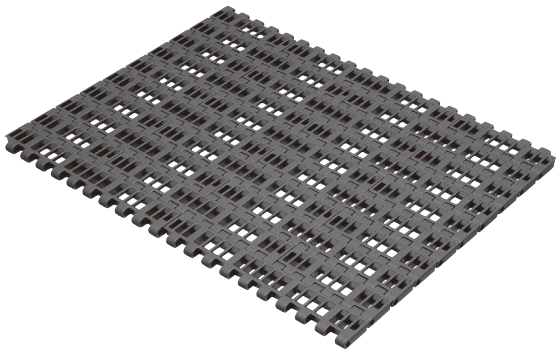


Inclined conveyor with attached flights

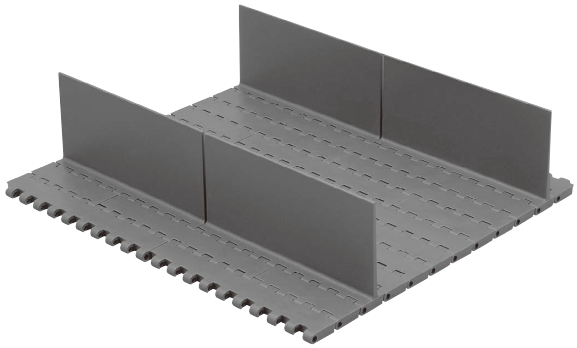


●WT2250FG-G and WT2250FG-HTW

(Refer to page 105 for maximum allowable load and other parameters)



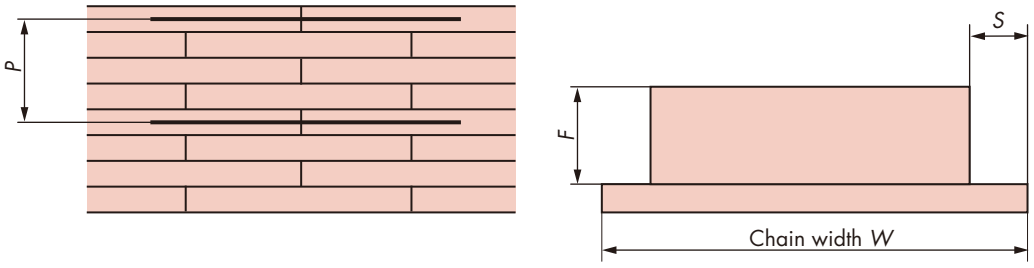
Example of flight type



■Flight Dimensions

The below dimensions must be determined in order to install flights:

- *P* = flight attachable spacing (Flights can be attached at integral multiples of the chain pitch of 25.4 mm.)
- *F* = flight height (Select from 25.4 mm, 50.8 mm, or 76.2 mm.)
- *S* = indent (Required to support the chain with rollers, etc. on the return-way. 17 mm, 34 mm, or 51 mm)



Note: Made-to-order product (RFQ).

WT2250FT/FG Flight Type Plastic Modular Chain Inquiry Sheet

Please fill out the following information and contact a Tsubaki representative when placing an order for or inquiring about WT2250FT/FG Flight Type Plastic Modular Chain.

WT2250FT/FG Inquiry Sheet				
Company			Your name	
Contact number (fax)			E-mail address	
1. Chain type	FT (closed type) · FG (open type)			
2. Chain width *W*	mm (Standard chain width begins at 170 mm and available in 85 mm increments)			
3. Chain material	Standard G (Link color: Gray) High Temperature HTW (Link color: White)			
4. Flight attachable spacing *P*	mm (Flights can be attached at integral multiples of the chain pitch of 25.4 mm.)			
5. Flight height *F*	25.4 mm · 50.8 mm · 76.2 mm · Other (mm)			
6. Indent *S*	17 mm · 34 mm · 51 mm · Other (mm)			
7. Equipment	①Description	New installation · Remodeling (Existing:)		
	②Layout	Layout sketch:		
	③Horizontal conveyance distance	Drive side: mm	Driven side: mm	
Conveyed product	①Conveyed product			
	②Mass	kg/m^2		
	③Conveying speed	m/min		
	④Temperature of conveyed product	from to °C		
	⑤Ambient temperature	from to °C		
	⑥Amount of product	kg/min		
	⑦Impact	No · Yes (Description:)		

Plastic Modular Chain
BTC4-M

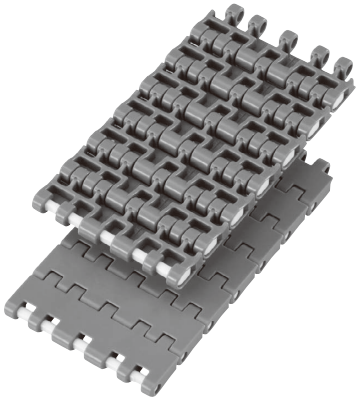
BT4 Series

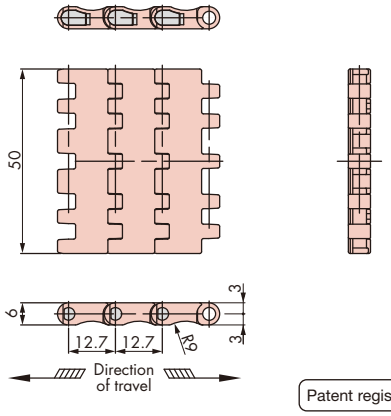
Straight Running (Mold-to-Width Type)

Sprockets P.145 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.421

Features

1. 12.7 mm pitch. Suitable for conveying small and lightweight containers.
2. The backside surface has a rounded shape, which is suitable to wrap around the 18 mm diameter shaft, effectively minimizing the dead space between conveyors.
3. Suitable for accumulation and/or transfer due to its unique multi-hinge structure.
4. Lightweight and easy-handling due to all plastic-made chain.





Patent registration

Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
12.7	0.2	10	240

Chain Material Table

	Standard Chain										High-Function Chain								
Material	Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	Y	E	DIA	DIY	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Matte White	Black	Cream	Green	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	0.49{50}											0.27 {28}	0.34 {35}	0.38{39}		0.49{50}		0.36 {37}	0.49 {50}
Chain mass kg/m	0.25											0.2	0.25	0.2	0.3	0.25			
Max. allowable speed m/min With lube	50													—	50			—	50
Max. allowable speed m/min No lube														50				50	
Operating temperature range °C	–20 to (60)80													–20 to 80	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic																		
Available	●	△	△	△	●	●	●	●	△	△	△	△	△	△	△	○	△	△	△

Note: 1. "●": Standard products, "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. Available only for dedicated plastic pins.
4. The color of connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFW	Low friction/Wear resistant LFG	Low friction/Wear resistant LFB	Standard
	Chain type	Chain type	Chain type	Chain type	Chain type
50	**BTC4-500-M-ALF**	**BTC4-500-M-LFW**	**BTC4-500-M-LFG**	**BTC4-500-M-LFB**	**BTC4-500-M**

Note: Standard products.

Model Numbering

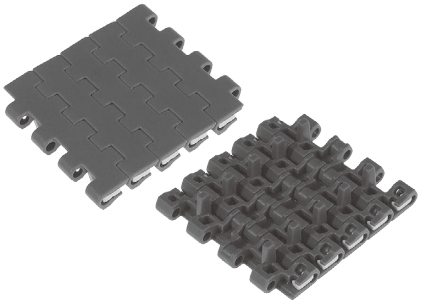
Chain type	Link shape	Chain pitch		Chain width		Mold-to-width		Material mark		Number of links		Unit
BT	**C**	**4**	**-**	**500**	**-**	**M**	**-**	**LFB** Note: 2	**+**	**80** Note: 3		**L**
	C: Closed type	4: 12.7 mm		500: 50 mm								L: Link

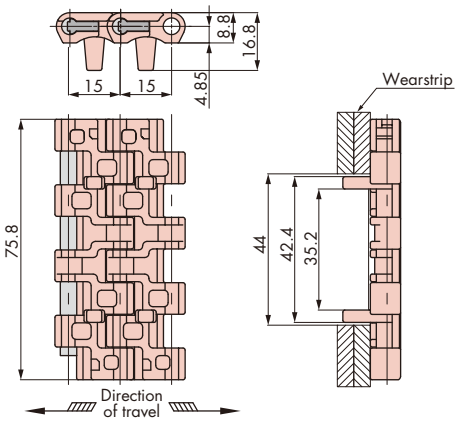
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. 15 mm pitch. Suitable for conveying small and light weight containers.
2. Suitable for a single filer, which consists of multilane conveyors with a speed difference, due to use of tab guide attachment.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
15	2	15	240

Chain Material Table

	Standard Chain										High-Function Chain					
Material	Standard				Low friction/ Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	0.8{81}											0.56 {56.7}	0.8{81}		0.59 {60.2}	0.8 {81}
Chain mass kg/m	0.6															
Max. allowable speed m/min With lube	120														—	120
Max. allowable speed m/min No lube	50															
Operating temperature range °C	–20 to (60)80														–20 to 80	–20 to (60)80
Pin material	Special engineering plastic															
Plug material	Polyacetal															
Plug color	Yellow															
Available	△	△	△	△	△	○	△	○	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. Nose bars (sliding types, integrated-bearing types) cannot be used.
4. Sprocket dedicated for the BT5 series cannot be used.
5. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 30 mm.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
75.8	WT1505G-M300-ALF	WT1505G-M300-LFG	WT1505G-M300-NLF

Note: Made-to-order products.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Number of links	Unit
WT	15	05	G	-	M	300	-	LFG Note: 2	+	80 Note: 3	L
	15:15 mm	5: Closed type	G: Tab guide attachment			300: 75.8 mm					L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT1515G-M

WT1510 Series

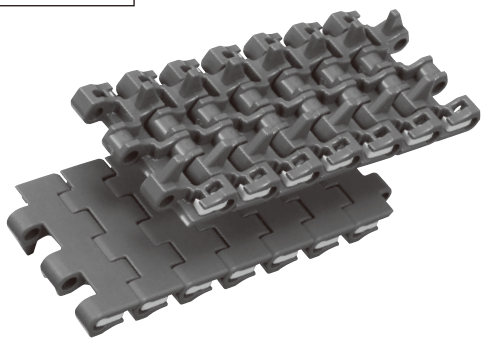
Straight Running (Mold-to-Width Type)

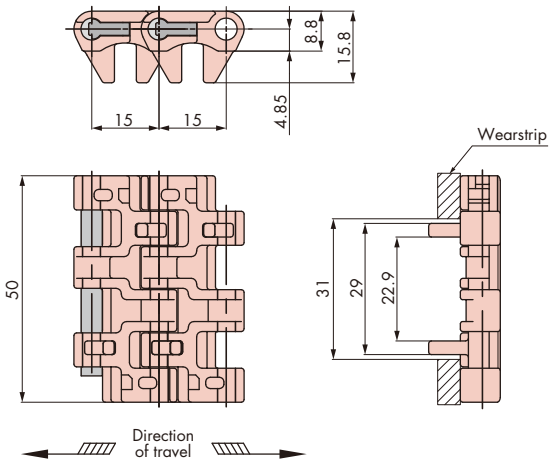
Features

1. 15 mm pitch. Suitable for conveying small and light weight containers.
2. Suitable for a single filer, which consists of multilane conveyors with a speed difference, due to use of tab guide attachment.
3. Lightweight and easy-handling due to all plastic-made chain.

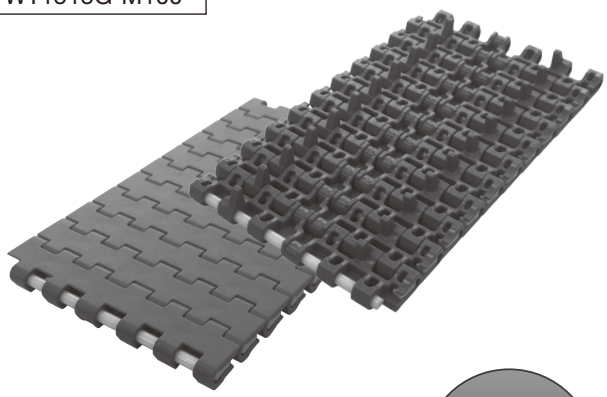
Tab Guide Attachment

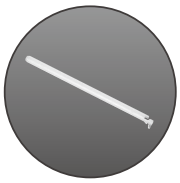
WT1515G-M50



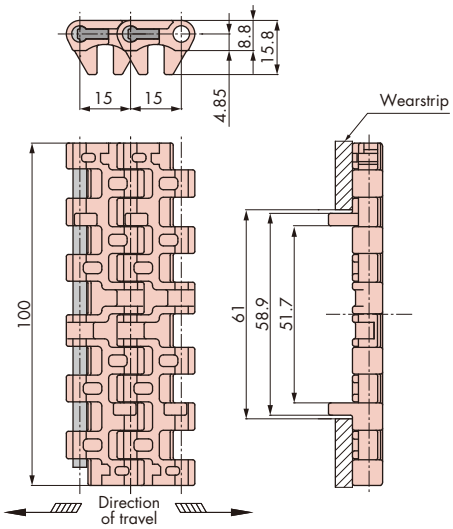


WT1515G-M100





Slit pin



Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
15	2	15	240

Chain Material Table

		Standard Chain										High-Function Chain					
Material		Standard				Low friction/ Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	M50	0.53{54}											0.37 {38}	0.53{54}		0.39 {40}	0.53 {54}
	M100	1.06{108}											0.74 {76}	1.06{108}		0.78 {80}	1.06 {108}
Chain mass kg/m	M50	0.4															
	M100	0.8															
Max. allowable speed m/min	With lube	120(50)														—	120 (50)
	No lube	50(30)															
Operating temperature range °C		–20 to (60)80														–20 to 80	–20 to (60)80
Pin material		Special engineering plastic															
Plug material		Polyacetal															
Plug color		Yellow															
Available		○	△	△	△	△	○	△	○	○	△	○	△	△	△	△	△ Note: 7

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 20 mm.
5. When using WT-S1500 (machined types) solid sprocket, the hub needs to be machined to have a proper diameter.
6. Nose roller cannot be used.
7. UVR series are not supported for slit-pin type products.

Tsubaki Model Table

◆Slit pin system

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF	Standard
	Chain type	Chain type	Chain type	Chain type
50	WT1515G-M50-ALF-SP	WT1515G-M50-LFG-SP	WT1515G-M50-NLF-SP	WT1515G-M50-SP
100	WT1515G-M100-ALF-SP	WT1515G-M100-LFG-SP	WT1515G-M100-NLF-SP	WT1515G-M100-SP

Note: Made-to-order products.

◆Pin and plug system

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF	Standard
	Chain type	Chain type	Chain type	Chain type
50	WT1515G-M50-ALF	WT1515G-M50-LFG	WT1515G-M50-NLF	WT1515G-M50
100	WT1515G-M100-ALF	WT1515G-M100-LFG	WT1515G-M100-NLF	WT1515G-M100

Note: Made-to-order products.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Pin retention system		Number of links		Unit
WT	**15**	**15**	**G**	**-**	**M**	**50**	**-**	**LFG** Note: 2	**-**	**SP**	**+**	**80** Note: 3		**L**
	15: 15 mm	5: Closed type	G: Tab guide attachment			50: 50 mm 100: 100 mm				None: Pin and plug SP: Slit pin (all-in-one pin with a plug)				L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

BTC8H-M/BTM8H-M

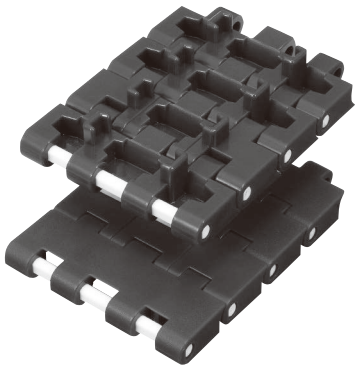
BT8 Series

Straight Running/Magnet Type (Mold-to-Width Type)

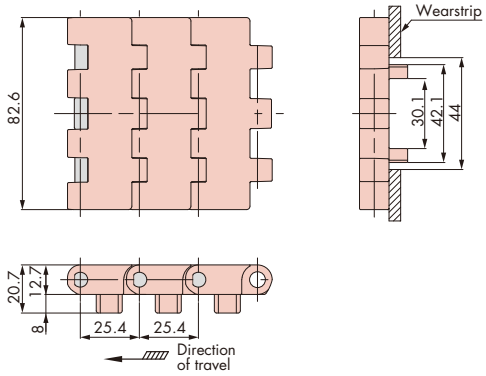
Features

1. Suitable for conveying trays with a parallel strand.
2. The product lineup includes BTC8H-M closed type which is suitable for horizontal conveyors and BTM8H-M magnet type which is suitable for vertical conveyors.
3. Magnetic type enables the conveyance of metal trays vertically.

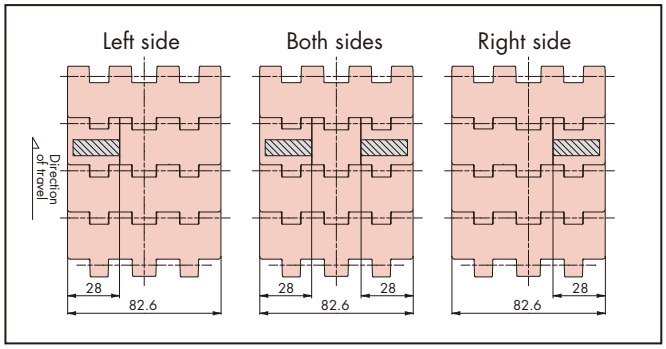
Tab Guide Attachment



●Closed Type BTC8H-M (Without magnet)

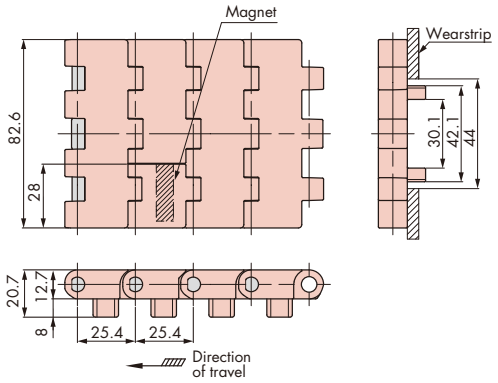


●Magnet Configuration



Magnets can be incorporated into BTM8H-M magnetic type on either the left side or the right side with respect to the direction of travel, or on both sides, and with any spacing desired. Specify the placement and spacing of the magnets when ordering.

●Magnetic Type BTM8H-M (With magnet)



Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	0.1	25	120

Chain Material Table

■Standard Chain

Standard Chain											
Material		Standard				Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		W	B	BL	G	LFW	LFG	LFB	ALF	NLF	WR
Link color		White	Blue	Sky blue	Gray	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		1.47{150}									
Chain mass kg/m	BTC8H	1.2									
	BTM8H	1.2 Note: 4									
Max. allowable speed m/min	With lube	50 Note: 3									
	No lube										
Operating temperature range °C		–20 to (60)80									
Pin material		Special engineering plastic									
Available	BTC8H	△	●	△	●	△	△	△	△	△	△
	BTM8H	△	△	△	△	△	△	△	△	△	△

■High-Function Chain

High-Function Chain									
Material		Low friction Wear resistant	High temperature	Electroconductive	Impact resistant	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	HTW	E	DIA	MWS	SE	MF	UVR
Link color		Navy blue	White	Black	Cream	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		1.47{150}	0.59{60}	1.03{105}	1.14{116}	1.47{150}		1.09{111}	1.47{150}
Chain mass kg/m	BTC8H	1.2	0.8	1.2	1.0	1.2			
	BTM8H	1.2 Note: 4	0.8 Note: 4	1.2 Note: 4	1.0 Note: 4	1.2 Note: 4			
Max. allowable speed m/min	With lube	50 Note: 3			—	50 Note: 3		—	50 Note: 3
	No lube				50 Note: 3			50 Note: 3	
Operating temperature range °C		–20 to (60)80	5 to (60)80	–20 to (60)80	–20 to 80	–20 to (60)80		–20 to 80	–20 to (60)80
Pin material		Special engineering plastic							
Available	BTC8H	△	△	△	△	△	△	△	△
	BTM8H	△	△	△	△	△	△	△	△

Note: 1. "●": Standard products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. BTM8H-M is only for dry conditions. It cannot be used under conditions where it is exposed to water or steam. Since magnets are sensitive to heat, do not store or use them in an environment exceeding 80°C.
4. Chain mass for BTM8H-M does not include the mass of the magnets shown in the above chain material table. Add 0.015 kg forper magnet.
5. Available only for dedicated plastic pins. The color of connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

◆Closed Type (Without magnet)

Chain width	Standard G	Standard B
	Chain type	Chain type
82.6	**BTC8H-826-M-G**	**BTC8H-826-M-B**

Note: Standard products.

◆Magnetic Type (With magnet)

Chain width	Standard G	Standard B
	Chain type	Chain type
82.6	BTM8H-826-M-G-TK	BTM8H-826-M-B-TK

Note: 1. Made-to-order products (RFQ).
2. Refer to model numbering for the Tsubaki model no.

Model Numbering

Chain type	Link shape	Chain pitch	Chain type		Chain width		Mold-to-width		Material mark		Special configuration		Number of links		Unit
BT	**M**	**8**	**H**	**-**	**826**	**-**	**M**	**-**	**B** Note: 2	**-**	**TK** Note: 3	**+**	**80** Note: 4		**L**
	C : Closed type M: Magnetic type	8: 25.4 mm			826: 82.6 mm						None: Closed type TK: Magnetic type				L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Chain with magnets requires confirmation of the magnet configuration in each case with customers. Contact a Tsubaki representative for more information.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT2505-M

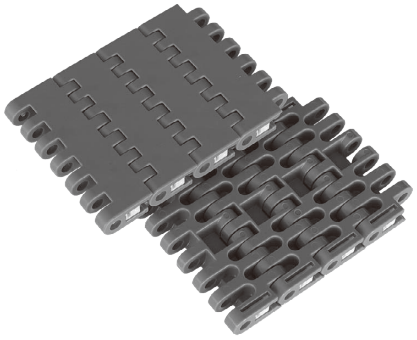
WT2500 Series

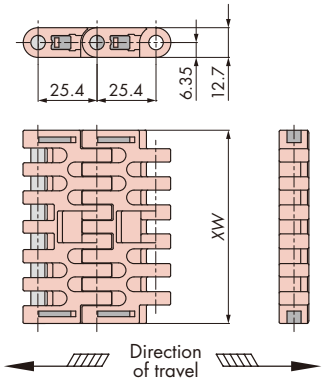
Straight Running (Mold-to-Width Type)

Sprockets P.157 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.422

Features

1. 25.4 mm pitch. Suitable for conveying medium-sized containers.
2. Promising to prolong lifetime against wear due to special engineering plastic pins.
3. Lightweight and easy-handling due to all plastic-made chain.





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	3	20	120

Chain Material Table

		Standard Chain										High-Function Chain						
Material		Standard				Low friction/ Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	M325	3.0{306}											1.2{122}	2.1{214}	3.0{306}		2.2{224}	3.0{306}
	M450	4.5{459}											1.8{183}	3.2{321}	4.5{459}		3.3{337}	4.5{459}
Chain mass kg/m	M325	1.0											0.7	1.0				
	M450	1.4											0.9	1.4				
Max. allowable speed m/min	With lube	120											50	120			—	120
	No lube	50																
Operating temperature range °C		0 to 80 Note: 4, 5				0 to (65)80 Note: 4, 5			0 to 80 Note: 4, 5	0 to (65)80 Note: 4, 5	0 to 80 Note: 4, 5	0 to (65)80 Note: 4, 5	5 to 105	0 to 80	0 to (65)80		0 to 80	
Pin material		Polypropylene/Special engineering plastic Note: 4											Polypropylene					
Slide plug material		Polypropylene																
Slide plug color		Blue																
Available		△	△	△	△	△	○	△	○	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of the slide plug was changed from yellow to blue as of December 2013.
4. If the pin material is special engineering plastic, add "-EP" to the end. Only the standard chain listed in chain material table above [excluding standard (W/B/BL) series] and HG series are available.
5. (60) applies when pins are made of special engineering plastic and use under wet condition.

Tsubaki Model Table

Chain width XW	Advanced low friction/Wear resistant ALF		Low friction/Wear resistant LFG	
	Chain type		Chain type	
82.6	WT2505-M325-ALF	WT2505-M325-ALF-EP	WT2505-M325-LFG	WT2505-M325-LFG-EP
114.3	WT2505-M450-ALF	WT2505-M450-ALF-EP	WT2505-M450-LFG	WT2505-M450-LFG-EP

Note: Made-to-order products.

Model Numbering

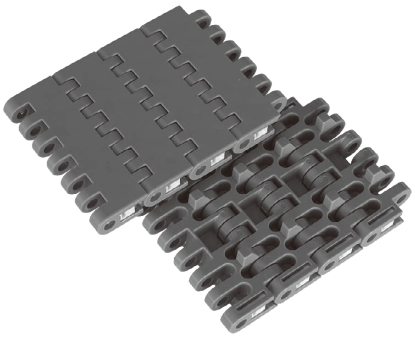
Chain type	Chain pitch	Link shape		Mold-to-width	Chain width		Material mark		Pin material		Number of links	Unit
WT	25	05	-	M	450	-	LFG Note: 2	-	EP	+	80 Note: 3	L
	25: 25.4 mm	5: Closed type			325: 82.6 mm 450: 114.3 mm				None: Polypropylene EP: Special engineering plastic			L: Link

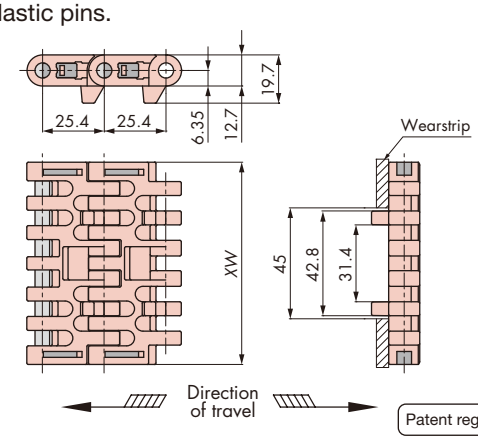
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. 25.4 mm pitch. Suitable for conveying medium-sized containers.
2. Suitable for a single filer, which consists of multilane conveyors with a speed difference, due to use of tab guide attachments.
3. Promising to prolong lifetime against wear due to special engineering plastic pins.
4. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Patent registration

Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	3	20	120

Chain Material Table

Material		Standard Chain										High-Function Chain						
		Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	M325	3.0{306}											1.2{122}	2.1{214}	3.0{306}		2.2{224}	3.0{306}
	M450	4.5{459}											1.8{183}	3.2{321}	4.5{459}		3.3{337}	4.5{459}
Chain mass kg/m	M325	1.1											0.7	1.1				
	M450	1.5											1.0	1.5				
Max. allowable speed m/min	With lube	120											50	120			—	120
	No lube	50																
Operating temperature range °C		0 to 80 Note: 4, 5				0 to (65)80 Note: 4, 5			0 to 80 Note: 4, 5	0 to (65)80 Note: 4, 5	0 to 80 Note: 4, 5	0 to (65)80 Note: 4, 5	5 to 105	0 to 80	0 to (65)80	0 to 80		
Pin material		Polypropylene/Special engineering plastic Note: 4											Polypropylene					
Slide plug material		Polypropylene																
Slide plug color		Blue																
Available		△	△	△	△	△	●	△	○	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard product, "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of the slide plug was changed from yellow to blue as of December 2013.
4. If the pin material is special engineering plastic, add "-EP" to the end. Only the standard chain listed in chain material table above [excluding standard (W/B/BL) series] and HG series are available.
5. (60) applies when pins are made of special engineering plastic and use under wet condition.

Tsubaki Model Table

Chain width XW	Advanced low friction/Wear resistant ALF		Low friction/Wear resistant LFG	
	Chain type		Chain type	
82.6	WT2505G-M325-ALF	WT2505G-M325-ALF-EP	**WT2505G-M325-LFG**	WT2505G-M325-LFG-EP
114.3	WT2505G-M450-ALF	WT2505G-M450-ALF-EP	**WT2505G-M450-LFG**	WT2505G-M450-LFG-EP

Note: Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Pin materials		Number of links		Unit
WT	25	05	G	-	M	450	-	LFG Note: 2	-	EP	+	80 Note: 3		L
	25: 25.4 mm	5: Closed type	G: Tab guide attachment			325: 82.6 mm 450: 114.3 mm				None: Polypropylene EP: Special engineering plastic				L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT2515G-M

WT2510 Series

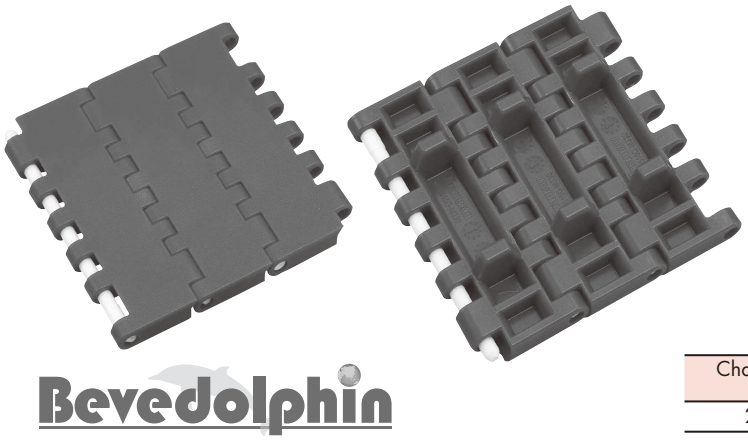
Straight Running (Mold-to-Width Type)

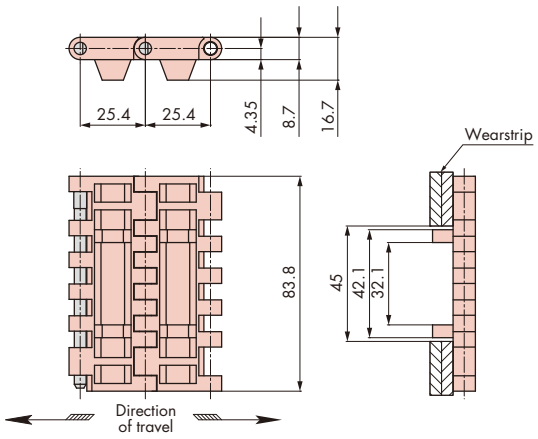
Sprockets P.155 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.422

Features

1. Highly effective for preventing foreign substance contamination through the adoption of a special stepped plastic connecting pin that is built by integrating a plug and pin.
2. Easy handling with a simple plug and pin system.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	2	25	120

Chain Material Table

	Standard Chain											High-Function Chain						
Material	Standard				Low friction/Wear resistant				Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	CB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Blue	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.9{190}												0.76 {76}	1.33 {133}	1.9{190}		1.41 {141}	1.9 {190}
Chain mass kg/m	0.8												0.5	0.8				
Max. allowable speed m/min With lube	100												50	100			—	100
Max. allowable speed m/min No lube	50																	
Operating temperature range °C	–20 to (60)80												5 to (60)80	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic																	
Available	△	△	△	△	△	△	△	○	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant HG	Low friction/Wear resistant CB
	Chain type	Chain type	Chain type
83.8	WT2515G-M330-ALF	WT2515G-M330-HG	WT2515G-M330-CB

Note: Made-to-order products.

Model Numbering

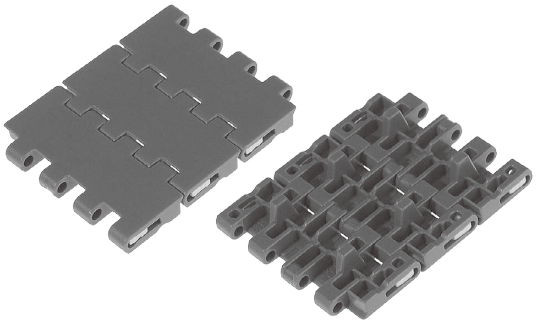
Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Number of links	Unit
WT	25	15	G	-	M	330	-	CB Note: 2	+	80 Note: 3	L
	25: 25.4 mm	5: Closed type	G: Tab guide attachment			330: 83.8 mm					L: Link

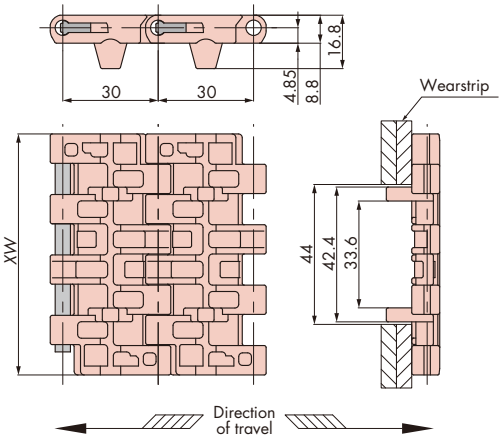
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Can be possible to drive coaxially with WT1500 series due to a 30 mm pitch.
2. Suitable for a single filer, which consists of multilane conveyors with a speed difference, due to use of tab guide attachments.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
30	4	30	140

Chain Material Table

Material		Standard Chain										High-Function Chain					
		Standard				Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	M300	0.8{81.1}											0.56 {56.8}	0.8{81.1}		0.59 {60.2}	0.8 {81.1}
	M450	1.2{122.0}											0.84 {85.4}	1.2{122.0}		0.89 {90.6}	1.2 {122.0}
Chain mass kg/m	M300	0.6															
	M450	0.8															
Max. allowable speed m/min	With lube	120														—	120
	No lube	50															
Operating temperature range °C		–20 to (60)80														–20 to 80	–20 to (60)80
Pin material		Special engineering plastic															
Plug material		Polyacetal															
Plug color		Yellow															
Available		△	△	△	△	△	○	△	○	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.

Tsubaki Model Table

Chain width XW	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
75.8	WT3005G-M300-ALF	WT3005G-M300-LFG	WT3005G-M300-NLF
113.8	WT3005G-M450-ALF	WT3005G-M450-LFG	WT3005G-M450-NLF

Note: Made-to-order products.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Number of links		Unit
WT	30	05	G	-	M	300	-	LFG Note: 2	+	80 Note: 3		L
	30: 30 mm	5: Closed type	G: Tab guide attachment			300: 75.8 mm 450: 113.8 mm						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain

WT3835G-M

WT3830 Series

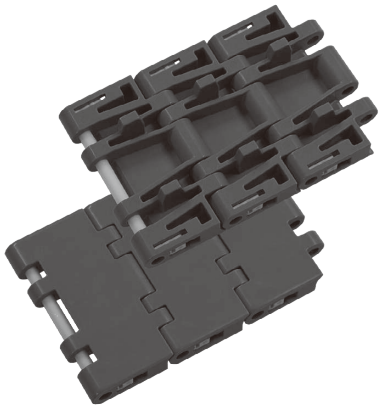
Straight Running (Mold-to-Width Type)

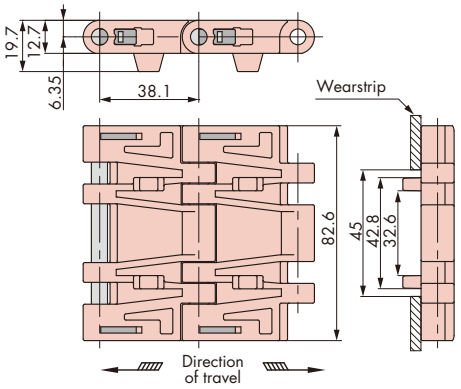
Sprockets P.163 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.423

Features

1. Mold-to-width type with 82.6 mm-width is lined up in WT3835-K. Suitable for conveying containers.
2. A slide plug type pin stopper is adopted to allow the easy connection and disconnection of the chain with just a screwdriver.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
38.1	2	40	80

Chain Material Table

	Standard Chain										High-Function Chain						
Material	Standard				Low friction/ Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction Wear resistant	High temperature	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.2{122.4}											0.5 {51}	0.84 {85.7}	1.2{122.4}		0.89 {90.6}	1.2 {122.4}
Chain mass kg/m	1.0											0.7	1.0				
Max. allowable speed m/min With lube	100											50	100			—	100
Max. allowable speed m/min No lube	50																
Operating temperature range °C	–20 to (60)80											5 to 105	–20 to (60)80			–20 to 80	–20 to (60)80
Pin material	Special engineering plastic											Polypropylene	Special engineering plastic				
Slide plug material	Polypropylene																
Slide plug color	Blue																
Available	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of the slide plug was changed from yellow to blue as of December 2013.
4. Use solid sprockets. Split sprockets cannot be used.

Tsubaki Model Table

Chain width	Low friction/Wear resistant LFB	Low friction NLF	High temperature HTW
	Chain type	Chain type	Chain type
82.6	WT3835G-M325-LFB	WT3835G-M325-NLF	WT3835G-M325-HTW

Note: Made-to-order products.

Model Numbering

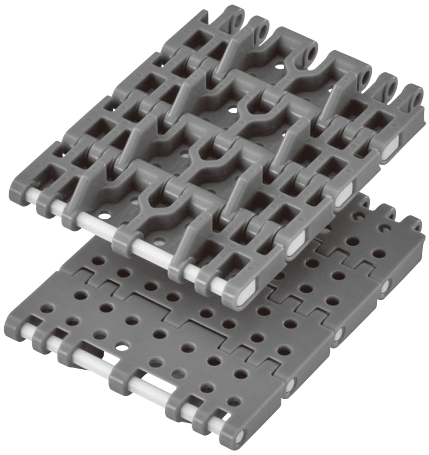
Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Number of links	Unit
WT	38	35	G	-	M	325	-	LFB Note: 2	+	80 Note: 3	L
	38: 38.1 mm	5: Closed type	G: Tab guide attachment			325: 82.6 mm					L: Link

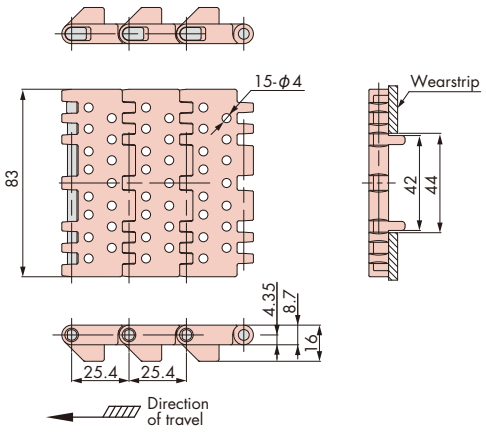
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Possible to convey and transfer small products stably and smoothly due to its unique link structure.
2. Effective for draining excess water and/or lubricant due to its perforated surface.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	9.3	20	120

Chain Material Table

	Standard Chain										High-Function Chain					
Material	Standard				Low friction/ Wear resistant			Advanced low friction Wear resistant	Low friction		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.08{110}											0.76 {77}	1.08{110}		0.80 {81}	1.08 {110}
Chain mass kg/m	0.7															
Max. allowable speed m/min With lube	50														—	50
Max. allowable speed m/min No lube															50	
Operating temperature range °C	–20 to (60)80														–20 to 80	–20 to (60)80
Pin material	Special engineering plastic															
Available	○	△	△	△	○	○	○	○	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFW	Low friction/Wear resistant LFG	Low friction/Wear resistant LFB	Standard
	Chain type	Chain type	Chain type	Chain type	Chain type
83	BTO8-830-M-ALF	BTO8-830-M-LFW	BTO8-830-M-LFG	BTO8-830-M-LFB	BTO8-830-M

Note: Made-to-order products.

Model Numbering

Chain type	Link shape	Chain pitch		Chain width		Mold-to-width		Material mark		Number of links	Unit
BT	**O**	**8**	**-**	**830**	**-**	**M**	**-**	**LFB** Note: 2	**+**	**80** Note: 3	**L**
	O: Open type	8: 25.4 mm		830: 83 mm							L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain WT3086G-M

WT3080 Series

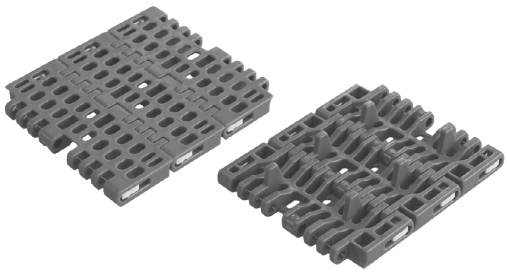
Straight Running (Mold-to-Width Type)

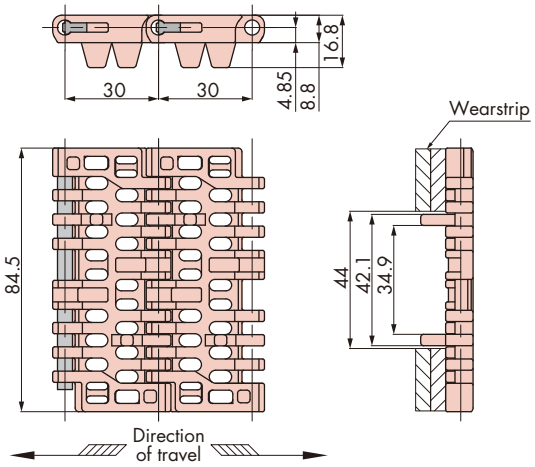
Sprockets P.147, 148 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.423

Features

1. Can be possible to drive coaxially with the WT1500 series due to a 30 mm pitch.
2. Suitable for a single filer, which consists of multilane conveyors with a speed difference, due to use of tab guide attachment.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
30	27	30	140

Chain Material Table

	Standard Chain										High-Function Chain					
Material	Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	0.9{90.4}											0.63 {63.3}	0.9{90.4}		0.67 {67.3}	0.9 {90.4}
Chain mass kg/m	0.6															
Max. allowable speed m/min (With lube)	120														—	120
Max. allowable speed m/min (No lube)	50															
Operating temperature range °C	0 to 80				0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80		
Pin material	Polypropylene															
Plug material	Polyacetal															
Plug color	Yellow															
Available	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
84.5	WT3086G-M85-ALF	WT3086G-M85-LFG	WT3086G-M85-NLF

Note: Made-to-order products.

Model Numbering

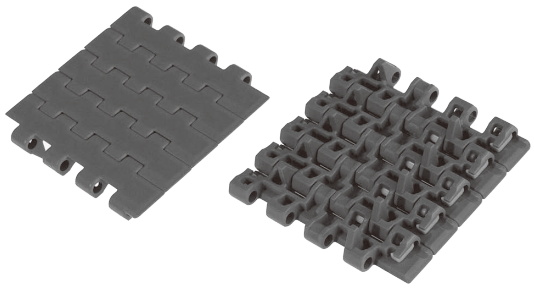
Chain type	Chain pitch	Link shape	Tab guide attachment		Mold-to-width	Chain width		Material mark		Number of links	Unit
WT	30	86	G	-	M	85	-	LFB Note: 2	+	80 Note: 3	L
	30: 30 mm	6: Open type	G: Tab guide attachment			85: 84.5 mm					L: Link

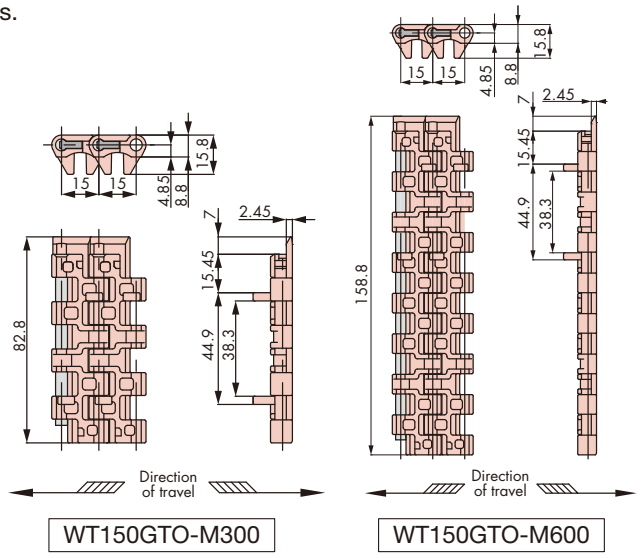
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. 15 mm pitch. Suitable for conveying small and lightweight containers.
2. Extended plate edges facilitate smoother right-angle transfers.
3. Lightweight and easy-handling due to all plastic-made chain.

Tab Guide Attachment





Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
15	2	15	240

Chain Material Table

		Standard Chain										High-Function Chain					
Material		Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	M300	0.8{81}											0.56 {56.7}	0.8{81}		0.59 {60}	0.8 {81}
	M600	1.6{162.2}											1.1 {114}	1.6{162.2}		1.2 {120}	1.6 {162.2}
Chain mass kg/m	M300	0.6															
	M600	1.2															
Max. allowable speed m/min	With lube	120(50)														—	120(50)
	No lube	50(30)															
Operating temperature range °C		–20 to (60)80														–20 to 80	–20 to (60)80
Pin material		Special engineering plastic															
Plug material		Polyacetal															
Plug color		Yellow															
Available		△	△	△	△	△	○	△	○	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) of each chain are for products that use nose bars made of ultrahigh molecular weight polyethylene. For products with nose bars made of SJ-CNO (special polyamide), use them without lubrication.
3. Operating temperature of (the value in parentheses) is for wet condition.
4. When using WT-N1500-12T30 solid sprocket, set the key length of the sprocket engaging module with tab guide attachment to 30 mm.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF	Low friction/Wear resistant LFG	Low friction NLF
	Chain type	Chain type	Chain type
82.8	WT1505GTO-M300-ALF	WT1505GTO-M300-LFG	WT1505GTO-M300-NLF
158.8	WT1505GTO-M600-ALF	WT1505GTO-M600-LFG	WT1505GTO-M600-NLF

Note: Made-to-order products.

Model Numbering

Chain type	Chain pitch	Link shape	Tab guide attachment	Link shape	Mold-to-width	Chain width	Material mark	Number of links	Unit
WT	15	05	G	TO	M	300	LFG Note: 2	80 Note: 3	L
	15: 15mm	5: Closed type	G: Tab guide attachment			300: 82.8 mm 600:158.8 mm			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
WT1505TOD-M

WT1500 Series

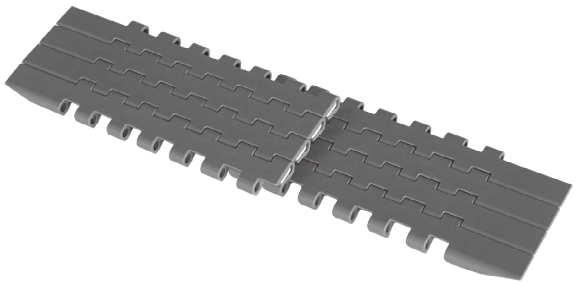
For Traverse (Mold-to-Width Type)

Sprockets P.147, 148 | Sprocket Pitch P.459 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.421

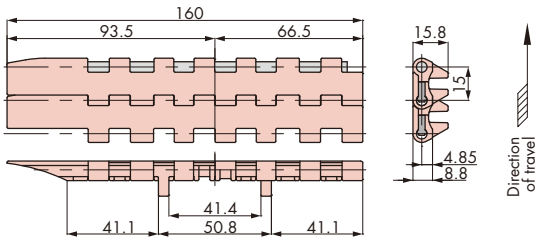
Features

1. Possible to transfer orthogonally due to tapered side of the plate.
2. 15 mm pitch. Suitable for conveying small and lightweight containers.
3. Lightweight and easy-handling due to all plastic-made chain.

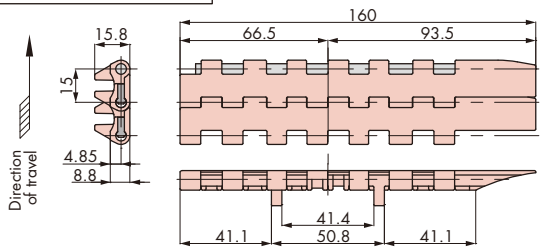
Tab Guide Attachment



WT1505TOD-M450L



WT1505TOD-M450R



Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
15	2	15	204

Chain Material Table

	Standard Chain										High-Function Chain					
Material	Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.4{142}											0.98 {99}	1.4{142}		1.04 {105}	1.4 {142}
Chain mass kg/m	1.2															
Max. allowable speed m/min With lube	120														—	120
Max. allowable speed m/min No lube	50															
Operating temperature range °C	–20 to (60)80														–20 to 80	–20 to (60)80
Pin material	Special engineering plastic															
Plug material	Polyacetal															
Plug color	Yellow															
Available	△	△	△	△	△	●	△	●	△	△	△	△	△	△	△	△

Note: 1. "●": Standard products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. Nose bars (sliding types, integrated-bearing types) cannot be used.

Tsubaki Model Table

Chain width	Advanced low friction/Wear resistant ALF		Low friction/Wear resistant LFG	
	Chain type		Chain type	
160	**WT1505TOD-M450L-ALF**	**WT1505TOD-M450R-ALF**	**WT1505TOD-M450L-LFG**	**WT1505TOD-M450R-LFG**

Note: 1. Standard products.
2. The chain width includes the length of the taper.

Model Numbering

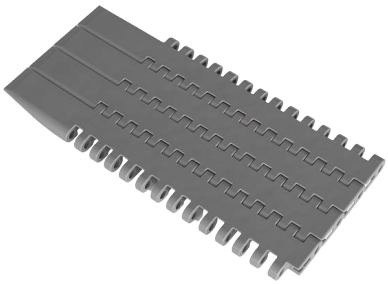
Chain type	Chain pitch	Link shape	Chain type	Mold-to-width	Chain width	Tapered side	Material mark	Number of links	Unit
WT	**15**	**05**	**TOD** -	**M**	**450** Note: 2	**L** Note: 3	- **LFG** Note: 4	+ **80** Note: 5	**L**
	15: 15 mm	5: Closed type			450: 160 mm				L: Link

Note: 1. Do not leave space between letters and symbols.
2. TOD includes the length of its taper part.
3. Indicates which side the taper will be on with respect to the chain direction of travel (right side: R; left side: L)
4. Please check the chain material and material marks in the chain material table above.
5. Minimum quantity: 2, maximum quantity: 99999.

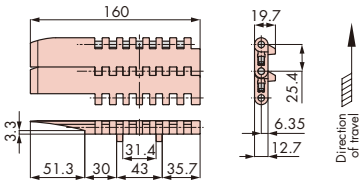
Features

1. Possible to transfer orthogonally due to the tapered side of the plate.
2. 25.4 mm pitch. Suitable for conveying medium-sized containers.
3. Lightweight and easy-handling due to all plastic-made chain.

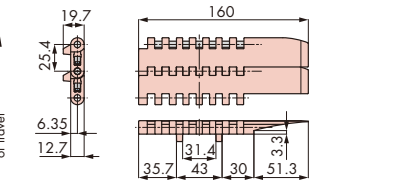
Tab Guide Attachment



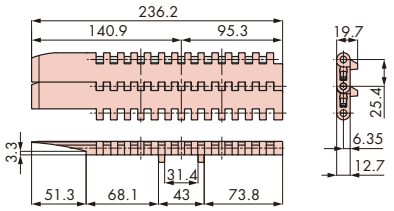
WT2505TOD-M450L



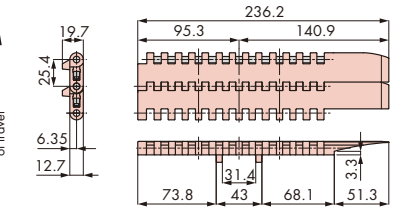
WT2505TOD-M450R



WT2505TOD-M750L



WT2505TOD-M750R



Chain pitch mm	Open area %	Backflex radius mm	Number of links per unit
25.4	3	20	120

Chain Material Table

		Standard Chain										High-Function Chain				
Material		Standard				Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Ultraviolet resistant
Material mark		—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	MWS	SE	UVR
Link color		Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Light gray
Max. allowable load kN {kgf}	M450	3.4{347}											2.4{243}	3.4{347}		
	M750	5.3{541}											3.7{379}	5.3{541}		
Chain mass kg/m	M450	1.7														
	M750	2.6														
Max. allowable speed m/min	With lube	120														
	No lube	50														
Operating temperature range °C		0 to 80				0 to (65)80			0 to 80	0 to (65)80	0 to 80	0 to (65)80	0 to 80	0 to (65)80		0 to 80
Pin material		Polypropylene														
Slide plug material		Polypropylene														
Slide plug color		Blue														
Available		△	△	△	△	△	△	△	△	△	●	△	△	△	△	△

Note: 1. "●": Standard product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. The color of the slide plug was changed from yellow to blue as of December 2013.

Tsubaki Model Table

Chain width	Low friction WR	
	Chain type	
160.0	**WT2505TOD-M450L-WR**	**WT2505TOD-M450R-WR**
236.2	**WT2505TOD-M750L-WR**	**WT2505TOD-M750R-WR**

Note: 1. Standard products.
2. The chain width includes the length of the taper.

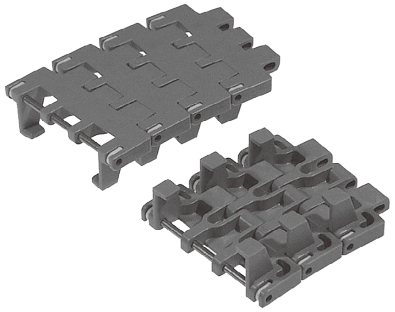
Model Numbering

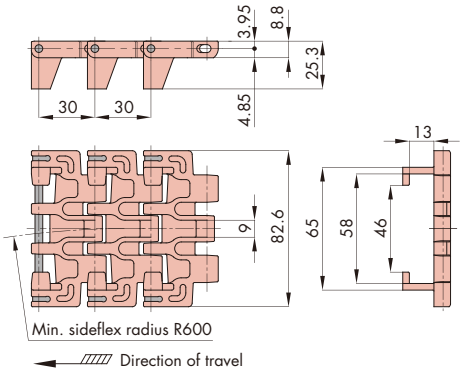
Chain type	Chain pitch	Link shape	Chain type	Mold-to-width	Chain width	Tapered side		Material mark	Number of links	Unit
WT	**25**	**05**	**TOD**	**M**	**450** Note: 2	**L** Note: 3	**-**	**LFG** Note: 4	**+ 80** Note: 5	**L**
	25:25.4 mm	5: Closed type			450: 160 mm 750: 236.2 mm					L: Link

Note: 1. Do not leave spaces between letters and symbols. 2. TOD includes the length of its taper part.
3. Indicates which side the taper will be on with respect to the chain direction of travel (right side: R; left side: L)
4. Please check the chain material and material marks in the chain material table above. 5. Minimum quantity: 2, maximum quantity: 99999.

Plastic Modular Chain
Digest Sideflexing Running (Mold-to-Width Type)

■WT3085-C325





Chain Material Table

Material	Low friction	High speed	Chain width	Max. allowable load kN{kgf}		Chain mass kg/m		Pin material
Material mark	WR	HS		WR	HS	WR	HS	
Chain type	WT3085-C325-WR	WT3085-C325-HS	82.6	0.55{56}	0.50{51}	0.9	0.8	Stainless steel

Note: 1. Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Contact a Tsubaki representative for the dedicated sprockets.

Model Numbering

Chain type	Chain pitch	Link shape		Sideflexing	Chain width		Material mark		Number of links		Unit
WT	**30**	**85**	**-**	**C**	**325**	**-**	**WR** Note: 2	**+**	**80** Note: 3		**L**
	30: 30 mm	5: Closed type			325: 82.6 mm						L: Link

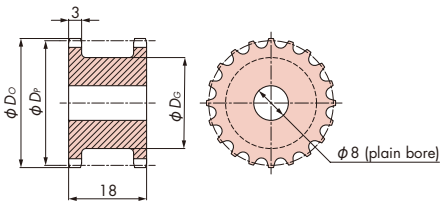
Note: 1. Do not leave spaces between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Sprockets for WT0400 Series

Applicable Chain	WT0405-W

◆Solid Sprockets (Machined Type)



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Groove diameter D_G	Bore shape	Material
WT-S0400-16T	16	23.07	24.0	15	Bore shape and size are made-to-order.	Polyacetal (color: white)
WT-S0400-20T	20	28.77	29.8	21		
WT-S0400-24T	24	34.48	35.5	27		
WT-S0400-32T	32	45.91	47.0	38		
WT-S0400-40T	40	57.35	58.5	50		

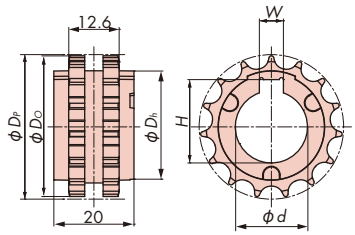
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

Sprockets & Accessories for WT0700 Series

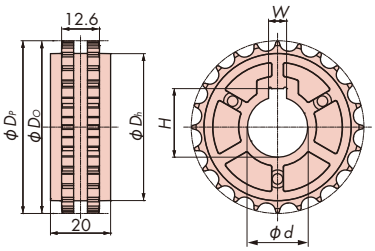
Applicable Chain	WT0705-W

◆Solid Sprockets

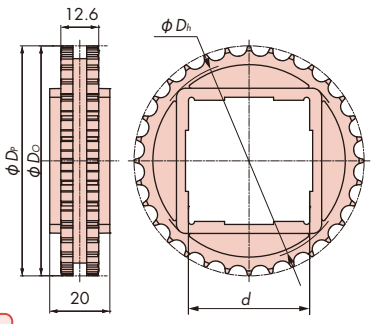
WT-N0700-15T18



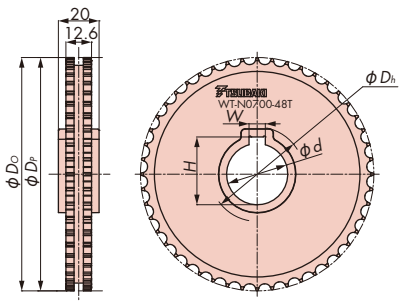
WT-N0700-24T



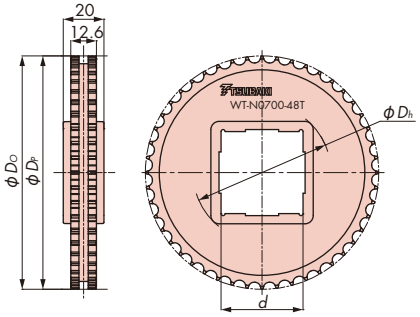
WT-N0700-32T40S



WT-N0700-48T30



WT-N0700-48T40S



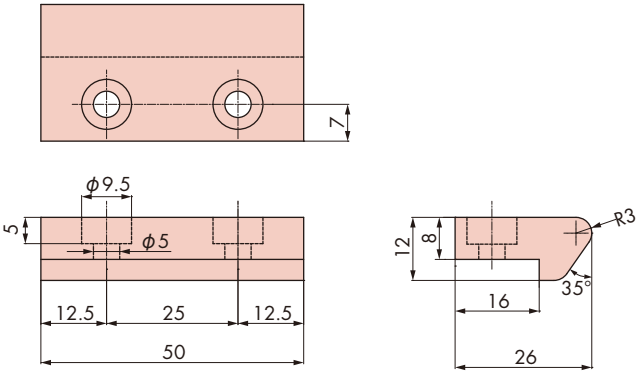
Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Keyway		Hub diameter D_h	Approx. mass kg	Material
						W	H			
WT-N0700-15T18	15	36.07	35.5	Round	φ18	6	20.8	28	0.010	Reinforced polyamide (color: black)
WT-N0700-24T20	24	57.46	57.2		φ20		22.8	49	0.032	
WT-N0700-24T25					φ25	8	28.3		0.030	
WT-N0700-24T30					φ30		33.3		0.029	
WT-N0700-32T40S	32	76.52	76.4	Square	40	–	–	66	0.045	
WT-N0700-48T30	48	114.67	114.7	Round	φ30	8	33.3	47	0.072	
WT-N0700-48T40S				Square	40	–	–	68	0.074	

Note 1. Standard products.
2. Operating temperature range: –20°C to 80°C.
3. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
4. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
5. Use a cold rolled steel shaft.

◆Applications of nose bars
Dead space between conveyors can be minimized by installing nose bars at their ends.
Suitable for conveying small product where there is a risk of product remaining between conveyors.

◆Material grade/applications
10-301: Suitable for lubricated operation with water or slider liquid.
SJ-CNO (Special Polyamide): Suitable for dry chain operation at high speeds (faster than 30 m/min).

◆Nose Bars (Sliding Series)



Tsubaki model no.	Material	Material grade	Color
WT-NB07-W50-10-301	UHMW-PE	10-301	Green
WT-NB07-W50-CNO	Special polyamide	SJ-CNO	Purple

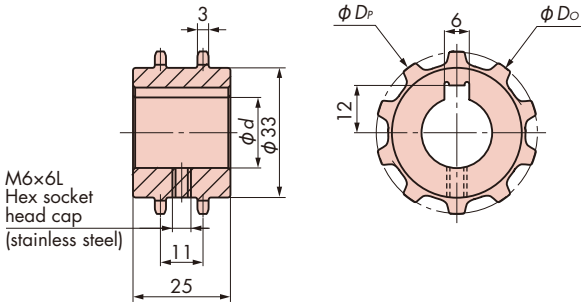
Note: 1. Standard products.
2. Operating temperature range 10-301: –20 to 60°C
SJ-CNO (Special Polyamide): –20 to 80°C
3. Refer to pages 445 and 446 for mating dimensions.
4. The color of SJ-CNO (Special Polyamide) was changed from gray to purple as of June 2015.
5. SJ-CNO (Special Polyamide) is for use under dry conditions only.

Sprockets for BT4 Series

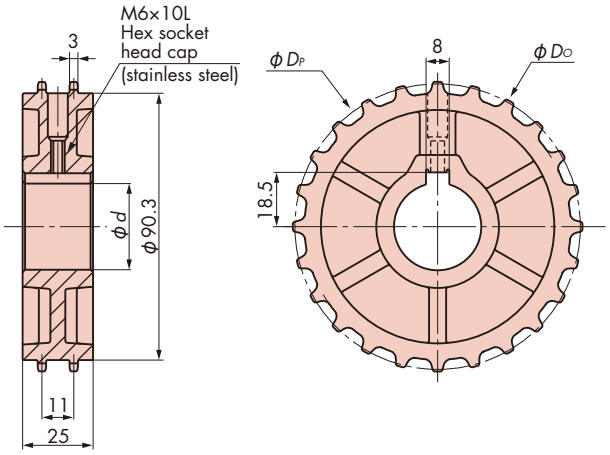
Applicable Chain	BTC4-M

◆Solid Sprockets

BTC4-10T18



BTC4-24T30



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Approx. mass kg	Material
BTC4-10T18	10	41.10	41.6	Round	φ18	0.025	Reinforced polyamide (color: black)
BTC4-24T30	24	97.30	99.0		φ30	0.110	

Note: 1. Standard products.
2. Operating temperature range: –20°C to 80°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

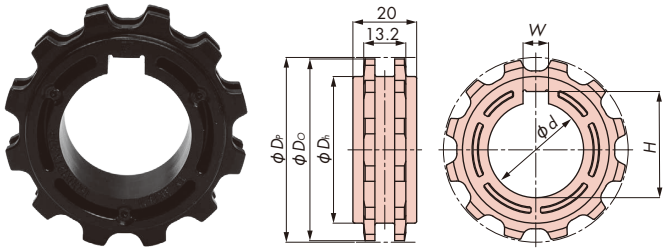
MEMO

Sprockets for WT1500/1510/3000, BT5 Series

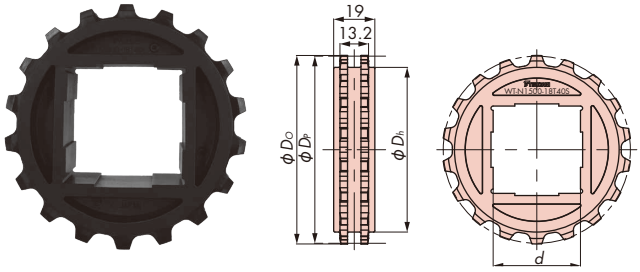
Applicable Chain	WT1505 (including G/GTO)-K, WT1506-K, WT1515(G)-W, WT1516-W, WT3005(G)-K, WT3086(G)-K, BTN5 (-A), WT1505G-M, WT1515G-M, WT3005G-M, WT3086G-M, WT1505GTO-M, WT1505TOD-M

◆Solid Sprockets

WT-N1500-12T30

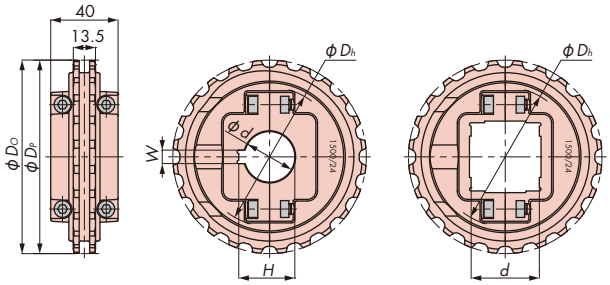


WT-N1500-18T40S

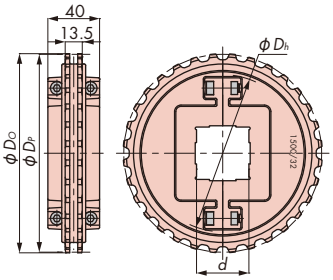


◆Split Sprockets

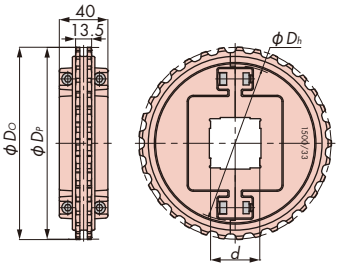
WT-SW1500-24T



WT-SW1500-32T



WT-SW1500-33T



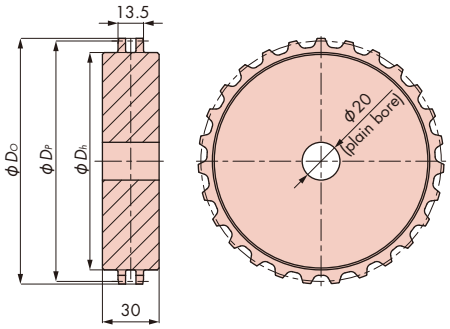
Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Keyway W	Keyway H	Hub diameter D_h	Approx. mass kg	Material: Body	Material: Bolt/Nut	Bolt tightening torque N·m{kgf·m}
WT-N1500-12T30	12	57.96	57	Round	ϕ30	8	33.3	46	0.027	Reinforced polyamide (color: black)	–	–
WT-N1500-18T40S	18	86.38	87	Square	40	–	–	76	0.060			
WT-SW1500-24T25	24	114.9	115.0	Round	ϕ25	8	28.3	83	0.3		Stainless steel	5.7 {0.58}
WT-SW1500-24T30					ϕ30		33.3					
WT-SW1500-24T35					ϕ35	10	38.3					
WT-SW1500-24T40					ϕ40	12	43.3					
WT-SW1500-24T40S				Square	40	–	–					
WT-SW1500-32T40S	32	153.0	154.0			–	–	122	0.4			
WT-SW1500-32T50S					50	–	–					
WT-SW1500-32T60S					60	–	–					
WT-SW1500-33T40S	33	157.8	158.6		40	–	–	128				
WT-SW1500-33T65S					65	–	–					

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. WT-N1500-12T30 and WT-N1500-18T40S cannot be used with the WT3000 series.
5. In case WT-N1500-12T30 is used for modules with tab guide attachments, be careful to choose the proper length of the key.
(WT1505G-K, WT1505GTO-K, BTN5-A: key length: 30 mm; WT1515G-M50, WT1515G-W: key length: 20 mm)
6. Square-hole sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
7. Use a cold rolled steel shaft.

Sprockets & Idler Sprockets for WT1500/1510/3000, BT5 Series

Applicable Chain	WT1505 (including G/GTO)-K, WT1506-K, WT1515(G)-W, WT1516-W, WT3005(G)-K, WT3086(G)-K, BTN5(-A), WT1505G-M, WT1515G-M, WT3005G-M, WT3086G-M, WT1505GTO-M, WT1505TOD-M

◆Solid Sprockets (Machined Type)

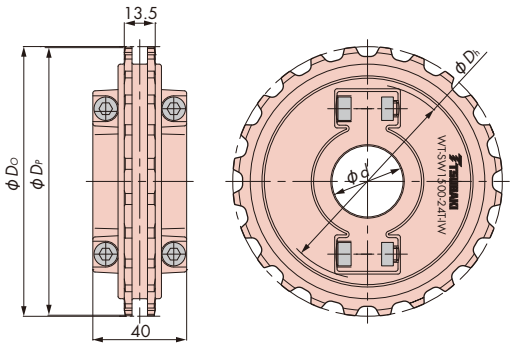


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Material
WT-S1500-24T	24	114.9	115	100	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S1500-25T	25	119.7	120	105		
WT-S1500-27T	27	129.2	130	115		
WT-S1500-31T	31	148.3	149	134		
WT-S1500-32T	32	153.0	154	139		
WT-S1500-33T	33	157.8	158.6	144		

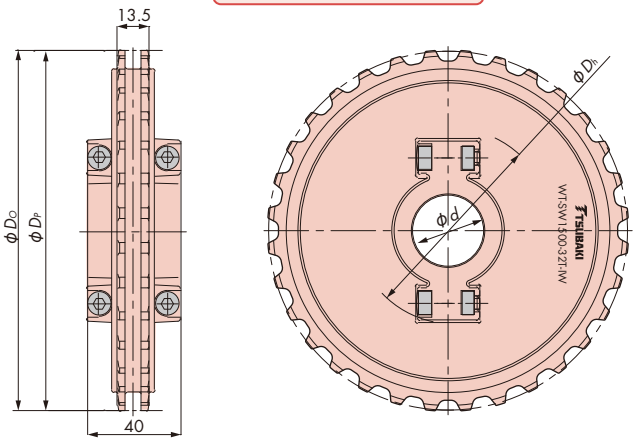
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. In case of using with WT1515G-W, WT1515G-M50 the hub needs to be machined to the proper diameter. Contact a Tsubaki representative for details.
4. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
5. Use a cold rolled steel shaft.

◆Split Idler Sprockets with Teeth

WT-SW1500-24T-IW



WT-SW1500-32T-IW



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Hub diameter D_h	Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
								Body	Bolt/Nut	
WT-SW1500-24T30-IW	24	114.9	115.0	Round	30.3	84	0.3	Polyamide (color: black)	Stainless steel	5.7 {0.58}
WT-SW1500-24T35-IW					35.3					
WT-SW1500-24T40-IW					40.3					
WT-SW1500-32T30-IW	32	153.0	154.0		30.3					
WT-SW1500-32T35-IW					35.3					
WT-SW1500-32T40-IW					40.3					

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the idler sprocket, do not mix the halves with halves from other idler sprockets.
4. Use a cold rolled steel shaft.
5. Use only as an idler sprocket.

Accessories for WT1500 Series

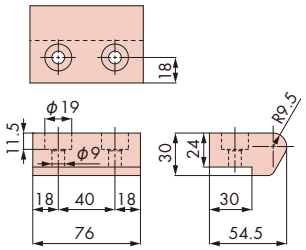
◆Applications of nose bars
Dead space between conveyors can be minimized by installing nose bars at their ends. Suitable for conveying small product where there is a risk of product remaining between conveyors.

◆Material grades/applications
10-301: Suitable for lubricated operation with water or slider liquid.
10-100M9: Suitable for non-lubricated (dry) operation at low speeds (slower than 30 m/min).
SJ-CNO (Special Polyamide): Suitable for dry chain operation at high speeds (faster than 30 m/min).

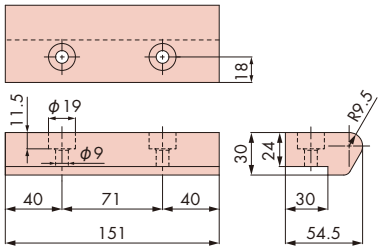
Applicable Chain	WT1505-K, WT1506-K, WT1505GTO-K Note: 4, WT1505GTO-M Note: 4

◆Nose Bars (Sliding Series)

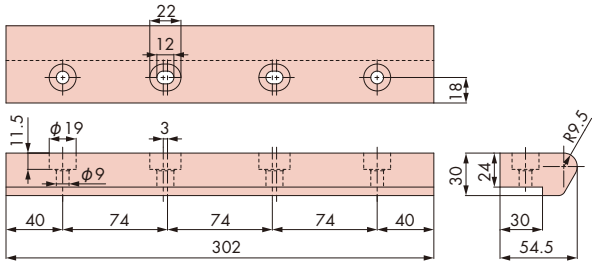
NB76



NB151



NB302

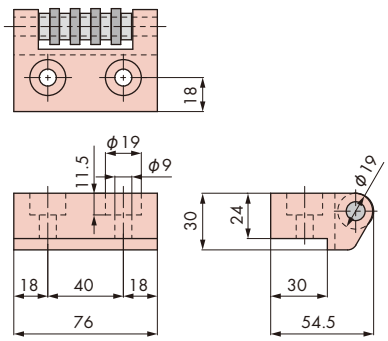


Tsubaki model no.	Material	Material grade	Color
WT-NB76-10-301	UHMW-PE	10-301	Green
WT-NB76-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NB76-CNO	Special polyamide	SJ-CNO	Purple
WT-NB151-10-301	UHMW-PE	10-301	Green
WT-NB151-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NB151-CNO	Special polyamide	SJ-CNO	Purple
WT-NB302-10-301	UHMW-PE	10-301	Green
WT-NB302-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NB302-CNO	Special polyamide	SJ-CNO	Purple

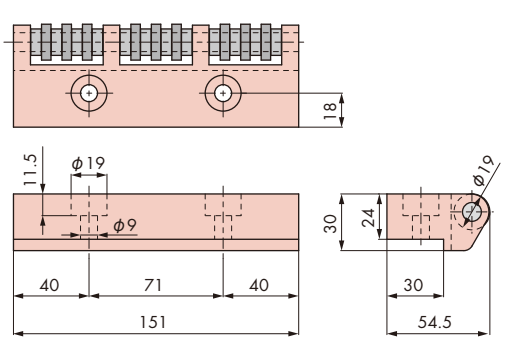
Note: 1. Standard products.
2. Operating temperature range: 10-301/10-100M9: –20 to 60°C, SJ-CNO (Special Polyamide): –20 to 80°C.
3. Refer to pages 445 and 446 for mating dimensions.
4. Use the sliding series nose bar WT-NB151TOL and WT-NB151TOR in combination with WT1505GTO-K and WT1505GTO-M600.
5. The color of SJ-CNO (Special Polyamide) was changed from gray to purple as of June 2015.
6. SJ-CNO (Special Polyamide) is for use under dry conditions only.

◆Nose Bars (Bearing Series)

NR76



NR151



Tsubaki model no.	Material	Material grade	Color	Bearing	Bearing material	Shaft material
WT-NR76	UHMW-PE	10-301	Green	Ball	Steel	Stainless steel
WT-NR151						

Note: 1. Standard products.
2. Operating temperature range: –20°C to 60°C.
3. Refer to pages 445 and 446 for mating dimensions.
4. Use the bearing series nose bar WT-NR76-TO in combination with WT1505GTO-M600 and WT1505GTO-K.
5. Suitable for dry chain operation at high speeds (faster than 30 m/min).

Accessories for WT1500 Series

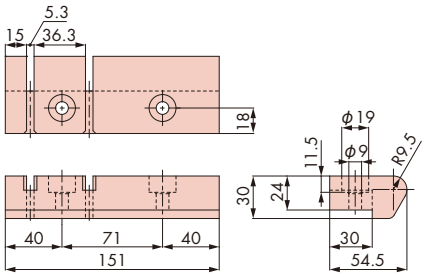
◆Applications of nose bars
Dead space between conveyors can be minimized by installing nose bars at their ends. Suitable for conveying small products where there is a risk of product remaining between conveyors.

◆Material grades/applications
10-301: Suitable for lubricated operation with water or slider liquid.
10-100M9: Suitable for non-lubricated (dry) operation at low speeds (slower than 30 m/min).
SJ-CNO (Special Polyamide): Suitable for dry chain operation at high speeds (faster than 30 m/min).

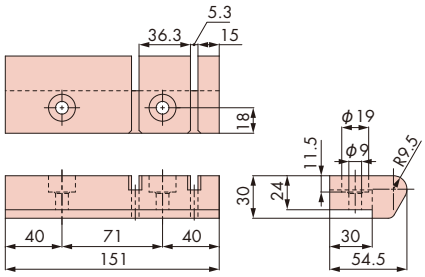
Applicable Chain	WT1505GTO-K, WT1505GTO-M Note: 4

◆Nose Bars (Sliding Series)

NB151TOL



NB151TOR



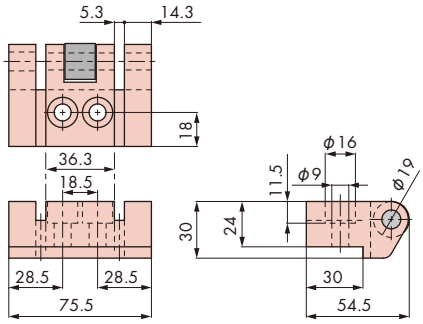
Tsubaki model no.	Material	Material grade	Color
WT-NB151TOL-10-301	UHMW-PE	10-301	Green
WT-NB151TOL-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NB151TOL-CNO	Special polyamide	SJ-CNO	Purple
WT-NB151TOR-10-301	UHMW-PE	10-301	Green
WT-NB151TOR-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NB151TOR-CNO	Special polyamide	SJ-CNO	Purple

Note: 1. Made-to-order products. 2. Operating temperature range: 10-301/10-100M9: –20 to 60°C, SJ-CNO (Special Polyamide): –20 to 80°C.
3. Refer to pages 445 and 446 for mating dimensions. 4. Cannot be used for WT1515GTO-M300.
5. The color of SJ-CNO (Special Polyamide) was changed from gray to purple as of June 2015. 6. SJ-CNO (Special Polyamide) is for use under dry conditions only.

Applicable Chain	WT1505GTO-M Note: 4, WT1505GTO-K Note: 5

◆Nose Bars (Bearing Series)

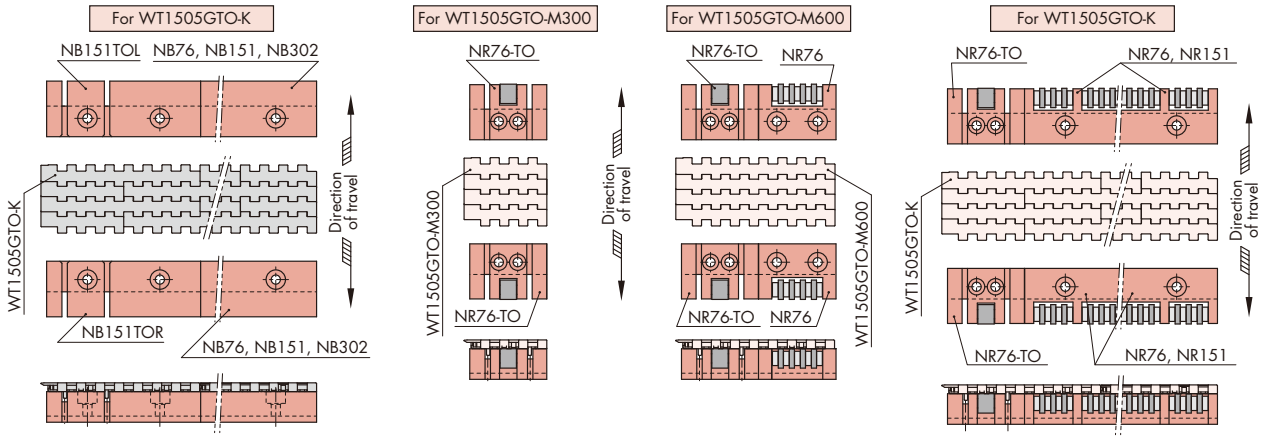
NR76-TO



Tsubaki model no.	Material	Material grade	Color	Bearing	Bearing material	Shaft material
WT-NR76-TO	UHMW-PE	10-301	Green	Needle	Steel	Stainless steel

Note: 1. Made-to-order product. 2. Operating temperature range: –20°C to 60°C.
3. Refer to pages 445 and 446 for mating dimensions. 4. Use bearing series nose bar WT-NR76 in combination with WT1505GTO-M600.
5. Use bearing series nose bar WT-NR76 or WT-NR151 in combination with WT1505G-K. 6. Suitable for dry chain operation at high speeds (faster than 30 m/min).

• Configuration examples of nose bars with WT1505GTO-K chains



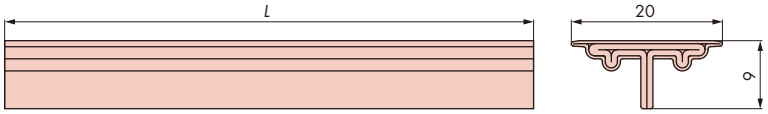
Accessories for WT1500/1510, BT5 Series

For WT1500/1510, BT5 Series

◆Applications of dead plates
Used as a transfer plate between nose bars

Applicable Chain	WT1505-K, WT1506-K, WT1515-W, WT1516-W, BTN5

◆ Dead Plates



Tsubaki model no.	L	Material
WT-DP12	400	Stainless steel
WT-DP18	550	
WT-DP24	700	
WT-DP30	850	

Note: 1. Made-to-order products.
2. Refer to page 445 for mating dimensions.
3. Contact a Tsubaki representative for information about dead plates with a width of 762 mm (K30) or longer and hard chrome plated dead plates.

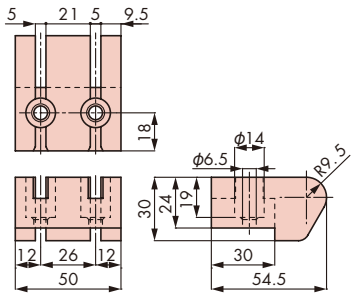
For WT1510 Series

◆Applications of nose bars
Dead space between conveyors can be minimized by installing nose bars at their ends.
Suitable for conveying small products where there is a risk of product remaining between conveyors.
◆Material grades/applications
10-301: Suitable for lubricated operation with water or slider liquid.
10-100M9: Suitable for non-lubricated (dry) operation at low speeds (slower than 30 m/min).
SJ-CNO (Special Polyamide): Suitable for dry chain operation at high speeds (faster than 30 m/min).

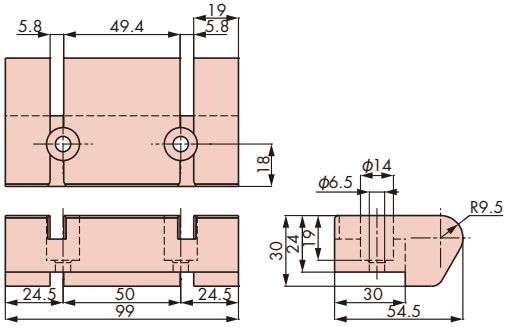
Applicable Chain	WT1515G-M

◆Nose Bars (Sliding Series)

NBG50 (For WT1515G-M50)



NBG99 (For WT1515G-M100)



Tsubaki model no.	Material	Material grade	Color
WT-NBG50-10-301	UHMW-PE	10-301	Green
WT-NBG50-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NBG50-CNO	Special polyamide	SJ-CNO	Purple
WT-NBG99-10-301	UHMW-PE	10-301	Green
WT-NBG99-10-100M9	UHMW-PE (oiled)	10-100M9	White
WT-NBG99-CNO	Special polyamide	SJ-CNO	Purple

Note: 1. Made-to-order products.
2. Operating temperature range: 10-301/10-100M9: –20 to 60°C, SJ-CNO (Special Polyamide): –20 to 80°C.
3. Refer to pages 445 and 446 for mating dimensions.
4. The color of SJ-CNO (Special Polyamide) was changed from gray to purple as of June 2015.
5. SJ-CNO (Special Polyamide) is for use under dry conditions only.

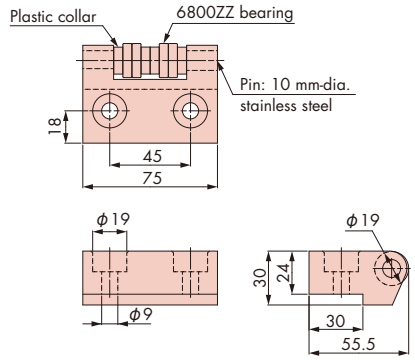
Accessories for BT5 Series

◆Applications of nose bars
Dead space between conveyors can be minimized by installing nose bars at their ends.
Suitable for conveying small products where there is a risk of product remaining between conveyors.

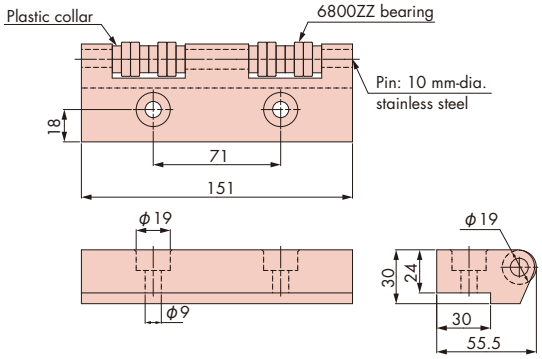
Applicable Chain	BTN5

◆Nose Bars (Bearing Series)

NB75



NB151



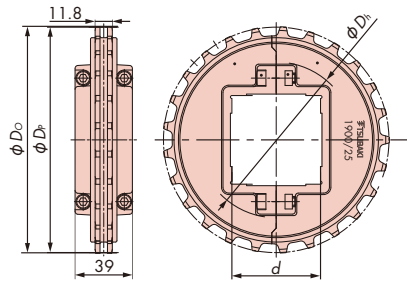
Tsubaki model no.	Material	Material grade	Color	Bearing	Bearing material	Shaft material
BT5-NB75-D19	UHMW-PE	10-100	White	6800ZZ	Steel	Stainless steel
BT5-NB151-D19						

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Refer to pages 445 and 446 for mating dimensions.
4. The shape was changed as of December 2010.
5. For use under dry conditions only (nose bar with SUS type of bearing is available).

Sprockets & Accessories for WT1900 Series

Applicable Chain	WT1907-K

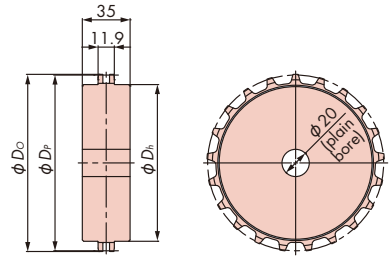
◆Split Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Bore diameter d	Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
								Body	Bolt/Nut	
WT-SW1900-25T40S	25	153.35	154	106	Square	40	0.35	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}
WT-SW1900-25T60S						60				

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
5. Use a cold rolled steel shaft.

◆Solid Sprockets (Machined Type)

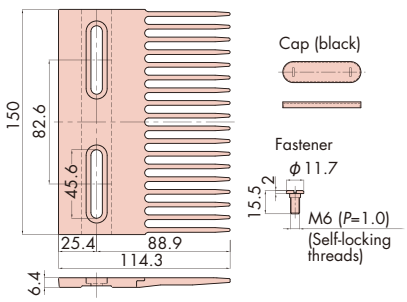


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Material
WT-S1900-17T	17	104.60	105	90	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S1900-21T	21	128.95	130	114		
WT-S1900-24T	24	147.25	148	133		
WT-S1900-25T	25	153.35	154	139		

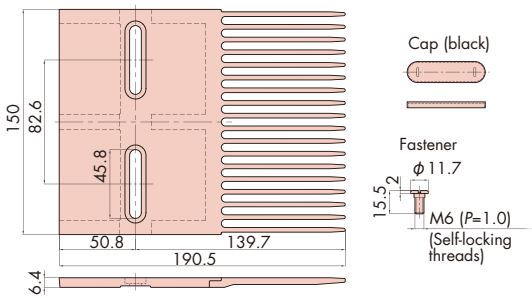
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

◆Transfer Plates

TP1907-L114



TP1907-L190



Tsubaki model no.	Material	Color	Approx. mass kg
WT-TP1907-L114	Reinforced polyamide	Black	0.100
WT-TP1907-L190			0.170

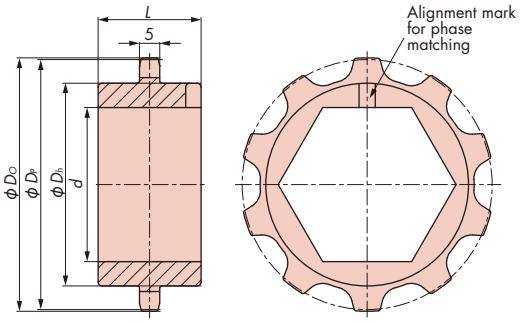
Note: 1. Made-to-order products.
2. Two caps and two fasteners are included with one transfer plate.
3. Refer to page 447 for transfer plate installation procedures.

Sprockets for BT6 Series

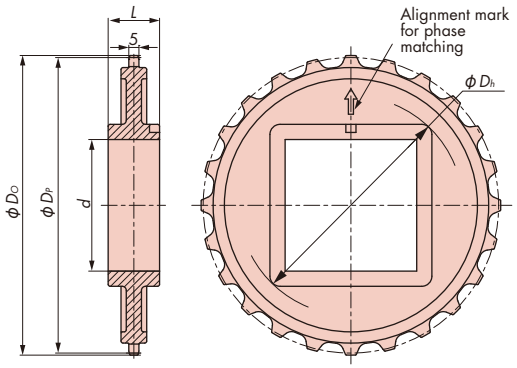
Applicable Chain	BTC6, BTCP6, BTO6, BTN6

◆Solid Sprockets

BT6-10T



BT6-24T



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Hub diameter		Approx. mass kg	Shaft	Material
						D_h	Length L			
BT6-10T-38H	10	61.65	62.5	Hexagonal	38	50	25.4	0.030	Hexagonal 38 cold rolled steel shaft	Reinforced polyamide (color: black)
BT6-24T-40S	24	145.95	148.0	Square	40	110		0.260	Square 40 cold rolled steel shaft	
BT6-24T-50S					50			0.230	Square 50 cold rolled steel shaft	
BT6-24T-65S					65			0.170	Square 65 cold rolled steel shaft	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 80°C.
3. BT6-10T sprockets can reduce dead space between conveyors and also make conveyors compact.
4. BT6-24T sprockets minimize undulation of speed resulting from chordal action (polygonal movement) of the chain, allowing smooth conveyance.
5. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.

◆Solid Sprockets

Chain material: For heat resistant/high speed (KV150, KV250)

Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Hub diameter		Approx. mass kg	Shaft	Material
						D_h	Length L			
BT6-KV-10T-38H	10	61.25	62.5	Hexagonal	38	50	25.4	0.040	Hexagonal 38 cold rolled steel shaft	Special engineering plastic (color: beige)
BT6-KV-24T-50S	24	145.95	148.0	Square	50	110		0.290	Square 50 cold rolled steel shaft	

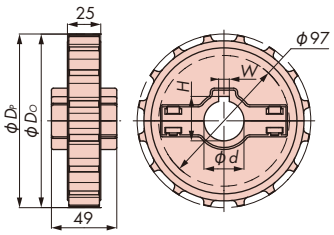
Note: 1. Made-to-order products.
2. Operating temperature range: 80°C to 200°C.
3. The materials and sizes of sprockets dedicated to heat resistant/high-speed (KV) series differ depending on their operating temperatures. Be ensure to contact a Tsubaki representative when using them.
4. Available for the sprockets with number of teeth other than above.

Sprockets & Idler Sprockets for WT2250/2510 Series

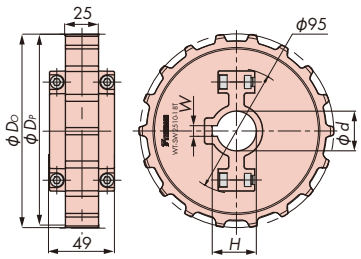
Applicable Chain	WT2250FT, WT2250FG, WT2250VG, WT2515G-M, WT2515-W, WT2515G-W, WT2515F-W

◆Split Sprockets

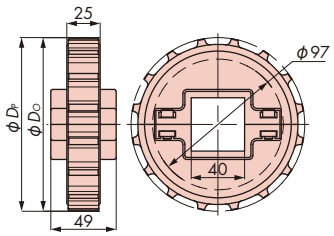
WT-SW2250-16T



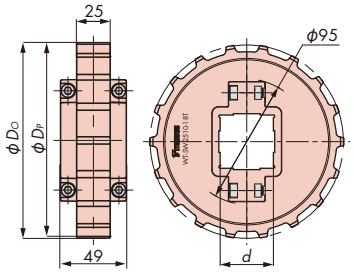
WT-SW2510-18T



WT-SW2250-16T40S



WT-SW2510-18T40S

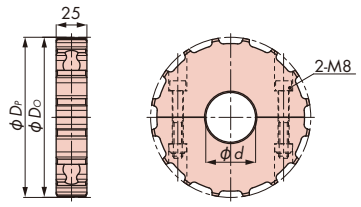


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Keyway W	Keyway H	Approx. mass kg	Shaft	Material: Body	Material: Bolt/Nut	Bolt tightening torque N·m{kgf·m}
WT-SW2250-16T30	16	130.20	130	Round	ϕ30	8	33.3	0.300	Round 30 cold rolled steel shaft	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}
WT-SW2250-16T40					ϕ40	12	43.3		Round 40 cold rolled steel shaft			
WT-SW2250-16T40S				Square	40	–	–		Square 40 cold rolled steel shaft			
WT-SW2510-18T30	18	146.27	147	Round	ϕ30	8	33.3	0.320	Round 30 cold rolled steel shaft			
WT-SW2510-18T40					ϕ40	12	43.3		Round 40 cold rolled steel shaft			
WT-SW2510-18T40S				Square	40	–	–		Square 40 cold rolled steel shaft			

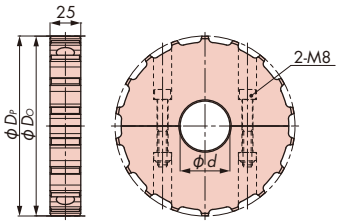
Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Square-hole sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
5. Use round-bore sprockets only for chains with a width of up to 680 mm and under conditions where temperature excursion within 30°C.

◆Split Idler Sprocket with Teeth

WT-SW2250-16T



WT-SW2250-18T



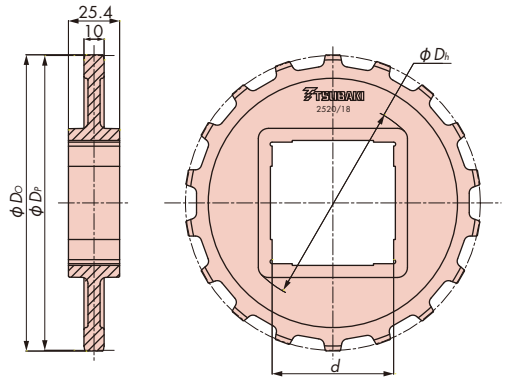
Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Approx. mass kg	Shaft	Material
WT-SW2250-16T30IW-M	16	130.20	130	Round	ϕ30	0.350	Round 30 cold rolled steel shaft	Polyamide (color: white)
WT-SW2250-16T40IW-M					ϕ40		Round 40 cold rolled steel shaft	
WT-SW2250-18T30IW-M	18	146.27	146		ϕ30	0.450	Round 30 cold rolled steel shaft	
WT-SW2250-18T40IW-M					ϕ40		Round 40 cold rolled steel shaft	

Note: 1. Standard products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the split idler sprocket with teeth, do not mix the halves with halves from other idler sprockets with teeth.
4. Use only as an idler sprocket.

Sprockets for WT2520/BT8S Series

Applicable Chain	WT2525-K, BTC8S

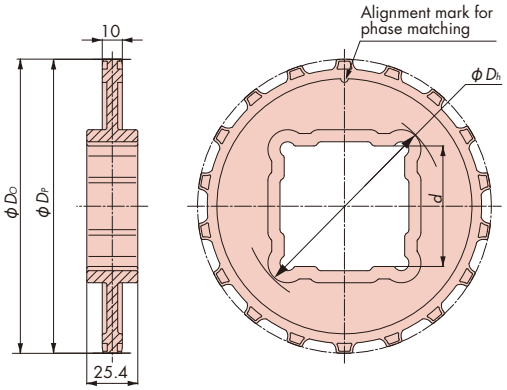
◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Bore diameter d	Approx. mass kg	Shaft	Material
WT-N2520-18T38S	18	146.27	147	73	Square	38.1	0.17	Square 38.1 cold rolled steel shaft	Reinforced polyamide (color: black)
WT-N2520-18T40S						40		Square 40 cold rolled steel shaft	
WT-N2520-18T60S				101		60		Square 60 cold rolled steel shaft	

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Hub diameter D_h	Approx. mass kg	Shaft	Material
BT8S-18T-40S	18	146.27	146.5	Square	40	71	0.230	Square 40 cold rolled steel shaft	Polyamide (color: gray)
BT8S-18T-60S					60	100	0.120	Square 60 cold rolled steel shaft	

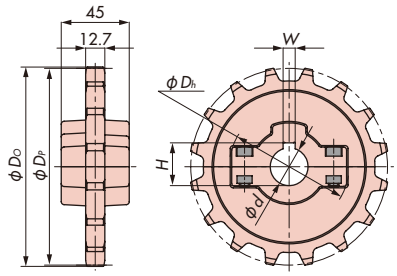
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.

Sprockets for WT2500/BT8 Series

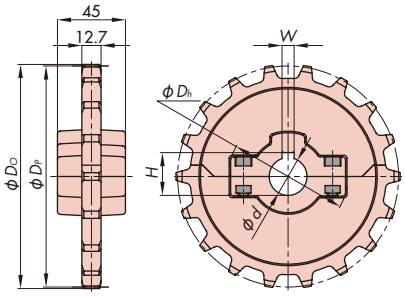
Applicable Chain	WT2505-K, WT2505-M, WT2506-K, BTM8H, BTC8H-M, BTM8H-M, TTUPS-H, TTUPM838H, WT2505G-M, WT2505TOD-M

◆Split Sprockets

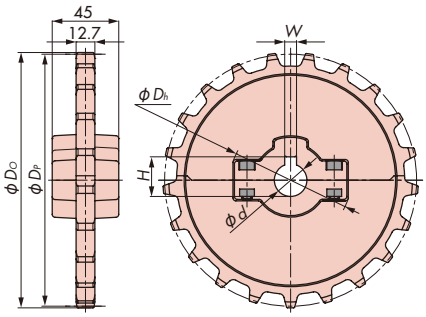
WT-SW2500-16T



WT-SW2500-18T



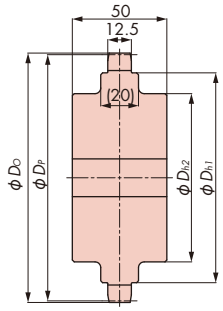
WT-SW2500-21T

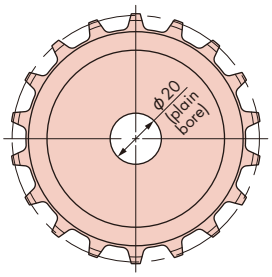


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Keyway		Hub diameter D_h	Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
						W	H			Body	Bolt/Nut	
WT-SW2500-16T25	16	130.20	131.9	Round	φ25	8	28.3	82	0.26	Reinforced polyamide (color: black)	Stainless steel	5.7 {0.58}
WT-SW2500-16T30					φ30		33.3		0.25			
WT-SW2500-16T35					φ35	10	38.3		0.24			
WT-SW2500-16T40					φ40	12	43.3					
WT-SW2500-18T25	18	146.27	148.3		φ25	8	28.3		0.30			
WT-SW2500-18T30					φ30		33.3		0.29			
WT-SW2500-18T35					φ35	10	38.3		0.28			
WT-SW2500-18T40					φ40	12	43.3					
WT-SW2500-21T25	21	170.42	172.7		φ25	8	28.3		0.36			
WT-SW2500-21T30					φ30		33.3		0.35			
WT-SW2500-21T35					φ35	10	38.3		0.34			
WT-SW2500-21T40					φ40	12	43.3		0.33			

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Use a cold rolled steel shaft.

◆Solid Sprockets (Machined Type)





Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter		Bore shape	Material
				D_{h1}	D_{h2}		
WT-S2500-16T	16	130.20	131.9	111	89	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S2500-18T	18	146.27	148.3	127	105		
WT-S2500-21T	21	170.42	172.7	152	130		

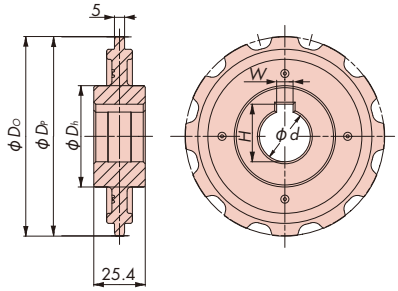
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. We also manufacture products with the number of teeth, sprocket shapes and materials other than those specified above.
4. Use a cold rolled steel shaft.

Sprockets for BT8 Series

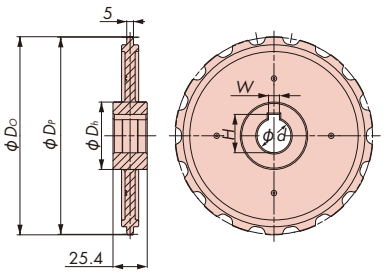
Applicable Chain	BTC8, BTC8-A Note: BTC8S, BTM8H, BTC8H-M, BTM8H-M, BTO8-M cannot be used.

◆Solid Sprockets

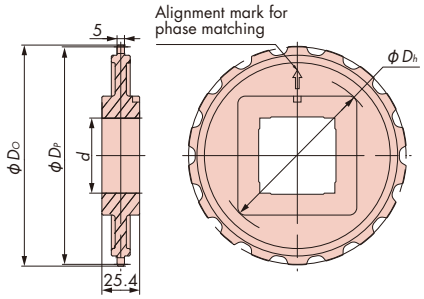
BT8-12T-25



BT8-18T-25



BT8-18T-40S, 50S, 65S



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Hub diameter D_h	Keyway		Approx. mass kg	Shaft	Material
							W	H			
BT8-12T-25	12	98.14	98.5	Round	ϕ25.1	50	8.1	28.4	0.090	Round 25 cold rolled steel shaft	Reinforced polyamide (color: black)
BT8-18T-25	18	146.27	147.0						0.190		
BT8-18T-40S				Square	40	110	–	–	0.250	Square 40 cold rolled steel shaft	
BT8-18T-50S					50				0.225	Square 50 cold rolled steel shaft	
BT8-18T-65S					65				0.165	Square 65 cold rolled steel shaft	

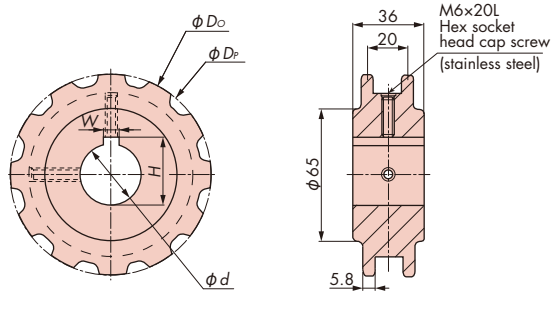
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
4. Sprockets (square hole) for BT8 series have an alignment mark for phase matching.
5. Contact a Tsubaki representative in case of considering the use of BT8-12T-25 or BT8-18T-25.

Sprockets & Idler Wheels for BT8 Series

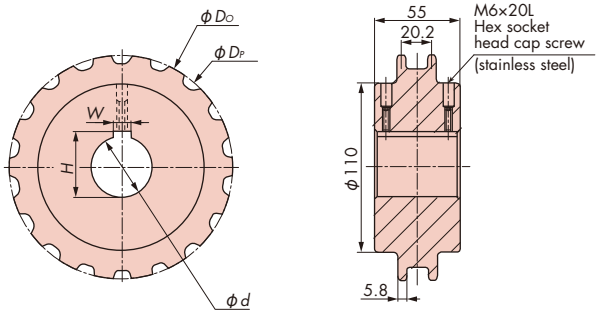
Applicable Chain	BTO8-M Note: Cannot be used for BTC8, BTC8S, BTM8H, BTC8H-M, BTM8H-M.

◆Solid Sprockets

BTO8-12T



BTO8-18T

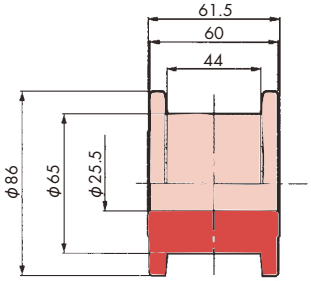


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter			Approx. mass kg	Material
					d	H	W		
BTO8-12T25	12	98.14	98	Round	ϕ25	28.3	8	0.200	UHMW-PE (color: white)
BTO8-12T30					ϕ30	33.3			
BTO8-18T30	18	146.27	147					0.520	
BTO8-18T40					ϕ40	43.3	12		

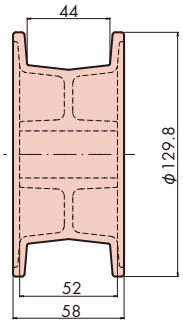
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Use a cold rolled steel shaft.

◆Solid Idler Wheels

Equivalent for 12 teeth



Equivalent for 18 teeth

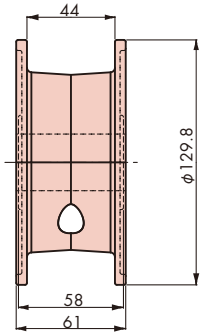


Tsubaki model no.	Effective teeth	Bore diameter	Approx. mass kg	Material
BT08-12T25-IW Note: 1	12	25	0.200	UHMW-PE (color: white)
TP-C12200BT-IW Note: 2	18	25	0.210	Polyamide (color: black)
TP-C12201BT-IW Note: 2		30		
TP-C12203BT-IW Note: 2		40	0.190	

Note: 1. Made-to-order product. (Operating temperature range: –20 to 60°C)
2. Standard products. (Operating temperature range: –20°C to 80°C)
3. Refer to page 254 for details of products marked 'note 2'.
4. Use a cold rolled steel shaft.

◆Split Idler Wheels

Equivalent for 18 teeth



Tsubaki model no.	Effective teeth	Bore diameter	Approx. mass kg	Material
TP-C12077BT-IW	18	25	0.260	Polyamide (color: black)
TP-C12078BT-IW		30	0.250	
TP-C12079BT-IW		35	0.280	
TP-C12080BT-IW		40	0.250	

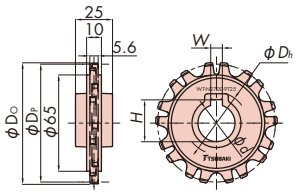
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Please refer to page 254 for details of the products.
4. Use a cold rolled steel shaft.

Sprockets for WT2700 Series

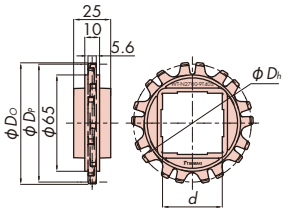
Applicable Chain	WT2705-K, WT2706-K

◆Solid Sprockets, Split Sprockets

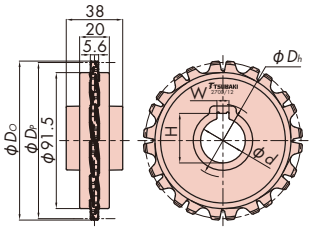
WT-N2700-9T25 (Solid)



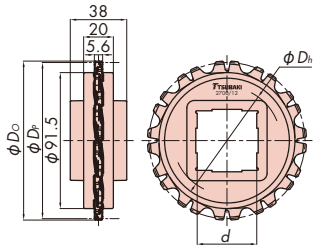
WT-N2700-9T40S (Solid)



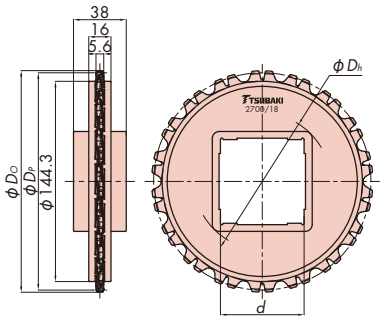
WT-N2700-12T (Solid)



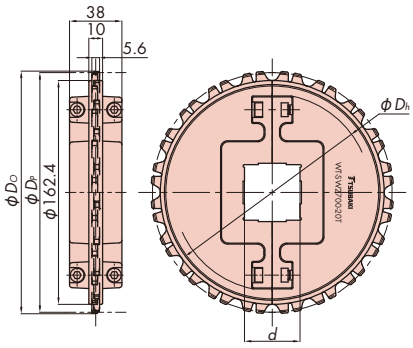
WT-N2700-12T40S (Solid)



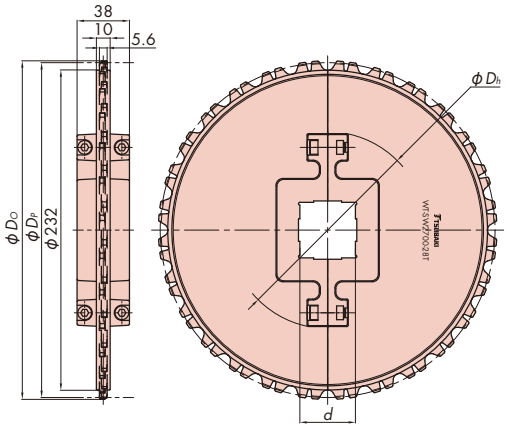
WT-N2700-18T (Solid)



WT-SW2700-20T (Split)



WT-SW2700-28T (Split)



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Bore diameter d	Keyway W	Keyway H	Approx. mass kg	Material	Bolt tightening torque N·m{kgf·m}
WT-N2700-9T25	9	79.53	82.0	41.6	Round	ϕ25	8	28.3	0.040	Reinforced polyamide (color: black)	–
WT-N2700-9T40S				62.0	Square	40	–	–	0.033		
WT-N2700-12T30	12	105.09	107.0	49.0	Round	ϕ30	8	33.3	0.120		
WT-N2700-12T40				60.0		ϕ40	12	43.3			
WT-N2700-12T40S				73.0	Square	40	–	–			
WT-N2700-18T40S	18	156.64	159.7	70.0					0.200		
WT-N2700-18T60S				98.0		60					
WT-N2700-18T65S				105.0		65					
WT-SW2700-20T40S	20	173.90	176.0	142.7		40			0.350		5.7 {0.58}
WT-SW2700-20T60S						60			0.315		
WT-SW2700-28T40S	28	242.93	245.6			40			0.550		
WT-SW2700-28T60S						60			0.500		

Note: 1. Standard products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
5. Use a cold rolled steel shaft.

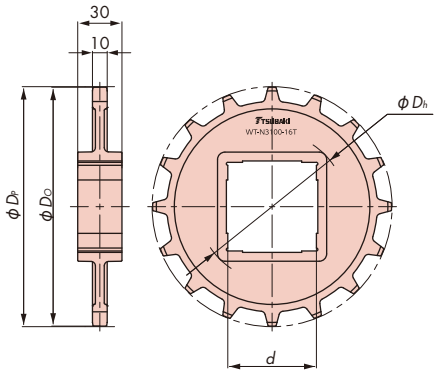
Sprockets for WT3100/3810 Series

For WT3100 Series

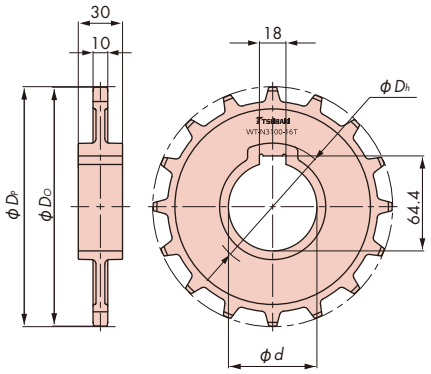
Applicable Chain	WT3109-W

◆Solid Sprockets

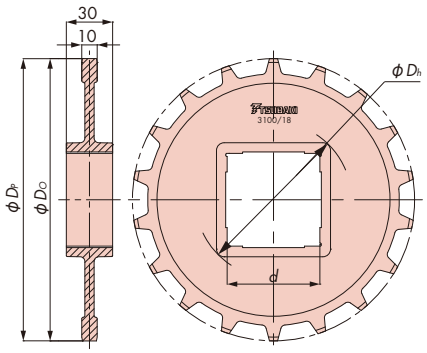
WT-N3100-16T



WT-N3100-16T



WT-N3100-18T



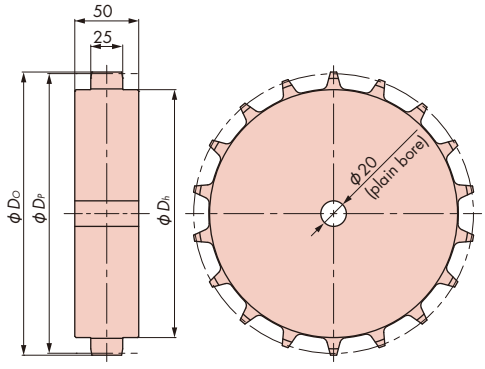
Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Bore diameter d	Approx. mass kg	Material
WT-N3100-16T40S	16	162.75	162	73	Square	40	0.180	Reinforced polyamide (color: black)
WT-N3100-16T60S				101		60		
WT-N3100-16T60				86	Round	ϕ60		
WT-N3100-18T40S	18	182.84	183	73	Square	40	0.240	
WT-N3100-18T60S				101		60		

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
4. Use a cold rolled steel shaft.

For WT3810 Series

Applicable Chain	WT3816-K

◆Solid Sprockets (Machined Type)



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Approx. mass kg	Bore shape	Material
WT-S3816-18T	18	218.83	221.6	194	1.50	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S3816-20T	20	242.91	245.9	219	1.80		
WT-S3816-24T	24	291.13	294.3	267	2.80		

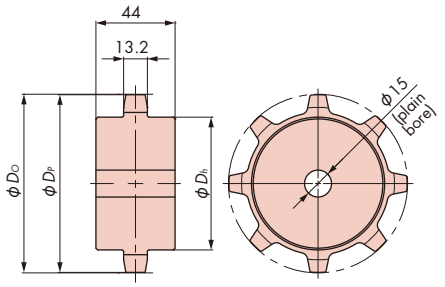
Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

Sprockets & Accessories for WT3820 Series

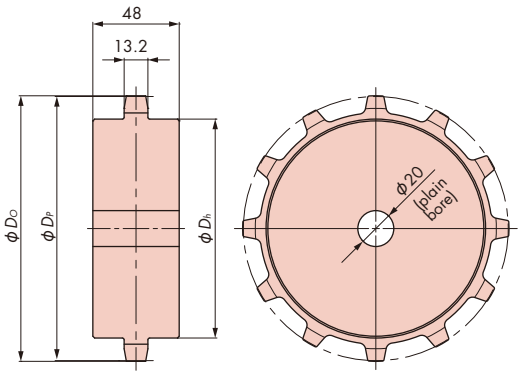
Applicable Chain	WT3827-K

◆Solid Sprockets (Machined Type)

WT-S3820-8T



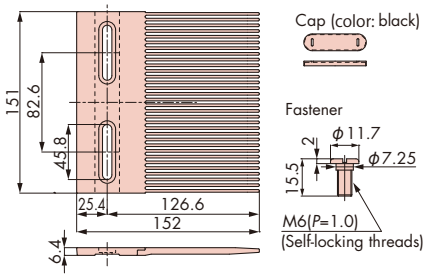
WT-S3820-12T



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Material
WT-S3820-8T	8	99.56	99	74	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S3820-12T	12	147.20	148	122		

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

◆Transfer Plates



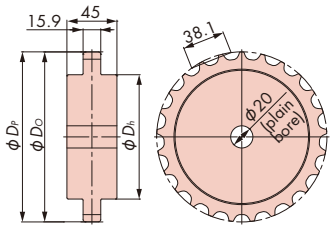
Tsubaki model no.	Material	Color	Approx. mass kg
WT-TP3827-L152	Reinforced polyamide	Black	0.150

Note: 1. Made-to-order product.
2. Two caps and two fasteners are included with one transfer plate.
3. Refer to page 447 for transfer plate installation procedures.

Sprockets for WT3830 Series

Applicable Chain	WT3835-K, WT3835-T, WT3835G-M

◆Solid Sprockets (Machined Type)

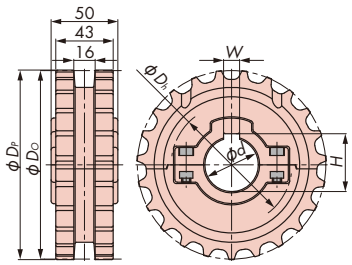


Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Material
WT-S3830-1200T	24	12	147.21	147	106	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S3830-1212T	25	12 1/2	153.20	153	112		

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

Applicable Chain	WT3835-K, WT3835-T

◆Split Sprockets



Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Keyway W	Keyway H	Hub diameter D_h	Approx. mass kg	Material: Body	Material: Bolt/Nut	Bolt tightening torque N·m{kgf·m}
TTP-21T25	21	10 1/2	129.26	130.0	Round	φ25	8	28.3	90	0.4	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}
TTP-21T30						φ30	8	33.3					
TTP-21T35						φ35	10	38.3					
TTP-21T40						φ40	12	43.3					
TTP-21T45						φ45	14	48.8					
TTP-23T25	23	11 1/2	141.22	142.0		φ25	8	28.3	90	0.5			
TTP-23T30						φ30	8	33.3					
TTP-23T35						φ35	10	38.3					
TTP-23T40						φ40	12	43.3					
TTP-23T45						φ45	14	48.8					
TTP-25T25	25	12 1/2	153.20	154.5		φ25	8	28.3	94	0.5			
TTP-25T30						φ30	8	33.3					
TTP-25T35						φ35	10	38.3					
TTP-25T40						φ40	12	43.3					
TTP-25T45						φ45	14	48.8					
TTP-25T50						φ50	14	53.8					

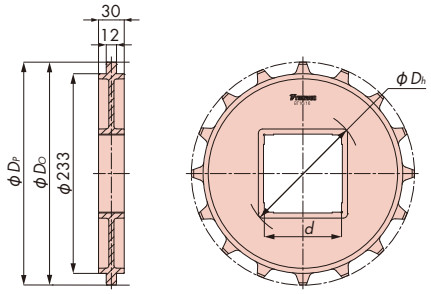
Note: 1. Standard products.
2. Operating temperature range: –20°C to 80°C.
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. This sprocket can be used in an environment with no temperature change.
5. Cannot be used for WT3835G-M325.
6. Use a cold rolled steel shaft.

Sprockets & Accessories for WT5700/BT16 Series

For BT16 Series

Applicable Chain	BTH16

◆Solid Sprockets



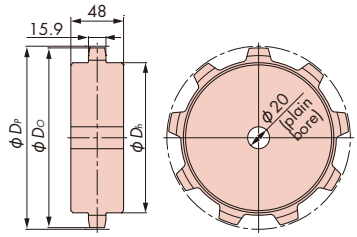
Tsubaki model no.	Teeth	Pitch diameter *DP*	Outside diameter *DO*	Hub diameter *Dh*	Bore shape	Bore diameter *d*	Approx. mass kg	Material
BT16-16T-60S	16	260.39	260	104	Square	60.1	0.6	Reinforced polyamide (color: black)
BT16-16T-90S				147		90.1		

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 80°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Sprockets are made to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the sprocket and chain.
5. Use a cold rolled steel shaft.

For WT5700 Series

Applicable Chain	WT5707-K

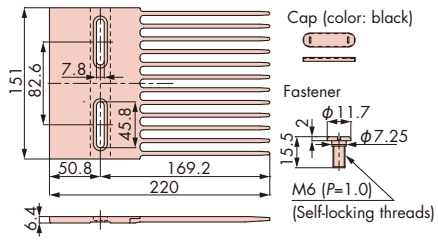
◆Solid Sprockets (Machined Type)



Tsubaki model no.	Teeth	Pitch diameter *DP*	Outside diameter *DO*	Hub diameter *Dh*	Bore shape	Material
WT-S5707-9T	9	167.09	164	137	Bore shape and size are made-to-order.	UHMW-PE (color: green)
WT-S5707-12T	12	220.81	220	193		
WT-S5707-14T	14	256.83	256	229		

Note: 1. Made-to-order products.
2. Operating temperature range: –20°C to 60°C.
3. Available for the sprockets with number of teeth, shapes and materials other than above. (Machined type)
4. Use a cold rolled steel shaft.

◆Transfer Plates



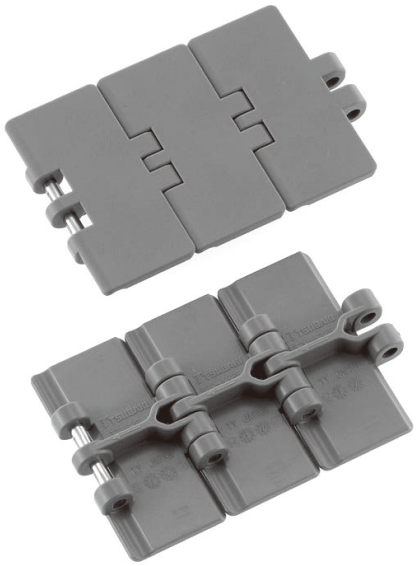
Tsubaki model no.	Material	Color	Approx. mass kg
WT-TP5707-L220	Reinforced polyamide	Black	0.180

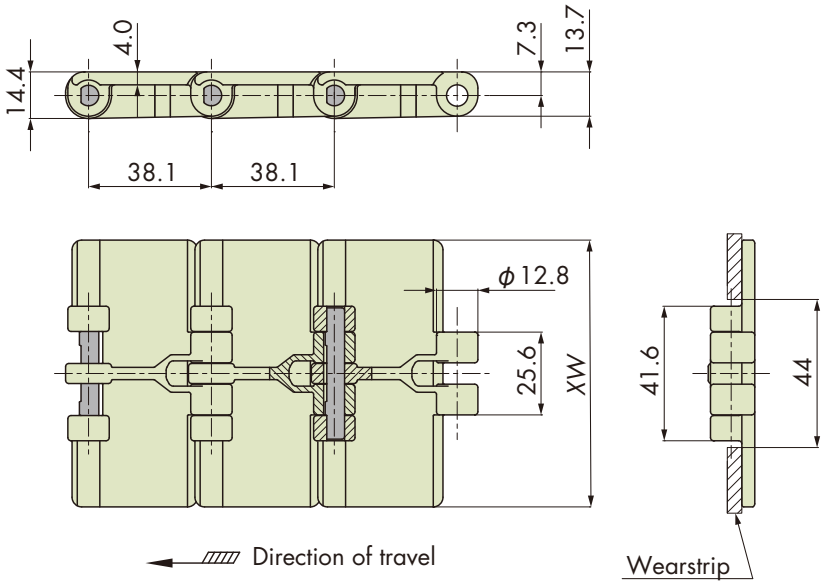
Note: 1. Made-to-order product.
2. Two caps and two fasteners are included with one transfer plate.
3. Refer to page 447 for transfer plate installation procedures.

Plastic Top Chain
TTP (Stainless Steel Pins)
Straight Running

Features

1. Worldwide standard shape. Can be used in a diverse range of applications.
2. Possible to convey various product sizes due to the diverse range of plate widths.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

		Standard Chain								High-Function Chain		
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		Heat resistant/ high speed		Low friction/ Wear resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	KV150	KV180	HG
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Black		Navy blue
Max. allowable load kN {kgf}		0.83{85}											
Max. allowable speed m/min	With lube	100									—	200	100
	No lube	50									200		50
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to 150	–20 to 180	–20 to (65)80
Pin material		SUS304											
Pin type		D-pin Note: 3											
TTP550		△	△	△	△	△	△	△	△	△	△	△	△
TTP635		○	△	△	○	●	○	○	△	○	△	△	○
TTP762		△	△	△	△	△	△	△	△	△	△	△	△
TTP826		●	△	△	●	●	●	●	△	●	○	●	●
TTP1016		○	△	△	○	○	○	○	△	○	×	×	○
TTP1143		●	△	△	○	●	●	●	△	●	×	×	●
TTP1270		○	△	△	○	○	○	○	△	○	×	×	○
TTP1524		○	△	△	○	○	○	○	△	○	×	×	○
TTP1651		△	△	△	△	△	△	△	△	△	×	×	△
TTP1905		●	△	△	○	●	●	○	△	○	×	×	○

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2007, knurled pins have been changed to D pins.
These chains, knurled pin type and D pin type, can be connected together.
4. As of April 2012, chains with top plate widths of 63.5 mm, 101.6 mm, 127 mm, and 152.4 mm changed to molded products. Depending on the specifications, the widths of their top plates are cut by machining.
5. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	ALF	WR		
Chain type	TTP550	TTP550-LFW	TTP550-LFG	TTP550-LFB	TTP550-ALF	TTP550-WR	55.0	0.8
	TTP635	TTP635-LFW	**TTP635-LFG**	TTP635-LFB	TTP635-ALF	TTP635-WR	63.5	
	TTP762	TTP762-LFW	TTP762-LFG	TTP762-LFB	TTP762-ALF	TTP762-WR	76.2	0.9
	TTP826	**TTP826-LFW**	**TTP826-LFG**	**TTP826-LFB**	**TTP826-ALF**	**TTP826-WR**	82.6	
	TTP1016	TTP1016-LFW	TTP1016-LFG	TTP1016-LFB	TTP1016-ALF	TTP1016-WR	101.6	1.0
	TTP1143	TTP1143-LFW	**TTP1143-LFG**	**TTP1143-LFB**	**TTP1143-ALF**	**TTP1143-WR**	114.3	
	TTP1270	TTP1270-LFW	TTP1270-LFG	TTP1270-LFB	TTP1270-ALF	TTP1270-WR	127.0	1.1
	TTP1524	TTP1524-LFW	TTP1524-LFG	TTP1524-LFB	TTP1524-ALF	TTP1524-WR	152.4	1.2
	TTP1651	TTP1651-LFW	TTP1651-LFG	TTP1651-LFB	TTP1651-ALF	TTP1651-WR	165.1	1.3
	TTP1905	TTP1905-LFW	**TTP1905-LFG**	**TTP1905-LFB**	TTP1905-ALF	TTP1905-WR	190.5	1.4

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Contact a Tsubaki representative for chain mass of chains corresponding to some top plate widths which is not described in below.
[TTP826] Y, SY, DIY: 1.10, DIA: 0.75, MPD: 0.8
[TTP1143] Y, DIY: 1.20, DIA: 0.8, MPD: 0.9
[TTP1905] Y, SY, DIY: 1.8, DIA, MPD: 1.0
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TTP	**826** Note: 2	**-**	**ALF** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin

Tsubaki model no. **TTP-SUS-JPD**

Note: Connecting the pins for the heat resistant and high-speed (KV150, KV180) series are different from this model. Conact a Tsubaki representative for more details.

Chain Material Table

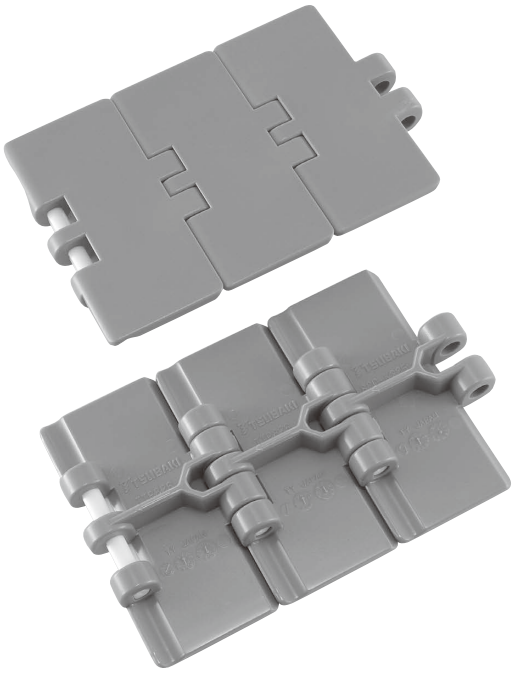
High-Function Chain													
Material	High speed	Chemical resistant	Super chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark	HS	Y	SY	E	DIA	DIY	MWS	MPD	SE	MF	AR	UVR	PFS
Link color	Beige	Matte white	Matte white	Black	Cream	Green	Cream	Black	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	0.74 {75}	0.41{42}		0.58 {59}	0.69{70}		0.83 {85}	0.69 {70}	0.83 {85}	0.61 {63}	0.75 {77}	0.83 {85}	0.83 {85}
Max. allowable speed m/min With lube	—	100			—	100		—	100	—	100		
Max. allowable speed m/min No lube	230	50											
Operating temperature range °C	–20 to 50	–20 to 80					–20 to (65)80	–20 to 80			–20 to (60)80	–20 to 80	
Pin material	SUS304		Titanium	SUS304									
Pin type	D-pin Note: 3		Diamond knurled	D-pin Note: 3									
TTP550	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP635	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP762	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP826	○	○	△	△	△	△	○	△	△	○	△	△	△
TTP1016	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP1143	△	○	△	△	△	△	○	△	△	△	△	△	△
TTP1270	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP1524	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP1651	△	△	△	△	△	△	△	△	△	△	△	△	△
TTP1905	△	△	△	△	△	△	○	△	△	△	△	△	△

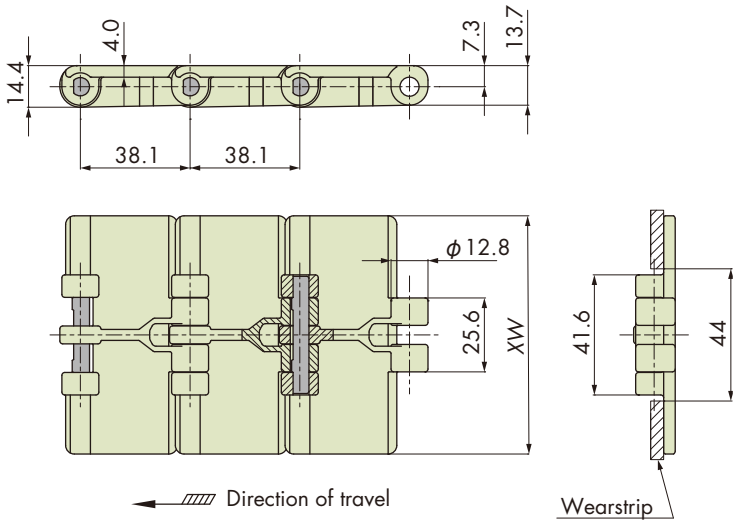
Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2007, knurled pins have been changed to D pins. These chains, knurled pin type and D pin type, can be connected together.
4. As of April 2012, chains with top plate widths of 63.5 mm, 101.6 mm, 127 mm, and 152.4 mm changed to molded products. Depending on the specifications, the widths of their top plates are cut by machining.
5. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Plastic Top Chain
TTP (Plastic Pins)
Straight Running

Features

1. Worldwide standard shape. Can be used in a diverse range of applications.
2. Possible to convey various product sizes due to the diverse range of plate widths.
3. Easy maintenance due to all-engineering-plastic-made. A longer service life is expected under water lubrication than stainless steel pin type of the chain.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.83{85}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Pin type		D-pin Note: 4								
TTP550P		△	△	△	△	△	△	△	△	△
TTP635P		○	△	△	○	●	○	○	△	○
TTP762P		△	△	△	△	△	△	△	△	△
TTP826P		●	△	△	●	●	●	●	△	●
TTP1016P		○	△	△	○	○	○	○	△	○
TTP1143P		●	△	△	○	●	●	●	△	●
TTP1270P		○	△	△	○	○	○	○	△	○
TTP1524P		○	△	△	○	○	○	○	△	○
TTP1651P		△	△	△	△	△	△	△	△	△
TTP1905P		○	△	△	○	●	●	○	△	○

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. As of October 2007, knurled pins have been changed to D pins. These chains, knurled pin type and D pin type, can be connected together.
5. As of April 2012, the chains with top plate widths of 63.5 mm, 101.6 mm, 127 mm, and 152.4 mm had changed to molded products. Depending on the specifications, the widths of their top plates are cut by machining.
6. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	ALF	WR		
Chain type	TTP550P	TTP550P-LFW	TTP550P-LFG	TTP550P-LFB	TTP550P-ALF	TTP550P-WR	55.0	0.5
	TTP635P	TTP635P-LFW	**TTP635P-LFG**	TTP635P-LFB	TTP635P-ALF	TTP635P-WR	63.5	0.55
	TTP762P	TTP762P-LFW	TTP762P-LFG	TTP762P-LFB	TTP762P-ALF	TTP762P-WR	76.2	0.62
	TTP826P	**TTP826P-LFW**	**TTP826P-LFG**	**TTP826P-LFB**	**TTP826P-ALF**	**TTP826P-WR**	82.6	0.65
	TTP1016P	TTP1016P-LFW	TTP1016P-LFG	TTP1016P-LFB	TTP1016P-ALF	TTP1016P-WR	101.6	0.75
	TTP1143P	TTP1143P-LFW	**TTP1143P-LFG**	**TTP1143P-LFB**	**TTP1143P-ALF**	**TTP1143P-WR**	114.3	0.8
	TTP1270P	TTP1270P-LFW	TTP1270P-LFG	TTP1270P-LFB	TTP1270P-ALF	TTP1270P-WR	127.0	0.85
	TTP1524P	TTP1524P-LFW	TTP1524P-LFG	TTP1524P-LFB	TTP1524P-ALF	TTP1524P-WR	152.4	0.95
	TTP1651P	TTP1651P-LFW	TTP1651P-LFG	TTP1651P-LFB	TTP1651P-ALF	TTP1651P-WR	165.1	1.05
	TTP1905P	TTP1905P-LFW	**TTP1905P-LFG**	**TTP1905P-LFB**	TTP1905P-ALF	TTP1905P-WR	190.5	1.2

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Contact a Tsubaki representative for chain mass of chains corresponding to some top plate widths which is not described in below.
[TTP826P] DIA: 0.5, DIY: 0.8, MPW: 0.6
[TTP1143P] (DIA: 0.7, DIY: 1.0, MPW: 0.6
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pins		Material mark		Number of links	Unit
TTP	**826** Note: 2	**P** Note: 3	**-**	**ALF** Note: 4	**+**	**80** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. Special engineering plastic D-pin/orange
Tsubaki model no. **TTP-PLA-JPD**

Chain Material Table

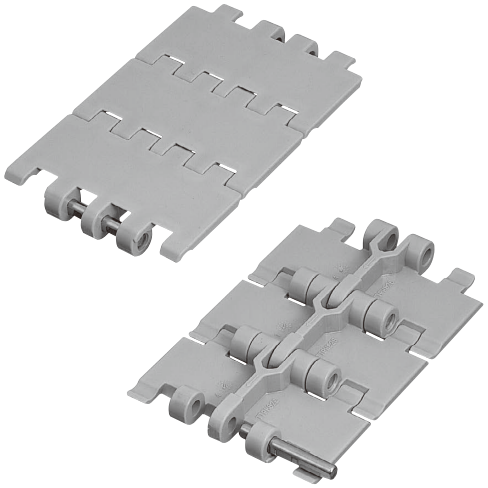
High-Function Chain										
Material		Low friction/ Wear resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	E	DIA	DIY	MWS	MPW	SE	MF	UVR
Link color		Navy blue	Black	Cream	Green	Cream	Black	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		0.83{85}	0.58{59}	0.66{68}		0.83{85}	0.34{35}	0.83{85}	0.61{63}	0.83{85}
Max. allowable speed m/min	With lube	100		–	100		50	100	–	100
	No lube	50								
Operating temperature range °C		–20 to (60)80		–20 to 80	–20 to (60)80		–20 to 60	–20 to (60)80	–20 to 80	–20 to (60)80
Pin material		Special engineering plastic								
Pin type		D-pin Note: 4								
TTP550P		△	△	△	△	△	△	△	△	△
TTP635P		○	△	△	△	△	△	△	△	△
TTP762P		△	△	△	△	△	△	△	△	△
TTP826P		●	△	△	△	○	△	△	○	△
TTP1016P		○	△	△	△	△	△	△	△	△
TTP1143P		●	△	△	△	○	△	△	○	△
TTP1270P		○	△	△	△	△	×	△	△	△
TTP1524P		○	△	△	△	△	×	△	△	△
TTP1651P		△	△	△	△	△	×	△	△	△
TTP1905P		○	△	△	△	○	×	△	△	△

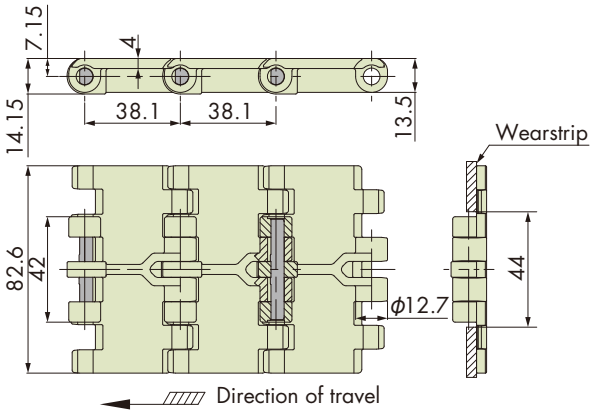
Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of connecting pins are orange. Base chain pins are white.
4. As of October 2007, knurled pins have been changed to D pins. These chains, knurled pin type and D pin type, can be connected together.
5. As of April 2012, chains with top plate widths of 63.5 mm, 101.6 mm, 127 mm, and 152.4 mm changed to molded products. Depending on the specifications, the widths of their top plates are cut by machining.
6. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Plastic Top Chain
TTPH
Straight Running

Features

1. Comb-toothed plates minimize gaps between links and are suitable for conveying unstable containers such as PET bottles and dessert cups.
2. Designed to narrow the gap between links to improve the flatness of the surface of the chain. Effective in preventing container wobbling during conveyance.
3. Ensure smooth side transfer due to chamfered edges of both sides of the plate.
4. Can be replaced to TTP826 due to having the same dimensions. Suitable for stable conveyance of containers.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	35	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.83{85}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
	Plastic pin	–20 to (60)80								
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic								
Pin type		D-pin								
TTPH826		○	△	△	○	●	●	●	△	△
TTPH826P		○	△	△	○	●	●	●	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

Material		Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark		—	LFW	LFG	LFB	ALF		
Chain type	Stainless steel pin	TTPH826	TTPH826-LFW	**TTPH826-LFG**	**TTPH826-LFB**	**TTPH826-ALF**	82.6	0.90
	Plastic pin	TTPH826P	TTPH826P-LFW	**TTPH826P-LFG**	**TTPH826P-LFB**	**TTPH826P-ALF**		0.65

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Contact a Tsubaki representative for chain mass of chains corresponding to some top plate widths which is not described in below.
[TTPH826] Y, DIY: 1.10, DIA: 0.75
[TTPH826P] DIY: 0.80
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pins		Material mark		Number of links	Unit
TTPH	**826** Note: 2	**P** Note: 3	**-**	**LFB** Note: 4	**+**	**80** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		0.83 {85}	0.41 {42}	0.58 {59}	0.69{70}		0.83 {85}		0.61 {63}	0.75 {77}	0.83 {85}	
Max. allowable speed m/min	With lube	100			–	100			–	100		
	No lube	50										
Operating temperature range °C	Stainless steel pin	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
	Plastic pin	–20 to (60)80	–	–	–	–20 to (60)80			–20 to 80	–	–20 to (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic										
Pin type		D-pin										
TTPH826		△	△	△	△	△	△	△	△	△	△	△
TTPH826P		△	×	×	×	△	△	△	△	×	△	×

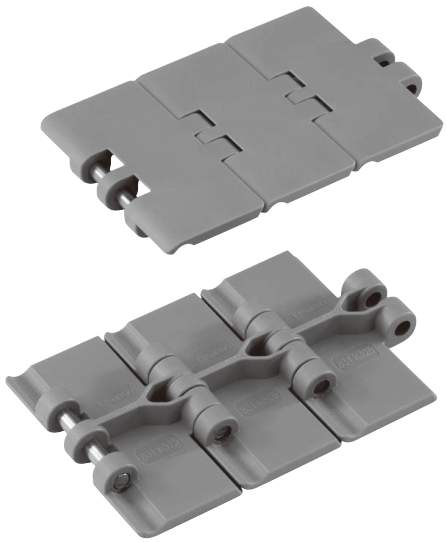
Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of connecting pin is orange. Base chain pin is white.

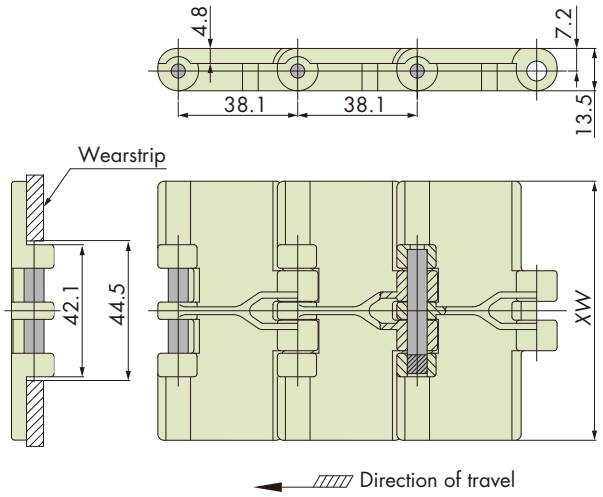
Plastic Top Chain
TTPT
Straight Running

Sprockets P.251- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.424

Features

Suitable for applications where top plates are susceptible to wear due to its thicker plate compared to TTP.
(Plate width: TTPT=4.8 mm, TTP=4.0 mm)





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		0.83{85}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		Knurled pin

Note: 1. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m
Material mark	LFB		
Chain type	**TTPT826-LFB**	82.6	1.04
	TTPT1143-LFB	114.3	1.29
	TTPT1905-LFB	190.5	1.82

Note: Chain type in boldface is a standard product. Chain type in normal face are made-to-order products.

Model Numbering

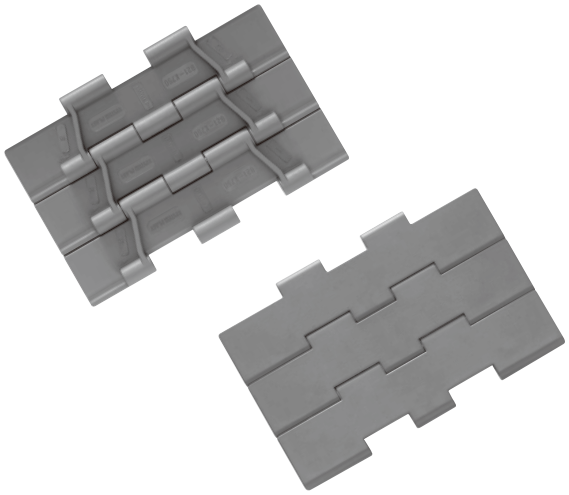
Chain type	Top plate width		Material mark		Number of links	Unit
TTPT	**826** Note: 2	**-**	**LFB**	**+**	**80** Note: 3	**L**

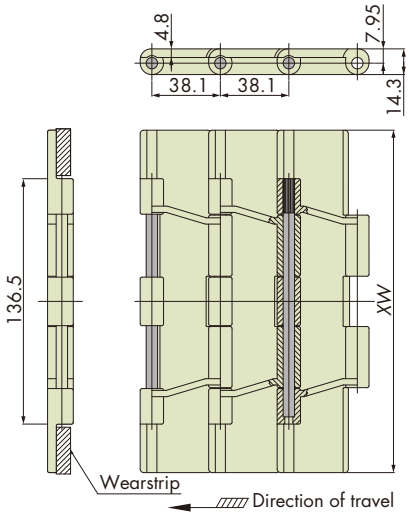
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Suitable for higher applied load conditions due to an approx. 2 times higher allowable load than TTP.
2. Suitable for conveying large products due to its wide plate width.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		1.67{170}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		Knurled pin
Availability		●

Note: 1. "●": Standard product.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m
Material mark	LFB		
Chain type	**TTPDH1905-LFB**	190.5	2.59
	TTPDH2540-LFB	254.0	3.08
	TTPDH3048-LFB	304.8	3.35

Note: 1. Chain type in boldface are standard products.
2. TTPH (standard series) had discontinued sales as of the end of September 2019. The alternative product is TTPDH-Y (standard series).
3. TTPDH (standard series) and TTPDH-Y (standard series) cannot be connected with each other.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TTPDH	**1905** Note: 2	**-**	**LFB**	**+**	**80** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

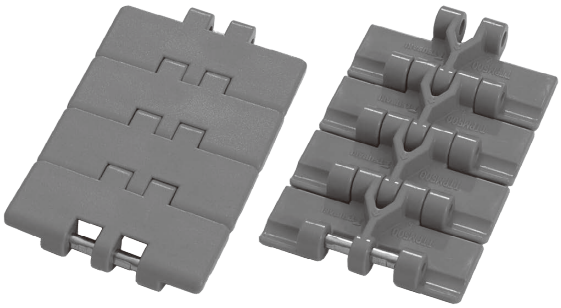
Plastic Top Chain

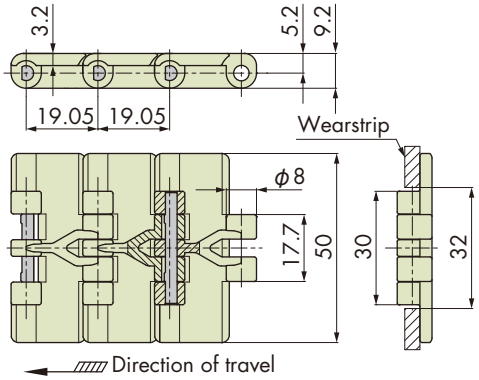
TTPM

Straight Running

Features

1. Adopts chain pitch of approx. half of conventional chains. Effective to reduce noise and to save space of transfer section.
2. Suitable for conveying small products such as batteries and vials for medical use due to its top plate width of 50.0 mm.
3. The high temperature (HTW) series are superior to standard chain listed in chain material table below in terms of chemical resistance, and provide a longer life even under use where chemical adherence is common.





Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	25	160 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

		Standard Chain									High-Function Chain	
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	High temperature
Material mark		W	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW
Link color		White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White
Max. allowable load kN {kgf}		0.29{30}										0.15 {15}
Max. allowable speed m/min	With lube	100										
	No lube	50										
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	5 to 105
Pin material		SUS304										
Pin type		D-pin										
TTPM500		●	△	●	○	○	○	○	△	○	○	○

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Can be connected with TTDS-20, which was obsolete round pin type.
4. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard		Top plate width	Chain mass kg/m Note: 2
Material mark	W	BL		
Chain type	**TTPM500-W**	**TTPM500-BL**	50	0.4

Note: 1. Chain type in boldface are standard products.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
HTW:0.3
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TTPM	**500** Note: 2	**-**	**BL** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

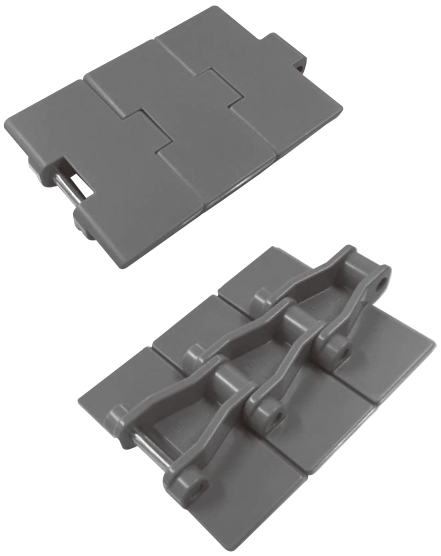
High-Function Chain							
Material		Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		E	MWS	SE	MF	UVR	PFS
Link color		Black	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		0.24{24}	0.29{30}		0.2{22}	0.29{30}	
Max. allowable speed m/min	With lube	100			—	100	
	No lube	50					
Operating temperature range °C		–20 to 80	–20 to (65)80	–20 to 80			
Pin material		SUS304					
Pin type		D-pin					
TTPM500		△	△	△	△	△	△

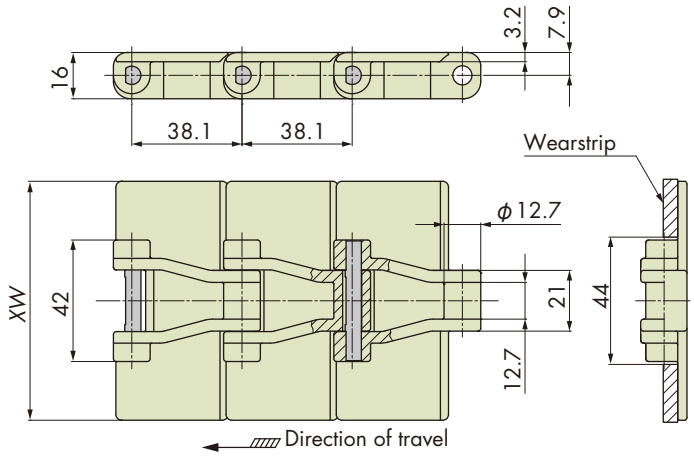
Note: 1. "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Can be connected with TTDS-20, which was obsolete round pin type.
4. Plastic pin type is not available.

Plastic Top Chain
TPF
Straight Running

Features

1. Suitable for higher applied load conditions due to an a pprox. 1.4 times higher allowable load than TTP.
2. 3.2 mm plate thickness, the same plate thickness as TT stainless steel top chain.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

Standard Chain										
Material	Standard				Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	1.18{120}									
Max. allowable speed m/min With lube	100									
Max. allowable speed m/min No lube	50									
Operating temperature range °C	–20 to 80				–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material	SUS304									
Pin type	D-pin Note: 3									
TPF762	●	●	△	△	○	○	○	○	△	△
TPF826	●	●	△	△	○	●	●	○	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of January 2009, knurled pin had been changed to D pin. These cannot be connected with each other.
4. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard		Low friction/Wear resistant		Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	W	LFG	LFB		
Chain type	**TPF762**	**TPF762-W**	TPF762-LFG	TPF762-LFB	76.2	0.85
	TPF826	**TPF826-W**	**TPF826-LFG**	**TPF826-LFB**	82.6	0.85

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TPF762] Y, DIY: 1.10, DIA: 0.75
[TPF826] Y, DIY: 1.10, DIA: 0.75
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TPF	**826** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TPF-SUS-JPD**

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		1.18 {120}	0.59 {60}	0.82 {84}	0.93{95}		1.18{120}		0.87 {89}	1.06 {108}	1.18{120}	
Max. allowable speed m/min	With lube	100			–	100			–	100		
	No lube	50										
Operating temperature range °C		–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material		SUS304										
Pin type		D-pin Note: 3										
TPF762		△	△	△	△	△	△	△	△	△	△	△
TPF826		△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of January 2009, knurled pin had been changed to D pin. These cannot be connected with each other.
4. Plastic pin type is not available.

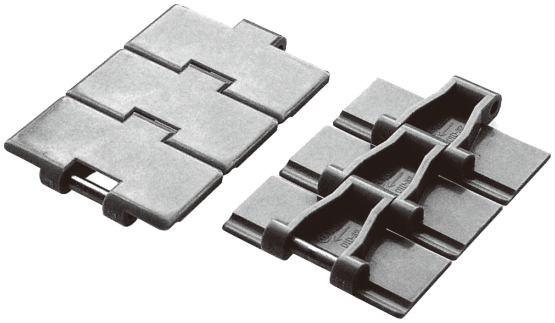
Plastic Top Chain

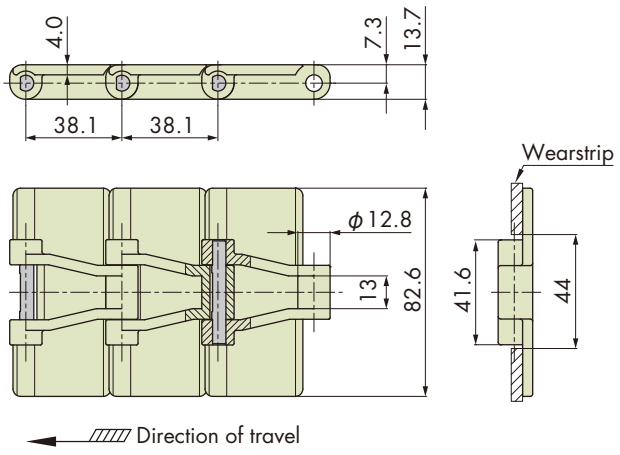
TP-OTD

Straight Running

Features

1. Suitable for higher applied load conditions due to an a pprox. 1.3 times higher allowable load than TTP.
2. With the same 4.0 mm plate thickness as the TTP and TTUP. It is easy to adjust the level of conveyors running in parallel.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		1.08{110}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
TP-OTD32		●	△	△	△	○	△	○	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Top plate width	Chain mass kg/m Note: 2
Material mark	—		
Chain type	**TP-OTD32**	82.6	0.9

Note: 1. Chain type in boldface is a standard product.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y, DIY: 1.1, DIA: 0.7
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TP-OTD	**32** Note: 2	**-**	**LFG** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	High speed	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		HG	HS	Y	E	DIA	DIY	MWS	SE	MF	UVR	PFS
Link color		Navy blue	Beige	Matte white	Black	Cream	Green	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		1.08 {110}	0.97 {100}	0.60 {61}	0.76 {77}	0.92{94}		1.08{110}		0.80 {81}	1.08{110}	
Max. allowable speed m/min	With lube	100	—	100		—	100			—	100	
	No lube	50	230	50								
Operating temperature range °C		–20 to (65)80	–20 to 50	–20 to 80				–20 to (65)80	–20 to 80			
Pin material		SUS304										
Pin type		D-pin										
TP-OTD32		△	○	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Plastic Top Chain
TPS
Straight Running

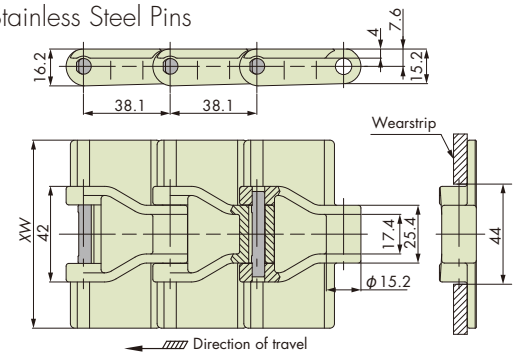
Features

1. Suitable for higher applied load conditions due to an a pprox. 1.4 times higher allowable load than TTP.
2. Sprockets for sideflexing plastic top chains (TTUP and TPU) can be used and standardize parts.
3. The plastic pin type is lightweight, easy to install and replace, and is expected to have a longer life cycle than stainless steel pins that use water lubrication.

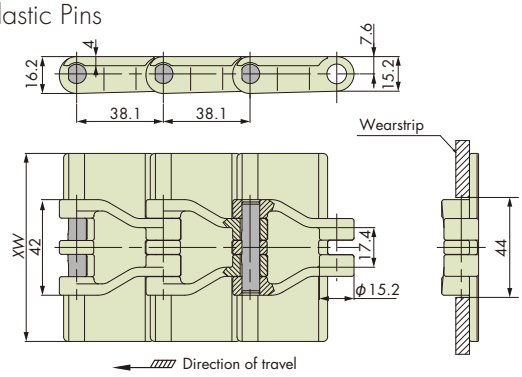




Stainless Steel Pins



Plastic Pins



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

		Standard Chain									High-Function Chain			
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		Heat resistant/High speed			Low friction/ Wear resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	KV150	KV180	KV250	HG
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Black			Navy blue
Max. allowable load kN {kgf}	Stainless steel pin	1.18{120}									0.98{100}			1.18 {120}
	Plastic pin	0.98{100}									–			0.98 {100}
Max. allowable speed m/min	With lube	100									–	200		100
	No lube	50									200			50
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to 150	–20 to 180	–20 to 250	–20 to (65)80
	Plastic pin	–20 to (60)80									–	–	–	–20 to (60)80
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic												
Pin type		D-pin Note: 4												
Stainless steel pin	TPS762	△	△	△	△	△	△	△	△	△	△	△	△	△
	TPS826	●	△	△	○	●	●	○	△	○	○	○	○	○
	TPS1016	●	△	△	○	○	○	△	△	△	×	×	×	△
	TPS1143	●	△	△	○	○	○	○	△	○	×	×	×	○
	TPS1270	●	△	△	○	○	○	△	△	△	×	×	×	△
Plastic pin	TPS762P	△	△	△	△	△	△	△	△	△	×	×	×	△
	TPS826P	○	△	△	○	●	●	●	△	○	×	×	×	○
	TPS1143P	○	△	△	○	○	○	○	△	○	×	×	×	○

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. As of January 2009, knurled pin had been changed to D pin. These cannot be connected with each other.

Tsubaki Model Table

Material		Standard	Low friction/Wear resistant		Advanced low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark		—	LFG	LFB	ALF		
Chain type	Stainless steel pin	TPS762	TPS762-LFG	TPS762-LFB	TPS762-ALF	76.2	0.85
		TPS826	**TPS826-LFG**	**TPS826-LFB**	TPS826-ALF	82.6	0.85
		TPS1016	TPS1016-LFG	TPS1016-LFB	TPS1016-ALF	101.6	1.05
		TPS1143	TPS1143-LFG	TPS1143-LFB	TPS1143-ALF	114.3	1.10
		TPS1270	TPS1270-LFG	TPS1270-LFB	TPS1270-ALF	127.0	1.20
	Plastic pin	TPS762P	TPS762P-LFG	TPS762P-LFB	TPS762P-ALF	76.2	0.75
		TPS826P	**TPS826P-LFG**	**TPS826P-LFB**	**TPS826P-ALF**	82.6	0.75
		TPS1143P	TPS1143P-LFG	TPS1143P-LFB	TPS1143P-ALF	114.3	1.00

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Contact a Tsubaki representative for chain mass of chains corresponding to some top plate widths which is not described in below.
[TPS826] Y, DIY: 1.10, DIA: 0.75
[TPS1143] Y, DIY: 1.35, DIA: 0.95
[TPS826P] DIY: 0.90, DIA: 0.6
[TPS1143P] DIY: 1.20, DIA: 0.8
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pins	Material mark	Number of links	Unit
TPS	**826** Note: 2	**P** Note: 3	- **LFB** Note: 4	+ **80** Note: 5	**L**

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

2. Special engineering plastic D-pin/orange
Tsubaki model no. **TPS-PLA-JPD**

Chain Material Table

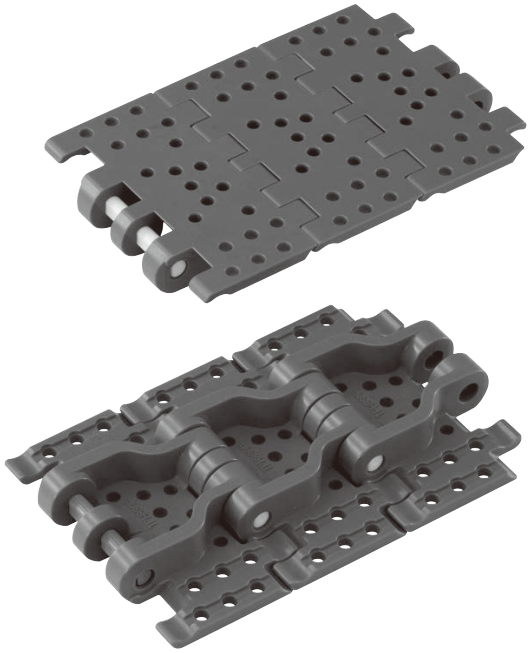
High-Function Chain											
Material		Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	0.59{60}	0.82{84}	0.93{95}		1.18{120}		0.87{89}	1.06{108}	1.18{120}	
	Plastic pin	–	0.69{70}	–	0.78{80}	0.98{100}		0.73{74}	–	0.98{100}	–
Max. allowable speed m/min	With lube	100		–	100			–	100		
	No lube	50									
Operating temperature range °C	Stainless steel pin	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
	Plastic pin	–	–20 to (60)80	–	–20 to (60)80			–20 to 80	–	–20 TO (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic									
Pin type		D-pin Note: 4									
Stainless steel pin	TPS762	△	△	△	△	△	△	△	△	△	△
	TPS826	△	△	△	△	△	△	△	△	△	△
	TPS1016	△	△	△	△	△	△	△	△	△	△
	TPS1143	△	△	△	△	△	△	△	△	△	△
	TPS1270	△	△	△	△	△	△	△	△	△	△
Plastic pin	TPS762P	×	△	×	△	△	△	△	×	△	×
	TPS826P	×	△	×	△	△	△	△	×	△	×
	TPS1143P	×	△	×	△	△	△	△	×	△	×

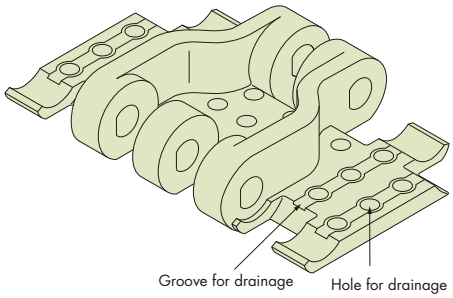
Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. As of January 2009, knurled pin had been changed to D pin. These cannot be connected with each other.

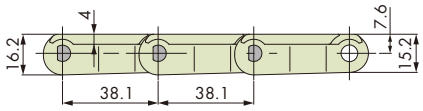
Plastic Top Chain
TPH
Straight Running

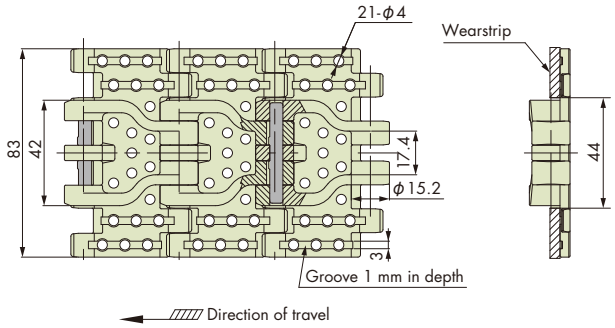
Features

1. Suitable for conveying unstable containers such as PET bottles and dessert cups due to its comb-toothed plates which minimize gaps between links.
2. Effective in preventing wobbling and toppling of containers due to improved flatness of the surface.
3. The perforated surface is effective to drain excess water and lubricant.
4. Can be replaced TPS chain with TPH chain due to same dimensions. Suitable for more stable transport.
5. The plastic pin type is lightweight, easy to install and replace, and is expected to have a longer life cycle than stainless steel pins that use water lubrication.









Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	35	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load N {kgf}	Stainless steel pin	1.18{120}								
	Plastic pin	0.78{80}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
	Plastic pin	–20to (60)80								
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic								
Pin type		D-pin								
TPH830		○	△	△	○	○	○	●	△	△
TPH830P		○	△	△	○	○	○	●	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins is orange. Base chain pins are white.

Tsubaki Model Table

Material		Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark		—	LFW	LFG	LFB	ALF		
Chain type	Stainless steel pin	TPH830	TPH830-LFW	TPH830-LFG	TPH830-LFB	**TPH830-ALF**	83	1.0
	Plastic pin	TPH830P	TPH830P-LFW	TPH830P-LFG	TPH830P-LFB	**TPH830P-ALF**		0.75

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TPH830] Y, DIY: 1.20, DIA: 0.85
[TPH830P] DIY: 0.90, DIA: 0.5
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pins		Material mark		Number of links	Unit
TPH	**830** Note: 2	**P** Note: 3	**-**	**ALF** Note: 4	**+**	**80** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	1.18{120}	0.59{60}	0.82{84}	0.93{95}		1.18{120}		0.87{89}	1.06{108}	1.18{120}	
	Plastic pin	0.78{80}	–	0.54{55}	–	0.64{65}	0.78{80}		0.58{59}	–	0.78{80}	
Max. allowable speed m/min	With lube	100			–	100			–	100		
	No lube	50										
Operating temperature range °C	Stainless steel pin	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
	Plastic pin	–20 to (60)80	–	–20 to (60)80	–	–20 to (60)80			–20 to 80	–	–20 to (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic										
Pin type		D-pin										
TPH830		△	△	△	△	△	△	△	△	△	△	△
TPH830P		△	×	△	×	△	△	△	△	×	△	×

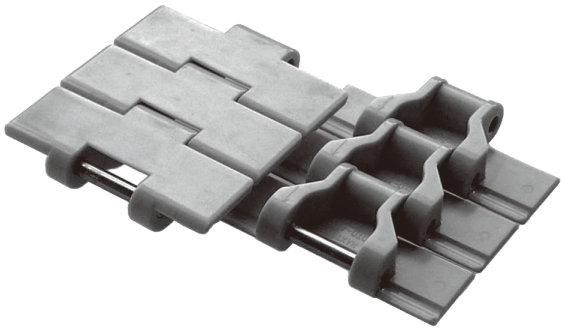
Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of connecting pin is orange. Base chain pin is white.

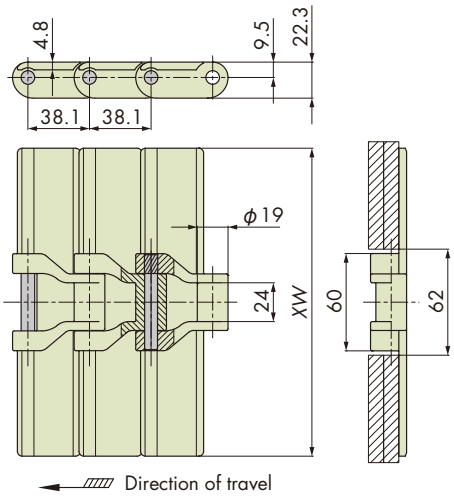
Plastic Top Chain
TPSS
Straight Running

Sprockets P.262 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. Suitable for higher applied load conditions due to an approx. 2.3 times higher allowable load than TTP.
2. Suitable for conveying large products due to its wide top plates.
3. Suitable for applications where top plates are susceptible to wear due to a thicker plate compared to TTP and TPS.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

		Standard Chain								High-Function Chain				
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		1.96{200}										1.45 {148}	1.96{200}	
Max. allowable speed m/min	With lube	100										–	100	
	No lube	50												
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80		–20 to (65)80	–20 to 80			
Pin material		SUS304												
Pin type		Knurled pin												
TPSS1143		△	△	△	△	○	○	△	△	△	△	△	△	△
TPSS1270		△	△	△	△	△	△	△	△	△	△	△	△	△
TPSS1524		△	△	△	△	△	△	△	△	△	△	△	△	△
TPSS1905		△	△	△	△	○	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. The chain widths of 127.0 mm and 152.4 mm are cut by machining.
5. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Tsubaki Model Table

Material	Low friction/Wear resistant		Top plate width XW	Chain mass kg/m
Material mark	LFG	LFB		
Chain type	TPSS1143-LFG	TPSS1143-LFB	114.3	1.9
	TPSS1270-LFG	TPSS1270-LFB	127.0	2.0
	TPSS1524-LFG	TPSS1524-LFB	152.4	2.1
	TPSS1905-LFG	TPSS1905-LFB	190.5	2.4

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

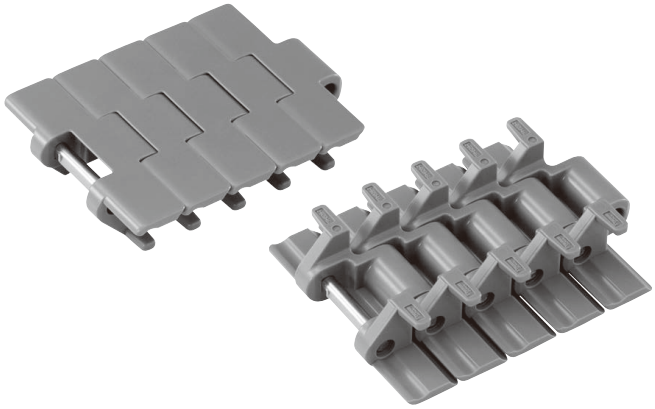
Chain type	Top plate width		Material mark		Number of links	Unit
TPSS	1143 Note: 2	-	LFG Note: 3	+	80 Note: 4	L

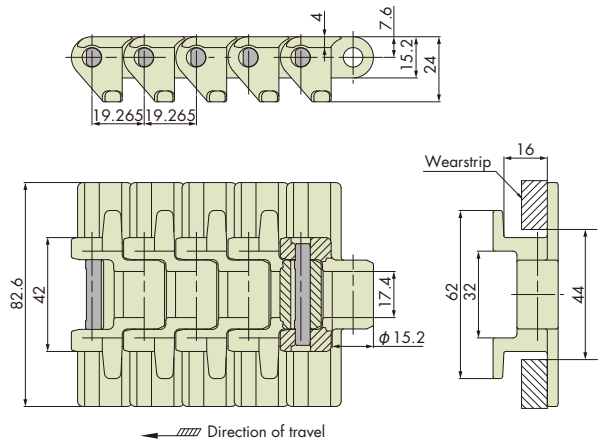
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Adopts chain pitch of approx. half of conventional chains. Effective to reduce noise and to save space of the transfer section.
2. Only odd number of teeth of TPS sprockets can be used with standardized parts.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Chain pitch mm	Backflex radius mm	Number of links per unit
19.265	15	160

Note: The pitch of 19.265 mm is designed to engage all teeth of TTUP1012T which is the sprocket for TPS chain withand the equivalent teeth of 21T.

Chain Material Table

	Standard Chain									High-Function Chain										
Material	Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	1.18{120}										0.59 {60}	0.82 {84}	0.93{95}		1.18{120}		0.87 {89}	1.06 {108}	1.18{120}	
Max. allowable speed m/min With lube	100												–	100			–	100		
Max. allowable speed m/min No lube	50																			
Operating temperature range °C	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material	SUS304																			
Pin type	D-pin																			
TPM826-T	○	△	△	○	○	○	○	△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant		Top plate width	Chain mass kg/m Note: 2
Material mark	LFG	LFB		
Chain type	TPM826-T-LFG	TPM826-T-LFB	82.6	1.40

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above.
Refer to the following information (unit: kg/m).
Y, DIY: 1.7, DIA: 1.2
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

Model Numbering

Chain type	Top plate width	Tab	Material mark	Number of links	Unit
TPM	**826** Note: 2	**- T -**	**LFB** Note: 3	**+ 80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

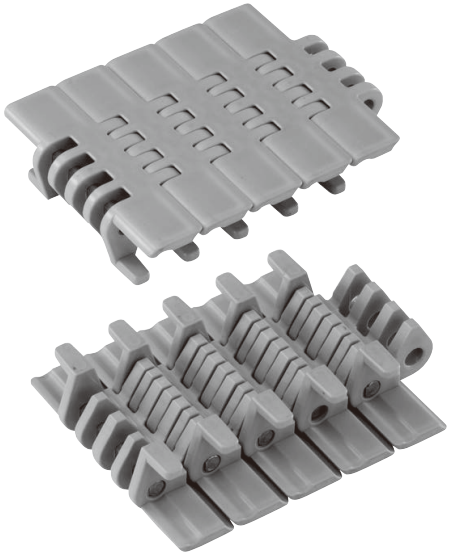
Plastic Top Chain

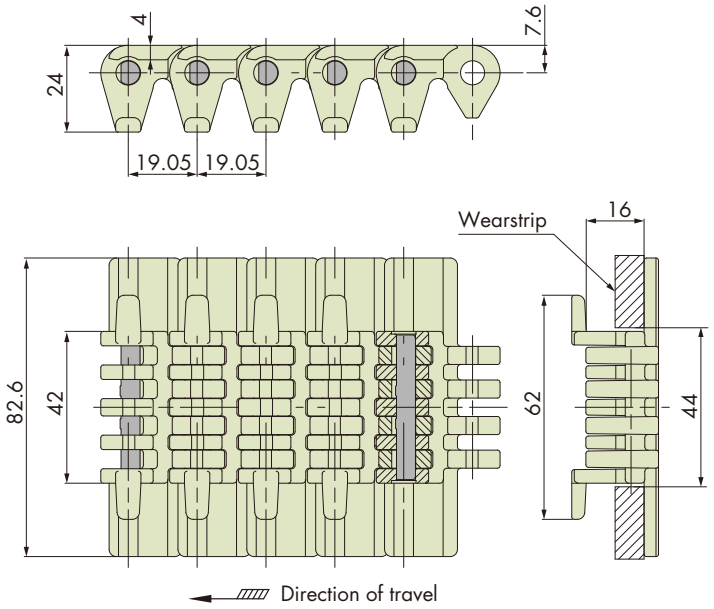
TPM-SN

Straight Running

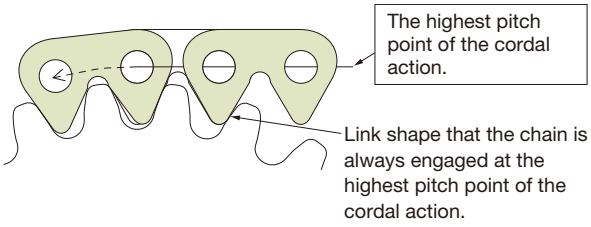
Features

1. Applies the concept of silent chain engagement. Extremely effective in reducing conveyor noise.
2. Special sprockets, which suppress chordal action of the chain when engaging with the sprocket, enable stable transportation.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.

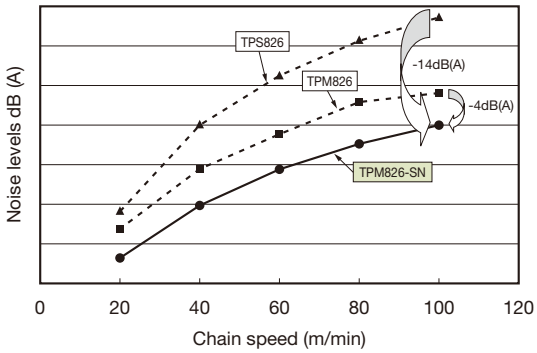




Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	15	160



Comparison of conveyor noises in-house



Chain Material Table

		Standard Chain									High-Function Chain							
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electroconductive	Impact resistant	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	E	DIA	MWS	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Black	Cream	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	1.18{120}										0.83 {84}	0.92 {94}	1.18{120}		0.87 {89}	1.18{120}	
	Plastic pin	0.78{80}										0.55 {56}	—	0.78{80}		0.58 {59}	0.78 {80}	—
Max. allowable speed m/min	With lube	100											—	100		—	100	
	No lube	50																
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80		–20 to (65)80	–20 to 80			
	Plastic pin	–20 to (60)80											—	–20 to (60)80		–20 to 80	–20 to (60)80	—
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic																
Pin type		D-pin																
TPM826-SN-T		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
TPM826P-SN-T		△	△	△	△	△	△	△	△	△	△	△	×	△	△	△	△	×

Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. Use the dedicated sprocket with 21 teeth.
Contact a Tsubaki representative in detail.

Tsubaki Model Table

Material		Standard	Low friction/Wear resistant			Advanced low friction/ Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark		—	LFW	LFG	LFB	ALF		
Chain type	Stainless steel pin	TPM826-SN-T	TPM826-SN-T-LFW	TPM826-SN-T-LFG	TPM826-SN-T-LFB	TPM826-SN-T-ALF	82.6	1.40
	Plastic pin	TPM826P-SN-T	TPM826P-SN-T-LFW	TPM826P-SN-T-LFG	TPM826P-SN-T-LFB	TPM826P-SN-T-ALF		1.10

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TPM826-SN-T] DIA: 1.0
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pins		Chain type		Tab		Material mark		Number of links		Unit
TPM	826 Note: 2	P Note: 3	-	SN	-	T	-	LFB Note: 4	+	80 Note: 5		L

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table above.
5. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top Chain

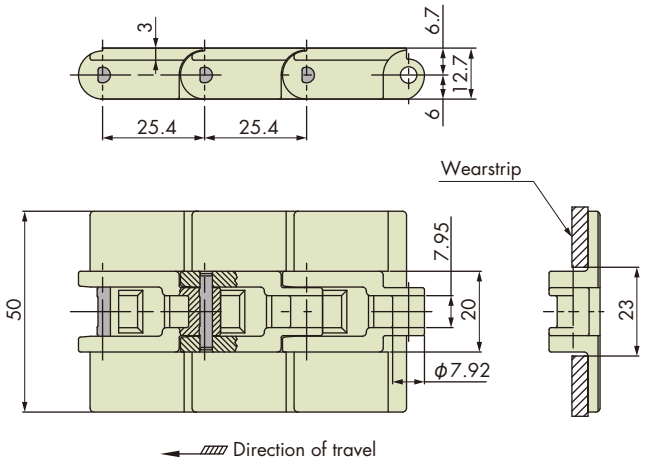
TPRF (TPRF2040)

Straight Running

Features

1. Conveyor chain with a plastic top plate and the same pitch as RF2040.
2. RF2040S sprockets (with 19T or greater) can be used.





Chain pitch mm	Backflex radius mm	Number of links per unit
25.4	350	120

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.44{45}								
Max. allowable speed m/min	With lube	60								
	No lube									
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin Note: 3								
TPRF2040		●	△	△	○	○	○	○	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of July 2008, knurled pins have been changed to D pins. These pins can be connected together.
4. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	ALF		
Chain type	**TPRF2040**	TPRF2040-LFW	TPRF2040-LFG	TPRF2040-LFB	TPRF2040-ALF	50	0.42

Note: 1. Chain type in boldface is a standard product. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y, SY, DIY: 0.52, DIA: 0.36
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Chain pitch		Material mark		Number of links		Unit
TPRF	**2040**	**-**	**LFB**	**+**	**80** Note: 3		**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the chain material table below.
3. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **RSP40-SUS-JPD**

Chain Material Table

High-Function Chain													
Material		Low friction/ Wear resistant	Chemical resistant	Super chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	SY	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		0.44 {45}	0.22{22}		0.31 {31}	0.34{35}		0.44{45}		0.33 {33}	0.40 {41}	0.44{45}	
Max. allowable speed m/min	With lube	60				–	60	60		–	60		
	No lube					60				60			
Operating temperature range °C		–20 to (65)80	–20 to 80					–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material		SUS304		Titanium	SUS304								
Pin type		D-pin Note: 3		Diamond knurled	D-pin Note: 3								
TPRF2040		△	○	△	○	△	△	○	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of July 2008, knurled pins have been changed to D pins. These pins can be connected together.
4. Plastic pin type is not available.

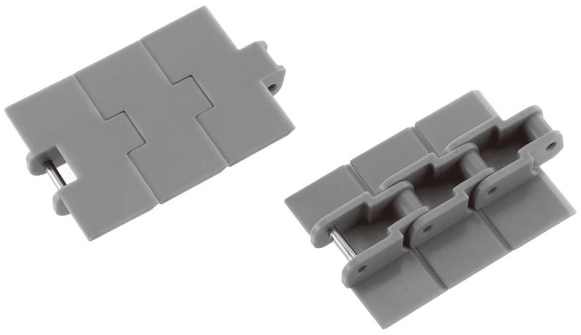
Plastic Top Chain

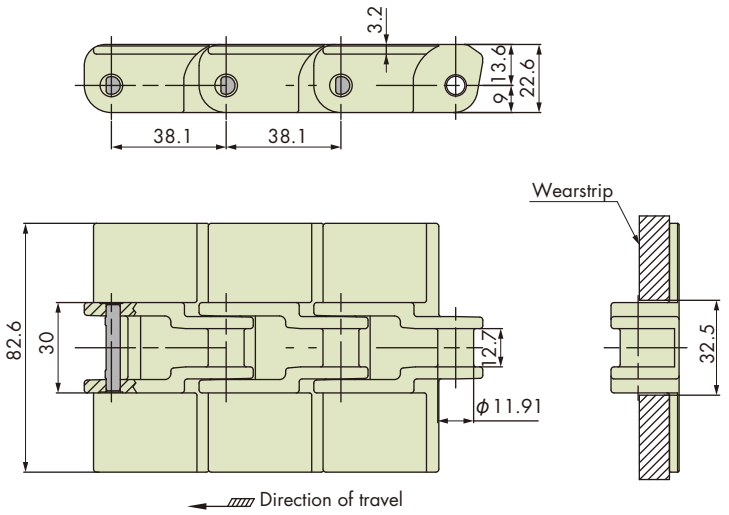
TPRF (TPRF2060)

Straight Running

Features

1. Conveyor chain with a plastic top plate and the same pitch as RF2060.
2. RF2060S sprockets (with 19T or greater) can be used.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.88{90}								
Max. allowable speed m/min	With lube	60								
	No lube									
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
TPRF2060		○	△	△	○	○	○	○	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	ALF		
Chain type	TPRF2060	TPRF2060-LFW	TPRF2060-LFG	TPRF2060-LFB	TPRF2060-ALF	82.6	0.9

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y, DIY: 1.1, DIA: 0.7
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Chain pitch		Material mark		Number of links	Unit
TPRF	**2060**	**-**	**LFB** Note: 2	**+**	**80** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the chain material table below.
3. Minimum quantity: 2, maximum quantity: 99999

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **RSP60-SUS-JPD**

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		0.88{90}	0.44{45}	0.62{63}	0.69{70}		0.88{90}		0.65 {67}	0.79 {81}	0.88{90}	
Max. allowable speed m/min	With lube	60			–	60			–	60		
	No lube				60				60			
Operating temperature range °C		–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material		SUS304										
Pin type		D-pin										
TPRF2060		△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Plastic Top Chain
TTUP (Stainless Steel Pins)

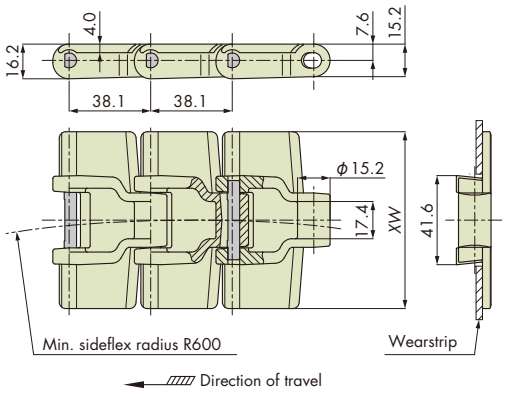
Sideflexing Running

Features

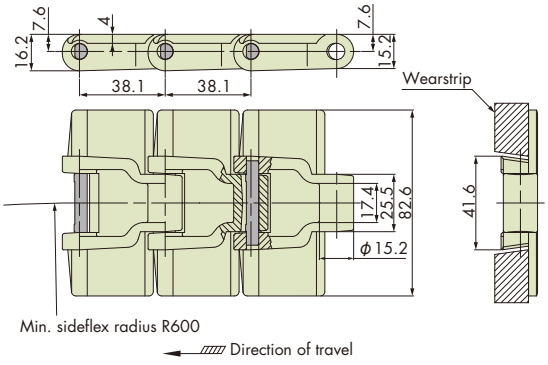
1. Standard type of sideflexing plastic top chain. Easy washing due to its simple design.
2. Sprockets for TPS and TPU can be used with standardized parts.



TTUP826 (materials other than those below), TTUP1143, TTUP1905



TTUP826-DIA, DIY, MPD, MPW, KV150, KV180



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		1.08{110}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
TTUP826		●	△	△	○	●	●	●	△	●
TTUP1143		●	△	△	○	●	●	●	△	●
TTUP1905		●	△	△	○	●	●	○	△	○

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2008, the shape of TTUP826's link had changed. The new chain cannot be connected to the previous model.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant		Advanced low friction/Wear resistant	Low friction	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	LFG	LFB	ALF	WR		
Chain type	**TTUP826**	**TTUP826-LFG**	**TTUP826-LFB**	**TTUP826-ALF**	**TTUP826-WR**	82.6	1.0
	TTUP1143	**TTUP1143-LFG**	**TTUP1143-LFB**	**TTUP1143-ALF**	**TTUP1143-WR**	114.3	1.1
	TTUP1905	**TTUP1905-LFG**	**TTUP1905-LFB**	TTUP1905-ALF	TTUP1905-WR	190.5	1.6

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TTUP826] Y, DIY: 1.2, DIA: 0.85, MPD: 0.9, MPW: 0.7
[TTUP1143] Y, DIY: 1.35, DIA: 0.95, MPD: 1.0, MPW: 0.8
[TTUP1905] Y, DIY: 1.95, DIA: 1.35
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Material mark		Number of links	Unit
TTUP	**826** Note: 2	**-**	**ALF** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

Chain Material Table

High-Function Chain															
Material	Heat resistant/ high speed		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable		Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark	KV150	KV180	HG	Y	E	DIA	DIY	MWS	MPD	MPW	SE	MF	UVR	PFS
Link color	Black		Navy blue	Matte white	Black	Cream	Green	Cream	Black		Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	0.98{100}		1.08 {110}	0.54 {55}	0.76 {77}	0.83{85}		1.08 {110}	0.83 {85}	0.34 {35}	1.08 {110}	0.80 {81}	1.08{110}	
Max. allowable speed m/min With lube	—	200	100			—	100		—	50	100	—	100	
Max. allowable speed m/min No lube	200		50											
Operating temperature range °C	–20 to 150	–20 to 180	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80	–20 to 60	–20 to 80			
Pin material	SUS304													
Pin type	D-pin													
TTUP826	○	○	●	○	△	△	△	△	△	△	△	△	△	△
TTUP1143	×	×	○	○	△	△	△	△	△	△	△	△	△	△
TTUP1905	×	×	△	△	△	△	△	△	×	×	△	△	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2008, the shape of TTUP826's link had changed excluding following specifications, DIA, DIY, MPD, MPW and KV150, KV180 series. The new chain cannot be connected to the previous model.

Plastic Top Chain
TTUP (Plastic Pins)

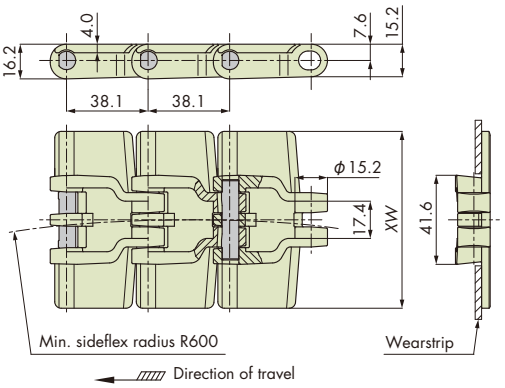
Sideflexing Running

Features

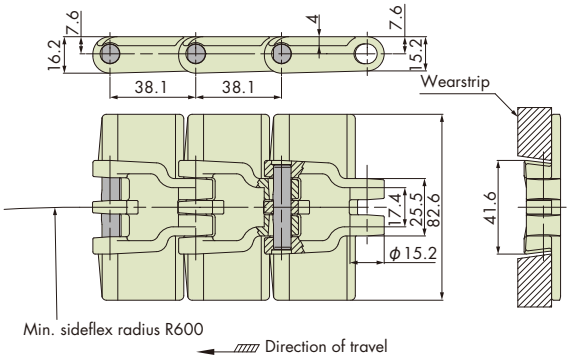
1. Standard type of sideflexing plastic top chain. Easy washing due to its simple design.
2. Sprockets for TPS and TPU can be used and standardize parts.
3. Easy maintenance due to all-engineering-plastic-made. A longer service life is expected under water lubrication than stainless steel pin type of the chain.



TTUP826P (materials other than those below), TTUP1143P



TTUP826P-DIY, MPW



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.88{90}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to (60)80								
Pin material		Special engineering plastic								
Pin type		D-pin								
TTUP826P		●	△	△	○	●	●	●	△	●
TTUP1143P		●	△	△	○	●	●	●	△	●

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. As of October 2008, the shape of TTUP826's link had changed. The new chain cannot be connected to the previous model.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant		Advanced low friction/Wear resistant	Low friction	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	LFG	LFB	ALF	WR		
Chain type	**TTUP826P**	**TTUP826P-LFG**	**TTUP826P-LFB**	**TTUP826P-ALF**	**TTUP826P-WR**	82.6	0.7
	TTUP1143P	**TTUP1143P-LFG**	**TTUP1143P-LFB**	**TTUP1143P-ALF**	**TTUP1143P-WR**	114.3	0.8

Note: 1.Chain type in boldface are standard products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TTUP826P] DIY: 0.95, MPW: 0.65
[TTUP1143P] DIY: 1.0, MPW: 0.75
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain Type	Top plate width	Plastic pin		Material mark		Number of links	Unit
TTUP	**826** Note: 2	**P** Note: 3	**-**	**ALF** Note: 4	**+**	**80** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. Special engineering plastic D-pin/orange
Tsubaki model no. **TTUP-PLA-JPD**

Chain Material Table

High-Function Chain									
Material		Low friction/ Wear resistant	Electroconductive	Impact resistant	Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		HG	E	DIY	MWS	MPW	SE	MF	UVR
Link color		Navy blue	Black	Green	Cream	Black	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		0.88 {90}	0.62 {63}	0.69 {70}	0.88 {90}	0.34 {35}	0.88 {90}	0.65 {67}	0.88{90}
Max. allowable speed m/min	With lube	100				50	100	–	100
	No lube	50							
Operating temperature range °C		–20 to (60)80				–20 to 60	–20 to (60)80	–20 to 80	–20 to (60)80
Pin material		Special engineering plastic							
Pin type		D-pin							
TTUP826P		●	△	△	△	△	△	○	△
TTUP1143P		○	△	△	△	△	△	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins is orange. Base chain pins are white.
4. As of October 2008, the link shape of TTUP826, exclude DIY and MPD, has changed. The new chain cannot be connected to the previous.

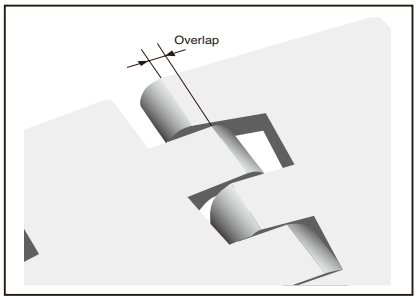
Plastic Top Chain

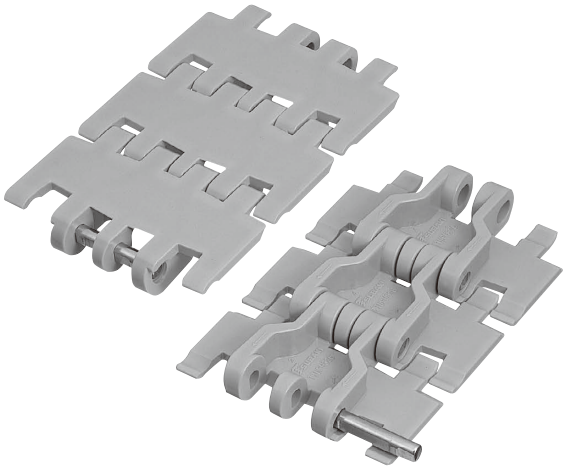
TTUPH

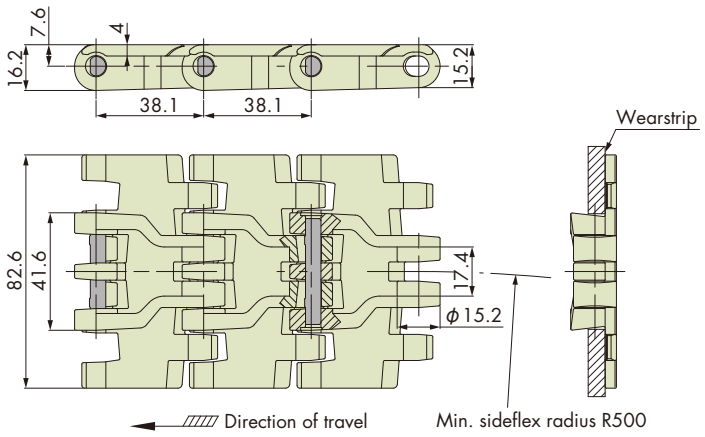
Sideflexing Running

Features

1. Suitable for conveying unstable containers such as PET bottles and dessert cups due to its comb-toothed plates which minimize gaps between links.
2. Effective in preventing wobbling and toppling of containers due to improved flatness of the surface.
3. Can be replaced with TTUP due to having the same dimensions. Suitable for stable conveyance of containers.
4. Ensure smooth side transfer due to chamfered edges of both sides of the plate.







Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	35	80

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		1.08{110}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
TTUPH826		○	△	△	○	●	●	●	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant		Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	LFG	LFB	ALF		
Chain type	**TTUPH826-LFG**	**TTUPH826-LFB**	**TTUPH826-ALF**	82.6	1.0

Note: 1. Chain type in boldface are standard products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TTUPH826] Y, DIY: 1.2, DIA: 0.7
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain Type	Top plate width		Material mark		Number of links	Unit
TTUPH	**826** Note: 2	-	**ALF** Note: 3	+	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		1.08 {110}	0.54 {55}	0.76 {77}	0.84{86}		1.08{110}		0.80{81}	0.97{99}	1.08{110}	
Max. allowable speed m/min	With lube	100			–		100		–	100		
	No lube	50										
Operating temperature range °C		–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material		SUS304										
Pin type		D-pin										
TTUPH826		△	△	△	△	△	△	△	△	△	△	△

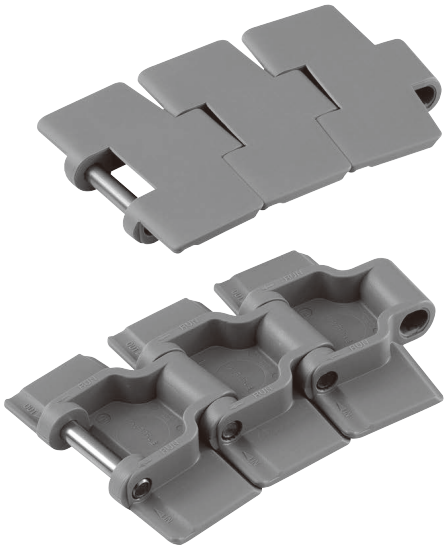
Note: 1. "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

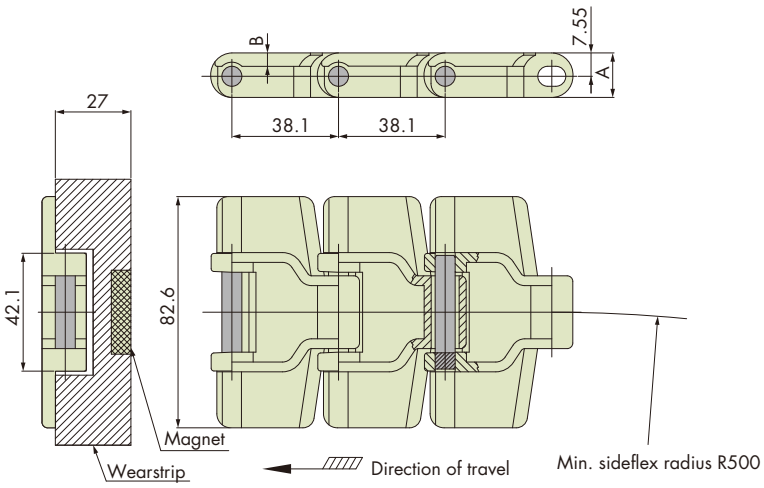
Plastic Top Chain
TTUP(T)-M
Sideflexing Running

Sprockets P.259- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

Magnetic stainless steel pins are adopted, making this type of chain ideal for preventing chain from floating in curved section when used in combination with plastic rails that have embedded magnets.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		0.98{100}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Stainless steel pin (magnetic)
Pin type		Knurled pin
Availability		△

Note: 1. "△": Made-to-order product (RFQ).
Not available for other chain materials that are not listed in the chain material table on the left.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Connecting pins are not for sale separately.
4. Plastic pin type is not available.
5. Contact a Tsubaki representative for information about magnet-embedded curved plastic rails.

Tsubaki Model Table

Material	Low friction/Wear resistant	Link height A	Top plate thickness B	Top plate width	Chain mass kg/m
Material mark	LFB				
Chain type	TTUP826M-LFB	15.1	4.0	82.6	1.05
	TTUPT826M-LFB	15.9	4.8		1.15

Note: Chain type in normal face are made-to-order products.

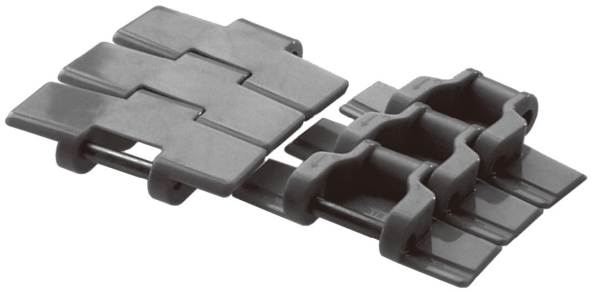
Model Numbering

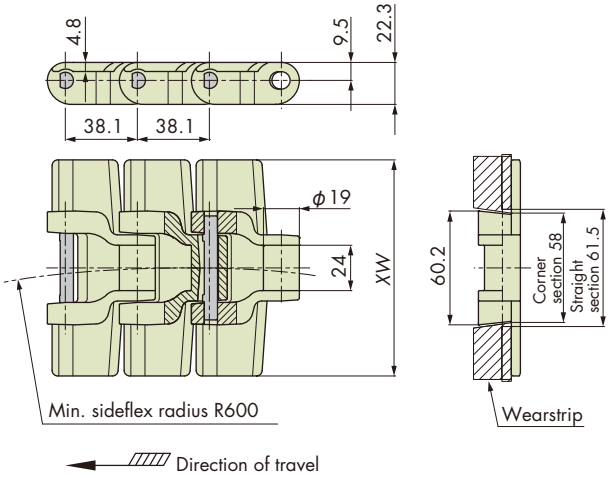
Chain type	Top plate width	Chain type		Material mark		Number of links	Unit
TTUP	**826** Note: 2	**M**	**-**	**LFB**	**+**	**80** Note: 3	**L**
		M: Magnetic type					L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Suitable for higher applied load conditions due to an approx. 1.8 times higher allowable load than TTUP.
2. Suitable for conveying large products due to its wide top plates.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

Material		Standard Chain									High-Function Chain				
		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		1.96{200}											1.45 {148}	1.96{200}	
Max. allowable speed m/min	With lube	90											—	90	
	No lube	40													
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80			
Pin material		SUS304													
Pin type		D-pin Note: 3													
TTUPS1143		△	△	△	△	○	△	△	△	△	△	△	△	△	△
TTUPS1270		△	△	△	△	△	△	△	△	△	△	△	△	△	△
TTUPS1524		△	△	△	△	△	△	△	△	△	△	△	△	△	△
TTUPS1905		△	△	△	△	○	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. TTUPS chains cannot connect with UTD-S knurled-pin type chains, which were sold until June 2005.
4. Plastic pin type is not available.
5. The chain widths of 127.0 mm and 152.4 mm are cut by machining.
6. The chain mark on the bottom of the plate of which the width was cut by machining indicates information not for the chain of modified width but for the original chains.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width XW	Chain mass kg/m
Material mark	LFG		
Chain type	TTUPS1143-LFG	114.3	1.90
	TTUPS1270-LFG	127.0	2.00
	TTUPS1524-LFG	152.4	2.10
	TTUPS1905-LFG	190.5	2.30

Note: 1. Chain type in normal face are made-to-order products.
Refer to the chain material table in the above for availability.
2. The chain mass of the chain materials available whose information are not described in on the left are the same with that in the Tsubaki model table on the left.

Model Numbering

Chain type	Top plate width		Material mark		Number of links		Unit
TTUPS	1143 Note: 2	-	LFG Note: 3	+	80 Note: 4		L

L: Link

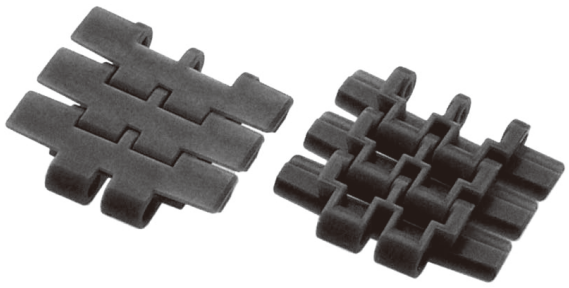
Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

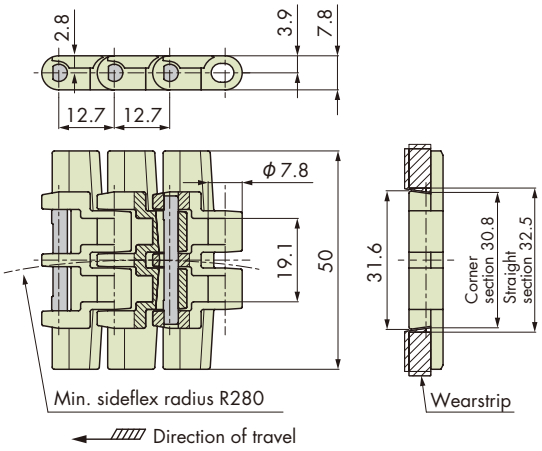
Plastic Top Chain
TTUPM-P
Sideflexing Running

Sprockets P.262 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. A small chain pitch of 12.7 mm. Effective to reduce noise and to save space in the transfer section.
2. Suitable for conveying small products due to its top plate width of 50 mm.





Chain pitch mm	Backflex radius mm	Number of links per unit
12.7	20	240 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	High temperature	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	HTW	SE	MF	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	White	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		0.25{25}										0.15 {15}	0.25 {25}	0.19 {19}	0.25 {25}
Max. allowable speed m/min	With lube	60												—	60
	No lube	40													
Operating temperature range °C		–20 to (60)80										5 to (60)80	–20 to (60)80	–20 to 80	–20 to (60)80
Pin material		Special engineering plastic													
Pin type		D-pin													
TTUPM500P		△	△	△	○	○	●	○	△	○	△	△	△	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins is orange. Base chain pins are white.
4. Stainless pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	LFB		
Chain type	**TTUPM500P-LFB**	50	0.3

Note: 1. Chain type in boldface is a standard product.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
HTW: 0.2
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pin		Material mark		Number of links	Unit
TTUPM	**500** Note: 2	**P**	**-**	**LFB** Note: 3	**+**	**240** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top Chain

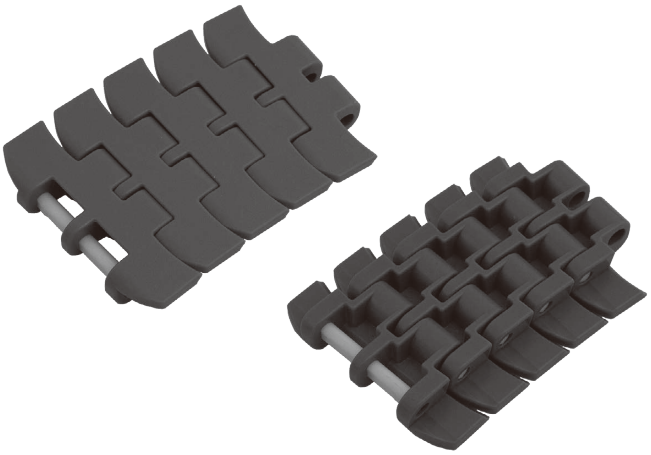
TTUPM-PC

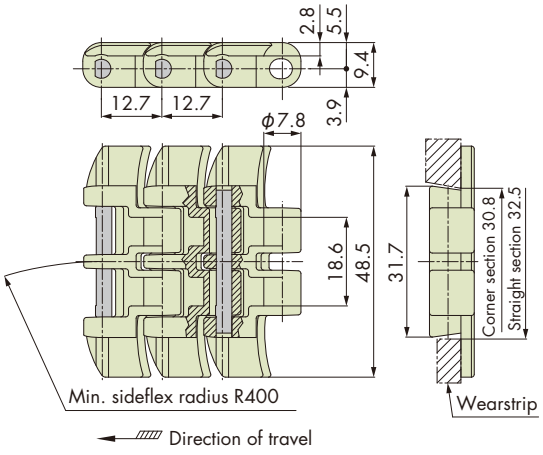
Sideflexing Running

Sprockets P.262 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. A small chain pitch of 12.7 mm. Effective to reduce noise and to save space in the transfer section.
2. Suitable for conveying small products due to its top plate width of 48.5 mm.





Chain pitch mm	Backflex radius mm	Number of links per unit
12.7	30	240

Chain Material Table

		Standard Chain									High-Function Chain			
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		0.25{25}											0.19 {19}	0.25 {25}
Max. allowable speed m/min	With lube	60											—	60
	No lube	40												
Operating temperature range °C		–20 to (60)80											–20 to 80	–20 to (60)80
Pin material		Special engineering plastic												
Pin type		D-pin												
TTUPM485PC		△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.
4. Stainless pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	LFB		
Chain type	TTUPM485PC-LFB	48.5	0.30

Note: 1. Chain type in normal face is a made-to-order product. Refer to the chain material table above for availability.
2. The chain mass of the chain materials available whose information are not described in on the left are the same with that in the Tsubaki model table on the left.

Model Numbering

Chain type	Top plate width	Plastic pin	Chain type		Material mark		Number of links	Unit
TTUPM	485 Note: 2	P	C	-	LFB Note: 3	+	240 Note: 4	L

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top Chain
TPU (Stainless Steel Pins)
Sideflexing Running

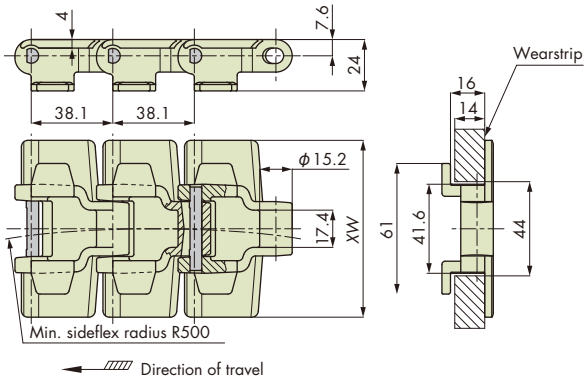
Features

1. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.
2. Sprockets for TPS and TTUP can be used with standardized parts.

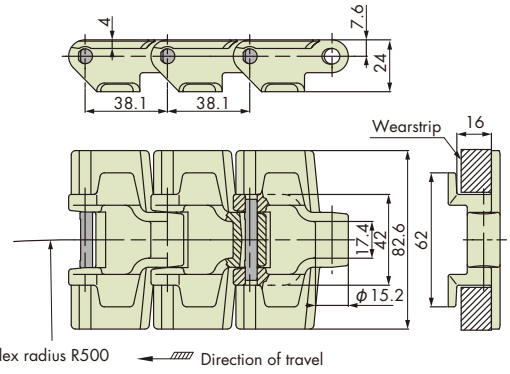




TPU826 (materials other than those below), TPU1143



TPU826-DIA, DIY, KV150, KV180, KV250



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

		Standard Chain									High-Function Chain			
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Heat resistance/ High speed			Low friction/ Wear resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	KV150	KV180	KV250	HG
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Black			Navy blue
Max. allowable load kN {kgf}		0.98{100}												
Max. allowable speed m/min	With lube	100									–	200		100
	No lube	50									200			50
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to 150	–20 to 180	–20 to 250	–20 to (65)80
Pin material		SUS304												
Pin type		D-pin												
TPU826-T		●	△	△	○	●	●	○	△	○	○	○	○	△
TPU1143-T		●	△	△	△	●	○	○	△	△	×	×	×	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2008, the shape of the tab for the stainless steel pin type of TPU826-T chain had changed.
4. The curent type of chain can be connected with the previous model.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	ALF		
Chain type	**TPU826-T**	TPU826-T-LFW	**TPU826-T-LFG**	**TPU826-T-LFB**	TPU826-T-ALF	82.6	1.0
	TPU1143-T	TPU1143-T-LFW	**TPU1143-T-LFG**	TPU1143-T-LFB	TPU1143-T-ALF	114.3	1.2

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TPU826-T] Y, DIY: 1.20, DIA: 0.85
[TPU1143-T] Y: 1.5,
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Tab		Material mark		Number of links		Unit
TPU	**826** Note: 2	**-**	**T**	**-**	**LFB** Note: 3	**+**	**80** Note: 4		**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TPU-SUS-JPD**

Chain Material Table

High-Function Chain											
Material		High speed	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		HS	Y	E	DIA	DIY	MWS	SE	MF	UVR	PFS
Link color		Beige	Matte white	Black	Cream	Green	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		0.9 {92}	0.49 {50}	0.69 {70}	0.78{80}		0.98{100}		0.73 {74}	0.98{100}	
Max. allowable speed m/min	With lube	–	100		–	100			–	100	
	No lube	230	50								
Operating temperature range °C		–20 to 50	–20 to 80				–20 to (65)80	–20 to 80			
Pin material		SUS304									
Pin type		D-pin									
TPU826-T		○	△	△	△	△	○	△	△	△	△
TPU1143-T		×	△	△	×	×	×	△	△	△	△

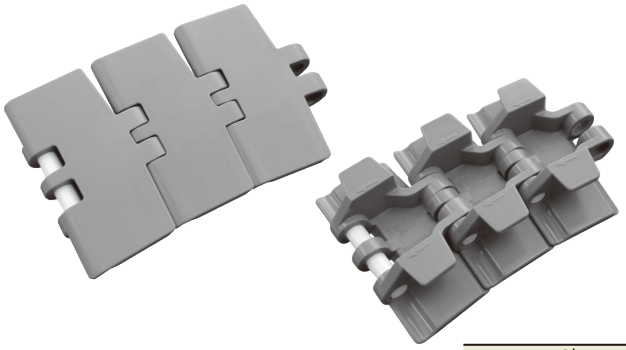
Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of October 2008, the shape of the tab for the stainless-pin type of TPU826-T chain had changed.
4. The curent type of chain can be connected with the previous model.

Plastic Top Chain
TPU (Plastic Pins) Sideflexing Running

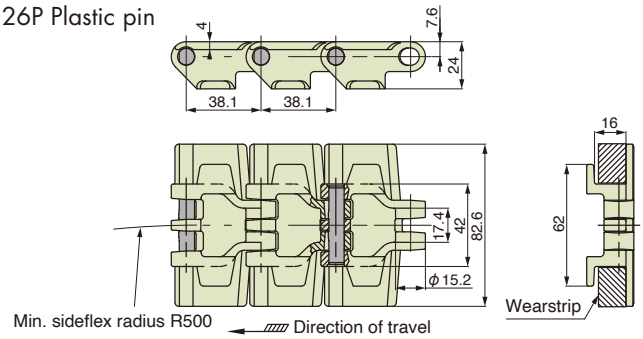
Sprockets P.259- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.
2. Sprockets for TPS and TTUP can be used with standardized parts.
3. Easy maintenance due to all-engineering-plastic-made. A longer service life is expected under water lubrication than stainless steel pin type of the chain.



TPU826P Plastic pin



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Impact resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	DIY	SE	MF	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Green	Gray	Yellow	Light gray
Max. allowable load kN {kgf}		0.88{90}										0.78 {80}	0.88 {90}	0.65 {67}	0.88 {90}
Max. allowable speed m/min	With lube	100												–	100
	No lube	50													
Operating temperature range °C		–20 to (60)80												–20 to 80	–20 to (60)80
Pin material		Special engineering plastic													
Pin type		D-pin													
TPU826P-T		○	△	△	○	○	○	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.

Tsubaki Model Table

Material	Low friction/Wear resistant			Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	LFW	LFG	LFB	ALF		
Chain type	TPU826P-T-LFW	TPU826P-T-LFG	TPU826P-T-LFB	TPU826P-T-ALF	82.6	0.80

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information. DIY: 1.0 kg/m.
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pin		Tab		Material mark		Number of links	Unit
TPU	**826** Note: 2	**P** Note: 3	**-**	**T**	**-**	**LFB** Note: 4	**+**	**240** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table above.
5. Minimum quantity: 2, maximum quantity: 99999.

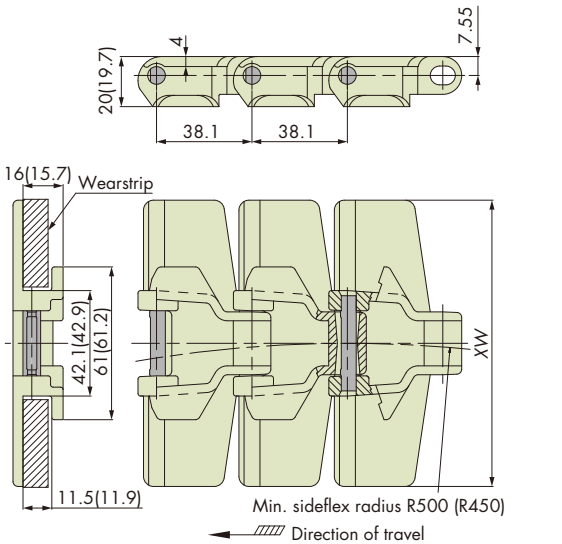
Connecting Pin

1. Special engineering plastic D-pin/orange
   Tsubaki model no. **TPS-PLA-JPD**

Features

1. Possible for compact layout due to its thinner plate thickness than TPU.
2. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Note: Dimensions of (the value in parentheses) are for TP-880TAB-K325.

Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Chain type	Top plate			Max. allowable load kN {kgf}	Chain mass kg/m	Operating temperature range °C	Max. allowable speed m/min	
	Width XW	Material	Material mark (Link color)				With lube	No lube
TPU1143-LH-T-LFB	114.3	Low friction/ Wear resistant	LFB (Brown)	0.98{100}	1.08	–20 to (65)80	100	50
TP-880TAB-K325-LFB	82.6			1.08{110}	1.0			
TP-880TAB-K325-LFG			LFG (Green)					
TP-880TAB-K325-ALF		Advanced low friction/ Wear resistant	ALF (Light blue)			–20 to 80		

Note: 1. Chain type in boldface is a standard product. Chain type in normal face are made-to-order products. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Only chain material of LFB series is available for the chain with a top plate width of 114.3 mm.
4. Plastic pin type is not available.

Model Numbering

◆Top plate width: 82.6 mm

Chain type	Tab		Top plate width		Material mark		Number of links	Unit
TP-880	**TAB**	-	**K325** Note: 2	-	**LFB** Note: 3	+	**80** Note: 4	**L**

L: Link

◆Top plate width: 114.3 mm

Chain type	Top plate width		Chain type		Tab		Material mark		Number of links	Unit
TPU	**1143** Note: 2	-	**LH**	-	**T**	-	**LFB** Note: 3	+	**80** Note: 4	**L**

L: Link

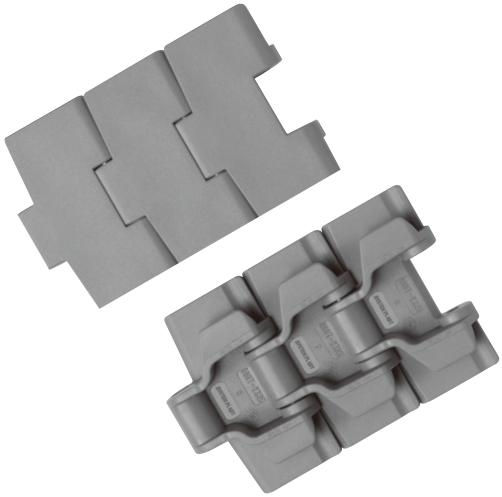
Note: 1. Do not leave space between letters and symbols.
2. Please check the width top plate in the chain material table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

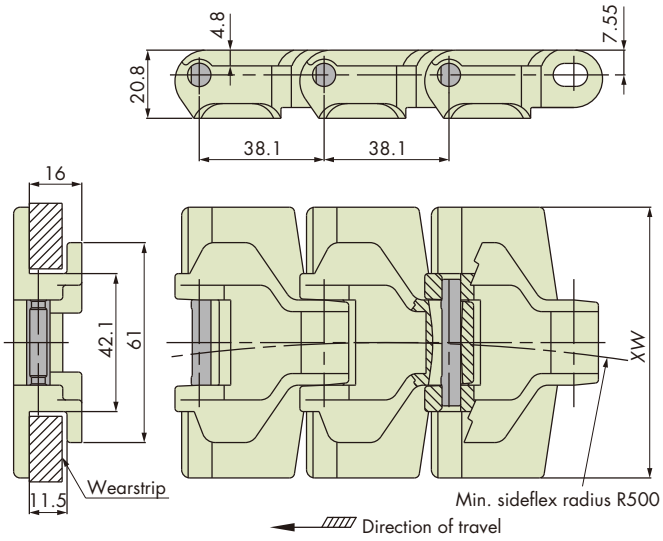
Plastic Top Chain
TPUT-LH
Sideflexing Running

Sprockets P.259- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. Possible for compact layout due to its thinner plate thickness than TPU type.
2. Suitable for applications where top plates are susceptible to wear due to a plate thickness of 4.8 mm which is thicker than that of TPU.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		0.98{100}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		D-pin

Note: 1. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m
Material mark	LFB		
Chain type	**TPUT826-LH-T-LFB**	82.6	0.98
	TPUT1143-LH-T-LFB	114.3	1.14

Note: Chain type in boldface is a standard product. Chain type in normal face is a made-to-order product.

Model Numbering

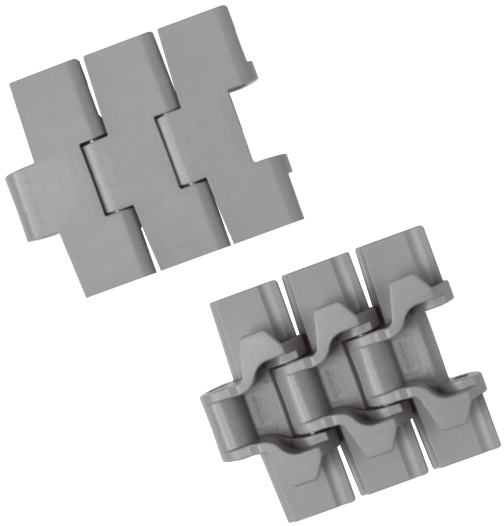
Chain type	Top plate width		Chain type		Tab		Material mark		Number of links		Unit
TPUT	**826** Note: 2	**-**	**LH**	**-**	**T**	**-**	**LFB**	**+**	**80** Note: 3		**L**

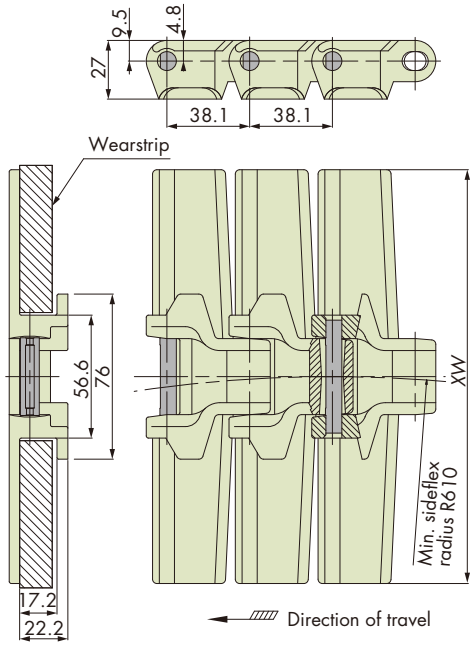
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Suitable for higher applied load conditions due to approx. 2.2 times higher allowable load than TPU.
2. Suitable for conveying large products due to its wide top plates.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		2.16{220}
Max. allowable speed m/min	With lube	80
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		D-pin
Availability		●

Note: 1. "●": Standard product. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width *XW*	Chain mass kg/m
Material mark	LFB		
Chain type	**TPUS1143-T-LFB**	114.3	2.03
	TPUS1905-T-LFB	190.5	2.46
	TPUS2540-T-LFB	254.0	2.87
	TPUS3048-T-LFB	304.8	3.41

Note: Standard products

Model Numbering

Chain type	Top plate width		Tab		Material mark		Number of links		Unit
TPUS	**1905**	Note: 2	**T**	-	**LFB**	+	**80**	Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

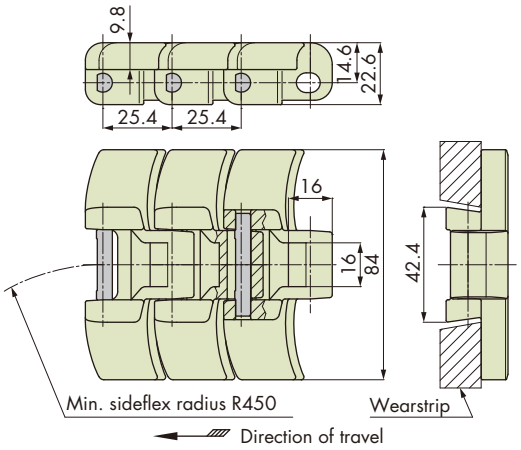
Plastic Top Chain
TTUPS-H
Sideflexing Running

Sprockets P.157, 264 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.428

Features

1. The adoption of a 9.8 mm top plate thickness provides higher resistance to chipping compared to conventional plastic top chains.
2. D-pin type connecting pins are adopted to prevent pin holes from cracking when pins are fitted. The pins can also be connected or disconnected from either side of the chain.





Chain pitch mm	Backflex radius mm	Number of links per unit
25.4	170	120

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		B	BL	G	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Blue	Sky blue	Gray	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light blue	Nile blue
Max. allowable load kN {kgf}		1.08{110}											0.80 {81}	1.08{110}	
Max. allowable speed m/min	With lube	100											—	100	
	No lube	50													
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80			
Pin material		SUS304													
Pin type		D-pin													
TTUPS840H		●	△	●	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard		Top plate width	Chain mass kg/m
Material mark	B	G		
Chain type	**TTUPS840H-B**	**TTUPS840H-G**	84.0	1.80

Note: 1. Chain type in boldface are standard products.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

Model Numbering

Chain type	Top plate width	Chain type	Material mark	Number of links	Unit
TTUPS	**840** Note: 2	**H**	- **G** Note: 3	+ **120** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

MEMO

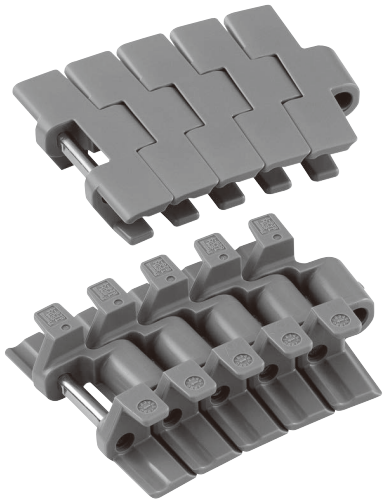
Plastic Top Chain

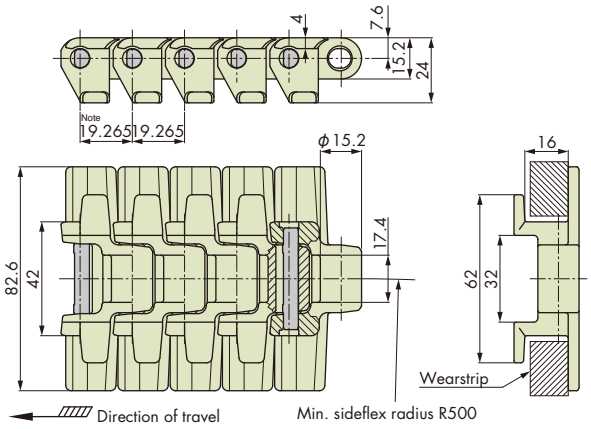
TPUM

Sideflexing Running

Features

1. Sideflexing chain of TPM. Adopts chain pitch of approx. half of conventional chains. Effective to reduce noise and to save space in the transfer sections.
2. Only odd number of teeth of TPS sprockets can be used with standardized parts.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Note: The pitch of 19.265 mm is designed to engage all teeth of TTUP1012T which is the sprocket for TPS and the equivalent of 21T.

Chain pitch mm	Backflex radius mm	Number of links per unit
19.265	15	160

Chain Material Table

Standard Chain										
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}		0.98{100}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
TPUM826-T		○	△	△	○	○	○	○	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Low friction/Wear resistant			Antibacterial/ Mold resistant	Advanced low friction/ Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark	—	LFW	LFG	LFB	MWS	ALF		
Chain type	TPUM826-T	TPUM826-T-LFW	TPUM826-T-LFG	TPUM826-T-LFB	TPUM826-T-MWS	TPUM826-T-ALF	82.6	1.40

Note: 1. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m). Y, DIY: 1.7, DIA: 1.2
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Tab		Material mark		Number of links	Unit
TPUM	**826** Note: 2	**-**	**T**	**-**	**LFB** Note: 3	**+**	**160** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TTUP-SUS-JPD**

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		0.98{100}	0.49{50}	0.69{70}	0.78{80}		0.98{100}		0.73{74}	0.88{90}	0.98{100}	
Max. allowable speed m/min	With lube	100			–	100			–	100		
	No lube	50										
Operating temperature range °C		–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
Pin material		SUS304										
Pin type		D-pin										
TPUM826-T		△	△	△	△	△	△	△	△	△	△	△

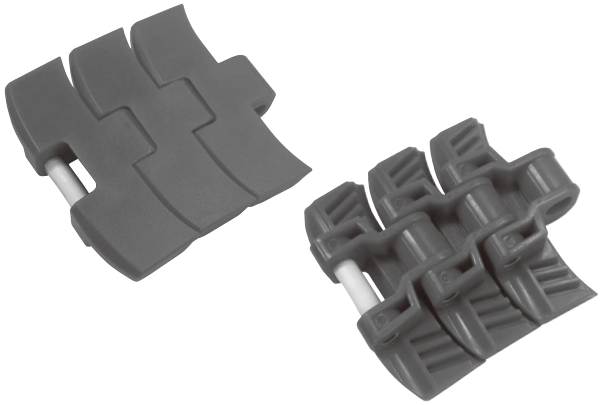
Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

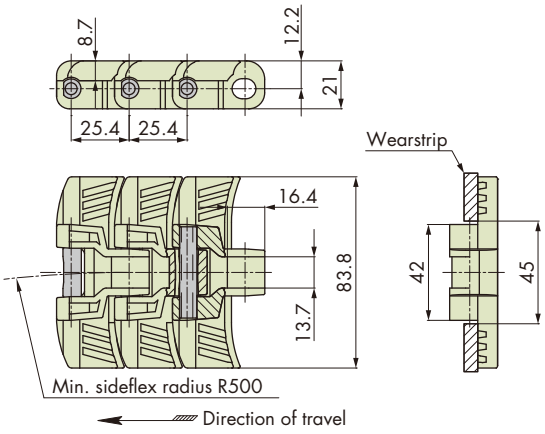
Plastic Top Chain
TTUPM838H
Sideflexing Running

Sprockets P.157 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.427

Features

1. Adopts special double layer D-type plastic pins made from a combination of special engineering plastic and metal.
2. This type of pin combines two features, one is the long service life of plastic pin under wet condition and the other is that of metal pin which prevents the chain from floating from exposure to external magnet force.





Bevedolphin

Chain pitch mm	Backflex radius mm	Number of links per unit
25.4	100	120

Chain Material Table

	Standard Chain										High-Function Chain			
Material	Standard			Low friction/ Wear resistant				Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	CB	ALF	NLF	WR	HG	SE	MF	UVR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Blue	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.9{190}												1.41 {141}	1.9 {190}
Max. allowable speed m/min — With lube	100												–	100
Max. allowable speed m/min — No lube	50													
Operating temperature range °C	–20 to (60)80												–20 to 80	–20 to (60)80
Pin material: Outer	Special engineering plastic													
Pin material: Core	Steel + nickel-plated							Martensitic stainless steel	Steel + nickel-plated	Martensitic stainless steel	Steel + nickel-plated			
Pin type	Special double layer D-type plastic pin Note: 3													
TTUPM838H	△	△	△	△	△	△	○	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.

Tsubaki Model Table

Material	Low friction/Wear resistant	Advanced low friction/Wear resistant	Low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	CB	ALF	HG		
Chain type	TTUPM838H-CB	TTUPM838H-ALF	TTUPM838H-HG	83.8	1.50

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

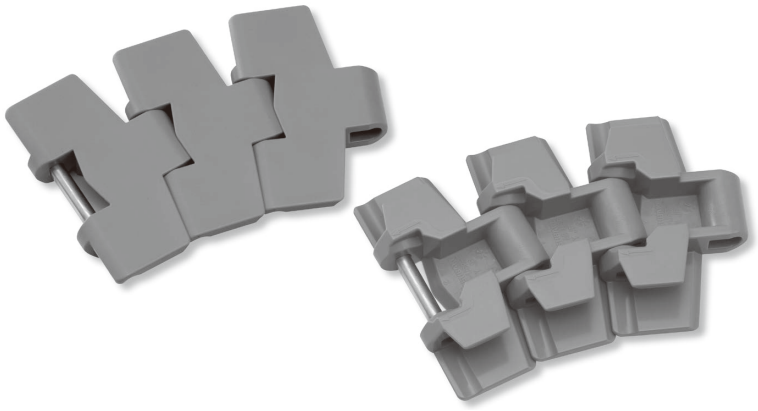
Chain type	Top plate width	Chain type	Material mark	Number of links	Unit
TTUPM	838 Note: 2	H	- CB Note: 3	+ 120 Note: 4	L

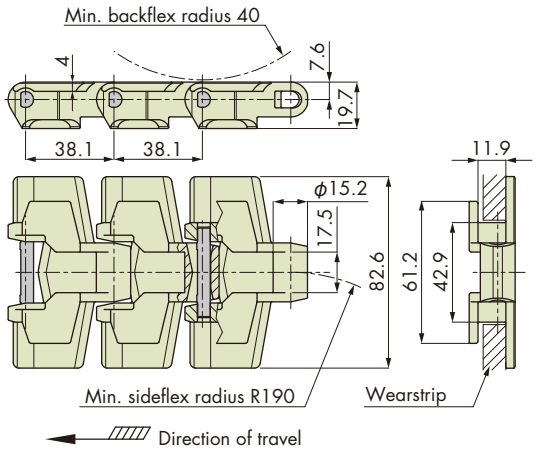
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Enables compact conveyor layouts due to its small minimum radius of 190 mm compared to TTUP and TPU.
2. Sprockets for TPS and TTUP can be used with standardized parts.
3. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	40	80

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		0.98{100}											0.73 {74}	0.98{100}	
Max. allowable speed m/min	With lube	100											–	100	
	No lube	50													
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80			
Pin material		SUS304													
Pin type		D-pin													
TPU826-USR-T		△	△	△	△	△	●	●	△	○	△	△	△	△	△

Note: 1. "●": Standard products, "○": Made-to-order product, "△": Made-to-order product (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant	Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	LFB	ALF		
Chain type	**TPU826-USR-T-LFB**	**TPU826-USR-T-ALF**	82.6	1.00

Note: 1. Chain type in boldface are standard products.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width		Chain type		Tab		Material mark		Number of links		Unit
TPU	826 Note: 2	-	USR	-	T	-	ALF Note: 3	+	80 Note: 4		L

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

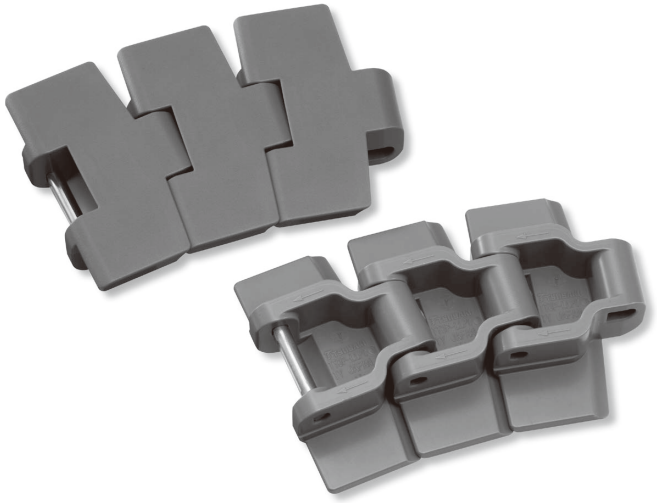
1. SUS304 D-pin
Tsubaki model no.
TPU-SUS-JPD

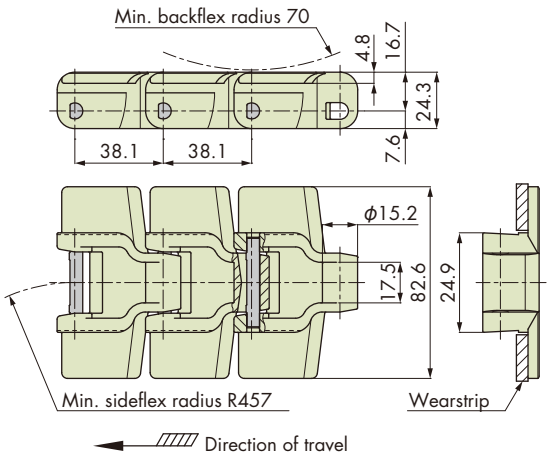
Plastic Top Chain
TTUP-LLPC
Sideflexing Running

Sprockets P.259- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.426

Features

1. The lowered center of gravity of its pins prevents the chain from floating even with a relatively small sideflex radius.
2. Sprockets for TPS and TTUP can be used with standardized parts.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	70	80

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		1.08{110}											0.80 {81}	1.08{110}	
Max. allowable speed m/min	With lube	100											–	100	
	No lube	50													
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80			
Pin material		SUS304													
Pin type		D-pin													
TTUP826-LLPC		△	△	△	△	△	△	△	●	△	△	△	△	△	△

Note: 1. "●": Standard product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction	Top plate width	Chain mass kg/m
Material mark	NLF		
Chain type	**TTUP826-LLPC-NLF**	82.6	1.20

Note: 1. Chain type in boldface is a standard product.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TPU-SUS-JPD**

Model Numbering

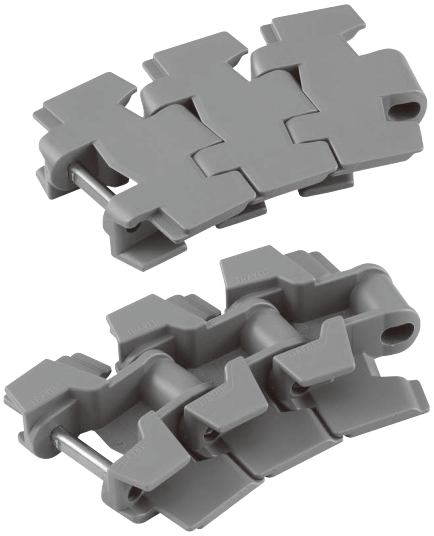
Chain type	Top plate width		Chain type		Material mark		Number of links		Unit
TTUP	**826** Note: 2	-	**LLPC**	-	**NLF** Note: 3	+	**80** Note: 4		**L**

L: Link

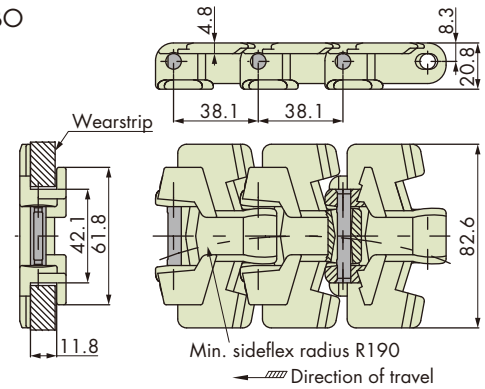
Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

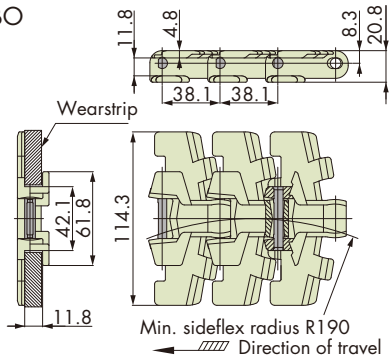
1. Enables compact conveyor layouts due to its small minimum radius of 190 mm compared to TTUP and TPU.
2. Suitable for conveying unstable containers such as dessert cups due to its comb-toothed plates which minimize gaps between links.



TPUH826-BO



TPUH1143-BO



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	50	80

Chain Material Table

Standard Chain		
Material		Low friction/ Wear resistant
Material mark		LFB
Link color		Brown
Max. allowable load kN {kgf}		0.98{100}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		D-pin
Availability		●

Note: 1. "●": Standard product. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	LFB		
Chain type	**TPUH826-BO-T-LFB**	82.6	1.08
	TPUH1143-BO-T-LFB	114.3	1.20

Note: Chain type in boldface are standard products.

Model Numbering

Chain type	Top plate width		Chain type		Tab		Material mark		Number of links		Unit
TPUH	**826** Note: 2	-	**BO**	-	**T**	-	**LFB**	+	**80** Note: 3		**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top Chain

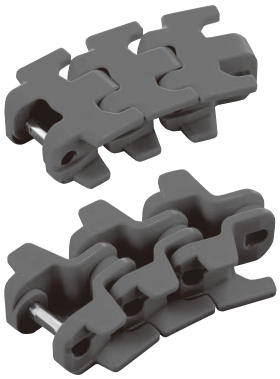
TPUSR550, TPUSR826

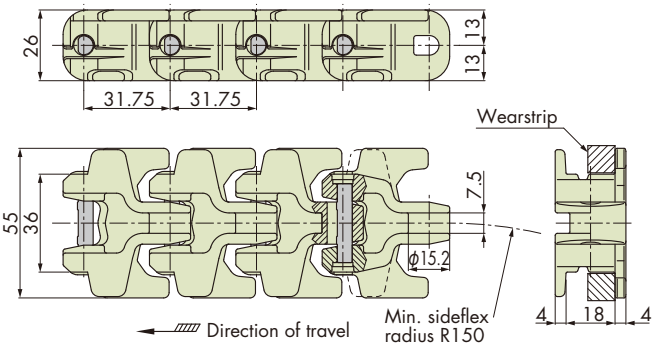
Sideflexing Running

Features

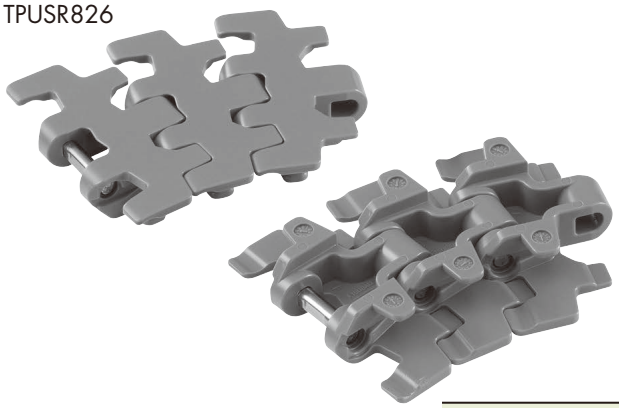
1. Small sideflex radius (150 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Suitable for conveying unstable containers such as PET bottles, paper containers and dessert cups due to its comb-toothed plates.
3. Possible to prevent producing wear debris and creaking/squealing noises in case of using the corner disc in curved sections.
4. A chain that has tabs prevents the chain from floating in a corner and ascending/descending section, and prevents scratches on the top surface of the plate on the return-way.

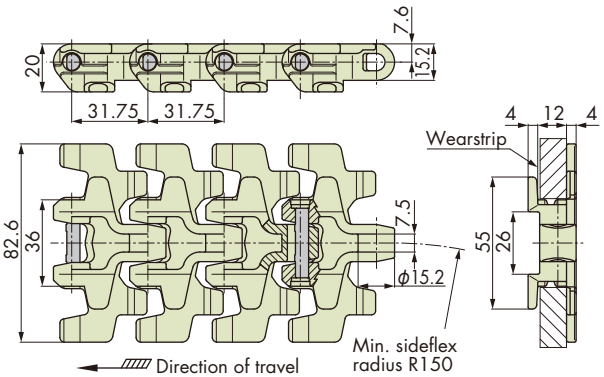
TPUSR550





TPUSR826





Chain type	Chain pitch mm	Backflex radius mm	Number of links per unit
TPUSR550	31.75	50	96
TPUSR826		25	

Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	Stainless steel pin	0.98 {100}								
	Plastic pin	0.3 {30.6}								
Max. allowable speed m/min	With lube	100								
	No lube	50								
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
	Plastic pin	–20 to (60)80								
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic								
Pin type		D-pin								
Stainless steel pin	TPUSR550-T	○	△	△	○	○	○	○	△	△
	TPUSR826-T	○	△	△	○	●	●	●	△	△
Plastic pin	TPUSR550P-T	△	△	△	△	△	△	△	△	△
	TPUSR826P-T	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.

Tsubaki Model Table

Material		Low friction/Wear resistant		Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m Note: 2
Material mark		LFG	LFB	ALF		
Chain type	Stainless steel pin	TPUSR550-T-LFG	TPUSR550-T-LFB	TPUSR550-T-ALF	55.0	1.00
		TPUSR826-T-LFG	**TPUSR826-T-LFB**	**TPUSR826-T-ALF**	82.6	0.90
	Plastic pin	TPUSR550P-T-LFG	TPUSR550P-T-LFB	TPUSR550P-T-ALF	55.0	0.80
		TPUSR826P-T-LFG	TPUSR826P-T-LFB	TPUSR826P-T-ALF	82.6	0.70

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products.
Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[TPUSR550] Y, DIY: 1.20, DIA: 0.85
[TPUSR826] Y, DIY: 1.10, DIA: 0.75
[TPUSR550P] DIY: 1.0, DIA: 0.6
[TPUSR826P] DIY: 0.9, DIA: 0.5
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Top plate width	Plastic pin	Tab	Material mark	Number of links	Unit
TPUSR	**826** Note: 2	**P** Note: 3	**-** **T** **-**	**LFB** Note: 4	**+** **96** Note: 5	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table below.
5. Minimum quantity: 2, maximum quantity: 99999.

Connecting Pin

1. SUS304 D-pin
Tsubaki model no. **TPUSR-SUS-JPD**

2. Special engineering plastic D-pin/orange
Tsubaki model no. **TPUSR-PLA-JPD**

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	0.98{100}	0.49{50}	0.69{70}	0.64{65}		0.98{100}		0.73{74}	0.88{90}	0.98{100}	
	Plastic pin	0.3 {30.6}	–	0.21{21}	–	0.24{24}	0.3 {30.6}		0.22{23}	–	0.3{30.6}	–
Max. allowable speed m/min	With lube	100			–	100			–	100		
	No lube	50										
Operating temperature range °C	Stainless steel pin	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80		–20 to (60)80	–20 to 80	
	Plastic pin	–20 to (60)80	–	–20 to (60)80	–	–20 to (60)80			–20 to 80	–	–20 to (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic										
Pin type		D-pin										
Stainless steel pin	TPUSR550-T	△	△	△	△	△	△	△	△	△	△	△
	TPUSR826-T	△	△	△	△	△	△	△	△	△	△	△
Plastic pin	TPUSR550P-T	△	×	△	×	△	△	△	△	×	△	×
	TPUSR826P-T	△	×	△	×	△	△	△	△	×	△	×

Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.

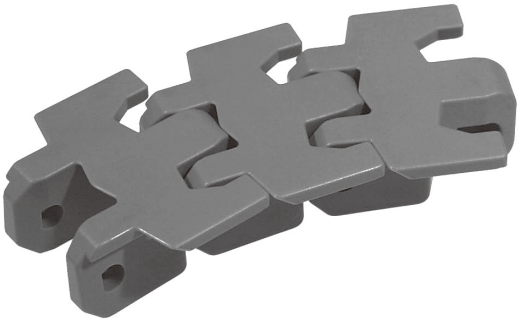
Plastic Top Chain
TP-UB36

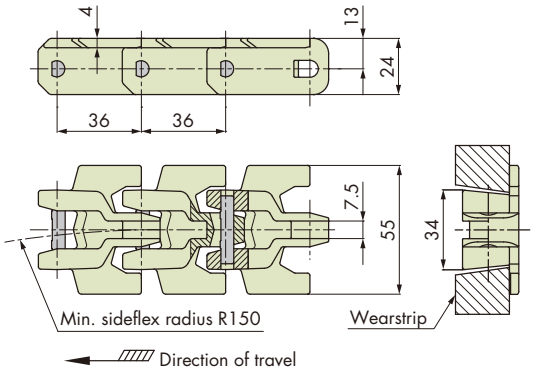
Sideflexing Running

Sprockets P.269 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.428

Features

1. Small sideflex radius (150 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Adopts comb-toothed plates which minimize gaps between links.
3. Possible to prevent producing wear debris and creaking/squealing noises in case of using the corner disc in curved sections.





Chain pitch mm	Backflex radius mm	Number of links per unit
36	30	85 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

		Standard Chain									High-Function Chain				
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	0.9{91}											0.67 {67}	0.9{91}	
	Plastic pin	0.3{30.6}											0.22 {22.6}	0.3 {30.6}	–
Max. allowable speed m/min	With lube	100											–	100	
	No lube	50													
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80			
	Plastic pin	–20 to (60)80											–20 to 80	–20 to (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic													
Pin type		D-pin													
Stainless steel pin	TP-UB36	△	△	△	△	△	△	●	△	△	△	△	△	△	△
Plastic pin	TP-UB36P	△	△	△	△	△	△	○	△	△	△	△	△	△	×

Note: 1. "●": Standard product, "○": Made-to-order product, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pins are orange. Base chain pins are white.

Tsubaki Model Table

Material		Advanced low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark		ALF		
Chain type	Stainless steel pin	**TP-UB36-ALF**	55	1.00
	Plastic pin	TP-UB36P-ALF		0.80

Note: 1. Chain type in boldface is a standard product. Chain type in normal face is a made-to-order product. Refer to the chain material table above for availability.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Plastic pins		Material mark		Number of links	Unit
TP-UB36	**P** Note: 2	**-**	**ALF** Note: 3	**+**	**85** Note: 4	**L**
						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Enter "P" only when a plastic pin type is selected.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

MEMO

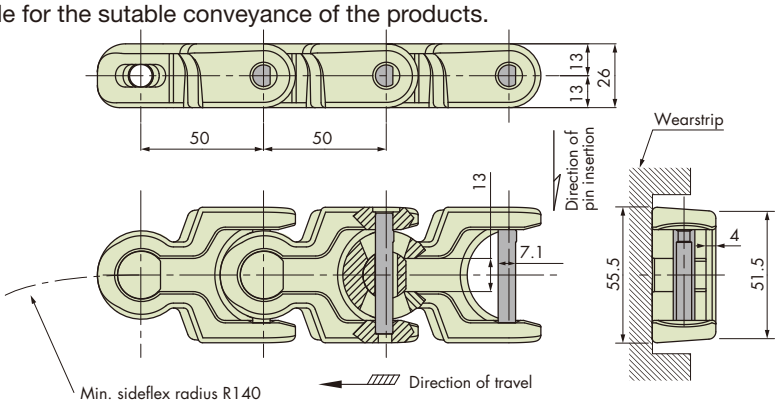
Plastic Universal Chain
TPUN

Sideflexing Running

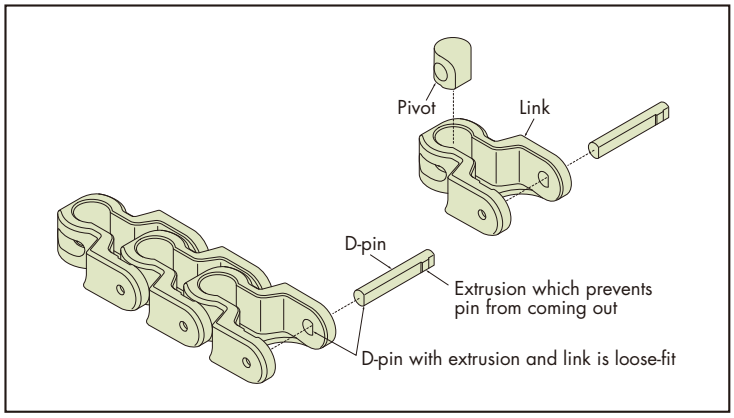
Features

1. Small sideflex radius (140 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Suitable for higher applied load conditions due to an a pprox. 1.8 times higher allowable load than TTUP.
3. D-pins with a projection on one side are used to prevent insufficient curving of the chain.
4. Prevents chains from engaging poorly with sprockets caused by incorrect insertion of pivots, due to its unique structure which prevents inserting pivots in the opposite direction.
5. Designed to narrow the gap between links. Suitable for the sutable conveyance of the products.

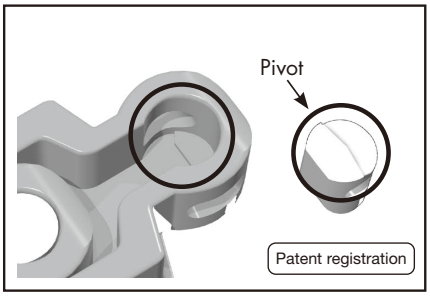




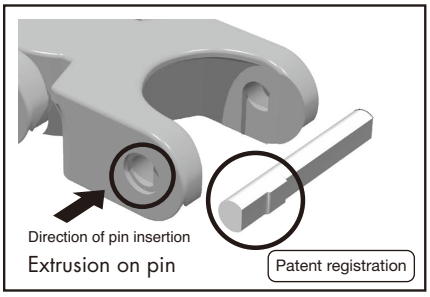
Three-dimensional drawing



Design for preventing false insertion of pivot



Pin type



Chain pitch mm	Backflex radius mm	Number of links per unit
50	25	60

Chain Material Table

Standard Chain										
Material	Standard				Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	—	W	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Green	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	1.96{200}									
Max. allowable speed m/min With lube / No lube	35									
Operating temperature range °C	–20 to (65)80									
Pin material	SUS304									
Pin type	D-pin									
TPUN555 (body)	●	●	△	△	△	●	○	○	△	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard		Low friction/Wear resistant	Chain mass kg/m
Material mark	—	W	LFG	
Chain type	**TPUN555**	**TPUN555-W**	**TPUN555-LFG**	1.45

Note: 1. Chain type in boldface are standard products.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Link width		Material mark		Number of links	Unit
TPUN	**555**	**-**	**LFB** Note: 2	**+**	**60** Note: 3	**L**
	555: 55.5 mm					L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table below.
3. Minimum quantity: 2, maximum quantity: 99999

Connecting Pin

1. SUS304 D-pin (special pin for TPUN)
Tsubaki model no. **TPUN555-SUS-JPD**

Chain Material Table

High-Function Chain						
Material		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction
Material mark		HG	E	MWS	SE	MF
Link color		Navy blue	Black	Cream	Gray	Yellow
Max. allowable load kN {kgf}		1.96{200}	1.37{140}	1.96{200}		1.45{148}
Max. allowable speed m/min	With lube	35				–
	No lube					35
Operating temperature range °C		–20 to (65)80				–20 to 80
Pin material		SUS304				
Pin type		D-pin				
TPUN555 (body)		△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Plastic Universal Chain
TPUN-LH

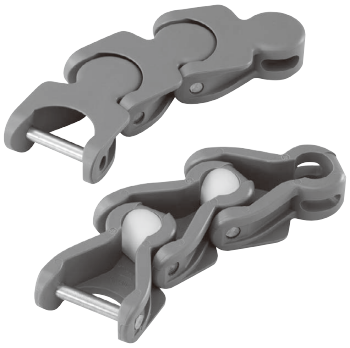
Sideflexing Running

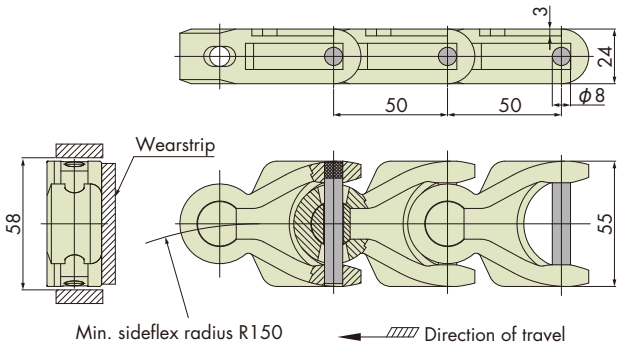
Sprockets P.270- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.428

Features

1. Small sideflex radius (150 mm) enables more compact conveyor layouts.
2. The link height, which is slightly shorter than TPUN, is commonly found in the global market.

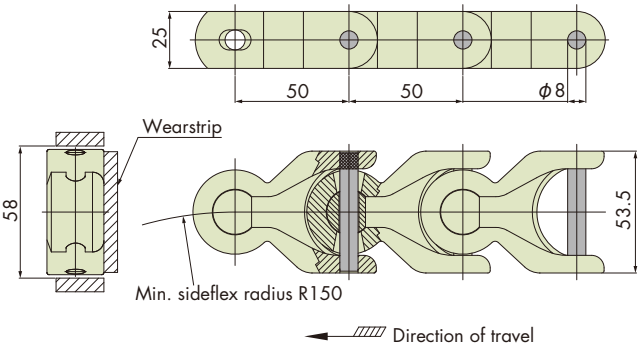
●TPUN550-LH





●TPUN535-LH





Chain pitch mm	Backflex radius mm	Number of links per unit
50	25	61

Chain Material Table

Standard Chain		
Material		Standard
Material mark		—
Link color		Gray
Max. allowable load kN {kgf}		1.96 {200}
Max. allowable speed m/min	With lube	35
	No lube	
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		Knurled pin
Availability		●

Note: 1. "●": Standard product.
Not available for other chain materials that are not listed in the chain material table above.
2. Standard only available.
3. Operating temperature of (the value in parentheses) is for wet conditions.
4. Plastic pin type is not available.
5. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Standard	Chain mass kg/m
Material mark	—	
Chain type	**TPUN550-LH**	1.25
	TPUN535-LH	1.40

Note: Chain type in boldface are standard products.

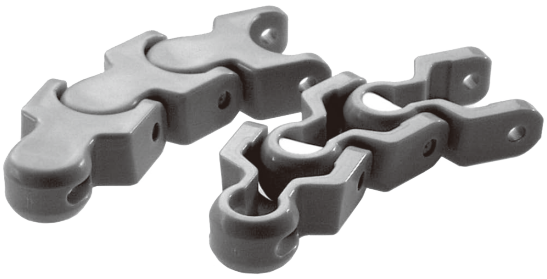
Model Numbering

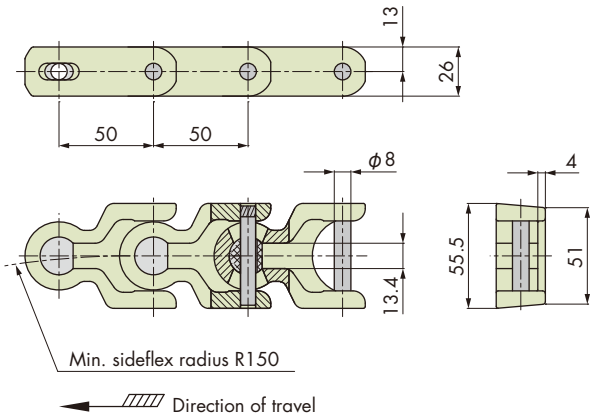
Chain type	Link width	Chain type	Number of links	Unit
TPUN	**550**	**-** **LH**	**+ 61** Note: 2	**L**
	535: 53.5 mm 550: 55 mm			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Small sideflex radius (150 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Suitable for higher load applications due to its high allowable load.





Chain pitch mm	Backflex radius mm	Number of links per unit
50	25	60 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

	Standard Chain								High-Function Chain			
Material	Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	MF	UVR
Link color	Green	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.96{200}										1.45 {148}	1.96 {200}
Max. allowable speed m/min With lube	35										–	35
Max. allowable speed m/min No lube	35										35	
Operating temperature range °C	–20 to (65)80										-20 to 80	-20 to (65)80
Pin material	SUS304											
Pin type	Knurled pin											
TP-50UNS (body)	●	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Sprockets for TPUN chains can be used.

Tsubaki Model Table

Material	Standard	Chain mass kg/m
Material mark	—	
Chain type	**TP-50UNS**	1.5

Note: 1. Chain type in boldface is a standard product.
2. The chain mass of the chain materials available whose information are not described in above are the same with that in the Tsubaki model table above.

Model Numbering

Chain type	Material mark	Number of links	Unit
TP-50UNS -	**WR** Note: 2 +	**60** Note: 3	**L**

L: Link

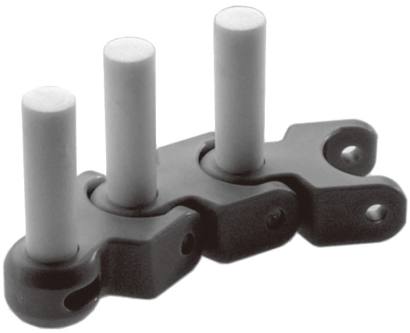
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

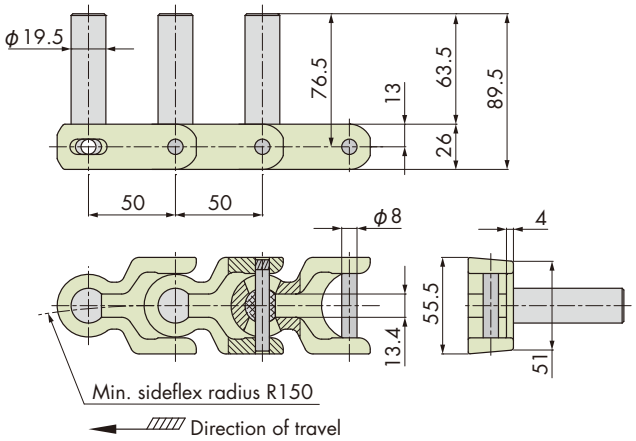
Plastic Universal Chain
TP-50UNS-D76
Sideflexing Running

Sprockets P.270- | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.428

Features

1. Small sideflex radius (150 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Suitable for higher load applications due to its high allowable load.
3. Suitable for vertical conveyance due to pusher-configurated chains.
4. Pushers can be configurated at any interval in conbination with TP-50UNS chains.





Chain pitch mm	Backflex radius mm	Number of links per unit
50	— Note: 1	— Note: 2

Note: 1. The backflex radius is different depending on the spacing of pushers. Contact a Tsubaki representative for more information.
2. Not specified because it depends on the spacing of the pushers.

Chain Material Table

	Standard Chain								High-Function Chain			
Material	Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark	—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	MF	UVR
Link color	Green	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	1.96{200}										1.45 {148}	1.96 {200}
Max. allowable speed m/min With lube	35										–	35
Max. allowable speed m/min No lube	35										35	
Operating temperature range °C	–20 to (65)80										–20 to 80	–20 to (65)80
Pin material	SUS304											
Pin type	Knurled pin											
TP-50UNS-D76 (body)	○	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Pushers can be configurated at any interval. Specify the required interval when ordering.
4. The pusher is made of special engineering plastic (color: white).
5. Sprockets for TPUN chains can be used.
6. Plastic pin type is not available.

Tsubaki Model Table

Chain type	Chain mass kg/m
TP-50UNS-D76	2.00

Note: 1. Chain type in normal face is a made-to-order product.
Refer to the chain material table above for availability.
2. The chain mass of the chain materials available whose information are not described in on the left are the same with that in the Tsubaki model table on the left.

Model Numbering

Chain type		Material mark		Number of links		Unit
TP-50UNS-D76	**-**	**WR** Note: 2	**+**	**40** Note: 3		**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

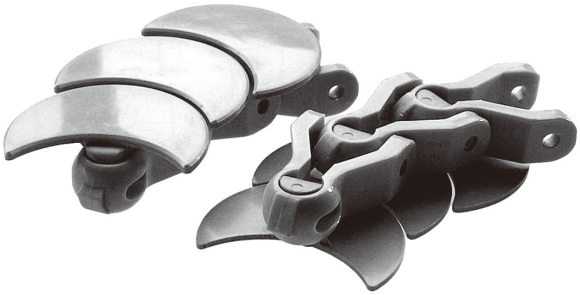
TP-50UN-T95

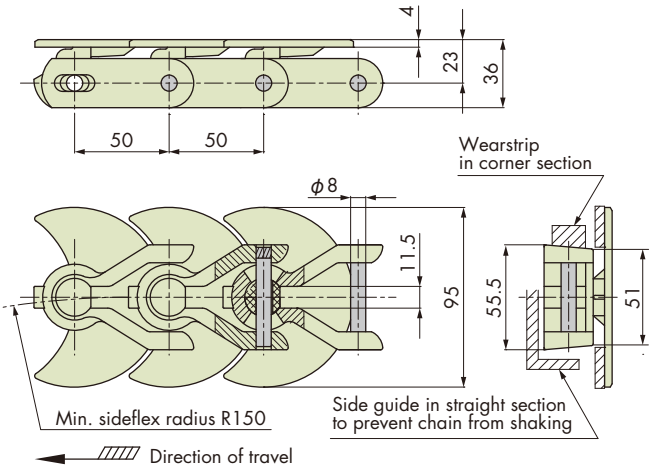
Sideflexing Running

Sprockets P.275 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.428

Features

1. Small sideflex radius (150 mm) provides more flexibility in the layout of conveyor lines. Ideal for conveyance in tight spaces.
2. Crescent-shaped top plates which keep space between links constant in curved sections.





Chain pitch mm	Backflex radius mm	Number of links per unit
50	500	60 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

Standard Chain		
Material		Standard
Material mark		—
Link color		Green
Max. allowable load kN {kgf}		1.96{200}
Max. allowable speed m/min	With lube	35
	No lube	
Operating temperature range °C		–20 to (60)80
Pin material		SUS304
Pin type		Knurled pin
TP-50UN-T95 (body)		○

Note: 1. "○": Made-to-order product. Contact a Tsubaki representative for more information.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Top plates are made of special engineering plastic (link color: green).
4. Plastic pin type is not available.
5. Sprockets for TPUN chains cannot be used.

Tsubaki Model Table

Chain type	Top plate width	Chain mass kg/m
TP-50UNS-T95	95.0	1.90

Note: Chain type in normal face is a made-to-order product.

Model Numbering

Chain type		Number of links	Unit
TP-50UN-T95	**+**	**60** Note 2	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 2, maximum quantity: 99999.

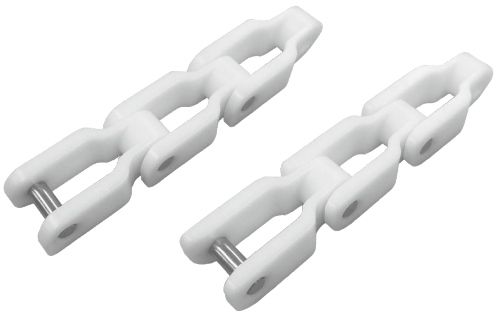
Curved-Movement Plastic Chain
TPCC
Sideflexing Running

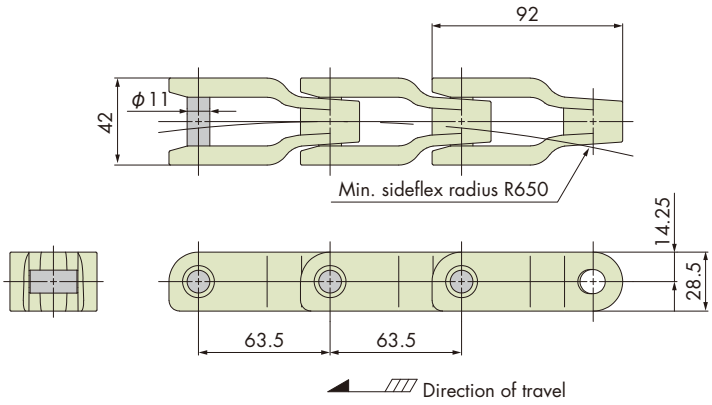
Sprockets P.276 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359

Features

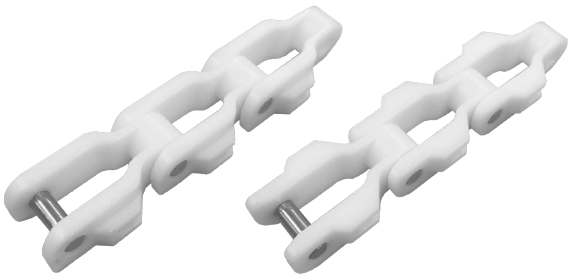
Simple plastic chain with offset link design. For conveying crates, boxes, and the like.

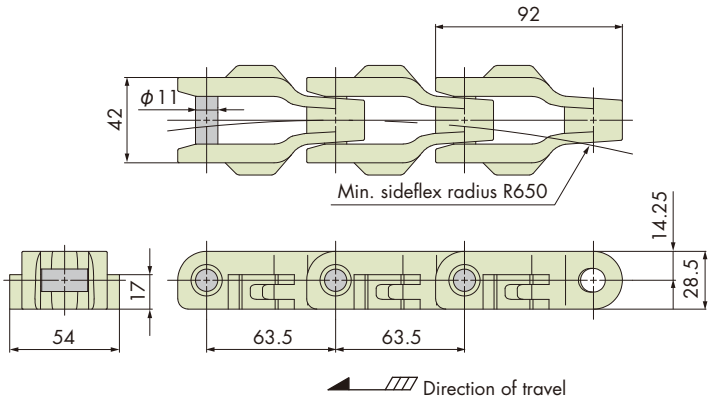
●TPCC420





●TPCC420-T





Chain pitch mm	Backflex radius mm	Number of links per unit
63.5	35	48

Chain Material Table

Standard Chain		
Material		Standard
Material mark		—
Link color		White
Max. allowable load kN {kgf}		1.96 {200}
Max. allowable speed m/min	With lube	35
	No lube	
Operating temperature range °C		–20 to (65)80
Pin material		Equivalent to SUS304
Pin type		Stepped round pin

Note: 1. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Tsubaki Model Table

Material	Standard	Top plate width	Chain mass kg/m
Material mark	W		
Chain type	**TPCC420**	42.0	1.33
	TPCC420-T		1.49

Note: Chain type in boldface is a standard product. Chain type in normal face is a made-to-order product.

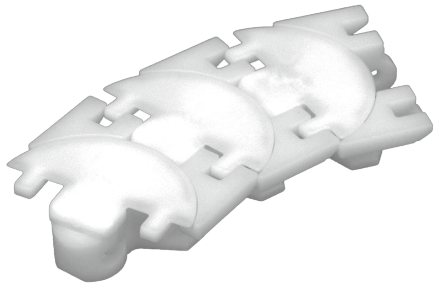
Model Numbering

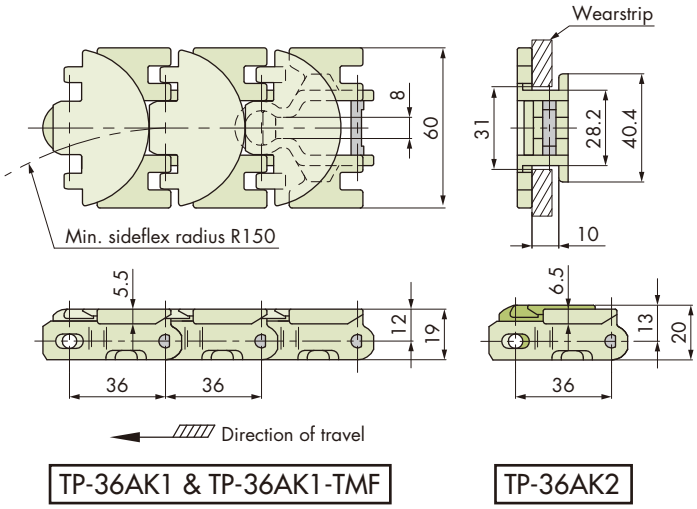
Chain type	Link width		Tab		Number of links	Unit
TPCC	**420**	**-**	**T** Note: 2	**+**	**48** Note: 3	**L**
	420:42 mm					L: Link

Note: 1. Do not leave space between letters and symbols.
2. Enter "T" only when tab is required.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. The chain is uniquely designed to keep the gap between chains at a minimum in straight and curved sections.
2. Different materials can be chosen only for semicircular part of the plates. Suitable for vertical conveyance.





TP-36AK1 & TP-36AK1-TMF　　TP-36AK2

Chain pitch mm	Backflex radius mm	Number of links per unit
36	75	85 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table/Tsubaki Model Table

Chain type	Material		Link color		Top plate width	Max. allowable load kN {kgf}	Operating temperature range °C	Max. allowable speed m/min		Chain mass kg/m	Pin material
	Body	Top plate	Body	Top plate				With lube	No lube		
TP-36AK1	Standard	Standard	White	White	60	0.5 {51}	–20 to 80	100	50	0.75	SUS304
TP-36AK1-TMF	Standard	Middle friction	White	Yellow		0.5 {51}	–20 to 80 (Without lubrication)	—			
TP-36AK2	Standard	Polyurethane	White	Amber		0.07 {7.1}	–20 to 80 (Without lubrication)	—			

Note: 1. Made-to-order products (RFQ for TP-36AK2).
2. Plastic pin type is not available.

Model Numbering

Chain type		Number of links		Unit
TP-36AK2	**+**	**85** Note		**L**

L: Link

Note: Minimum quantity: 2, maximum quantity: 99999.

Plastic Crescent Chain
TORP, TOSP

Sideflexing Running

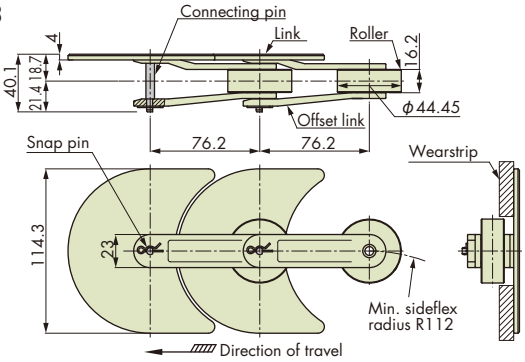
Sprockets P.321 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359

Features

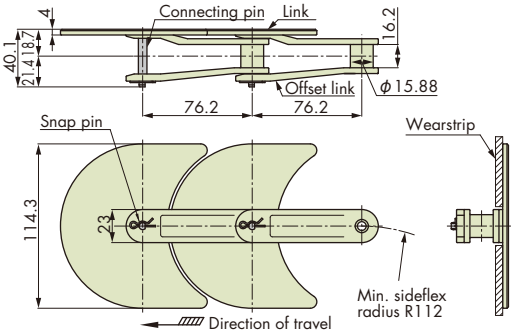
1. The chain for horizontal conveyors which allows for the entire carry-way for conveyance.
2. The height of the conveyor can be lower due to the structure without the return-way.
3. Crescent-shaped top plates are adopted to keep space between links constant in curved sections, minimizing conveyed products becoming pinched or caught.



TORP1143



TOSP1143



Chain pitch mm	Backflex radius mm	Number of links per unit
76.2	—	40

Chain Material Table/Tsubaki Model Table

Chain type	Max. allowable load N {kgf}	Operating temperature range °C	Max. allowable speed m/min	Chain mass kg/m	Top plate main link	Offset link	Roller	Connecting pin/snap pin	Link color
TORP1143	0.69{70}	0 to 60	20	1.40	Reinforced polycarbonate	Reinforced polycarbonate	Polyacetal	Stainless steel	White
TOSP1143				1.36			—		

Note: 1. Made-to-order products.
2. Areas between pins and bushings are pre-lubricated.
3. Connecting pins are not for sale separately.
4. For TOSP chain, the sprockets should be installed in the curved sections.

Model Numbering

Chain type	Top plate width		Number of links	Unit
TORP	**1143**	**+**	**40** Note: 2	**L**
	1143:114.3 mm			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Snap Top Chain
TN
Straight Running

Features

1. Suitable for high-capacity conveyors due to its large maximum allowable load. (excluding SS and PC series).
2. It is possible to replace top plates only.
3. Chain materials available for operating environments which require a higher resistance to corrosion.

Base Chain Material

The following types are available for snap top chains.

◆Standard series: Base chain is steel, and main dimensions are the same as standard roller chain. Note, however, that the shape of the pin ends is different and that strength is lower than RS roller chain.

◆NP series (nickel-plated): Base chains are a standard type processed with nickel-plating, providing corrosion resistance and better appearance.

◆LMC-NP series (Lambda type): By using a special oil-impregnated bush that uses NSF H1 compatible oil for the NP series chain, it can be used without lubrication (Lambda) and with a long life.

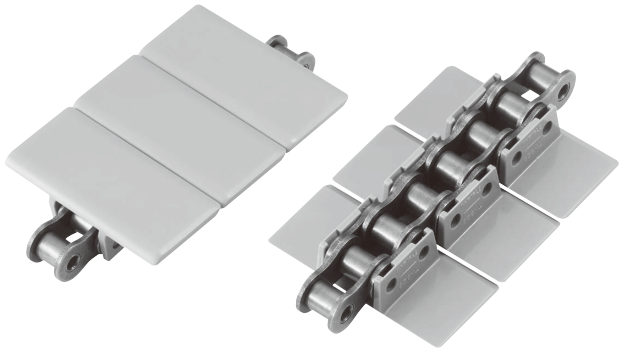
◆SS series: Made of type SUS304 and is suitable for an environment where corrosion resistance is to be prioritized.

◆PC series: Base chain is constructed from TN-C-PC poly-steel chain. Joint links are those intended for TN chain. Made from stainless steel and engineering plastic, this chain delivers corrosion resistance and low noise with no lubrication required.

Note: Standard, NP and SS series require lubrication.

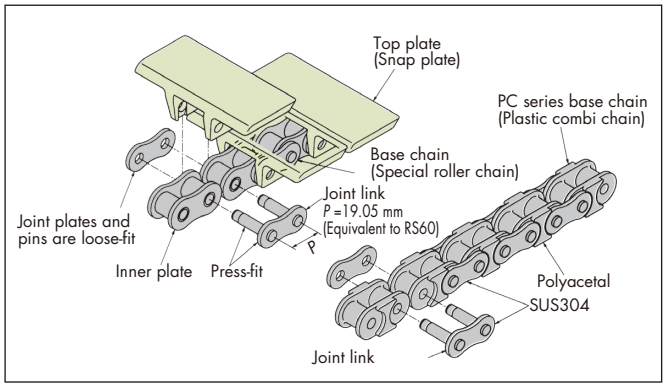
Chain Construction

Snap top chains TN consist of ANSI #60 base chain and top plates (snap plate).
The top plate snaps to the outer links of the main chain.



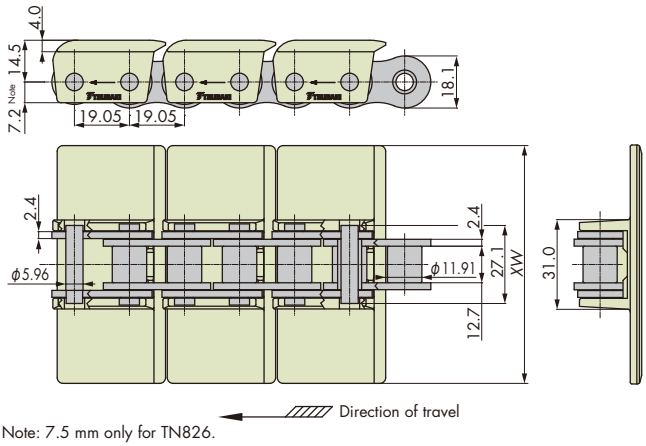
Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	100	160

Three-dimensional drawing



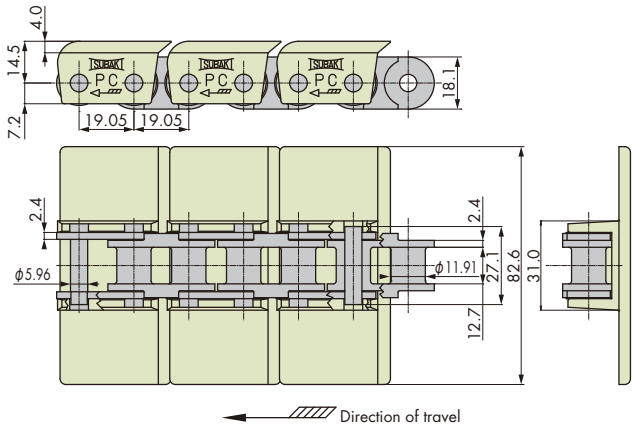
Drawing

TN, TN-NP, TN-LMCNP, TN-SS



Note: 7.5 mm only for TN826.

TN826-PC (with dedicated top plate)
Available for plate width of 82.6 mm or smaller



Sprockets

Sprockets for RS60 can be used. Twelve teeth (12T) or greater of the RS60 B type sprockets can be used without modification.

Model Numbering

○When ordering complete chain including base chain, joint link and top plates.

Chain type	Top plate width		Base chain material mark		Top plate material mark		Number of links		Options
TN	**826**	–	**LMCNP**	–	**LFG** Note:3	+	**50L** Note:4	–	**P** Note:5
	826: 82.6 mm		None: Standard						

◆Base chain

Chain type		Base chain material mark		Number of links		Options
TNC	–	**LMCNP**	+	**50L** Note: 4	–	**P** Note: 5
		None: Standard				

◆Joint link

Chain type	Top plate width		Base chain material mark		Top plate material mark		Joint link
TN	**826**	–	**LMCNP**	–	**LFG** Note:3	–	**JL**
	826: 82.6 mm		None: Standard				

◆Top plate

Chain type	Top plate width	Top plate		Chain type		Top plate material mark
TN	**826**	**P**	–	**PC**	–	**LFG** Note:3
	826: 82.6 mm			Enter only for PC type None: Other types		

●Ordering examples

When ordering 100 links of TN chain with NP base chains and standard top plates.

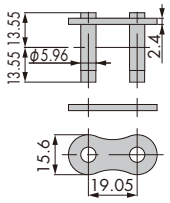
	Quantity	Unit
TN826-NP+100L	1	H

Note: 1. Do not leave space between letters and symbols.
2. TN chain is equipped with top plates for each outer link of the base chain (one top plate every two links). Specify the length of the product using the number of links of the base chain. The number of links for the base chain is twice the number of top plates. Note that one unit consists of 160 links (basic chain) and the length is 3,048 mm, chain pitch of 19.05 mm x 160 links (base chain).
3. Please check the chain material and material marks in the top plate material table below.
4. Minimum quantity: 3, maximum quantity: 99999.
5. Please refer on page 6.

Base Chain/Joint Link

◆Base chain

Equivalent for RS60 and the joint link is dedicated to TN.
(The edge of the pin of the base chain is different from that of the standard transmission chain)
PC series is as same as transmission chain except joint link, though.



◆Joint link

Neither cotter pin nor clips are attached to both roller chains and plastic combi chains.
The legs of the top plates serve to hold the joint link plate in place and keep it from coming loose.

Base Chain Material Table

Material		Standard	NP	LMCNP	SS	PC
Max. allowable load kN {kgf}		6.28 {640}			1.03 {105}	0.88 {90}
Max. allowable speed m/min	With lube	120		–	70	100
	No lube	60			45	50
Operating temperature range °C		–10 to 80			–20 to 80	

Top Plate

Top Plate

Description	TN826P	TN826P-PC	TN1016P	TN1143P	TN1270P	TN1905P
Top plate material	Polyacetal (Standard, link color: gray)					
Top plate width *XW*	82.6		101.6	114.3	127.0	190.5
Completed chain mass kg/m	2.1	1.5	2.2	2.3	2.4	2.8

Note: 1. Standard products.
2. The top plate model number is different when base chain is PC series. (TN826P-PC).
3. Embedded products (**TN826-PC**) are in stock only when the base chain is PC series.

Top Plate Material Table

	Standard Chain					High-Function Chain	
Material	Standard	Low friction/Wear resistant			Low friction	Chemical resistant	Antibacterial/ Mold resistant
Material mark	—	LFW	LFG	LFB	WR	Y	MWS
Link color	Gray	White	Green	Brown	Dark green	Matte white	Cream
Availability	●	○	○	○	○	※	▲

Note: 1. "●": Standard product, "○": Made-to-order products, "▲": Special configurations may be available. Contact a Tsubaki representative for more information. "※": Contact a Tsubaki representative whether it is available or not only when the base chain is SS or PC series.
2. Not available for other specifications that are not listed in the base chain material table above.
3. The main chain formation is the number of units + fraction.

Snap Top Chain
TNU

Sideflexing Running

Features

1. Sideflexing chain with high allowable load. (Sideflexing type of TN)
2. It is possible to replace top plates only.
3. Chain materials available for operating environments which require a higher resistance to corrosion.

Base Chain Material

The following types are available for snap top chains.

◆Standard series: Base chain is steel, and main dimensions are the same as the standard roller chain, however, the shape of the pin ends is different. Please note that the strength is weaker than the RS roller chain.

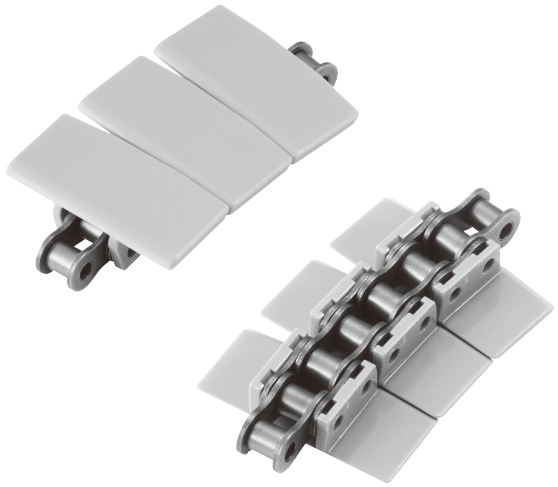
◆NP series (nickel-plated): Base chains are a standard type processed with nickel-plating, providing corrosion resistance and better appearance.

◆AS series: Pins, bushes, and rollers are made of precipitation-hardened stainless steel. Plates are made of SUS304. Suitable for corrosive environments.

Note: Standard, NP and AS series require lubrication.

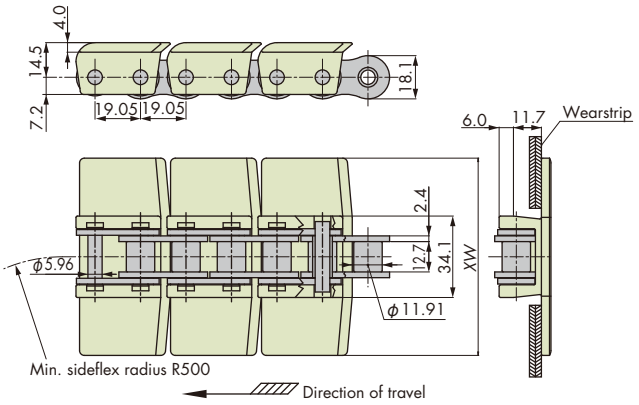
Chain Construction

Snap top chain TNU consists of the base chain (equivalent to RS60-CU) and top plates (snap plate). The top plate snaps to the outer links of the main chain.

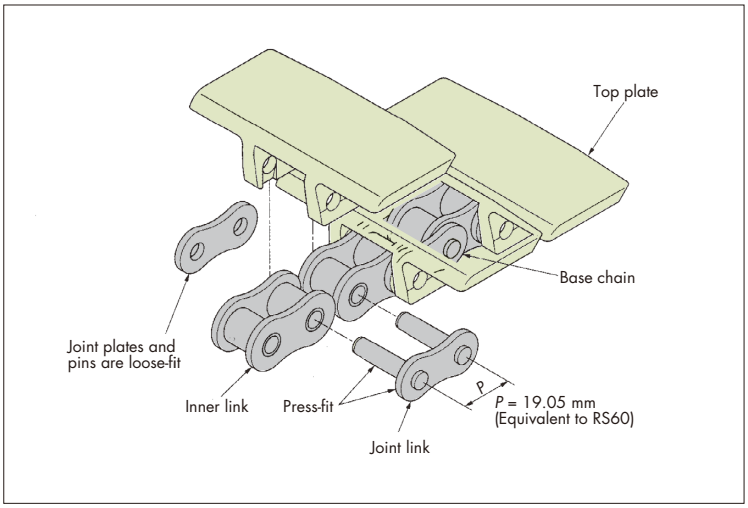


Drawing

(Chain, top plate)



Three-dimensional drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	100	160

Sprockets

Sprockets for RS60 can be used. Twelve teeth (12T) or greater of the RS60 B type sprockets can be used without modification.

Model Numbering

○When ordering complete chain including base chain, joint link and top plates.

Chain type	Top plate width		Base chain material mark		Top plate material		Number of links		Options
TNU	826	–	NP	–	LFG Note: 3	+	50L Note: 4	–	2 Note: 5
	826: 82.6 mm		None: Standard						

◆Base chain

Chain type		Base chain material mark		Number of links		Options
TNUC	–	NP	+	50L Note: 4	–	2 Note: 5
		None: Standard				

◆Joint link

Chain type	Top plate width		Base chain material mark		Top plate material mark		Joint link
TNU	826	–	NP	–	LFG Note: 3	–	JL
	826: 82.6 mm		None: Standard				

◆Top plate

Chain type	Top plate width		Top plate		Top plate material mark
TNU	826	–	P	–	LFG Note: 3
	826: 82.6 mm				

●Ordering examples

When ordering 100 links of TNU chain with NP base chains and standard top plates.

	Quantity	Unit
TNU826-NP+100L	1	H

Note: 1. Do not leave space between letters and symbols.
2. TNU chain is equipped with top plates for each outer link of the base chain (one top plate every two links). Specify the length of the product using the number of links of the base chain. Note that one unit consists of 160 links (basic chain) and the length is 3,048 mm, chain pitch of 19.05 mm x 160 links (base chain).
3. Please check the chain material and material marks in the top plate material table below.
4. Minimum quantity: 3, maximum quantity: 99999.
5. Please refer on page 6.

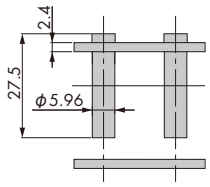
Base Chain/Joint Link

◆Base chain

Equivalent for RS60-CU and the joint link is dedicated to TNU.
(The edge of the pin of the base chain is different from that of the standard transmission chain)

◆Joint link

Neither cotter pin nor clips are attached to both roller chains and plastic combi chains. The legs of the top plates serve to hold the joint link plate in place and keep it from coming loose.



Base Chain Material Table

Material		Standard	NP	AS
Max. allowable load kN {kgf}		4.02 {410}		0.78 { 80}
Max. allowable speed m/min	With lube	100		–
	No lube	60		45
Operating temperature range °C		–10 to 80		–20 to 80

Top Plate

Top Plate

Description	TNU826P	TNU1143P	TNU1270P
Top plate material	Polyacetal (Standard, link color: gray)		
Top plate width *XW*	82.6	114.3	127.0
Completed chain mass kg/m	2.2	2.3	2.5

Note: Made-to-order products.

Top Plate Material Table

	Standard Chain					High-Function Chain	
Material	Standard	Low friction/Wear resistant			Low friction	Chemical resistant	Antibacterial/ Mold resistant
Material mark	—	LFW	LFG	LFB	WR	Y	MWS
Link color	Gray	White	Green	Brown	Dark green	Matte white	Cream
Availability	○	○	○	○	○	※	▲

Note: 1. "○": Made-to-order products, "▲": Special configurations may be available. Contact a Tsubaki representative for more information.
"※": Contact a Tsubaki representative whether it is available or not only when the base chain is AS series.
2. Not available for other specifications that are not listed in the base chain material table above.
3. The main chain formation is the number of units + fraction.

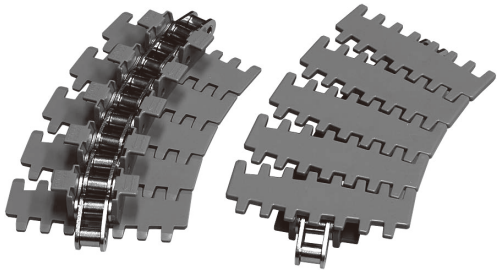
Snap Top Chain
TP-PT

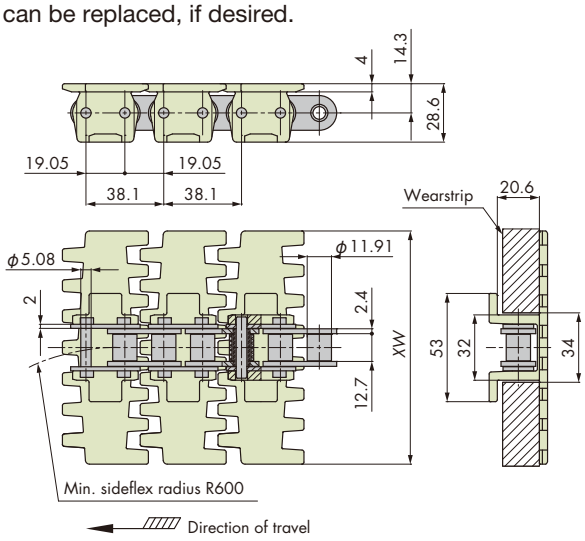
Sideflexing Running

Sprockets P.302 | Rails P.323 | Return-Way Parts P.369 | Allowable Load Graph P.429

Features

1. Sideflexing chain with high allowable load. (high allowable chain load).
2. Adopts comb-toothed plates which minimize gaps between links.
3. Top plates snap on to a sideflexing roller chain. The top plates can be replaced, if desired.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	150	80 Note

Note: When top plate is attached.

Chain Material Table

		Standard Chain								High-Function Chain		
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Light gray
Max. allowable load kN {kgf}	Steel	2.16{220}										
	Stainless	0.88{90}										
Max. allowable speed m/min	With lube	100(60)										
	No lube	40(30)										
Operating temperature range °C		–20 to 80			–20 to (65)80				–20 to 80	–20 to (65)80	–20 to 80	
TP-PT32 (top plate)		△	△	△	△	△	△	△	△	△	△	△
TP-PT44 (top plate)		△	△	△	△	○	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) is the value of the chain with SUS304 base chain.
3. Operating temperature of (the value in parentheses) is for wet conditions.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width XW	Chain mass kg/m	Base chain material
Material mark	LFG			
Chain type	TP-PT32-LFG	82.6	2.2	Steel
	TP-PT32-SS-LFG			SUS304
	TP-PT44-LFG	114.3	2.3	Steel
	TP-PT44-SS-LFG			SUS304

Note: 1. Chain type in normal face are made-to-order products.
2. The chain width of 82.6 mm is cut by a machine. The actual width is slightly shorter than the nominal width. The chain mark indicates information not for the modified width but for the original ones.
3. The Tsubaki model table shown above is that of the base chain with top plates. The number of links is equal to that of the top plate. (This arrangement is different from that of TN and TNU.)
4. Sprockets for RS60 with 20 teeth or greater can be used. The hub may interfere with some sprockets depending on their type and shape. Please machine the hub with a diameter no greater than a "pitch diameter of 38.1 mm."

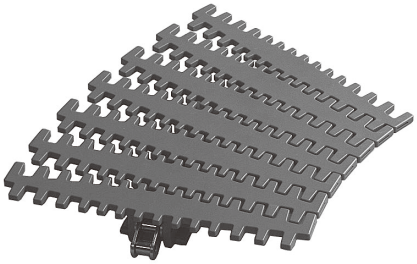
Model Numbering

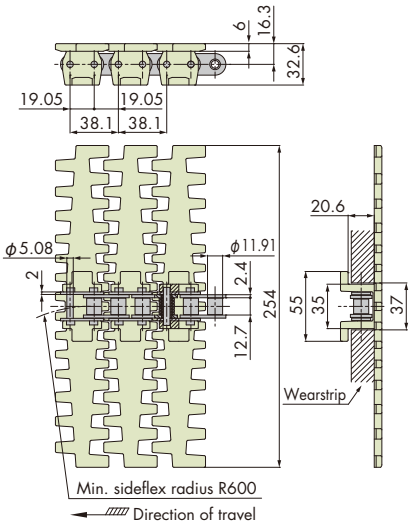
Chain type	Top plate width		Base chain material		Material mark		Number of links		Unit
TP-PT	44 Note: 2	-	SS	-	LFG Note: 3	+	80 Note: 4		L
			None: Steel (Omit hyphen in front) SS: SUS304						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Sideflexing chain with high allowable load. Also suitable for conveying large products due to its wide top plates.
2. Adopts comb-toothed plates which minimize gaps between links.
3. Top plates snap on to a sideflexing roller chain. The top plates can be replaced, if desired.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	150	80 Note

Note: When top plate is attached.

Chain Material Table

		Standard Chain								High-Function Chain		
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Light gray
Max. allowable load kN {kgf}	Steel	2.16{220}										
	Stainless	0.88{90}										
Max. allowable speed m/min	With lube	100(60)										
	No lube	40(30)										
Operating temperature range °C		–20 to 80			–20 to (65)80				–20 to 80	–20 to (65)80	–20 to 80	
TP-PTS100 (top plate)		△	△	△	△	○	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) is the value of the chain with SUS304 stainless steel base chain.
3. Operating temperature of (the value in parentheses) is for wet conditions.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m	Base chain material
Material mark	LFG			
Chain type	TP-PTS100-LFG	254	3.5	Steel
	TP-PTS100-SS-LFG			SUS304

Note: 1. Chain type in normal face are made-to-order products.
2. The Tsubaki model table shown above is that of the base chain with top plates. The number of links is equal to that of the top plate. (This arrangement is different from that of TN and TNU.)
3. Sprockets for RS60 with 20 teeth or greater can be used. The hub may interfere with some sprockets depending on their type and shape. Please machine the hub with a diameter no greater than a "pitch diameter of 38.1 mm."

Model Numbering

Chain type	Top plate width		Base chain material mark		Material mark		Number of links		Unit
TP-PTS	100 Note: 2	-	SS	-	LFG Note: 3	+	80 Note: 4		L
			None: Steel (Omit hyphen in front) SS: SUS304						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

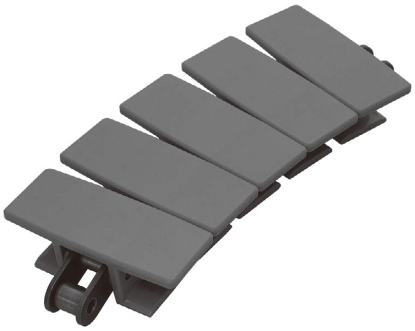
Snap Top Chain
TP-1873-T

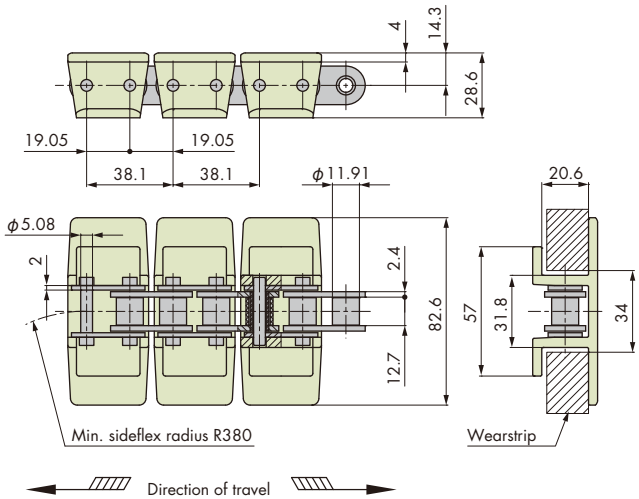
Sideflexing Running

Sprockets P.302 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.429

Features

1. Sideflexing chain with high allowable load.
2. Top plates snap on to a sideflexing roller chain. The top plates can be replaced, if desired.





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	305	80 Note

Note: When top plate is attached.

Chain Material Table

		Standard Chain								High-Function Chain			
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	High speed	Electrostatic preventive	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	HS	SE	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Beige	Gray	Light gray
Max. allowable load kN {kgf}	Steel	2.16{220}											
	Stainless	0.88{90}											
Max. allowable speed m/min	With lube	100(60)											
	No lube	40(30)											
Operating temperature range °C		–20 to 80			–20 to (65)80				–20 to 80	–20 to (65)80	–20 to 50	–20 to 80	
TP-1873-T (top plate)		△	△	△	△	△	○	△	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) is the value of the chain with SUS304 base chain.
3. Operating temperature of (the value in parentheses) is for wet conditions.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m	Base chain material
Material mark	LFB			
Chain type	TP-1873-TK325-LFB	82.6	2.2	Steel
	TP-1873-SS-TK325-LFB			SUS304

Note: 1. Chain type in normal face are made-to-order products.
2. The Tsubaki model table shown above is that of the base chain with top plates. The number of links is equal to that of the top plate. (This arrangement is different from that of TN and TNU.)
3. Sprockets for RS60 with 16 teeth or greater can be used. The hub may interfere with some sprockets depending on their type and shape. Please machine the hub with a diameter no greater than a "pitch diameter of 38.1 mm."
4. Contact a Tsubaki representative for the selection of the product.

Top Plate Only

Model no.	Link color
TP-1873-TK325-TP-LFB	Brown
TP-1873-TK325-TP-WR	Dark green

Note: 1. Made-to-order products.
2. Base chain for TP-1873-G can on page 238 can be used.

Model Numbering

Chain type	Chain material mark	Tab	Top plate width	Material mark	Number of links	Unit
TP-1873 -	SS	- T	K325 Note: 2	- LFB Note: 3	+ 80 Note: 4	L

None: Steel (Omit hyphen in front)
SS: SUS304

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the Tsubaki model table above.
3. Please check the chain material and material marks in the chain material table above.
4. Minimum quantity: 2, maximum quantity: 99999.

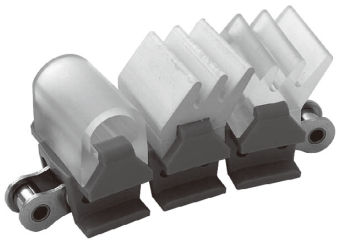
TP-1843-G

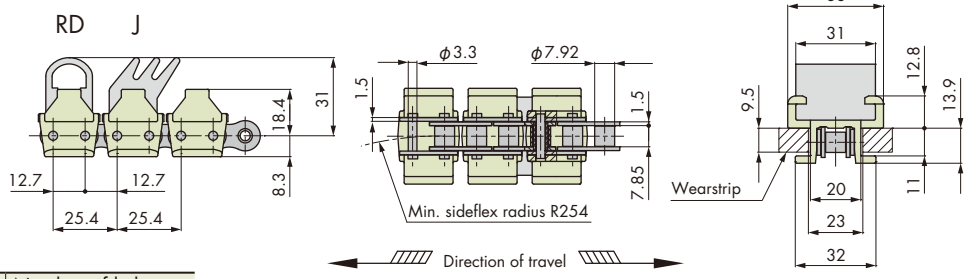
Sideflexing Running

Sprockets P.301 Rails P.323 Allowable Load Graph P.429

Features

1. Gripper chains are used to hold products from both sides to convey them vertically.
2. A selection of the grip rubber shape and material is available.
3. Top plates and grip rubbers can be replaced.





Chain pitch mm	Backflex radius mm	Number of links per unit
12.7	–	120 Note

Note: When top plate is attached.

Chain Material Table

		Standard Chain								High-Function Chain		
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Light gray
Max. allowable load kN {kgf}	Steel	0.88{90}										
	Stainless	0.36{37}										
Max. allowable speed m/min	With lube	—										
	No lube	100(60)										
Operating temperature range °C		–20 to 80										
TP-1843-G (top plate)		△	△	△	△	△	○ Note: 3	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) is the value of the chain with SUS304 base chain.
3. DU and JU type grip rubbers are made-to-order products (RFQ).
4. Be sure to lubricate contact areas between the top plates and rails periodically.

Tsubaki Model Table

Base chain material		Top plate material	Grip rubber type			Chain mass kg/m
Steel	SUS304		Grip rubber shape	Grip rubber material	Grip rubber color	
Chain type	Chain type					
TP-1843-G-LFB	TP-1843-SS-G-LFB	Low friction/ Wear resistant LFB	—			0.90
TP-1843-G-DU-LFB	TP-1843-SS-G-DU-LFB		RD	Urethane	Amber	1.40
TP-1843-G-DN-LFB	TP-1843-SS-G-DN-LFB		RD	Nitrile	White	
TP-1843-G-DS-LFB	TP-1843-SS-G-DS-LFB		RD	Silicone	Translucent white	
TP-1843-G-DH-LFB	TP-1843-SS-G-DH-LFB		RD	CSM	White	
TP-1843-G-JU-LFB	TP-1843-SS-G-JU-LFB		J	Urethane	Amber	1.60
TP-1843-G-JN-LFB	TP-1843-SS-G-JN-LFB		J	Nitrile	White	
TP-1843-G-JS-LFB	TP-1843-SS-G-JS-LFB		J	Silicone	Translucent white	
TP-1843-G-JH-LFB	TP-1843-SS-G-JH-LFB		J	CSM	White	

Note: 1. Chain type in normal face are made-to-order products.
2. The chain type described on the left is that of a completed chain with top plates, base chains and grip rubbers (excluding TP-1873-G-LFB and TP-1873-SS-G-LFB). The number of links is equal to that of the top plate. (This arrangement is different from that of TN and TNU.)
3. Sprockets for RS40 with 17 teeth or greater can be used. The hub may interfere with some sprockets depending on their type and shape. Please machine the hub with a diameter no greater than a "pitch diameter of 19 mm."
4. Contact a Tsubaki representative for the selection of products.
5. Refer to page 238 for information about the base chain, connecting link, top plate and grip rubber.

Model Numbering

Chain type	Chain material mark	Gripper	Grip rubber shape	Grip rubber material	Top plate material mark	Number of links	Unit
TP-1843 -	SS	- G -	J	N	- LFB Note: 2	+ 120 Note: 3	L
	None: Steel (Omit hyphen in front) SS: SUS304		None: No grip rubbers (only base chain and plastic top plates) D: RD type J: J type	None: No grip rubbers (only base chain and plastic top plates) U: Urethane N: Nitrile S: Silicone H: CSM			L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Snap Top Gripper Chain
TP-1873-G

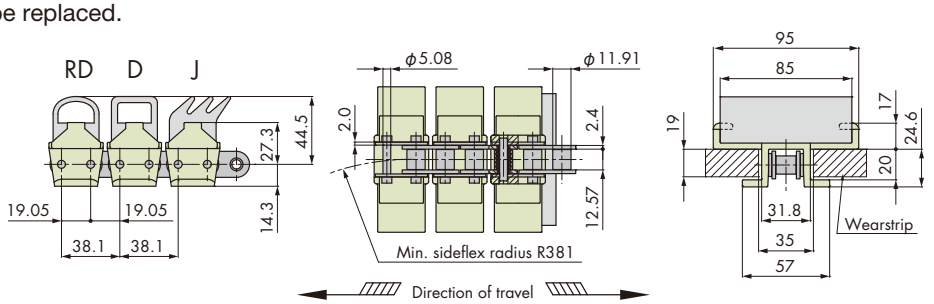
Sideflexing Running

Sprockets P.302 Rails P.323 Allowable Load Graph P.429

Features

1. Gripper chains hold products from both sides to convey them vertically.
2. A selection of the grip rubber shape and material is available.
3. Top plates and grip rubbers can be replaced.





Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	—	80 Note

Note: When top plate is attached.

Chain Material Table

		Standard Chain								High-Function Chain		
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFG	LFB	NLF	WR	HG	SE	UVR
Link color		Gray	Blue	Sky blue	White	Green	Brown	Dark gray	Dark green	Navy blue	Gray	Light gray
Max. allowable load kN {kgf}	Steel	2.16{220}										
	Stainless	0.88{90}										
Max. allowable speed m/min	With lube	—										
	No lube	100(60)										
Operating temperature range °C		–20 to 80										
TP-1873-G (top plate)		△	△	△	△	△	○ Note: 3	△	△	△	△	△

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. The allowable speed (the value in parentheses) is the value of the chain with SUS304 base chain.
3. DU and JU type grip rubbers are made-to-order products (RFQ). 4. Be sure to lubricate contact areas between the top plates and rails periodically.

Tsubaki Model Table

Base chain material		Top plate material	Grip rubber type			Chain mass kg/m
Steel	SUS304		Grip rubber shape	Grip rubber material	Grip rubber color	
Chain type	Chain type					
TP-1873-G-LFB	TP-1873-SS-G-LFB	Low friction/ Wear resistant LFB	—			2.40
TP-1873-G-DB-LFB	TP-1873-SS-G-DB-LFB		D	EPDM	Black	3.80
TP-1873-G-DU-LFB	TP-1873-SS-G-DU-LFB		RD	Urethane	Amber	
TP-1873-G-DN-LFB	TP-1873-SS-G-DN-LFB		RD	Nitrile	White	
TP-1873-G-DS-LFB	TP-1873-SS-G-DS-LFB		RD	Silicone	Translucent white	
TP-1873-G-DH-LFB	TP-1873-SS-G-DH-LFB		RD	CSM	White	
TP-1873-G-JU-LFB	TP-1873-SS-G-JU-LFB		J	Urethane	Amber	4.70
TP-1873-G-JN-LFB	TP-1873-SS-G-JN-LFB		J	Nitrile	White	
TP-1873-G-JS-LFB	TP-1873-SS-G-JS-LFB		J	Silicone	Translucent white	
TP-1873-G-JH-LFB	TP-1873-SS-G-JH-LFB		J	CSM	White	

Note: 1. Chain type in normal face are made-to-order products..
2. The chain type described on the left is that of a completed chain with top plates, base chains and grip rubbers (excluding TP-1873-G-LFB and TP-1873-SS-G-LFB). The number of links is equal to that of the top plate. (This arrangement is different from that of TN and TNU.)
3. Sprockets for RS60 with 16 teeth or greater can be used. The hub may interfere with some sprockets depending on their type and shape. Please machine the hub with a diameter no greater than a "pitch diameter of 38.1 mm."
4. Contact a Tsubaki representative for the selection of the product.
5. Refer to page 238 for information about the base chain, connecting link, top plate and grip rubber.

Model Numbering

Chain type	Chain material mark	Gripper	Grip rubber shape	Grip rubber material	Top plate material mark	Number of links	Unit
TP-1873 -	SS	- G -	J	N	- LFB Note: 2	+ 80 Note: 3	L
	None: Steel (Omit hyphen in front) SS: SUS304		None: No grip rubbers (only base chain and plastic top plates) D: D, RD types J: J type	None: No grip rubbers (only base chain and plastic top plates) U: Urethane N: Nitrile S: Silicone H: CSM B: EPDM			L: Link

Note: 1. Do not leave space between letters and symbols. 2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Parts for Gripper Chains

Base Chain/Connecting Links/Top Plates

■ TP-1843-G

Chain type	Remarks
TP-1843-BC	Steel base chain
TP-1843-SS-BC	Stainless steel base chain
Tsubaki model no.	**Remarks**
TP-1843-JL	Connecting link for steel base chain
TP-1843-SS-JL	Connecting link for stainless steel base chain
TP-1843-G-TP-LFB	Top plate (Link color: brown)
TP-1843-G-TP-LFW	Top plate for connecting links (Link color: white)

Note: 1. Made-to-order products. Number of links in the base chain unit: 240
2. The number of links in the main chain for TP-1843-G is different from that of the top plate built-in products.
When ordering the body chain and top plate individually, be sure to specify the length with the number of links of the body chain and connecting links.
Twice the number of top plates is the number of links in the main chain.
(Required length ÷ chain pitch = required number of links)

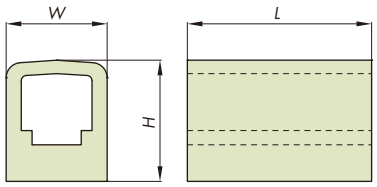
■ TP-1873-G

Chain type	Remarks
TP-1873-BC	Steel base chain
TP-1873-SS-BC	Stainless steel base chain
Tsubaki model no.	**Remarks**
TP-1873-JL	Connecting link for steel base chain
TP-1873-SS-JL	Connecting link for stainless steel base chain
TP-1873-G-TP-LFB	Top plate (Link color: brown)
TP-1873-G-TP-LFW	Top plate for connecting links (Link color: white)

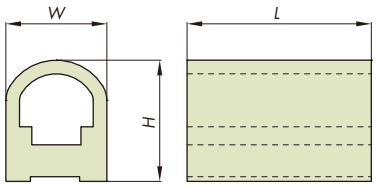
Note: 1. Made-to-order products. Number of links in the base chain unit: 160
2. The number of links in the main chain for TP-1873-G is different from that of the top plate built-in products.
When ordering the body chain and top plate individually, be sure to specify the length with the number of links of the body chain and connecting links.
Twice the number of top plates is the number of links in the main chain.
(Required length ÷ chain pitch = required number of links)

Grip Rubber

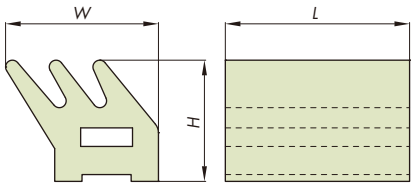
D



RD



J



■ TP-1843-G

Tsubaki model no.	Shape	Material	Link color	Approx. dimensions			Approx. mass kg/m (g/unit)
				W	*H*	*L*	
TP-DUS	RD	Urethane	Amber	18.5	22	31	10
TP-DNS	RD	Nitrile	White				
TP-DSS	RD	Silicone	Translucent white				
TP-DHS	RD	CSM	White				
TP-JUS	J	Urethane	Amber	28	22	31	13
TP-JNS	J	Nitrile	White				
TP-JSS	J	Silicone	Translucent white				
TP-JHS	J	CSM	White				

Note: Made-to-order products.

■ TP-1873-G

Tsubaki model no.	Shape	Material	Link color	Approx. dimensions			Approx. mass kg/m (g/unit)
				W	*H*	*L*	
TP-DBB	D	EPDM	Black	30	30	85	55
TP-DUB	RD	Urethane	Amber				
TP-DNB	RD	Nitrile	White				
TP-DSB	RD	Silicone	Translucent white				
TP-DHB	RD	CSM	White				
TP-JUB	J	Urethane	Amber	40	28	85	70
TP-JNB	J	Nitrile	White				
TP-JSB	J	Silicone	Translucent white				
TP-JHB	J	CSM	White				

Note: Made-to-order products.

Plastic Accumulation Chain

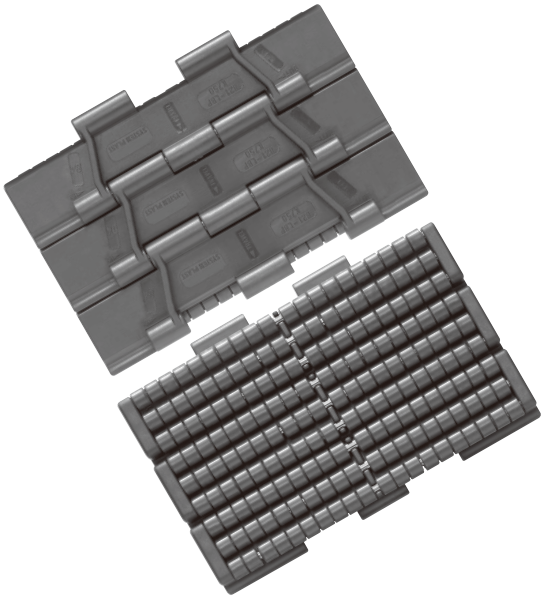
TTPDH-LBP

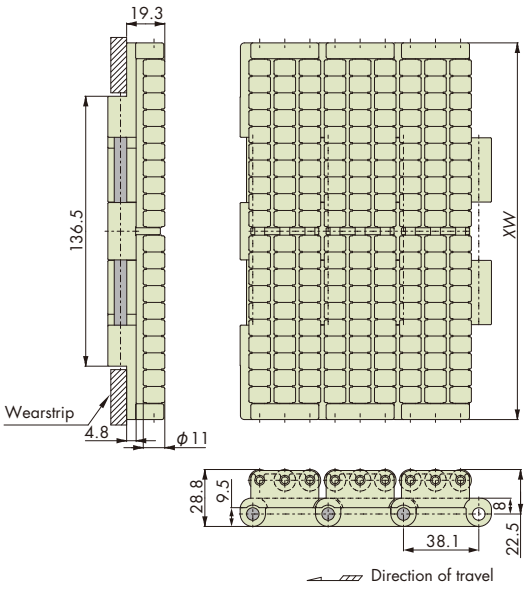
Straight Running

Sprockets P.255 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.429

Features

1. The rolling of rollers prevents scratches on conveyed products. Suitable for applications with an accumulation to reduce damage on the bottom of the products and line pressure.
2. Coefficient of rolling friction between plastic roller and conveyed product: 0.10





Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	400	40

Chain Material Table

Chain type	Plate width XW	Top plate		Max. allowable load kN{kgf}	Chain mass kg/m	Operating temperature range °C	Max. allowable speed m/min	
		Material	Link color				With lube	No lube
TTPDH1905-LBP	190.5	Link: Low friction Polyacetal Roller: Special engineering plastic	Link: Dark gray Roller: Light blue	1.67{170}	5.52	–20 to (65)80	30	30
TTPDH2540-LBP	254.0				6.90			
TTPDH3048-LBP	304.8				8.00			

Note: 1. Standard products. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Model Numbering

Chain type	Top plate width		Accumulation chain mark		Number of links	Unit
TTPDH	**1905** Note: 2	**-**	**LBP**	**+**	**40** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width top plate in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

TPUS-LBP

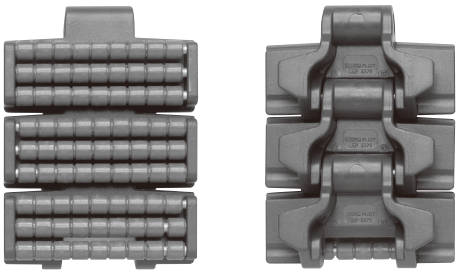
Sideflexing Running

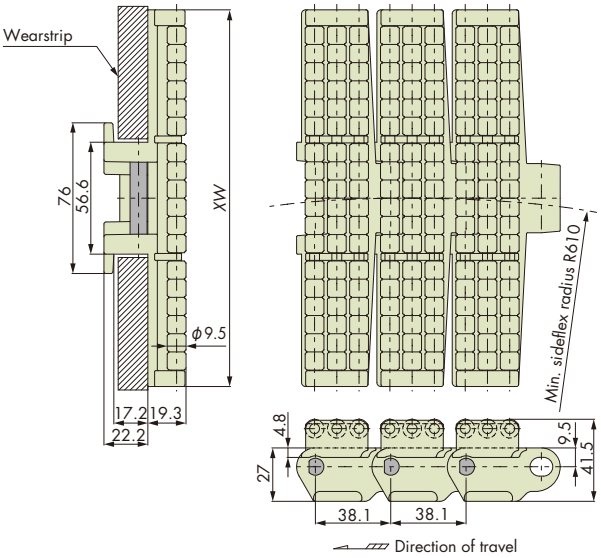
Sprockets P.262,263 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.429

Features

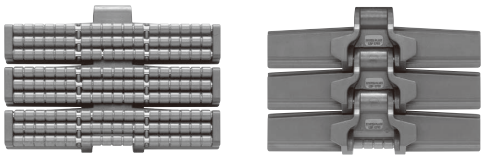
1. The rolling of rollers prevents scratches on conveyed products. Suitable for applications with an accumulation to reduce damage on the bottom of the products and line pressure.
2. Coefficient of rolling friction between plastic roller and conveyed product: 0.10

●TPUS953





●TPUS1905



Chain pitch mm	Backflex radius mm	Number of links per unit
38.1	400	40

Chain Material Table

Chain type	Plate width XW	Top plate		Max. allowable load kN{kgf}	Chain mass kg/m	Operating temperature range °C	Max. allowable speed m/min	
		Material	Link color				With lube	No lube
TPUS953-T-LBP	95.3	Link: Low friction Polyacetal Roller: Special engineering plastic	Link: Dark gray Roller: Light blue	2.16{220}	3.31	–20 to {65}80	30	30
TPUS1905-T-LBP	190.5				4.70			
TPUS2540-T-LBP	254.0				5.90			
TPUS3048-T-LBP	304.8				6.50			

Note: 1. Chain type in boldface are standard products. Chain type in normal face are made-to-order products. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of {the value in parentheses} is for wet conditions.
3. Plastic pin type is not available.
4. Connecting pins are not for sale separately.

Model Numbering

Chain type	Top plate width		Tab		Accumulation chain mark		Number of links	Unit
TPUS	**1905** Note: 2	**-**	**T**	**-**	**LBP**	**+**	**40** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the width of the top plate in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top/Curved Accumulation Chain

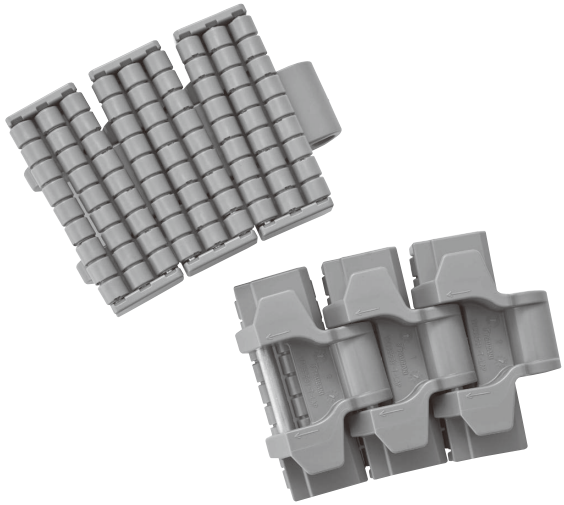
TPUS-Y-LAP

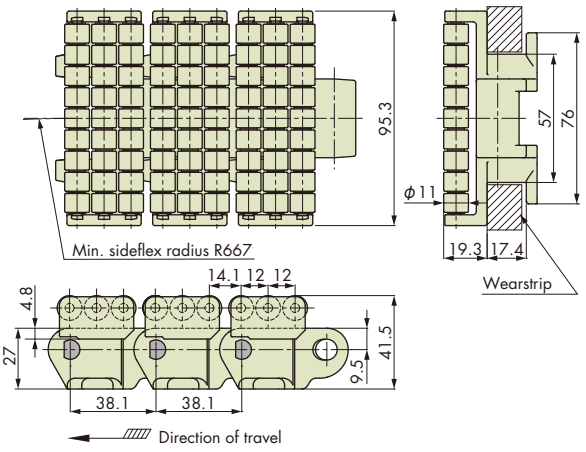
Sideflexing Running

Sprockets P.262,263 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.429

Features

1. The rolling of rollers reduces line pressure.
2. Suitable for the accumulation line.
3. By increasing the roller diameter from ϕ9.5 in the previous model to ϕ11, the gap between the rollers is narrowed to prevent conveyed products from getting caught.
4. Coefficient of rolling friction between plastic roller (LFB series) and conveyed product: 0.07
5. Plastic roller with higher coefficient of rolling friction than LFB series by 30% is available (MFR series). Suitable to improve throughput due to the shorter sliding time of the products when accumulation is released.





Chain pitch mm	Top plate width mm	Backflex radius mm	Number of links per unit
38.1	95.3	250	40

Chain Material Table/Tsubaki Model No.

Chain type	Top plate width	Material		Link color		Coefficient of friction Note: 4	Max. allowable load kN {kgf}	Chain mass kg/m	Operating temperature range °C	Max. allowable speed m/min	
		Link	Roller	Link	Roller					With lube	No lube
TPUS953Y-T-LAP-LFB-MFR	95.3	Low friction/ Wear resistant LFB	Special engineering plastic	Brown	Cream	0.10	2.16{220}	3.3	–20 to (65)80	50	50
TPUS953Y-T-LAP-LFB		Low friction/Wear resistant LFB		Brown		0.07		3.5			

Note: 1. Made-to-order products.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Pins of both connecting chains and supporting plastic rollers are made of SUS304.
4. Coefficient of rolling friction between plastic roller and conveyed product.
5. Contact a Tsubaki representative for the availability of other chain materials.
6. Plastic pin type is not available.

Model Numbering

Chain type	Top plate width	Chain type	Tab	Accumulation chain mark	Base chain material mark	Material mark	Number of links	Unit
TPUS	953	Y	- T -	LAP	- LFB	- MFR Note: 2	+40 Note: 3	L

L: Link

Note: 1. Do not leave space between letters and symbols.
2. The type of roller material will be LFB series, if not the material mark is specified.
3. Minimum quantity: 2, maximum quantity: 99999.

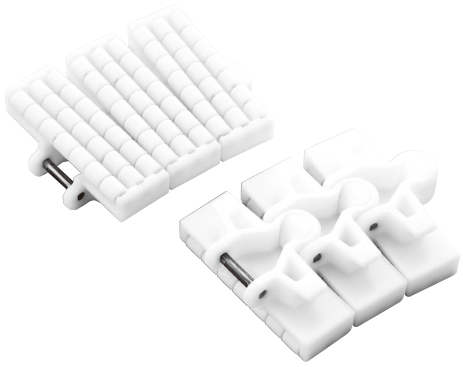
TP-30UTW-LAP

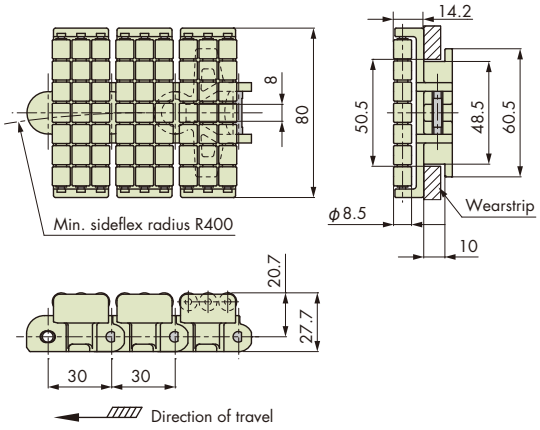
Sideflexing Running

Sprockets P.277 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.429

Features

1. Roller rotation reduces line pressure.
2. Coefficient of rolling friction between plastic roller and conveyed product: 0.07.
3. Suitable for the accumulation line.





Chain pitch mm	Top plate width mm	Backflex radius mm	Number of links per unit
30	80	180	100

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFW
Link color		White
Max. allowable load kN {kgf}		0.7 {71}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin type		SUS304
Availability		●

Note: 1. "●": Standard product.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	LFW		
Chain type	**TP-30UTW-LAP**	80	1.9

Note: Chain type in boldface is a standard product.

Model Numbering

Chain type		Accumulation chain mark		Number of links	Unit
TP-30UTW	-	**LAP**	+	**100** Note: 2	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 2, maximum quantity: 99999.

Plastic Top/Curved Accumulation Chain

TP-36UTW-LAP

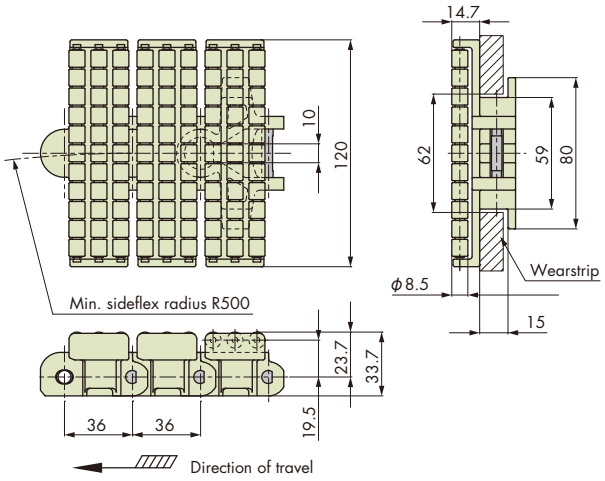
Sideflexing Running

Sprockets P.278 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.430

Features

1. The rolling of rollers reduces conveyor line pressure.
2. Coefficient of rolling friction between the roller and conveyed product: 0.07.
3. Suitable for the accumulation line.





Chain pitch mm	Top plate width mm	Backflex radius mm	Number of links per unit
36	120	160	85 Note

Note: As of 2013, the number of links per unit has changed.

Chain Material Table

Standard Chain		
Material		Low friction/Wear resistant
Material mark		LFW
Link color		White
Max. allowable load kN {kgf}		1.1 {112}
Max. allowable speed m/min	With lube	100
	No lube	50
Operating temperature range °C		–20 to (65)80
Pin type		SUS304
Availability		●

Note: 1. "●": Standard product.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Low friction/Wear resistant	Top plate width	Chain mass kg/m
Material mark	LFW		
Chain type	**TP-36UTW-LAP**	120	2.9

Note: Chain type in boldface is a standard product.

Model Numbering

Chain type		Accumulation chain mark		Number of links	Unit
TP-36UTW	-	**LAP**	+	**85** Note: 2	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Plastic Roller Table
ST
Straight Running

Features

1. Free flow chain which can convey products without using pallets.
2. Smooth parallel transfer is possible due to the same height of the tops of the plastic rollers and special attachments of the ST roller table.
3. Coefficient of rolling friction between plastic roller and conveyed product: 0.06 to 0.10
4. The gap between plastic rollers does not change even when the chain bends because the rollers are aligned with the pitch line of the base chain.

Plastic Roller Table Chain Material

Plastic roller table includes the following series.

◆SS series: Made of type SUS304 and is suitable for an environment where corrosion resistance is to be prioritized.

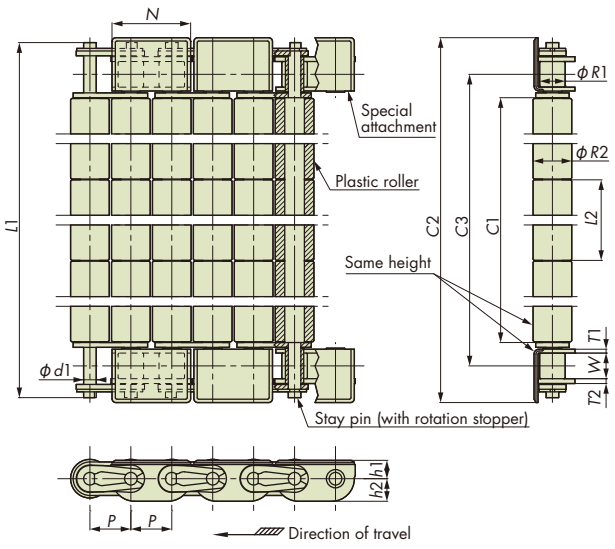
◆NP series (nickel-plated): Base chain is made of steel with nickel-plating, providing corrosion resistance and better appearance.

Material	Series				
	Plastic roller	Stay pin	Special attachment	Clip	Base chain
SS	Polyacetal (Link color: light gray)	SUS304		SUS301	Stainless
NP					Steel + nickel-plated

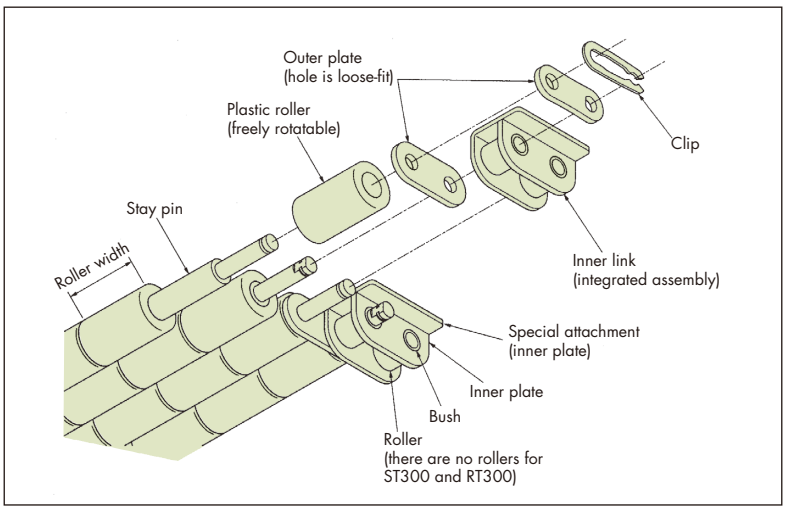
Chain Construction



Drawing



Three-dimensional drawing



Model Numbering

Chain type	Material mark	Number of links	End link	Options
ST305 -	SS +	100L Note: 2	- JKR Note: 3	- P Note: 3

SS: SS series
NP: NP series

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 3, maximum quantity: 99999.
3. Please refer on page 6.

Dimensions

Chain type	Pitch *P*	Inner width *W*	Roller (bush) outer diameter *R1*	Attachment height *h1*	Plate height *h2*	Attachment width *N*	Attachment thickness *T1*	Plate thickness *T2*	Pin outer diameter *d1*	Plastic roller outer diameter *R2*	Plastic roller length *L2*	Max. allowable conveying load Note: 2 kg/m²	Number of links
ST300 Note: 1	9.525	4.78	(5.08)	4.4	5.2	18.3	0.75	1.25	3.54	9.2	10.0	50	100
ST400	12.70	7.95	7.92	5.7	7.0	24.4	1.2	1.5	3.92	12.0	25.0	250	80
ST500	15.875	9.53	10.16	7.1	8.5	30.5	1.5	2.0	5.00	15.0	25.0	350	64

Note: 1. The base chain for RT300 (#35) is rollerless and bushed type.
2. Maximum allowable load depends on the length and the width of the roller table. Refer to the selection page.

Chain Material Table

■ ST300

Model no.	Effective width *C1*	Total width *C2*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
ST305-SS	50.0	75.0	60.4	74.2	1.75
ST310-SS	100.0	125.0	110.4	124.2	2.68
ST315-SS	150.0	175.0	160.4	174.2	3.61
ST320-SS	200.0	225.0	210.4	224.2	4.54

■ ST400

Model no.	Effective width *C1*	Total width *C2*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
ST404-SS	101.2	138.0	115.6	135.6	4.42
ST404-NP					
ST406-SS	151.2	188.0	165.6	185.6	5.78
ST406-NP					
ST408-SS	201.2	238.0	215.6	235.6	7.13
ST408-NP					
ST410-SS	251.2	288.0	265.6	285.6	8.48
ST410-NP					
ST412-SS	301.2	338.0	315.6	335.6	9.82
ST412-NP					
ST414-SS	351.2	388.0	365.6	385.6	11.17
ST414-NP					
ST416-SS	401.2	438.0	415.6	435.6	12.52
ST416-NP					

Note: Made-to-order products.

■ ST500

Model no.	Effective width *C1*	Total width *C2*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
ST504-SS	101.2	145.2	119.0	142.8	6.16
ST504-NP					
ST506-SS	151.2	195.2	169.0	192.8	8.08
ST506-NP					
ST508-SS	201.2	245.2	219.0	242.8	9.88
ST508-NP					
ST510-SS	251.2	295.2	269.0	292.8	11.74
ST510-NP					
ST512-SS	301.2	345.2	319.0	342.8	13.60
ST512-NP					
ST514-SS	351.2	395.2	369.0	392.8	15.46
ST514-NP					
ST516-SS	401.2	445.2	419.0	442.8	17.31
ST516-NP					
ST518-SS	451.2	495.2	469.0	492.8	19.18
ST518-NP					
ST520-SS	501.2	545.2	519.0	542.8	21.04
ST520-NP					
ST522-SS	551.2	595.2	569.0	592.8	22.90
ST522-NP					
ST524-SS	601.2	645.2	619.0	642.8	24.76
ST524-NP					

Note: Made-to-order products.

Sprockets

B type of RS sprockets with (23T) teeth or greater can be used. Sprockets for plastic roller plates should be used when the number of teeth is (22T) or smaller due to the interference of the hub with the plate of the chain.

Plastic Roller Table
RT

Straight Running

Features

1. Free flowing chain which can convey products without the use of pallets.
2. The width of the plastic roller of RT is twice as wide as that of ST, excluding RT300 series, and suitable to convey pallets and cases.
3. Coefficient of rolling friction between plastic roller and conveyed product: 0.06 to 0.10
4. The gap between plastic rollers does not change even when the chain bends because the rollers are aligned with the pitch line of the base chain.

Plastic Roller Table Chain Material

Plastic roller table includes the following series.

◆SS series: Made of type SUS304 and is suitable for an environment where corrosion resistance is to be prioritized.

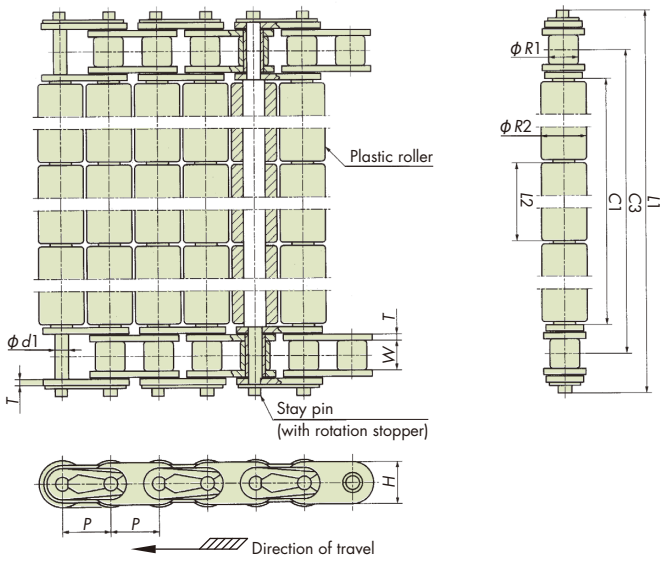
Material	Series			
	Plastic roller	Stay pin	Clip	Base chain
SS	Polyacetal (Link color: light gray)	SUS304	SUS301	Stainless

Chain Construction

This is a shape in which the special attachment is removed from the plastic roller table ST.



Drawing



Model Numbering

Chain type	Material mark	Number of links	End link	Options
RT305 -	SS +	100L Note: 2	- JKR Note: 3	- P Note: 3
	SS series			

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 3, maximum quantity: 99999.
3. Please refer on page 6.

Dimensions

Chain type	Pitch *P*	Inner width *W*	Roller (bush) outer diameter *R1*	Plate width *H*	Plate thickness *T*	Pin outer diameter *d1*	Plastic roller outer diameter *R2*	Plastic roller length *L2*	Max. allowable conveying load Note: 2 kg/m²	Number of links
RT300 Note: 1	9.525	4.78	(5.08)	8.2	1.25	3.54	9.2	10.0	50	100
RT400	12.70	7.95	7.92	11.1	1.5	3.92	12.2	50.0	200	80
RT500	15.875	9.53	10.16	13.9	2.0	5.00	15.2	50.0	300	64
RT600	19.05	12.70	11.91	16.8	2.4	5.96	18.3	50.0	300	54

Note: 1. The base chain for RT300 (#35) is rollerless and bushed type.
2. Maximum allowable load depends on the length and the width of the roller table. Refer to the selection page.

Chain Material Table

■ RT300

Model no.	Effective width *C1*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
RT305-SS	50.0	60.4	74.2	1.68
RT310-SS	100.0	110.4	124.2	2.61
RT315-SS	150.0	160.4	174.2	3.54
RT320-SS	200.0	210.4	224.2	4.47

■ RT400

Model no.	Effective width *C1*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
RT404-SS	101.2	115.6	135.6	4.03
RT408-SS	201.2	215.6	235.6	6.76
RT412-SS	301.2	315.6	335.6	9.48
RT416-SS	401.2	415.6	435.6	12.21

■ RT500

Model no.	Effective width *C1*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
RT504-SS	101.2	119.0	142.8	5.80
RT508-SS	201.2	219.0	242.8	9.48
RT512-SS	301.2	319.0	342.8	13.17
RT516-SS	401.2	419.0	442.8	16.89
RT520-SS	501.2	519.0	542.8	20.54
RT524-SS	601.2	619.0	642.8	24.23

Note: Made-to-order products.

■ RT600

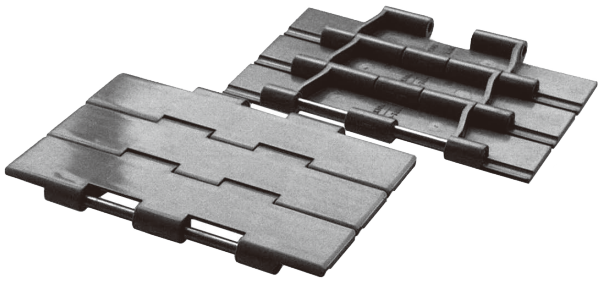
Model no.	Effective width *C1*	Center distance *C3*	Pin length *L1*	Chain mass kg/m
RT604-SS	101.2	124.0	153.6	6.73
RT608-SS	201.2	224.0	253.6	10.38
RT612-SS	301.2	324.0	353.6	14.03
RT616-SS	401.2	424.0	453.6	17.68
RT620-SS	501.2	524.0	553.6	21.32
RT624-SS	601.2	624.0	653.6	24.97

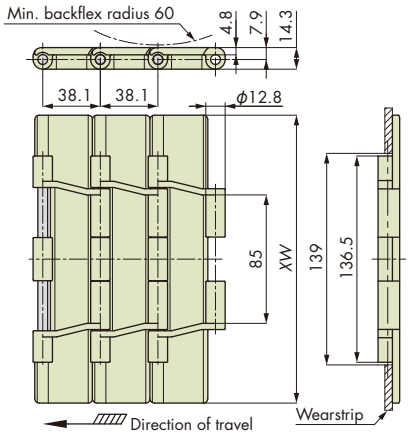
Note: Made-to-order products.

Sprockets

B type of RS sprockets with (23T) teeth or greater can be used. Sprockets for plastic roller plates should be used when the number of teeth is (22T) or smaller due to the interference of the hub with the plate of the chain. The height of outer and inner link is same for RT600 type.

■ TTPDH-Y (Straight Running)

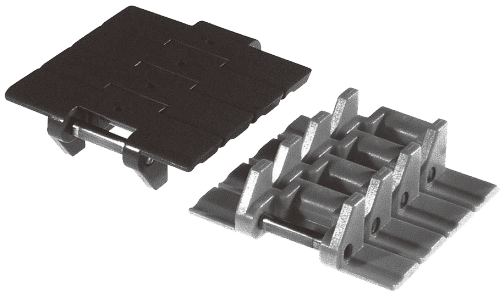


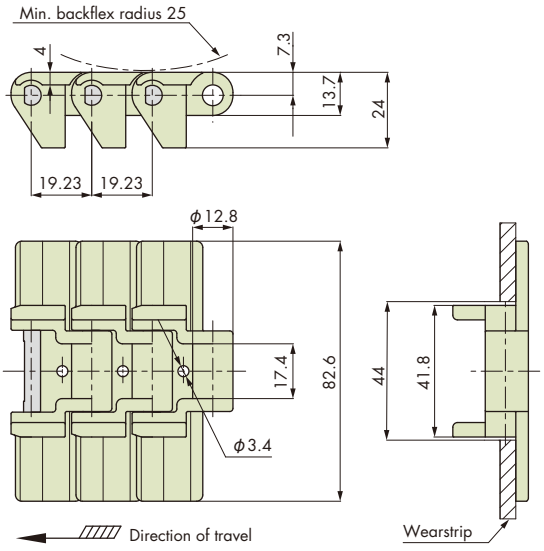


Material	Standard	Low friction/Wear resistant	Low friction	Top plate width *XW*	Max. allowable load kN{kgf}	Chain mass kg/m	Connecting pin
Material mark	—	LFG	WR				
Link color	Gray	Green	Dark green				
Chain type	TTPDH1905Y	TTPDH1905Y-LFG	TTPDH1905Y-WR	190.5	1.67 {170}	2.5	Knurled pins
	TTPDH2540Y	TTPDH2540Y-LFG	TTPDH2540Y-WR	254.0		3.0	
	TTPDH3048Y	TTPDH3048Y-LFG	TTPDH3048Y-WR	304.8		3.3	

Note: 1. Made-to-order products.
2. Number of links per unit: 80
3. The chain width of 254.0 mm is cut by machining. The chain mark indicates information of the original.
4. Plastic pin type is not available.

■ TP-YS (Straight Running)

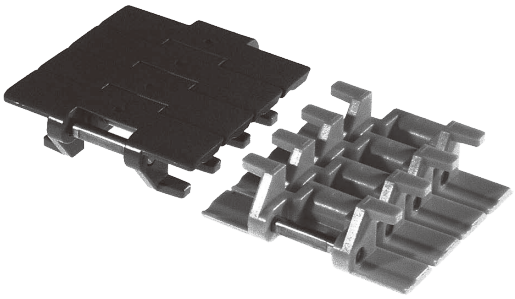


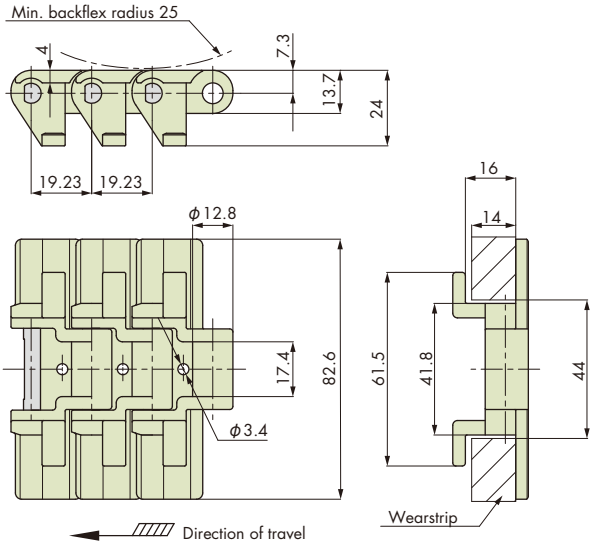


Material	Low friction	High speed	Plate width	Max. allowable load kN{kgf}	Chain mass kg/m	Connecting pin
Material mark	WR	HS				
Link color	Dark green	Beige				
Chain type	TP-YS32-WR	TP-YS32-HS	82.6	0.83{85}	1.3	D-pin

Note: 1. Made-to-order products.
2. Number of links per unit: 160
3. Plastic pin type is not available.

■ TP-YST (Straight Running)

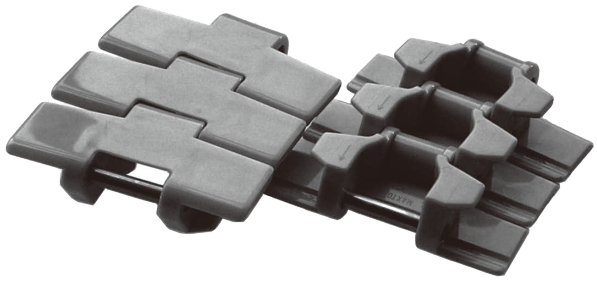


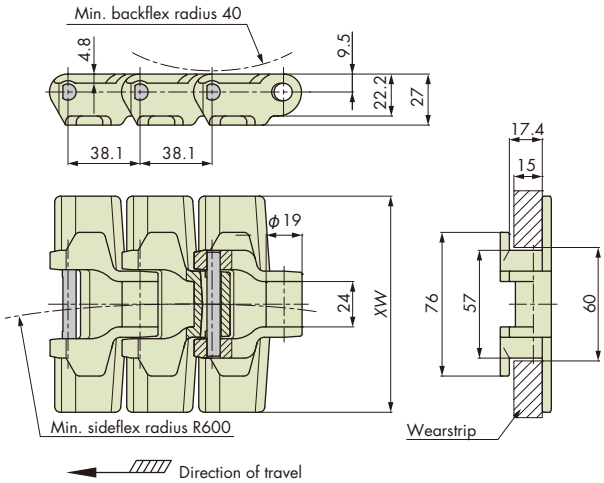


Material	Low friction	High speed	Top plate width	Max. allowable load kN{kgf}	Chain mass kg/m	Connecting pin
Material mark	WR	HS				
Link color	Dark green	Beige				
Chain type	TP-YST32-WR	TP-YST32-HS	82.6	0.83{85}	1.4	D-pin

Note: 1. Made-to-order products.
2. Number of links per unit: 160
3. Plastic pin type is not available.

■ TPUS-Y-T (Sideflexing Running)





Material	Low friction/Wear resistant	Top plate width *XW*	Max. allowable load kN{kgf}	Chain mass kg/m	Connecting pin
Material mark	LFG				
Link color	Green				
Chain type	TPUS1143Y-T-LFG	114.3	1.96{200}	2.1	D-pin
	TPUS1905Y-T-LFG	190.5		2.4	

Note: 1. Made-to-order products.
2. Number of links per unit: 80
3. TPUS-Y-T chain cannot connect with UTDT-S knurled-pin type chain, which had been sold until December 2004.
4. Plastic pin type is not available.

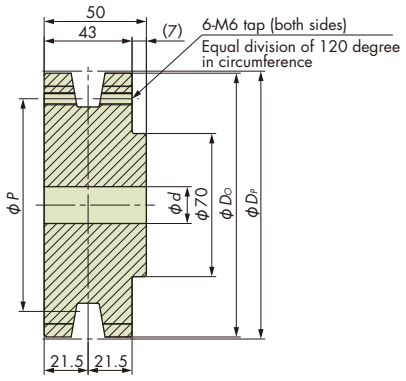
Sprockets for TTP Chain

Steel

Applicable Chain	TTP, TTPH, TTPT

◆Sprockets (With Plain Bore)



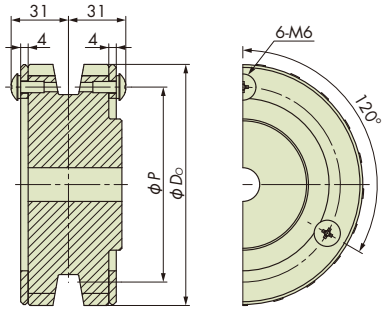


Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter *DP*	Outside diameter *DO*	*P*	Bore shape	Bore diameter *d*		Approx. mass kg	Material
							Plain bore	Max.		
TTP912T	19	9½	117.34	117	92	Round	18	40	2.5	Carbon steel for machine structural use
TTP1012T	21	10½	129.26	129	104				3.2	
TTP1112T	23	11½	141.22	141	116				3.7	
TTP1212T	25	12½	153.20	153	128				4.4	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. The teeth of all sprockets table above have not been hardened.

◆Guide Rings





Tsubaki model no.	Applicable sprocket Tsubaki model no.	Outside diameter *DO*	Pitch diameter *P*	Approx. mass kg
TT912G	TTP912T TT912T	116	92	0.17
TT1012G	TTP1012T TT1012T	128	104	0.19
TT1112G	TTP1112T TT1112T	140	116	0.21
TT1212G	TTP1212T TT1212T	152	128	0.23

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. A set consists of two guide rings and six bolts.
3. Common with TT guide rings.
4. Guide rings are shipped separately with sprockets.

Model Numbering

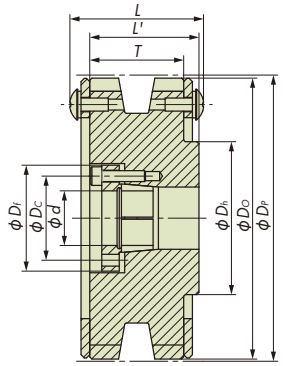
◆Guide Rings

Chain type	Applicable sprocket teeth	Guide ring
TT	**1012**	**G**

G: guide ring

Note: Do not leave space between letters and symbols.

◆Sprockets (Lock Series)



Tsubaki model no.	Actual teeth	Effective teeth	Dimensions						Applicable bore diameter *d*						
			Pitch diameter *DP*	Outside diameter *DO*	Tooth width *T*	Hub diameter *Dh*	*L*	*L'*	15	20	25	30	35	40	45
TTP912T-S24□□	19	9½	117.34	117	43	70	62	50	●	●					
TTP912T-S34□□											●				
TTP912T-S44□□												●	●		
TTP912T-S55□□														●	●
TTP1012T-S24□□	21	10½	129.26	129					●	●					
TTP1012T-S34□□											●				
TTP1012T-S44□□												●	●		
TTP1012T-S55□□														●	●
TTP1112T-S24□□	23	11½	141.22	141					●	●					
TTP1112T-S34□□											●				
TTP1112T-S44□□												●	●		
TTP1112T-S55□□														●	●
TTP1212T-S24□□	25	12½	153.20	153					●	●					
TTP1212T-S34□□											●				
TTP1212T-S44□□												●	●		
TTP1212T-S55□□														●	●

Note: Guide rings are shipped separately with sprockets.

■ Lock Sleeve Dimensions

Sleeve no.	*Df*	*DC*	Bolt size M x L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	8.3
S4	56.0	46.0	M5×20	8.3
S5	66.0	56.0	M5×22	8.3

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4			S5			
Bore diameter *d*	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45
Sprocket type	Max. allowable transfer torque N·m																
TTP912T	139	149	158	167	177	186	205	167	174	195	279	298	325	442	465	488	523
TTP1012T																	
TTP1112T																	
TTP1212T																	

Model Numbering

◆Sprockets

Chain type	Effective teeth		Sleeve no.	Number of tightening bolts	Bore diameter
TTP	**1012T**	**-**	**S2** Note:2, 3	**4** Note: 3	**18** Note: 3

TTP: TTP, TTPH, TTPT
(All chain types are to be specified "TTP")

Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions above for details.
3. Enter only for Lock series.

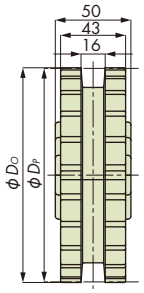
Sprockets for TTP Chains

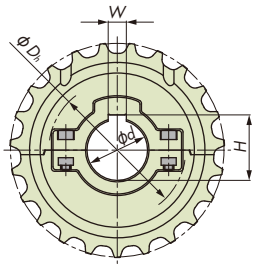
Engineering Plastic

Applicable Chain	TTP, TTPH, TTPT, WT3835-K, WT3835-T

◆Split Sprockets (Domestic Products)





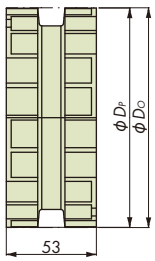


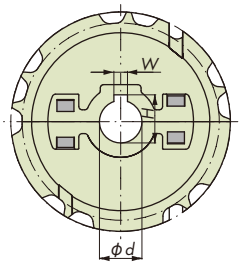
Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter *DP*	Outside diameter *DO*	Bore shape	Bore diameter *d*	Keyway *W*	Keyway *H*	Hub diameter *Dh*	Approx. mass kg	Material: Body	Material: Bolt/Nut	Bolt tightening torque N·m{kgf·m}
TTP-21T25	21	10½	129.2	130.0	Round	ϕ25	8	28.3	90	0.4	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}
TTP-21T30						ϕ30	8	33.3					
TTP-21T35						ϕ35	10	38.3					
TTP-21T40						ϕ40	12	43.3					
TTP-21T45						ϕ45	14	48.8					
TTP-23T25	23	11½	141.2	142.0		ϕ25	8	28.3	90	0.5			
TTP-23T30						ϕ30	8	33.3					
TTP-23T35						ϕ35	10	38.3					
TTP-23T40						ϕ40	12	43.3					
TTP-23T45						ϕ45	14	48.8					
TTP-25T25	25	12½	153.2	154.5		ϕ25	8	28.3	94	0.5			
TTP-25T30						ϕ30	8	33.3					
TTP-25T35						ϕ35	10	38.3					
TTP-25T40						ϕ40	12	43.3					
TTP-25T45						ϕ45	14	48.8					
TTP-25T50						ϕ50	14	53.8					

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Cannot be used for WT3835G-M.
5. Use a cold rolled steel shaft.

◆Split Sprockets (OEM Supplied Products)







Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter *DP*	Outside diameter *DO*	Bore shape	Bore diameter *d*	Keyway *W*	Keyway *H*	Approx. mass kg	Material: Body	Material: Bolt/Nut	Bolt tightening torque N·m{kgf·m}
TP-C12057NT-SPR	21	10½	129.26	129	Round	ϕ25	8	28.3	0.45	Reinforced polyamide (color: black)	Bolt: Stainless steel Nut: Brass + nickel-plated	6{0.61}
TP-C12058NT-SPR						ϕ30	8	33.3	0.44			
TP-C12059NT-SPR						ϕ35	10	38.3	0.42			
TP-C12060NT-SPR						ϕ40	12	43.3	0.42			
TP-C12104NT-SPR	23	11½	141.22	142		ϕ25	8	28.3	0.48			
TP-C12105NT-SPR						ϕ30	8	33.3	0.45			
TP-C12106NT-SPR						ϕ35	10	38.3	0.45			
TP-C12107NT-SPR						ϕ40	12	43.3	0.42			
TP-C12069NT-SPR	25	12½	153.20	154		ϕ25	8	28.3	0.6			
TP-C12070NT-SPR						ϕ30	8	33.3	0.59			
TP-C12071NT-SPR						ϕ35	10	38.3	0.57			
TP-C12072NT-SPR						ϕ40	12	43.3	0.55			

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Cannot be used for WT3835-K, WT3835-T, and WT3835G-M.
5. Use a cold rolled steel shaft.

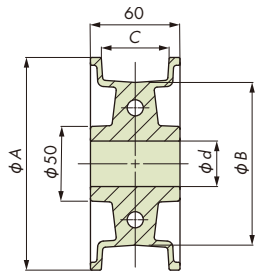
Idler Wheels for TTP Chains

Engineering Plastic

Applicable Chain	TTP, TTPH, TTPT, TPF, TT, TP-OTD, TPS, TTUP, TTUPH, TTU, TPH, TTUPS-H, BTC8H-M, BTM8H-M, TTUPM838H, BTO8-M, WT3835G-M

◆Split Idler Wheels (Domestic Products)



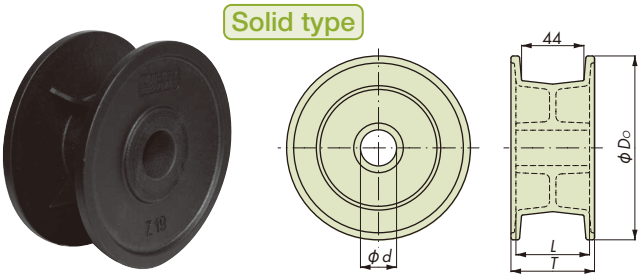


Tsubaki model no.	Sprocket equivalent no. of teeth (actual)	Dimensions A	B	C	d	Approx. mass kg	Material Body	Bolt/Nut	Bolt tightening torque N·m{kgf·m}
TP-IW1221-25	21	129.3	100	45	φ25.3	0.4	Polyacetal (color: green)	Stainless steel	9.8{1}
TP-IW1221-30					φ30.3				
TP-IW1221-40					φ40.3				
TP-IW1223-30	23	141.8	109	43.5	φ30.3	0.4			
TP-IW1223-40					φ40.3				
TP-IW1225-30	25	154.1	125	45	φ30.3	0.5			
TP-IW1225-40					φ40.3				

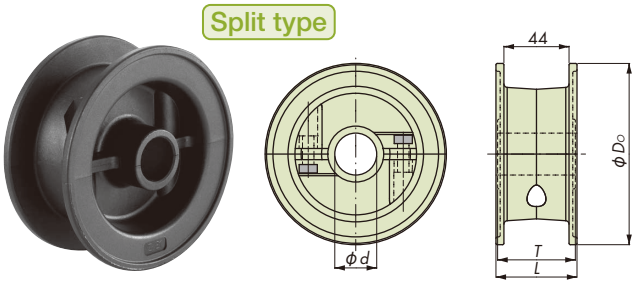
Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the idler wheels, do not mix the halves with halves from other idler wheels.
4. Use a cold rolled steel shaft.

◆Idler Wheels (OEM Supplied Products)

Solid type



Split type



Tsubaki model no.	Sprocket equivalent no. of teeth (actual)	Outside diameter Do	Bore diameter d	Hub length L	Width T	Approx. mass kg	Material	Bolt tightening torque N·m{kgf·m}	Type
TP-C12200BT-IW	21	129.8	φ25	52	58	0.21	Polyamide (color: black)	6{0.61}	Solid
TP-C12201BT-IW			φ30			0.21			
TP-C12203BT-IW			φ40			0.19			
TP-C12212BT-IW	23	142.2	φ25	52	58	0.20			
TP-C12213BT-IW			φ30			0.20			
TP-C12215BT-IW			φ40			0.21			
TP-C12204BT-IW	25	154.7	φ25	52	58	0.23			
TP-C12205BT-IW			φ30			0.23			
TP-C12207BT-IW			φ40			0.25			
TP-C12077BT-IW	21	129.8	φ25	61	58	0.26	Bolt/Nut: Stainless steel Body: Polyamide (color: black)		Split
TP-C12078BT-IW			φ30			0.25			
TP-C12079BT-IW			φ35			0.28			
TP-C12080BT-IW			φ40			0.25			
TP-C121928BT-IW	23	142.2	φ25	61	58	0.29			
TP-C121929BT-IW			φ30			0.27			
TP-C121930BT-IW			φ35			0.30			
TP-C121931BT-IW			φ40			0.27			
TP-C12081BT-IW	25	154.7	φ25	61	58	0.32			
TP-C12082BT-IW			φ30			0.30			
TP-C12083BT-IW			φ35			0.32			
TP-C12084BT-IW			φ40			0.30			

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the idler wheels, do not mix the halves with halves from other idler wheels.
4. The shape of the solid idler wheels with 23 teeth is different from those with other numbers of teeth.
5. Cannot be used for TTUPM838H.
6. Use a cold rolled steel shaft.

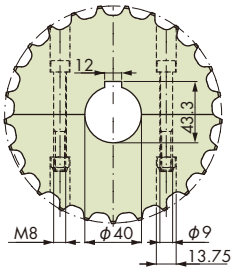
Sprockets & Idler Wheels for TTPDH Chains

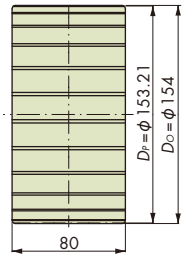
Engineering Plastic

Applicable Chain	TTPDH, TTPDH-LBP, TTPDH-Y

◆Split Sprockets





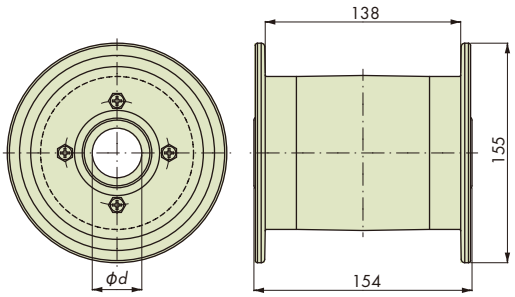


Tsubaki model no.	Actual teeth	Effective teeth	Approx. mass kg	Material			Bolt tightening torque N·m{kgf·m}
				Body	Bolt	Nut	
TP-C12295T-SPR	25	12½	0.97	Polyamide (color: white)	Stainless steel	Brass + nickel-plated	6{0.61}

Note: 1. Tsubaki model no. in boldface is a standard product.
2. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
3. Use a cold rolled steel shaft.

◆Solid Idler Wheels





Tsubaki model no.	Sprocket equivalent no. of teeth (actual)	Bore diameter *d*	Approx. mass kg	Material	
				Body	Bolt
TP-C121646T-IW	25	φ35	0.76	Polyamide (color: black)	Stainless steel

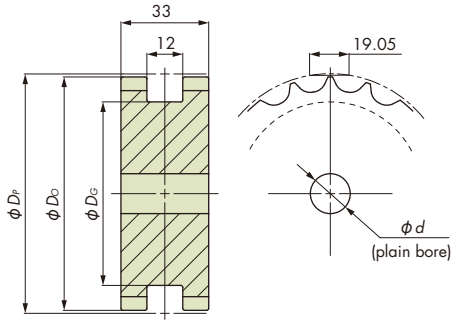
Note: 1. Tsubaki model no. in boldface is a standard product.
2. Use a cold rolled steel shaft.

Sprockets for TTPM Chains

Steel

Applicable Chain	TTPM

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter *DP*	Outside diameter *DO*	Groove diameter *DG*	Bore shape	Bore diameter *d*		Approx. mass kg	Material
						Plain bore	Max.		
TTPM1200T	12	73.6	73	59	Round	15	35	0.9	Carbon steel for machine structural use
TTPM1400T	14	85.6	85	70			40	1.2	
TTPM1500T	15	91.6	92	75				1.4	
TTPM1900T	19	115.7	116	100			50	2.4	
TTPM2100T	21	127.8	128	110				2.9	
TTPM2300T	23	139.9	141	125				3.5	

Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. We also manufacture products with a number of teeth other than those specified above.

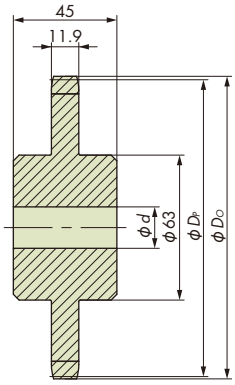
Sprockets for TPF Chains

Steel

Applicable Chain	TPF

◆Sprockets (With Plain Bore)

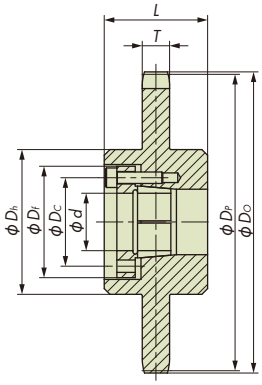




Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx. mass kg	Material
					Plain bore	Max.		
TPF912T	19	9½	117.34	120.0	18	42	1.7	Carbon steel for machine structural use
TPF1012T	21	10½	129.26	131.5			1.9	
TPF1112T	23	11½	141.22	143.5			2.1	
TPF1212T	25	12½	153.20	155.5			2.3	

Note: Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.

◆Sprockets (Lock Series)



Tsubaki model no.	Actual teeth	Effective teeth	Dimensions					Applicable bore diameter d				
			Pitch diameter D_P	Outside diameter D_O	Tooth width T	Hub diameter D_h	L	15	20	25	30	35
TPF912T-S24□□	19	9½	117.34	120.0	11.9	63	45	●	●			
TPF912T-S34□□										●		
TPF912T-S44□□											●	●
TPF1012T-S24□□	21	10½	129.26	131.5				●	●			
TPF1012T-S34□□										●		
TPF1012T-S44□□											●	●
TPF1112T-S24□□	23	11½	141.22	143.5				●	●			
TPF1112T-S34□□										●		
TPF1112T-S44□□											●	●
TPF1212T-S24□□	25	12½	153.20	155.5				●	●			
TPF1212T-S34□□										●		
TPF1212T-S44□□											●	●

■ Lock Sleeve Dimensions

Sleeve no.	D_f	D_C	Bolt size M x L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	8.3
S4	56.0	46.0	M5×20	8.3

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4		
Bore diameter d	15	16	17	18	19	20	22	24	25	28	30	32	35
Sprocket type	Max. allowable transfer torque N·m												
TPF912T	105	112	119	126	133	139	153	167	174	195	279	298	325
TPF1012T													
TPF1112T													
TPF1212T													

Model Numbering

◆Sprockets

Chain type	Effective teeth		Sleeve no.	Number of tightening bolts	Bore diameter
TPF	**1012T**	**-**	**S2** Note: 2, 3	**4** Note: 3	**18** Note: 3

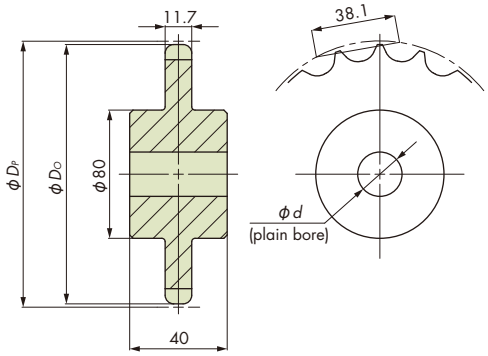
Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions above for details.
3. Enter only for Lock series.

Sprockets for TP-OTD Chains

Steel

Applicable Chain	TP-OTD

◆Solid Sprockets



Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter *DP*	Outside diameter *DO*	Bore diameter *d*		Approx. mass kg	Material
					Plain bore	Max.		
TP-OTD1012T	21	10½	129.2	129	20	40	2.1	Carbon steel for machine structural use
TP-OTD1112T	23	11½	141.2	141			2.3	

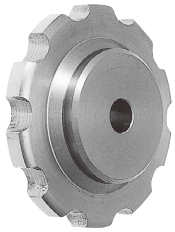
Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. We also manufacture products with a number of teeth other than those specified above.

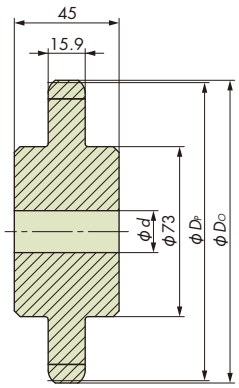
Sprockets for TPS Chains

Steel

Applicable Chain	TPS, TPH, TTUP, TTUPH, TPU, TPU-LH, TPUT-LH, TPUH-BO, TTUP-M, TTUPT-M (some models can also be used with TPM or TPUM), TPU-USR, TP-880TAB, TTUP-LLPC

◆Sprockets (With Plain Bore)





Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx. mass kg	Material
					Plain bore	Max.		
TTUP900T	–	9	111.40	111	18	47	2.0	Carbon steel for machine structural use
TTUP912T	19	9½	117.34	117			2.1	
TTUP1000T	–	10	123.29	123			2.2	
TTUP1012T	21	10½	129.26	130			2.4	
TTUP1100T	–	11	135.23	135			2.6	
TTUP1112T	23	11½	141.22	142			2.8	
TTUP1200T	–	12	147.21	147			3.0	
TTUP1212T	25	12½	153.20	154			3.2	
TTUP1300T	–	13	159.20	159			3.4	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Only TTUP1012T, TTUP1112T and TTUP1212T can be used with TPM and TPUM chains. Contact a Tsubaki representative for the other number of teeth and sprockets made of engineering plastic.

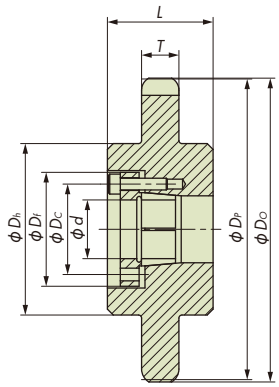
Model Numbering

◆Sprockets

Chain type	Effective teeth		Sleeve no.	Number of tightening bolts	Bore diameter
TTUP	**1012T**	**-**	**S2** Note: 2, 3	**4** Note: 3	**18** Note: 3

Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions for details.
3. Enter only for Lock series.

◆Sprockets (Lock Series)



■ Lock Sleeve Dimensions

Sleeve no.	D_f	D_C	Bolt size M x L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	8.3
S4	56.0	46.0	M5×20	8.3
S5	66.0	56.0	M5×22	8.3

Tsubaki model no.	Actual teeth	Effective teeth	Dimensions					Applicable bore diameter *d*						
			Pitch diameter D_P	Outside diameter D_O	Tooth width *T*	Hub diameter D_h	*L*	15	20	25	30	35	40	45
TTUP900T-S24□□	–	9	111.40	111	15.9	73	45	●	●					
TTUP900T-S34□□										●				
TTUP900T-S44□□											●	●		
TTUP900T-S55□□													●	●
TTUP912T-S24□□	19	9½	117.34	117				●	●					
TTUP912T-S34□□										●				
TTUP912T-S44□□											●	●		
TTUP912T-S55□□													●	●
TTUP1000T-S24□□	–	10	123.29	123				●	●					
TTUP1000T-S34□□										●				
TTUP1000T-S44□□											●	●		
TTUP1000T-S55□□													●	●
TTUP1012T-S24□□	21	10½	129.26	130				●	●					
TTUP1012T-S34□□										●				
TTUP1012T-S44□□											●	●		
TTUP1012T-S55□□													●	●
TTUP1100T-S24□□	–	11	135.23	135				●	●					
TTUP1100T-S34□□										●				
TTUP1100T-S44□□											●	●		
TTUP1100T-S55□□													●	●
TTUP1112T-S24□□	23	11½	141.22	142				●	●					
TTUP1112T-S34□□										●				
TTUP1112T-S44□□											●	●		
TTUP1112T-S55□□													●	●
TTUP1200T-S24□□	–	12	147.21	147				●	●					
TTUP1200T-S34□□										●				
TTUP1200T-S44□□											●	●		
TTUP1200T-S55□□													●	●
TTUP1212T-S24□□	25	12½	153.20	154				●	●					
TTUP1212T-S34□□										●				
TTUP1212T-S44□□											●	●		
TTUP1212T-S55□□													●	●
TTUP1300T-S24□□	–	13	159.20	159				●	●					
TTUP1300T-S34□□										●				
TTUP1300T-S44□□											●	●		
TTUP1300T-S55□□													●	●

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4			S5			
Bore diameter *d*	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45
Sprocket type	Max. allowable transfer torque N·m																
TTUP900T ≀ TTUP1300T	139	149	158	167	177	186	205	167	174	195	279	298	325	442	465	488	523

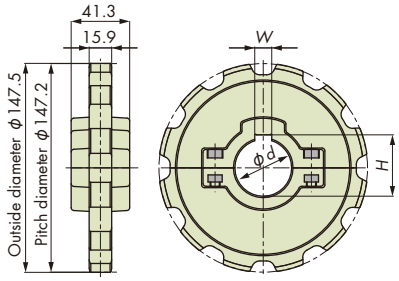
Sprockets & Idler Sprockets for TPS Chains

Engineering Plastic

Applicable Chain	TPS, TPH, TTUP, TTUP-LLPC, TTUPH, TPU, TPU-LH, TPUT-LH, TPU-USR, TPUH-BO, TTUP-M, TTUPT-M, TP-880TAB

◆Split Sprockets (Domestic Products)



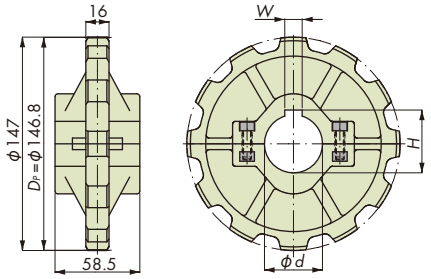


Tsubaki model no.	Teeth	Bore shape	Bore diameter *d*	Keyway		Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
				W	*H*		Body	Bolt/Nut	
TTUP-12T25	12	Round	φ25	8	28.3	0.4	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}
TTUP-12T30			φ30	8	33.3				
TTUP-12T35			φ35	10	38.3				
TTUP-12T40			φ40	12	43.3				
TTUP-12T45			φ45	14	48.8				

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Cannot be used for TPM and TPUM.
5. Use a cold rolled steel shaft.

◆Split Sprockets (OEM Supplied Products)

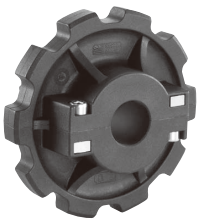


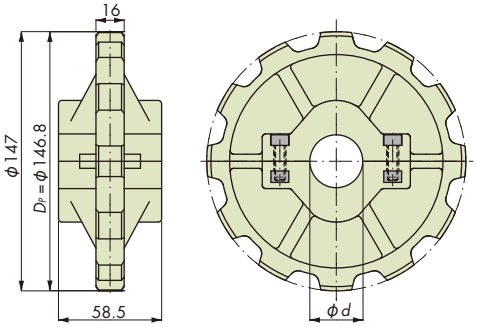


Tsubaki model no.	Teeth	Bore shape	Bore diameter *d*	Keyway		Approx. mass kg	Material			Bolt tightening torque N·m{kgf·m}
				W	*H*		Body	Bolt	Nut	
TP-C12400T-SPR	12	Round	φ25	8	28.3	0.38	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	6{0.61}
TP-C12711T-SPR			φ30	8	33.3	0.37				
TP-C12401T-SPR			φ35	10	38.3	0.35				
TP-C12402T-SPR			φ40	12	43.3	0.35				

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. Cannot be used for TPM and TPUM.
4. Use a cold rolled steel shaft.

◆Split Idler Sprockets





Tsubaki model no.	Teeth	Bore shape	Bore diameter *d*	Approx. mass kg	Material			Bolt tightening torque N·m{kgf·m}
					Body	Bolt	Nut	
TP-C12404T-IW	12	Round	φ30	0.31	Polyamide (color: black)	Stainless steel	Brass + nickel-plated	6{0.61}

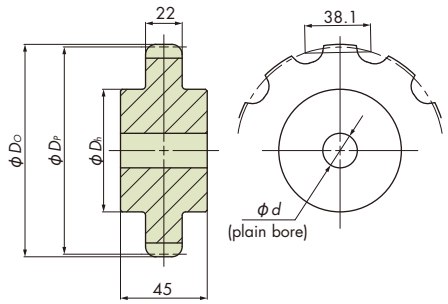
Note: 1. Tsubaki model no. in boldface is a standard product.
2. Operating temperature range: –20°C to 80°C
3. Cannot be used for TPM and TPUM.
4. Use a cold rolled steel shaft.

Sprockets for TPSS Chains

Steel

Applicable Chain	TPSS, TTUPS, TPUS, TPUS-Y-T, TPUS-Y-LAP, TPUS-LBP

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Hub diameter D_h	Bore shape	Bore diameter d		Approx. mass kg	Material
						Plain bore	Max.		
TPSS900T	9	111.40	111	63	Round	φ20	φ35	1.9	Carbon steel for machine structural use
TPSS1000T	10	123.29	124	71			φ40	2.3	
TPSS1100T	11	135.23	136					2.7	
TPSS1200T	12	147.21	149					3.1	
TPSS1300T	13	159.20	161					3.6	
TPSS1400T	14	171.22	173					4.1	
TPSS1500T	15	183.25	186					4.6	

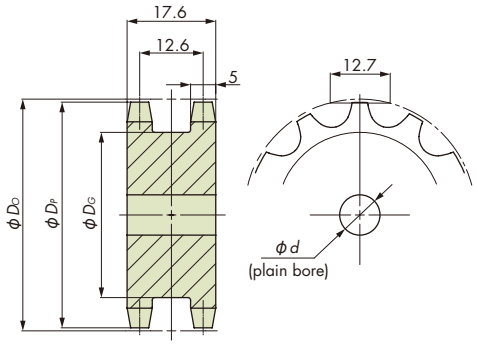
Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. We also manufacture products with a number of teeth other than those specified above.

Sprockets for TTUPM-P Chains

Engineering Plastic

Applicable Chain	TTUPM-P, TTUPM-PC

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Groove diameter D_G	Bore shape	Bore diameter d		Approx. mass kg	Material
						Plain bore	Max.		
TTUPM1100T	11	45.1	45.0	32	Round	φ8	φ20	0.03	UHMW-PE (color: green)
TTUPM1300T	13	53.1	53.3	40			φ25	0.04	
TTUPM1500T	15	61.1	61.4	48			φ30	0.05	

Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. Operating temperature range is –20°C to 60°C. Use stainless steel sprockets (made-to-order product) when operating temperatures exceed 60°C.

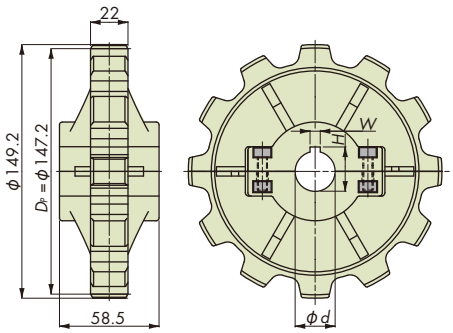
Sprockets & Idler Sprockets for TPUS Chains

Engineering Plastic

Applicable Chain	TPUS, TPUS-Y-T, TPUS-LBP, TPUS-Y-LAP, TPSS, TTUPS

◆Split Sprockets



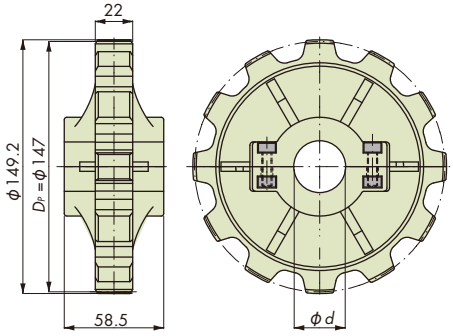


Tsubaki model no.	Teeth	Bore shape	Bore diameter *d*	Keyway		Approx. mass kg	Material			Bolt tightening torque N·m{kgf·m}
				W	*H*		Body	Bolt	Nut	
TP-C12115T-SPR	12	Round	ϕ30	8	33.3	0.37	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	6{0.61}
TP-C12117T-SPR			ϕ40	12	43.3	0.34				

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. Use a cold rolled steel shaft.

◆Split Idler Sprockets





Tsubaki model no.	Teeth	Bore shape	Bore diameter *d*	Approx. mass kg	Material			Bolt tightening torque N·m{kgf·m}
					Body	Bolt	Nut	
TP-C12120T-IW	12	Round	ϕ30	0.33	Polyamide (color: black)	Stainless steel	Brass + nickel-plated	6{0.61}
TP-C12122T-IW			ϕ40	0.30				

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. Use a cold rolled steel shaft.

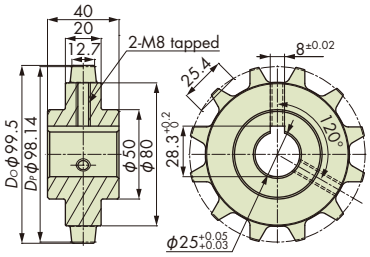
Sprockets for TTUPS-H Chains

Steel

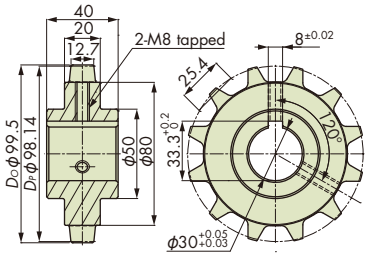
Applicable Chain	TTUPS-H, BTC8H-M, BTM8H-M

◆Solid Sprockets

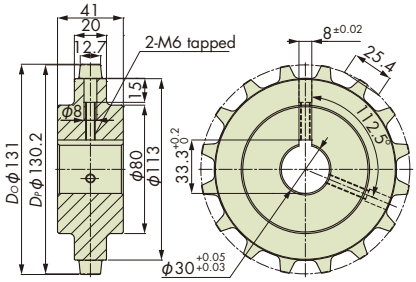
BT8H-12T25-CS



BT8H-12T30-CS



BT8H-16T30-CS

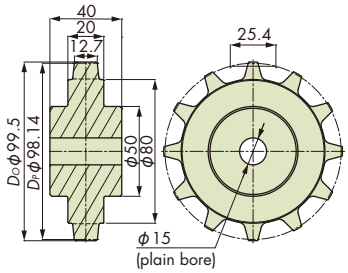


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d	Applicable shaft	Approx. mass kg	Material
BT8H-12T25-CS	12	98.14	99.5	Round	ϕ25	Round 25 cold rolled steel shaft	1.1	Carbon steel for machine structural use
BT8H-12T30-CS					ϕ30	Round 30 cold rolled steel shaft	1.0	
BT8H-16T30-CS	16	130.2	131		ϕ30	Round 30 cold rolled steel shaft	2.3	

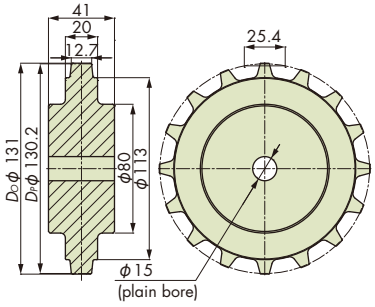
Note: 1. Tsubaki model no. in boldface are standard products.
2. The teeth of all sprockets table above have not been hardened.
3. Contact a Tsubaki representative for the number of teeth and materials other than those described above.
4. Set screws are not included.
5. Cannot be used for WT2505 (including M and G-M), WT2506, and BTM8H (wide type).

◆Solid Sprockets (With Plain Bore)

BT8H-12T-CS



BT8H-16T-CS



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore shape	Bore diameter d		Approx. mass kg	Material
					Plain bore	Max.		
BT8H-12T-CS	12	98.14	99.5	Round	ϕ15	ϕ30	1.2	Carbon steel for machine structural use
BT8H-16T-CS	16	130.2	131		ϕ15	ϕ50	2.5	

Note: 1. Tsubaki model no. in boldface are standard products.
2. The teeth of all sprockets table above have not been hardened.
3. Contact a Tsubaki representative for the number of teeth and materials other than those described above.
4. Set screws are not included.
5. Cannot be used for WT2505 (including M and G-M), WT2506, and BTM8H (wide type).

Model Numbering

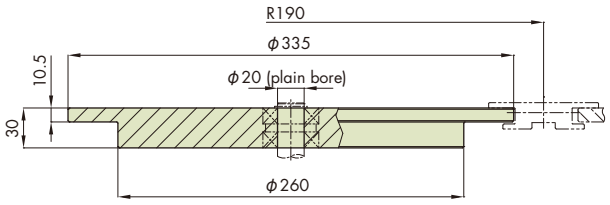
Chain type		Teeth		Type		Material mark
BT8H	-	**12T**		**30**	-	**CS**
				No code: Plain bore 25: ϕ25 30: ϕ30		CS: Carbon steel

Note: Do not leave space between letters and symbols.

Corner Disc for TPU-USR Chains

Engineering Plastic

Applicable Chain	TPU-USR



Tsubaki model no.	Material	Material grade	Color	Remark
TPU826USR-CD-R190	UHMW-PE	10-100	White	Carry-way Return-way

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 60°C
3. Plain bore product. Available for bearing-assembled product upon request.

Sprockets & Corner Discs for TPUH-BO Chains

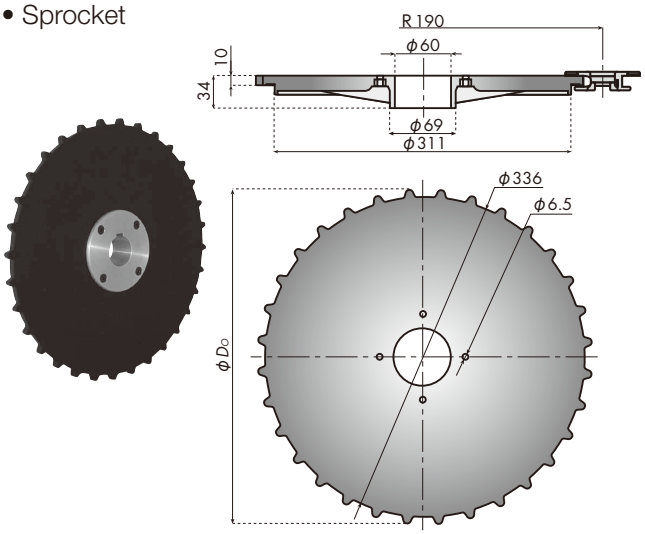
Engineering Plastic

Applicable Chain	TPUH-BO

◆Sprockets for Horizontal Drive

* Please use the main body and hub together.

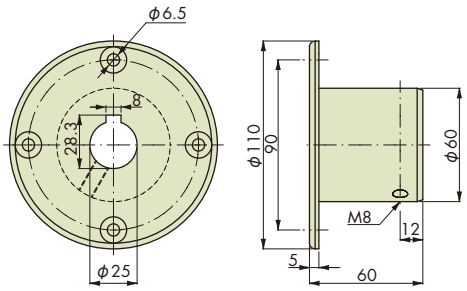
• Sprocket



Tsubaki model no.	Teeth	Outside diameter *Do*	Material
TP-C12781LT-SPR	32	352	Polyamide (color: black)

Note: 1. Tsubaki model no. in boldface is a standard product.
2. For applications other than horizontal bend drive, use sprockets for TPS. Refer to page 259, 260 and 261 for the list of products.
3. Do not use to convey unstable containers. They may wobble or tip over during conveyance.
4. Use in combination with hub, TP-C12773T-HB.

• Hub

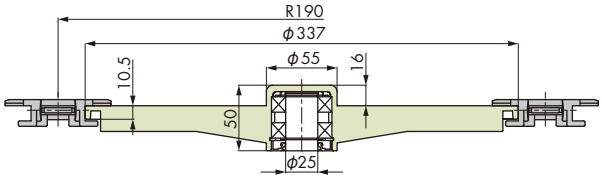


Tsubaki model no.	Material
TP-C12773T-HB	Aluminum

Note: 1. Tsubaki model no. in boldface is a standard product.
2. Use in combination TP-C12781LT-SPR.
3. Four sets of M6 bolts and nuts (stainless steel) are included.
4. Contact a Tsubaki representative if a bore with a different diameter is required.

◆Corner Discs

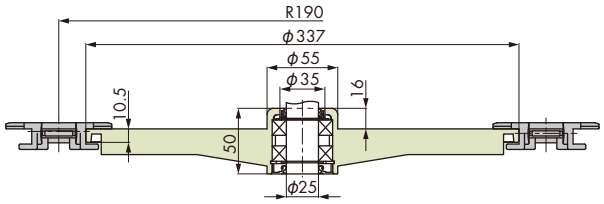
• For carry-way



Tsubaki model no.
TP-C12779T-CD

Note: 1. Tsubaki model no. in boldface is a standard product.
2. Disc: Polyamide (color: black)
3. Bearing: Type 6005-2RS (25 x 47 x 12)
4. Seal ring: NBR
5. Retaining ring: ϕ25 mm (DIN 471)
6. Approx. mass: 0.98 kg/disc
7. Chain sideflex radius R: 190 mm
8. Operating temperature range: –20°C to 60°C
9. Not recommended for conveying unstable containers.
10. The only difference between the corner disc for return-way and carry-way is whether the shaft can extend through it or not.
11. Bearings and seal-ring seals are packaged separately and shipped in the same container as the disc unit.

• For return-way



Tsubaki model no.
TP-C12777T-CD

Note: 1. Tsubaki model no. in boldface is a standard product.
2. Disc: Polyamide (color: black)
3. Bearing: Type 6005-2RS (25 x 47 x 12)
4. Seal ring: NBR
5. Retaining ring: ϕ25 mm (DIN 471)
6. Approx. mass: 0.98 kg/disc
7. Chain sideflex radius R: 190 mm
8. Operating temperature range: –20°C to 60°C
9. Not recommended for conveying unstable containers.
10. The only difference between the corner disc for return-way and carry-way is whether the shaft can extend through it or not.
11. Bearings and seal-ring seals are packaged separately and shipped in the same container as the disc unit.

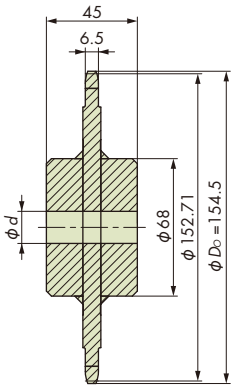
Sprockets for TPUSR Chains

Steel

Applicable Chain	TPUSR550-T, TPUSR826-T

◆Sprockets (With Plain Bore)

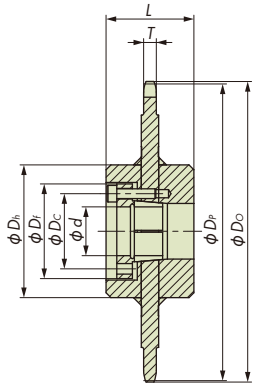




Tsubaki model no.	Teeth	Pitch diameter D_P	Bore diameter		Approx mass kg	Material
			Plain bore	Max.		
TPUSR1500T	15	152.71	15.9	45	2.0	Carbon steel for machine structural use (teeth) Rolled steel for general structure (hub)
TPUSR1500T-SS						Stainless steel

Note: 1. Tsubaki model no. in boldface are standard products. (only for plain bore types)
2. Contact a Tsubaki representative for the number of teeth and materials other than those described above.

◆Sprockets (Lock Series)



■ Lock Sleeve Dimensions

Sleeve no.	D_f	D_C	Bolt size M x L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	8.3
S4	56.0	46.0	M5×20	8.3

Tsubaki model no.	Actual teeth	Dimensions					Applicable bore diameter d				
		Pitch diameter D_P	Outside diameter D_O	Tooth width T	Hub diameter D_h	L	15	20	25	30	35
TPUSR1500T-S24□□	15	152.71	154.5	6.5	68	45	●	●			
TPUSR1500T-S34□□									●		
TPUSR1500T-S44□□										●	●

Note: Contact a Tsubaki representative for the applicable bore diameters other than those described above.

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4		
Bore diameter d	15	16	17	18	19	20	22	24	25	28	30	32	35
Sprocket type	Max. allowable transfer torque N·m												
TPUSR1500T	139	149	158	167	177	186	205	167	174	195	279	298	325

Note: Only carbon-steel-made lock sleeves are available.

Model Numbering

◆Sprockets

Chain type	Effective teeth		Sleeve no.	Number of tightening bolts	Bore diameter
TPUSR	**1500T**	**-**	**S2** Note: 2, 3	**4** Note: 3	**18** Note: 3

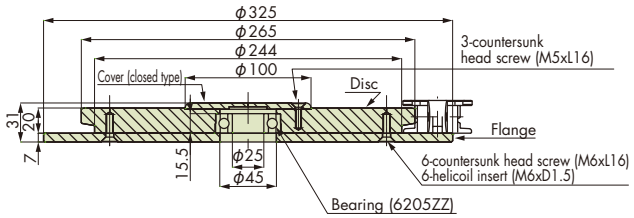
Note: 1. Do not leave space between letters and symbols.
2. Refer the lock sleeve dimensions above for details.
3. Enter only for Lock series.

Corner Discs for TPUSR Chains

Engineering Plastic

Applicable Chain TPUSR550

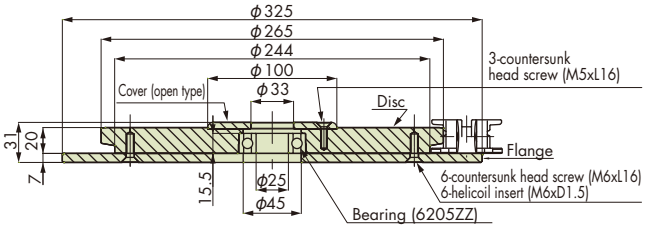
• For carry-way



Tsubaki model no.
TPUSR550-CD-R150C

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: white)
3. Flange: UHMW-PE (color: white)
4. Cover: UHMW-PE (color: white)
5. Countersunk head screw: Stainless steel
6. Approx. mass: 1.0 kg/disc
7. Chain sideflex radius R = 150mm
8. Contact a Tsubaki representative for dimensions, bearings and materials other than those described above.
9. Operating temperature range: –20°C to 60°C
10. Recommended to use under dry conditions. Also available for the product with bearings made of stainless steel suitable for wet conditions.

• For return-way

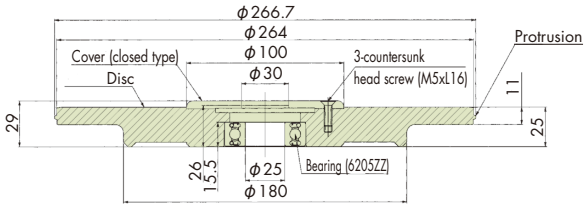


Tsubaki model no.
TPUSR550-CD-R150R

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: white)
3. Flange: UHMW-PE (color: white)
4. Cover: UHMW-PE (color: white)
5. Countersunk head screw: Stainless steel
6. Approx. mass: 1.0kg/disc
7. Chain sideflex radius R = 150mm
8. Contact a Tsubaki representative for dimensions, bearings and materials other than those described above.
9. Operating temperature range: –20°C to 60°C
10. Recommended to use under dry conditions. Also available for products with bearings made of stainless steel suitable for wet conditions.

Applicable Chain TPUSR826

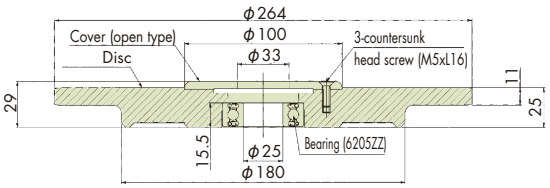
• For carry-way



Tsubaki model no.
TPUSR826-CD-R150C

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: green)
3. Cover: UHMW-PE (color: green)
4. Countersunk head screw: Stainless steel
5. Approx. mass: 1.0 kg/disc
6. Chain sideflex radius R = 150mm
7. Contact a Tsubaki representative for dimensions, bearings and materials other than those described above.
8. Operating temperature range: –20°C to 60°C
9. Recommended to use under dry conditions. Also available for products with bearings made of stainless steel suitable for wet conditions.

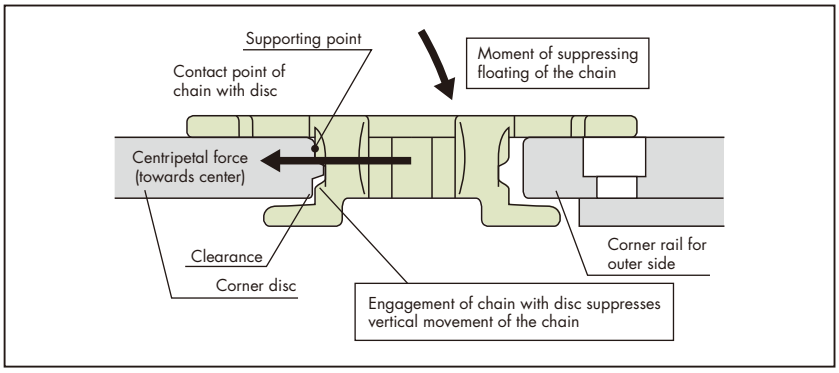
• For return-way



Tsubaki model no.
TPUSR826-CD-R150R

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: green)
3. Cover: UHMW-PE (color: green)
4. Countersunk head screw: Stainless steel
5. Approx. mass: 1.0 kg/disc
6. Chain sideflex radius R = 150mm
7. Contact a Tsubaki representative for dimensions, bearings and materials other than those described above.
8. Operating temperature range: –20°C to 60°C
9. Recommended to use under dry conditions. Also available for products with bearings made of stainless steel suitable for wet conditions.

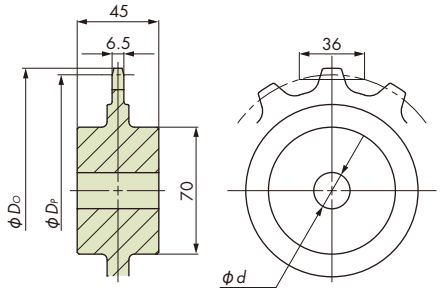
◆Float-preventive Mechanism



Sprockets, Idler Wheels, Turn Discs for TP-UB36 Chains

Applicable Chain	TP-UB36

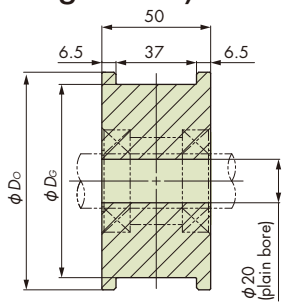
◆Solid Sprockets (Steel)



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx. mass kg	Material
				Plain bore	Max.		
TP-UB1100T	11	127.8	135	ϕ20	ϕ40	1.8	Carbon steel for machine structural use
TP-UB1200T	12	139.1	147			2.0	
TP-UB1300T	13	150.4	159			2.5	

Note: Tsubaki model no. in normal face are made-to-order products.

◆Solid Idler Wheels (Special Engineering Plastic)

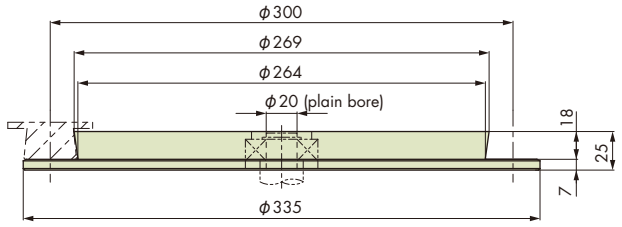


Tsubaki model no.	Equivalent no. of teeth	Outside diameter D_O	Groove diameter D_G	Approx. mass kg	Material
TP-IW36UB1100T	11	112	100	0.4	UHMW-PE (color: white)
TP-IW36UB1200T	12	124	112	0.5	
TP-IW36UB1300T	13	136	124	0.6	

Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. Operating temperature range: –20°C to 60°C

◆Turn Discs (Machined Type)

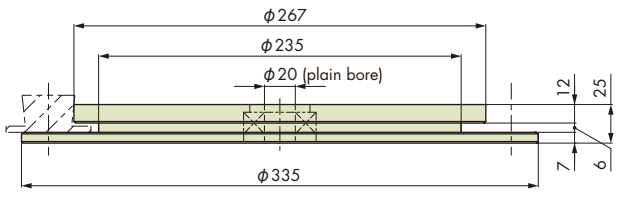
• For carry-way



Tsubaki model no.	Material	Material grade	Color
PR-TP-UB36TW-D	UHMW-PE	10-100	White

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Available for bearing-assembled product upon request.
3. Operating temperature range: –20°C to 60°C

• For return-way



Tsubaki model no.	Material	Material grade	Color
PR-TP-UB36TW-R	UHMW-PE	10-100	White

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Available for bearing-assembled product upon request.
3. Operating temperature range: –20°C to 60°C

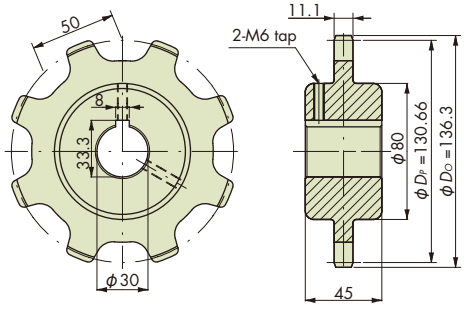
Sprockets & Idler Sprockets for TPUN Chains

Engineering Plastic

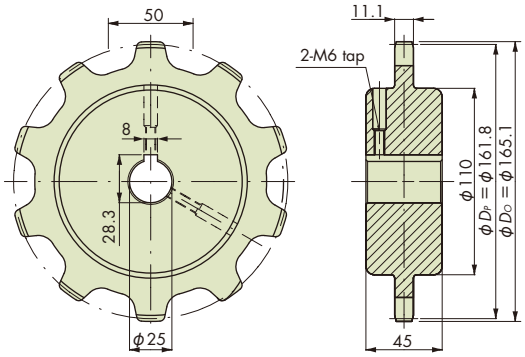
Applicable Chain	TPUN555, TPUN550-LH, TPUN535-LH, TP-50UNS, TP-50UNS-D76

◆Solid Sprockets

TP-C213959T-SPR

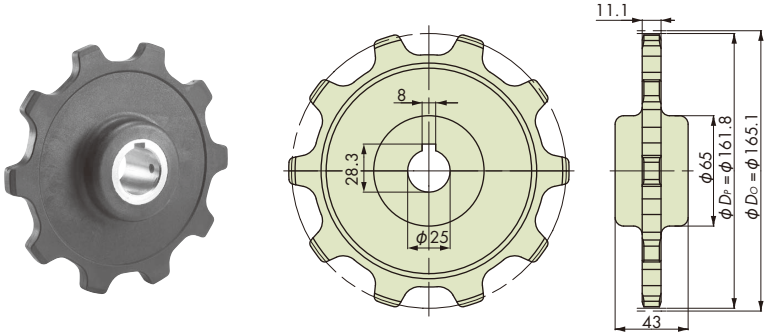


TP-C213961T-SPR



Tsubaki model no.	Teeth	Approx. mass kg	Material
TP-C213959T-SPR	8	0.29	Polyamide (color: white)
TP-C213961T-SPR	10	0.44	

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. The split type sprockets (10 teeth: TP-C12746T-SPR, 8 teeth: TP-C12732T-SPR) were discontinued as of October 2012.
4. Use a cold rolled steel shaft.

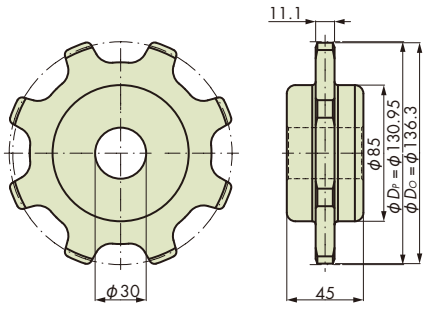


Tsubaki model no.	Teeth	Approx. mass kg	Material	
			Body	Shaft
TP-C12721T-SPR	10	0.5	Reinforced polyamide (color: black)	Brass

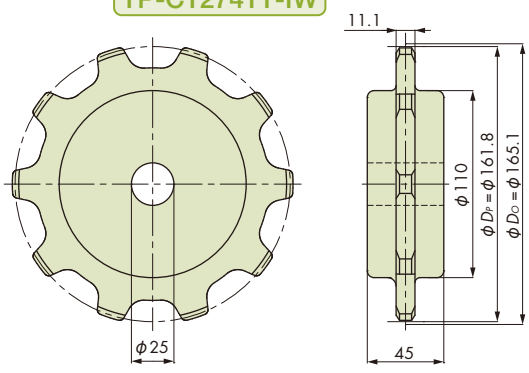
Note: 1. Tsubaki model no. in boldface is a standard product.
2. Operating temperature range: –20°C to 80°C
3. Use a cold rolled steel shaft.

◆Solid Idler Sprockets

TP-C12737T-IW



TP-C12741T-IW



Tsubaki model no.	Teeth	Approx. mass kg	Material
TP-C12737T-IW	8	0.29	Polyamide (color: white)
TP-C12741T-IW	10	0.57	

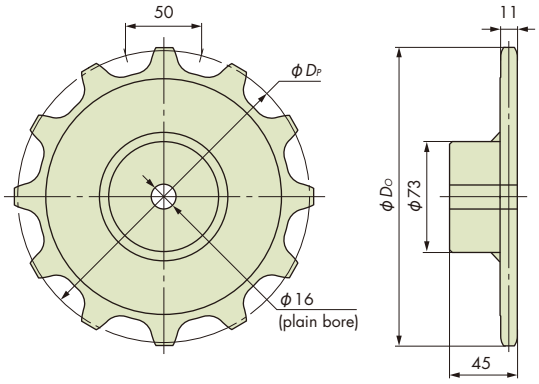
Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. Use a cold rolled steel shaft.

Sprockets for TPUN Chains

Steel

Applicable Chain	TPUN555, TPUN550-LH, TPUN535-LH, TP-50UNS, TP-50UNS-D76

◆Sprockets (With Plain Bore)



Tsubaki model no.	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Approx. mass kg	Material	Construction
TPUN555-800TQ	8	130.6	134	1.9	Carbon steel for machine structural use (teeth/hub)	Machined
TPUN555-1000TQ	10	161.8	163	2.7		
TPUN555-1200TQ	12	193.2	198	3.1	Carbon steel for machine structural use (teeth) Rolled steel for general structure (hub)	Welded

Note: 1. Only products with a plain bore are standard.
2. Contact a Tsubaki representative for the number of teeth and materials other than those described above.
3. Teeth of all sprockets above have been hardened.

Model Numbering

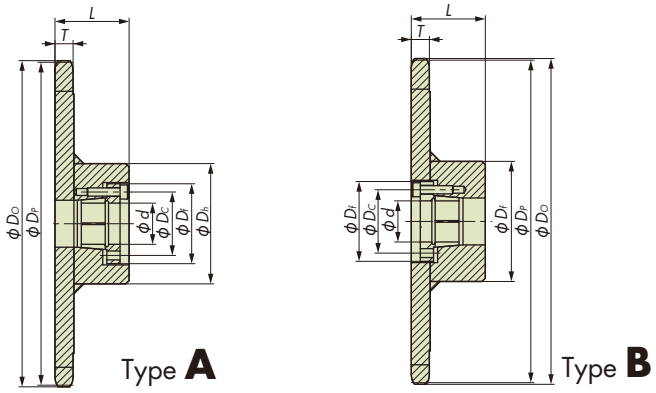
◆Sprockets (With Plain Bore)

Chain type	Effective teeth	Teeth hardening
TPUN555 -	**1000T**	**Q**

1000T=10 teeth

Note: Do not leave space between letters and symbols.

◆Sprockets (Lock Series)



■ Lock Sleeve Dimensions

Sleeve no.	*Df*	*Dc*	Bolt size M x L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	8.3
S4	56.0	46.0	M5×20	8.3
S5	66.0	56.0	M5×22	8.3

Tsubaki model no.	Actual teeth	Dimensions					Applicable bore diameter *d*						
		Pitch diameter *Dp*	Outside diameter *Do*	Tooth width *T*	Hub diameter *Dh*	*L*	15	20	25	30	35	40	45
TPUN555-800TQ-S24□□	8	130.6	134	8.8	73	45	●	●					
TPUN555-800TQ-S34□□									●				
TPUN555-800TQ-S44□□										●	●		
TPUN555-800TQ-S55□□												●	●
TPUN555-1000TQ-S25□□	10	161.8	163				●	●					
TPUN555-1000TQ-S34□□									●				
TPUN555-1000TQ-S44□□										●	●		
TPUN555-1000TQ-S55□□												●	●
TPUN555-1200TQ-S25□□	12	193.2	198				●	●					
TPUN555-1200TQ-S34□□									●				
TPUN555-1200TQ-S44□□										●	●		
TPUN555-1200TQ-S55□□												●	●

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4			S5			
Bore diameter *d*	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45
Sprocket type	Max. allowable transfer torque N·m																
TPUN555-800TQ	139	149	158	167	177	186	205	167	174	195	279	298	325	442	465	586	628
TPUN555-1000TQ	174	186	198	209	221	232	256										
TPUN555-1200TQ																	

Model Numbering

◆Sprockets (Lock Sprockets)

Chain type	Effective teeth	Teeth hardening		Sleeve no.	Number of tightening bolts	Bore diameter	Mounting position of lock sleeve
TPUN555	**-** **1000T**	**Q**	**-**	**S2** Note: 2	**4**	**18**	**A**
	1000T=10 teeth						A: Mount to hub B: Mount to sprocket

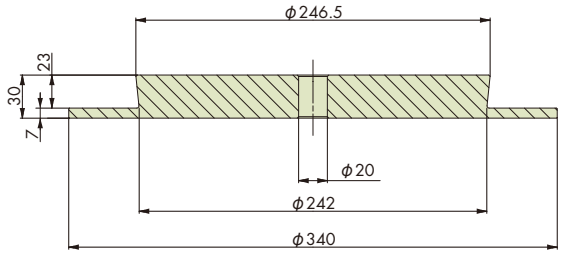
Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions above for details.

Corner Discs for TPUN Chains

Engineering Plastic

Applicable Chain	TPUN555, TPUN550-LH, TPUN535-LH, TP-50UNS, TP-50UNS-D76 Note: It cannot be used for the return-way.

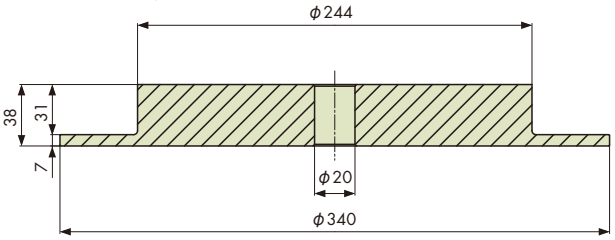
• Carry-way



Tsubaki model no.
TPUN555-CD-R150C

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: white)
3. Approx. mass: 2.1 kg/disc
4. Chain sideflex radius R = 150mm
5. Contact a Tsubaki representative if dimensions other than shown in the drawing above or bearing-including type are required.
6. Operating temperature range: –20°C to 60°C
7. As of September 2010, the thickness of the carry-way corner disc was changed to 30 mm (previously 38 mm).

• Return-way



Tsubaki model no.
TPUN555-CD-R150R

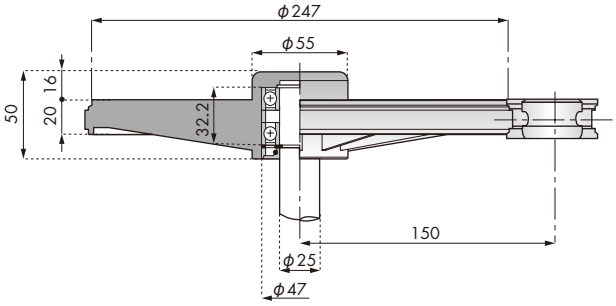
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Disc: UHMW-PE (color: white)
3. Approx. mass: 2.1 kg/disc
4. Chain sideflex radius R = 150mm
5. Contact a Tsubaki representative if dimensions other than shown in the drawing above or bearing-including type are required.
6. Operating temperature range: –20°C to 60°C

Corner Discs for TPUN-LH Chains

Engineering Plastic

Applicable Chain	TPUN-LH

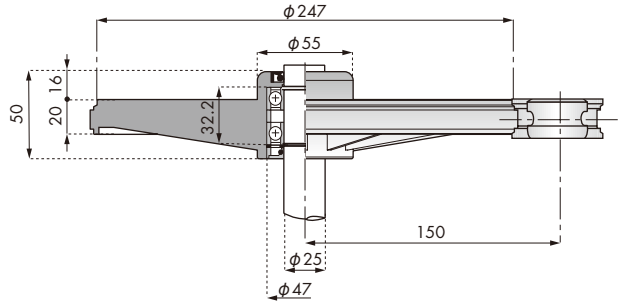
• Carry-way



Tsubaki model no.	Material		Chain minimum sideflex radius
	Body	Shaft bearing	
TP-C12723T-CD	Reinforced polyamide (color: black)	Steel	R150

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Bearings and seal-ring seals are packaged separately and shipped in the same container as the disc unit.
3. Operating temperature range: –20°C to 60°C

• Return-way



Tsubaki model no.	Material		Chain minimum sideflex radius
	Body	Shaft bearing	
TP-C12725T-CD	Reinforced polyamide (color: black)	Steel	R150

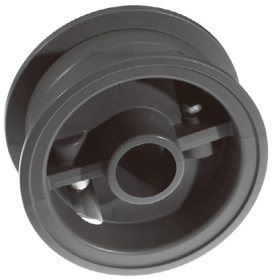
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. The only difference between the corner disc for return-way and carry-way is whether the shaft can extend through it or not.
3. Bearings and seal-ring seals are packaged separately and shipped in the same container as the disc unit.
4. Operating temperature range: –20°C to 60°C

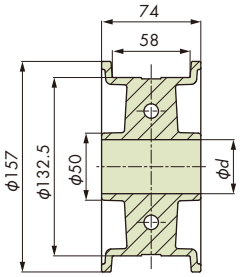
TP-50UNS Chain Accessories

Engineering Plastic

Applicable Chain	TP-50UNS, TPUN555

◆Split Idler Wheels



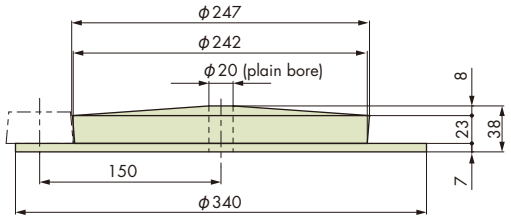


Tsubaki model no.	Sprocket equivalent no. of teeth (actual)	Bore diameter *d*	Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
				Body	Bolt/Nut	
TP-IW50UNS10-30	10	ϕ 30.3	0.6	Polyacetal (color: green)	Stainless steel	9.8{1}
TP-IW50UNS10-40		ϕ 40.3				

Note: 1. Tsubaki model no. in boldface are standard products.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the idler wheels, do not mix the halves with halves from other idler wheels.
4. Use a cold rolled steel shaft.

◆Turn Discs for 50UNS Chains (Machined Type)

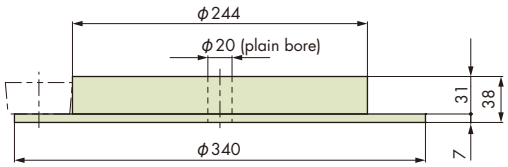
• Carry-way



Tsubaki model no.	Material	Material grade	Color
TP-50UNST1	High-density polyethylene	84-100	White

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Available for bearing-assembled product upon request.
3. Operating temperature range: –20°C to 60°C

• Return-way



Tsubaki model no.	Material	Material grade	Color
TP-50UNST2	High-density polyethylene	84-100	White

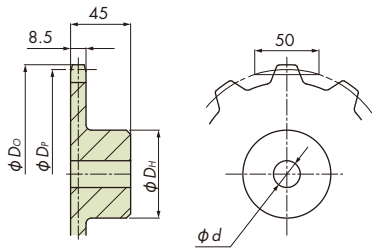
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Available for bearing-assembled product upon request.
3. Operating temperature range: –20°C to 60°C

Sprockets for TP-50UN-T95 Chains

Steel

Applicable Chain	TP-50UN-T95

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter *Dp*	Outside diameter *Do*	Hub diameter *Dh*	Bore diameter *d*		Approx. mass kg	Material
					Plain bore	Max.		
TP-50UNT-8T	8	130.6	129	65	ϕ15	ϕ40	1.6	Carbon steel for machine structural use
TP-50UNT-10T	10	161.8	163	65	ϕ20	ϕ40	2.3	
TP-50UNT-12T	12	193.2	198	65	ϕ20	ϕ40	2.8	

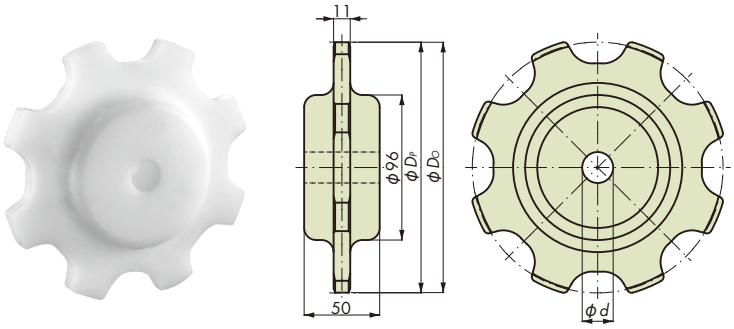
Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. We also manufacture products with a number of teeth other than those specified above.

Sprockets for TPCC Chains

Engineering Plastic

Applicable Chain	TPCC

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d	Material
TP-C12326T-SPR	8	165.9	172	φ20 (Plain bore)	Polyamide (color: white)
TP-C12327T-SPR	10	205.5	215		
TP-C12328T-SPR	12	245.3	256		

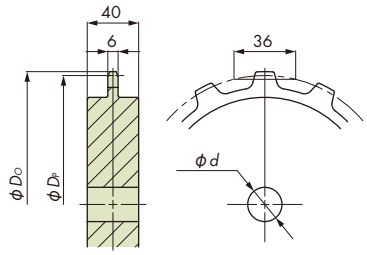
Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. These sprockets have a plain bore.
3. Operating temperature range: –20°C to 60°C

Sprockets for TP-36AK Chains

Engineering Plastic

Applicable Chain	TP-36AK

◆Solid Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx. mass kg	Material
				Plain bore	Max.		
TP-36AK1100T	11	127.7	131	φ20	φ60	0.3	UHMW-PE (color: white)
TP-36AK1300T	13	150.4	155			0.5	
TP-36AK1500T	15	173.1	178			0.7	

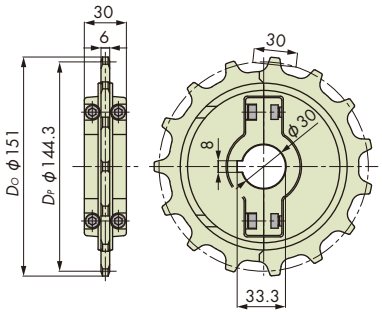
Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. Operating temperature range is –20°C to 60°C. Use stainless steel sprockets (made-to-order product) when operating temperatures exceed 60°C.

Sprockets & Idler Wheels for TP-30UTW-LAP Chains

Engineering Plastic

Applicable Chain	TP-30UTW-LAP

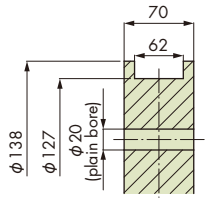
◆Split Sprockets



Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Approx. mass kg	Material		Bolt tightening torque N·m{kgf·m}
					Body	Bolt/Nut	
TP-SW30UT-15T30	15	144.3	151	0.2	Reinforced polyamide (color: black)	Stainless steel	5.7{0.58}

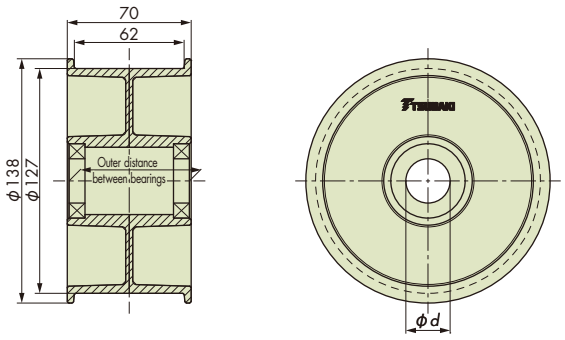
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 80°C
3. When assembling the halves of the sprocket, do not mix the halves with halves from other sprockets.
4. Use a cold rolled steel shaft.

◆Solid Idler Wheels



Tsubaki model no.	Equivalent no. of teeth	Approx. mass kg	Material
TP-IW30UTW-15T20	15	0.9	UHMW-PE (color: white)

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range is –20°C to 60°C. Use stainless steel sprockets (made-to-order product) when operating temperatures exceed 60°C.



Tsubaki model no.	Equivalent no. of teeth	Bore diameter d	Approx. mass kg	Material	
				Body	Bearing
TP-IWB30UTW-15T25	15	φ25	0.36	Polyamide (color: black)	Stainless (6905 seal type)

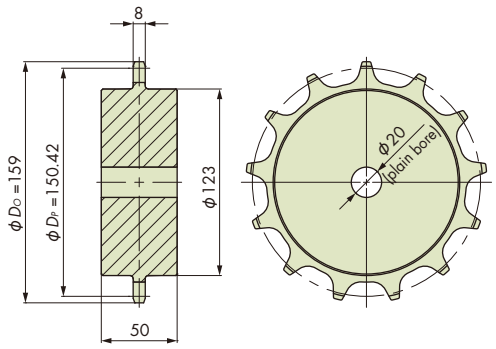
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 80°C
3. Use a cold rolled steel shaft. (Recommended shaft tolerance: g6).
4. Place mechanical devises to prevent misalignment of the idler wheel in shaft direction.

Sprockets & Idler Wheels for TP-36UTW-LAP Chains

Engineering Plastic

Applicable Chain	TP-36UTW-LAP

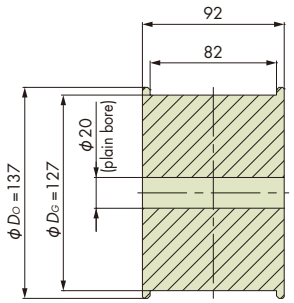
◆Solid Sprockets (Machined Type)



Tsubaki model no.	Teeth	Pitch diameter *DP*	Outside diameter *DO*	Bore diameter *d*	Approx. mass kg	Material
TP-36UT-13T	13	150.42	159	Bore shape and size are made-to-order.	0.6	UHMW-PE (color: white)

Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 60°C
3. We also manufacture products with the number of teeth, sprocket shapes and materials other than those specified above. (Only machined types are available.)
4. Use a cold rolled steel shaft.

◆Solid Idler Wheels (Machined Type)



Tsubaki model no.	Equivalent no. of teeth	Outside diameter *DO*	Bore diameter *d*	Approx. mass kg	Material
TP-IW36UTW-13T	13	137	Bore shape and size are made-to-order.	0.6	UHMW-PE (color: white)

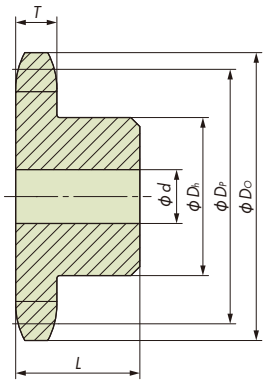
Note: 1. Tsubaki model no. in normal face is a made-to-order product.
2. Operating temperature range: –20°C to 60°C
3. We also manufacture products with the number of teeth, sprocket shapes and materials other than those specified above. (Only machined types are available.)
4. Use a cold rolled steel shaft.

Sprockets for Plastic Roller Tables

Steel

Applicable Chain	ST, RT





Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Tooth width T	Bore diameter d		Hub diameter Dh	Width L	Approx. mass kg	Material
					Plain bore	Max.				
RS35-1B13TQ-R	13	39.80	44	4.4	9.5	12	26	20	0.09	Carbon steel for machine structural use
RS35-1B14TQ-R	14	42.81	47			15	29		0.11	
RS35-1B15TQ-R	15	45.80	51			16	32		0.14	
RS35-1B16TQ-R	16	48.82	54			19	35		0.18	
RS35-1B17TQ-R	17	51.84	57			20	38		0.20	
RS35-1B18TQ-R	18	54.85	60		12.7	23	41		0.23	
RS35-1B19TQ-R	19	57.87	63			26	44		0.25	
RS35-1B20TQ-R	20	60.89	66			28	47		0.29	
RS35-1B21TQ-R	21	63.91	69			30	50		0.33	
RS40-1B10TQ-R	10	41.10	47	7.3	9.5	12	24	22	0.10	
RS40-1B11TQ-R	11	45.08	51			15	28		0.14	
RS40-1B12TQ-R	12	49.07	55			17	32		0.17	
RS40-1B13TQ-R	13	53.07	59		12.7	20	36		0.22	
RS40-1B14TQ-R	14	57.07	63			23	40		0.27	
RS40-1B15TQ-R	15	61.08	67			26	44		0.32	
RS40-1B16TQ-R	16	65.10	71			28	48		0.38	
RS40-1B17TQ-R	17	69.12	76			32	52		0.44	
RS40-1B18TQ-R	18	73.14	80			35	56		0.50	
RS40-1B19TQ-R	19	77.16	84			38	60		0.57	
RS40-1B20TQ-R	20	81.18	88			41	64	25	0.72	
RS40-1B21TQ-R	21	85.21	92			45	68		0.80	
RS40-1B22TQ-R	22	89.24	96			47	72		0.90	
RS50-1B10TQ-R	10	51.37	58	8.9	9.5	16	31	25	0.20	
RS50-1B11TQ-R	11	56.35	64		12.7	20	36		0.24	
RS50-1B12TQ-R	12	61.34	69			23	41		0.31	
RS50-1B13TQ-R	13	66.34	74			27	46		0.40	
RS50-1B14TQ-R	14	71.34	79			31	51		0.50	
RS50-1B15TQ-R	15	76.35	84			35	56		0.60	
RS50-1B16TQ-R	16	81.37	89			38	61		0.70	
RS50-1B17TQ-R	17	86.39	94			43	66		0.80	
RS50-1B18TQ-R	18	91.42	100			46	71	28	0.97	

Note: 1. Tsubaki model no. in normal face are made-to-order products.
2. The teeth of all sprockets above have been hardened.
3. Type B sprocket of RS roller chains can be used with a number of teeth greater than those listed in the table above.
4. The sprockets shown in the table above is applicable for RT types, excluding the following.
RS351B: 14 teeth or greater
RS40-1B: 13 teeth or greater
RS50-1B: 14 teeth or greater
RS60-1B: Type B sprocket with 12 teeth or greater can be used.
The same applies to stainless steel sprockets. (Refer to the separate catalog "Tsubaki Drive Chains & Sprockets".)

Model Numbering

Applicable chain size		Hub	Teeth	Teeth hardening		For plastic roller table
RS40	**-**	**1B**	**11T**	**Q**	**-**	**R**

Note: Do not leave space between letters and symbols.

MEMO

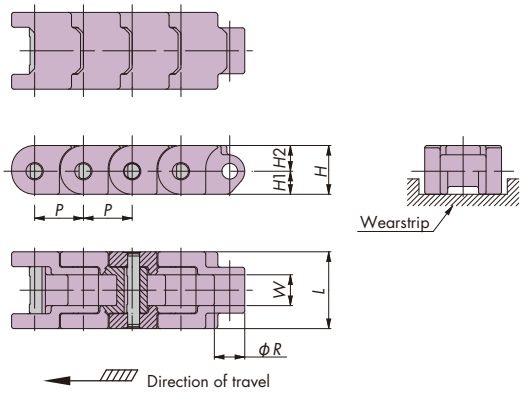
Plastic Block Chain
RSP (Stainless Steel Pins)

Features

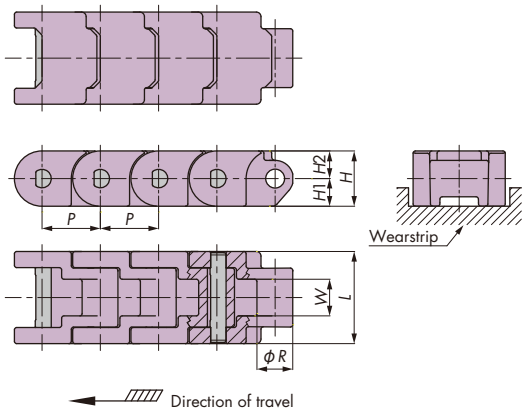
1. A smaller chain pitch than a plastic top chain allows use of sprockets with a smaller outer diameter, effectively saving transferring space between conveyors.
2. Block shape and small link width; suitable for conveying small products.
3. Multiple strands can be used in parallel; suitable for conveying pallets.
4. Suitable for a diverse range of applications with a variety of chain pitches and widths available.
5. RS sprockets can be used.



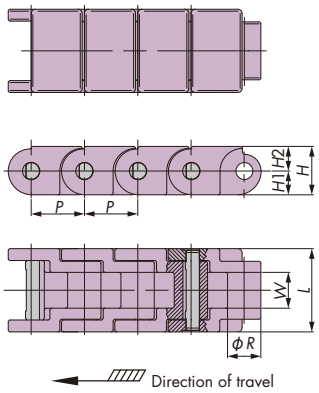
RSP (Except KV series and RSP80 shown below)



RSP80 only



RSP40-KV and RSP60-KV



Chain Material Table

		Standard Chain								High-Function Chain			
Material		Standard			Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction		Heat resistant/High speed			Low friction/Wear resistant
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	KV150	KV180	KV250	HG
Link color		White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Black			Navy blue
Max. allowable load kN {kgf}	RSP35	0.18{18}									–	0.18{18}	–	0.18{18}
	RSP40	0.44{45}												
	RSP50	0.69{70}									–	–	–	0.69{70}
	RSP60	0.88{90}												
	RSP80	1.77{180}									–	–	–	1.77{180}
Max. allowable speed m/min	With lube	60									–	100		60
	No lube										100			
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to 150	–20 to 180	–20 to 250	–20 to (65)80
Pin material		SUS304												
Pin type		D-pin												
RSP35		●	△	△	●	●	●	●	△	△	×	●	×	△
RSP40		●	△	△	●	●	●	●	△	△	○	●	○	△
RSP50		●	△	△	○	○	○	○	△	△	×	×	×	△
RSP60		●	△	△	●	●	●	●	△	△	○	●	○	△
RSP80		○	△	△	○	○	○	○	△	△	×	×	×	△

Note: 1. "●": Standard products, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of July 2008, the RSP40 and RSP60 were remodeled. Please check the following for details of the changes.
• The shape of the upper side of the link has changed: Same shape with RSP35 and RSP50 which is hard to chip by eliminating the thin section that may crack or become deformed.
• Knurled pins changed to D-pins: Damage to connecting sections (pin holes) are reduced and prevent pins from falling off.
4. The shape of the upper side of the link of KV [RSP40 (60)-KV150, RSP40 (60)-KV180] is different from other spec's chains and cannot be connected to each other.
5. The remodeled chain cannot be connected to the previous model.

Dimension Table

Chain type	P	R	W	L	H1	H2	H	Backflex radius mm
RSP35	9.525	5.08	4.78	13	4	5	9	110 Note
RSP40	12.7	7.92	7.95	20	6	6.7	12.7	125
RSP50	15.875	10.16	9.53	22.5	7	8	15	200
RSP60	19.05	11.91	12.7	30	8.5	8.8	17.3	180
RSP80	25.4	15.88	15.9	40	12	12	24	

Note: The backflex radius of RSP35-KV180 is R150.

Tsubaki Model Table

Material	Standard	Electroconductive	Chain mass kg/m Note: 2	Number of links per unit
Material mark	—	E		
Chain type	**RSP35**	RSP35-E	0.15	320
	RSP40	**RSP40-E**	0.36	240
	RSP50	RSP50-E	0.46	192
	RSP60	RSP60-E	0.72	160
	RSP80	RSP80-E	1.4	120

Note:
1. Chain type in boldface are standard products. Chain type in normal face is a made-to-order product. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table left. Refer to the following information (unit: kg/m).
   [RSP35] Y, DIY: 0.18, DIA: 0.13, MPD: 0.14
   [RSP40] Y, SY, DIY: 0.45, DIA: 0.30
   [RSP50] Y, DIY: 0.55, DIA: 0.40
   [RSP60] Y, SY, DIY: 0.90, DIA: 0.68, MPD: 0.70
   [RSP80] Y, DIY: 1.60, DIA: 1.20, UPE: 1.05
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table on the left.

Sprockets

RS sprocket (with 14 or more teeth) can be used.

Note: A special sprocket is necessary when using in an ambient temperature of –20°C or below. Contact a Tsubaki representative for more information.

Connecting Pin

1. SUS304 D-pin for RSP35 Tsubaki model no. **RSP35-SUS-JPD**
2. SUS304 D-pin for RSP40 Tsubaki model no. **RSP40-SUS-JPD**
3. SUS304 D-pin for RSP50 Tsubaki model no. **RSP50-SUS-JPD**
4. SUS304 D-pin for RSP60 Tsubaki model no. **RSP60-SUS-JPD**
5. SUS304 D-pin for RSP80 Tsubaki model no. **RSP80-SUS-JPD**

Model Numbering

Chain type	Chain size		Material mark		Number of links	Unit
RSP	**35** Note: 2	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**
						L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain sizes from the dimension table above.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

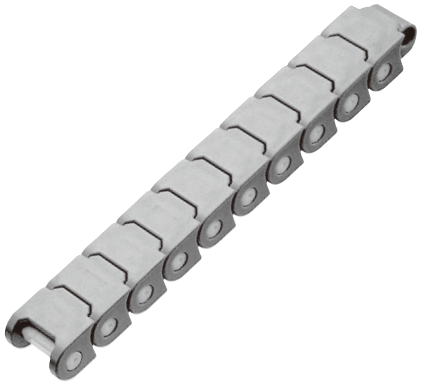
		High-Function Chain												Special-Function Chain
Material		Chemical resistant	Super chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying	Low temperature Chemical resistant
Material mark		Y	SY	E	DIA	DIY	MWS	MPD	SE	MF	AR	UVR	PFS	UPE
Link color		Matte white	Matte white	Black	Cream	Green	Cream	Black	Gray	Yellow	White	Light gray	Nile blue	Matte white
Max. allowable load kN {kgf}	RSP35	0.10{10}	–	0.13{13}	0.14{14}		0.18{18}	0.14{14}	0.18{18}	0.13{13}	0.16{16}	0.18{18}		–
	RSP40	0.25{25}		0.34{35}			0.44{45}	–	0.44{45}	0.33{33}	0.40{41}	0.44{45}		–
	RSP50	0.39{40}	–	0.49{50}	0.54{55}		0.69{70}	–	0.69{70}	0.51{52}	0.62{63}	0.69{70}		–
	RSP60	0.49{50}		0.64{65}	0.69{70}		0.88{90}	0.69{70}	0.88{90}	0.65{67}	0.79{81}	0.88{90}		–
	RSP80	0.98{100}	–	1.26{128}	1.36{139}		1.77{180}	–	1.77{180}	1.31{133}	–	1.77{180}		0.56{57}
Max. allowable speed m/min	With lube	60			–	60		–	60	–	60			
	No lube	60												
Operating temperature range °C		–20 to 80					-20 to (65)80	–20 to 80			-20 to (60)80	–20 to 80		–70 to 60
Pin material		SUS304	Titanium	SUS304										
Pin type		D-pin	Diamond knurled	D-pin										
RSP35		○	×	○	△	△	○	△	△	△	△	△	△	×
RSP40		○	○	●	△	△	○	×	△	△	△	△	△	×
RSP50		○	×	○	△	△	○	×	△	△	△	△	△	×
RSP60		○	○	○	△	△	○	△	△	△	△	△	△	×
RSP80		△	×	△	△	△	△	×	△	△	×	△	△	△

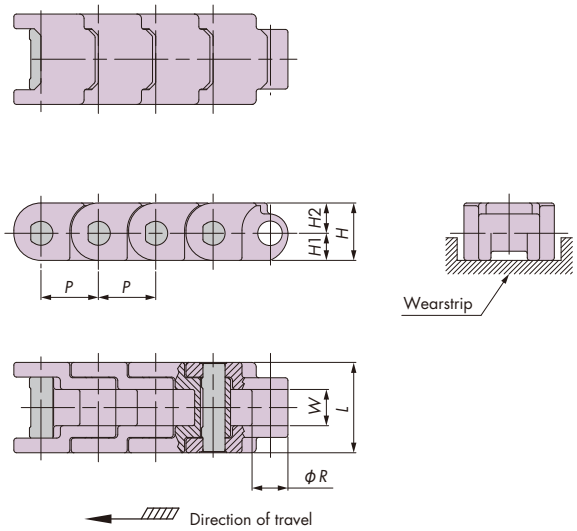
Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ), "×": Unable to produce. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. As of July 2008, the RSP40 and RSP60 were remodeled. Please check the following for details of the changes.
   • The shape of the upper side of the link has changed: Same shape with RSP35 and RSP50 which is hard to chip by eliminating the thin section that may crack or become deformed.
   • Knurled pins changed to D-pins: Damage to connecting sections (pin holes) are reduced and prevent pins from falling off. Note that only SY series use diamond knurled pins.
4. The remodeled chain cannot be connected to the previous model.

Plastic Block Chain
RSP (Plastic Pins)
Straight Running

Features

1. A smaller chain pitch than a plastic top chain allows use of sprockets with a smaller outer diameter, effectively saving transferring space between conveyors.
2. Block shape and small link width; suitable for conveying small products.
3. Multiple strands can be used in parallel; suitable for conveying pallets.
4. Suitable for a diverse range of applications with a variety of chain pitches and widths available.
5. The plastic pin type is lightweight and easy to install and replace, and is expected to have a longer life than the stainless steel pin with water lubrication.
6. RS sprockets can be used.





Chain Material Table

		Standard Chain								High-Function Chain					
Material		Standard			Low friction/ Wear resistant			Low friction		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant
Material mark		—	B	BL	LFW	LFB	LFG	NLF	WR	HG	E	MWS	SE	MF	UVR
Link color		White	Blue	Sky blue	White	Brown	Green	Dark gray	Dark green	Navy blue	Black	Cream	Gray	Yellow	Light gray
Max. allowable load kN {kgf}	RSP40P	0.25{25}									0.18{18}	0.25{25}		0.19{19}	0.25{25}
	RSP60P	0.59{60}									0.41{42}	0.59{60}		0.44{44}	0.59{60}
Max. allowable speed m/ min	With lube	60												–	60
	No lube													60	
Operating temperature range °C		–20 to (60)80												–20 to 80	–20 to (60)80
Pin material		Special engineering plastic													
Pin type		D-pin													
RSP40P		○	△	△	○	○	○	△	△	△	△	△	△	△	△
RSP60P		○	△	△	○	○	○	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pin is orange. Base chain pins are white.

Dimension Table

Chain type	*P*	*R*	*W*	*L*	*H*1	*H*2	*H*	Backflex radius mm
RSP40P	12.7	7.92	7.95	20	6	6.7	12.7	125
RSP60P	19.05	11.91	12.7	30	8.5	8.8	17.3	180

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Number of links per unit
Material mark	—		
Chain type	RSP40P	0.26	240
	RSP60P	0.53	160

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table left for availability.
2. The chain masses of other materials available are the same with those described in the Tsubaki model table above.

Sprockets

RS sprocket (with 14 or more teeth) can be used.

Connecting Pin

1. Special engineering plastic D-pin for RSP40P, orange color — Tsubaki model no. **RSP40P-PLA-JPD**.
2. Special engineering plastic D-pin for RSP60P, orange color — Tsubaki model no. **RSP60P-PLA-JPD**.

Model Numbering

Chain type	Chain size	Plastic pins		Material mark		Number of links	Unit
RSP	**40** Note: 2	**P** Note: 3	**-**	**LFB** Note: 4	**+**	**80** Note: 5	**L**

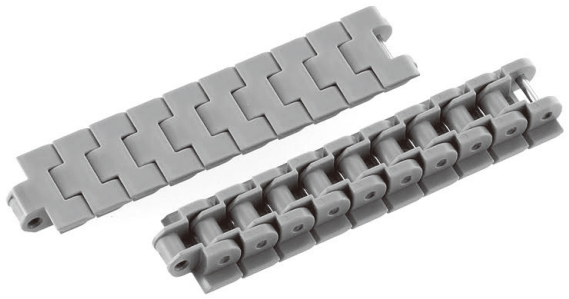
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain sizes from the dimension table above.
3. Enter "P" only when a plastic pin type is selected.
4. Please check the chain material and material marks in the chain material table at left.
5. Minimum quantity: 2, maximum quantity: 99999.

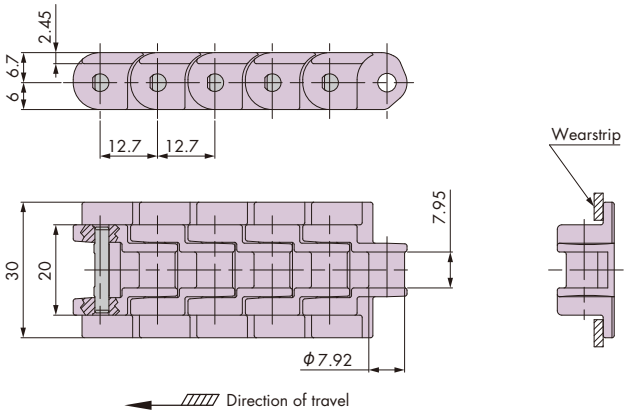
Plastic Block Chain
RSP-SL
Straight Running

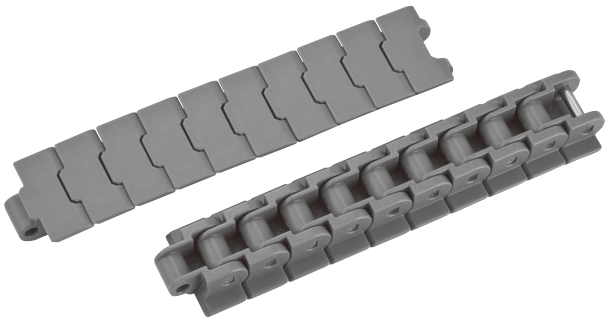
Features

1. A smaller chain pitch than a plastic top chain allows use of sprockets with a smaller outer diameter, effectively saving transferring space between conveyors.
2. Plastic block chain with top plate; suitable for conveying small products.
3. Suitable for suspended conveyance of products between paralleled strands of chains.

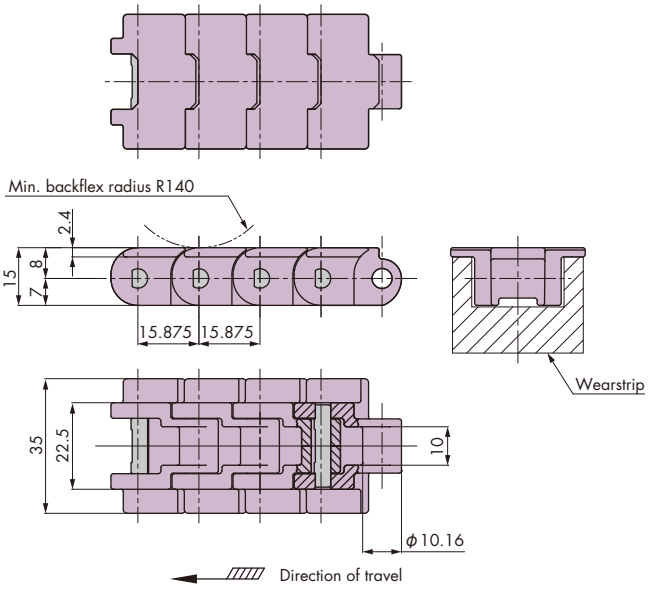


RSP40-SL300





RSP50-SL350



Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFB	LFG	ALF	NLF	WR
Link color		White	Blue	Sky blue	White	Brown	Green	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	RSP40-SL300	0.44{45}								
	RSP50-SL350	0.69{70}								
Max. allowable speed m/min	With lube	60								
	No lube									
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material		SUS304								
Pin type		D-pin								
RSP40-SL300		○	△	△	○	○	○	○	△	△
RSP50-SL350		△	△	△	△	△	○	○	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material / Material mark	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Chain type	RSP40-SL300	0.36	50	240
	RSP50-SL350	0.51	140	192

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above.
Refer to the following information (unit: kg/m).
[RSP40-SL300] Y, DIY: 0.45, DIA: 0.30
[RSP50-SL350] Y, DIY: 0.61, DIA: 0.45
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Sprockets

RS sprocket (with 14 or more teeth) can be used.

Connecting Pin

1. SUS304 D-pin for RSP40-SL300 Tsubaki model no. **RSP40-SUS-JPD**
2. SUS304 D-pin for RSP50-SL350 Tsubaki model no. **RSP50-SUS-JPD**

Model Numbering

Chain type	Chain size		Chain type	Top plate width		Material mark		Number of links	Unit
RSP	**40**	**-**	**SL**	**300**	**-**	**LFB** Note: 2	**+**	**80** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table below.
3. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain												
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	RSP40-SL300	0.44{45}	0.25{25}	0.31{32}	0.34{35}		0.44{45}		0.33{33}	0.40{41}	0.44{45}	
	RSP50-SL350	0.69{70}	0.38{39}	0.48{49}	0.54{55}		0.69{70}		0.51{52}	–	0.69{70}	
Max. allowable speed m/min	With lube	60			–	60			–	60		
	No lube				60				60			
Operating temperature range °C		-20 to (65)80	-20 to 80				-20 to (65)80	-20 to 80		-20 to (60)80	-20 to 80	
Pin material		SUS304										
Pin type		D-pin										
RSP40-SL300		△	△	△	△	△	△	△	△	△	△	△
RSP50-SL350		△	△	△	△	△	△	△	△	×	△	△

Note: 1. "△": Made-to-order products (RFQ), "×": Unable to produce. Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Plastic Block Chain
RSP-PO8PF
Straight Running

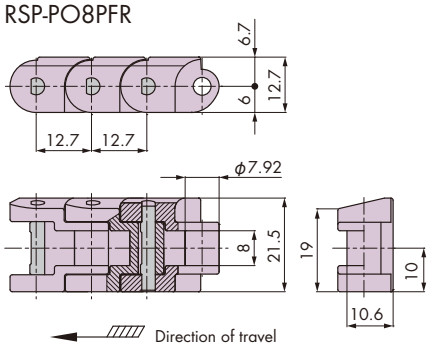
Sprockets P.301 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.432

Features

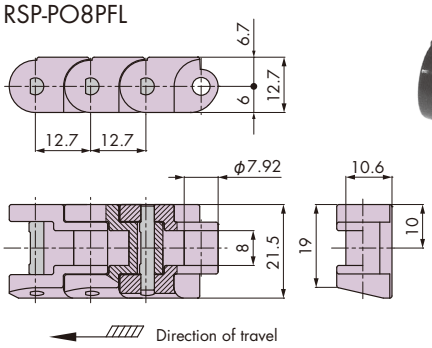
1. Small pitch and small link width; suitable for conveying small products.
2. Chain is designed to convey flanged products supported between two strands of chains.
3. RS sprockets can be used.



RSP-PO8PFR



RSP-PO8PFL



Chain Material Table

		Standard Chain									High-Function Chain							
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFB	LFG	ALF	NLF	WR	HG	Y	E	MWS	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Brown	Green	Light blue	Dark gray	Dark green	Navy blue	Matte white	Black	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	RSP-PO8PFL / RSP-PO8PFR	0.49{50}										0.27 {28}	0.34 {35}	0.49{50}		0.36 {37}	0.49{50}	
Max. allowable speed m/min	With lube	60														—	60	
	No lube															60		
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80		–20 to (65)80	–20 to 80			
Pin material		SUS304																
Pin type		D-pin																
RSP-PO8PFL		△	△	△	△	△	△	△	△	○	△	△	△	△	△	△	△	△
RSP-PO8PFR		△	△	△	△	△	△	△	△	○	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	RSP-PO8PFL	0.40	125	240
	RSP-PO8PFR			

Note: 1. Chain type in normal font are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above.
Refer to the following information (unit: kg/m).
[RSP-PO8PFL] Y: 0.49 [RSP-PO8PFR] Y: 0.49
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Sprockets

RS40 sprocket (with 13 or more teeth) can be used. The hub diameter (*Dh*) should be machined to size.

Model Numbering

Chain type	Chain size	Chain type	Taper		Material mark		Number of links	Unit
RSP-PO	**8**	**PF**	**R**	**–**	**WR** Note: 2	**+**	**80** Note: 3	**L**
			Refer to the drawing					L: Link

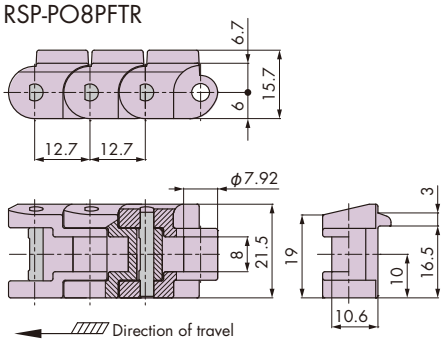
Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

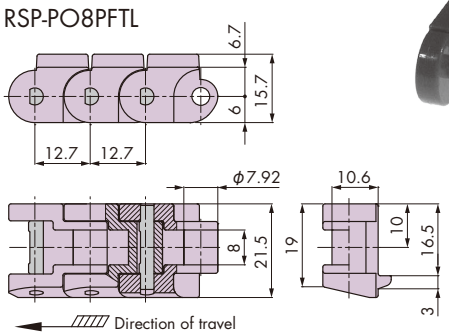
1. Small pitch and small link width; suitable for conveying small products.
2. Chain is designed to convey flanged products supported between two strands of chains.
3. Protrusions on the surface enable centering of flanged products.
4. RS sprockets can be used.



RSP-PO8PFTR



RSP-PO8PFTL



Chain Material Table

		Standard Chain									High-Function Chain							
Material		Standard			Low friction/ Wear resistant			Advanced low friction/ Wear resistant	Low friction		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFB	LFG	ALF	NLF	WR	HG	Y	E	MWS	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Brown	Green	Light blue	Dark gray	Dark green	Navy blue	Matte white	Black	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	RSP-PO8PFTL / RSP-PO8PFTR	0.49{50}										0.27 {28}	0.34 {35}	0.49{50}		0.36 {37}	0.49{50}	
Max. allowable speed m/min	With lube	60														—	60	
	No lube															60		
Operating temperature range °C		-20 to 80			-20 to (65)80			-20 to 80	-20 to (65)80	-20 to 80	-20 to (65)80	-20 to 80		-20 to (65)80	-20 to 80			
Pin material		SUS304																
Pin type		D-pin																
RSP-PO8PFTL		△	△	△	△	△	△	△	△	○	△	△	△	△	△	△	△	△
RSP-PO8PFTR		△	△	△	△	△	△	△	△	○	△	△	△	△	△	△	△	△

Note: 1. "○": Made-to-order products, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	RSP-PO8PFTL	0.40	125	240
	RSP-PO8PFTR			

Note: 1. Chain type in normal face are made-to-order products. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
[RSP-PO8PFTL] Y: 0.49
[RSP-PO8PFTR] Y: 0.49
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Sprockets

RS40 sprocket (with 13 or more teeth) can be used. The hub diameter (*Dh*) should be machined to size.

Model Numbering

Chain type	Chain size	Chain type	Taper		Material mark		Number of links	Unit
RSP-PO	**8**	**PFT**	**L**	**–**	**WR** Note: 2	**+**	**80** Note: 3	**L**
			Refer to the drawing					L: Link

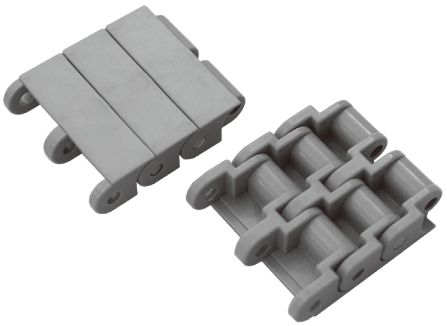
1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

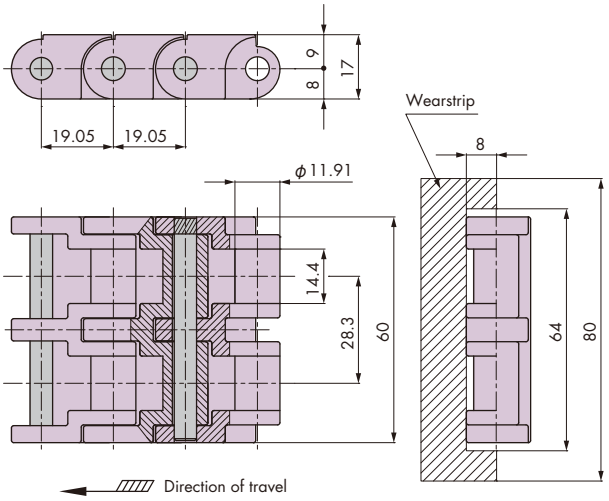
Plastic Block Chain
RSP-PO12-2S
Straight Running

Sprockets P.303 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.433

Features

1. Link width is double that of RSP-60; suitable for conveying wider products.
2. Suitable for higher applied load conditions due to approx. 1.5 times higher allowable load than RSP-60.





Chain Material Table

		Standard Chain								High-Function Chain				
Material		Standard			Low friction/Wear resistant			Low friction		Low friction/ Wear resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFB	LFG	NLF	WR	HG	SE	MF	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Brown	Green	Dark gray	Dark green	Navy blue	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}		1.27{130}										0.94 {96}	1.27{130}	
Max. allowable speed m/min	With lube	60										—	60	
	No lube											60		
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80		–20 to (65)80	–20 to 80			
Pin material		SUS304												
Pin type		Round pin												
RSP-PO12-2S		●	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard product, "△": Made-to-order products (RFQ). Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	**RSP-PO12-2S**	1.50	400	160

Note: Chain type in boldface is a standard product. Refer to the chain material table above for availability.

Model Numbering

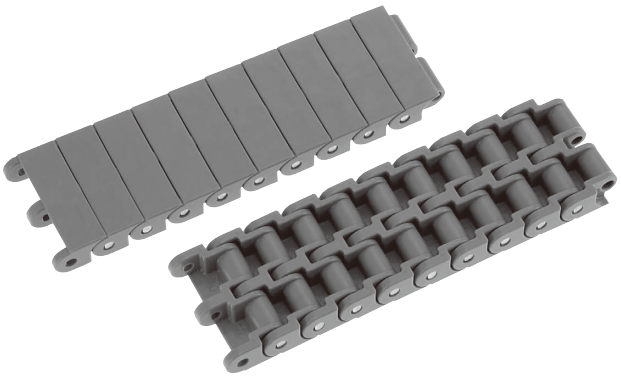
Chain type	Chain size		Chain type		Material mark		Number of links	Unit
RSP-PO	**12**	**–**	**2S**	**–**	**LFG** Note: 2	**+**	**80** Note: 3	**L**

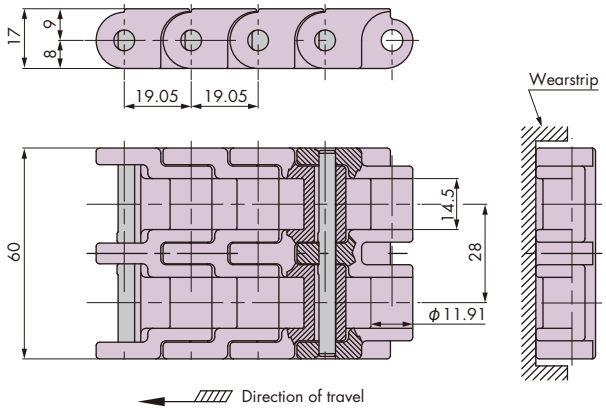
L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

Features

1. Link width is double that of the RSP60 chain; suitable for conveying wider products.
2. Suitable for higher applied load conditions due to approx. 1.4 times higher allowable load than the RSP60.





Chain Material Table

		Standard Chain									High-Function Chain												
Material		Standard			Low friction/ Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	Y	E	DIA	DIY	MWS	MPD	SE	MF	AR	UVR	PFS
Link color		Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Matte white	Black	Cream	Green	Cream	Black	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		1.27{130}										0.64 {65}	0.89 {91}	0.98{100}		1.27 {130}	0.98 {100}	1.27 {130}	0.94 {96}	1.14 {117}	1.27{130}	
Max. allowable speed m/ min	With lube	60												–	60		–	60	–	60			
	No lube													60			60		60				
Operating temperature range °C		–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80				–20 to (65)80	–20 to 80			–20 to (60)80	–20 to 80	
Pin material		SUS304																					
Pin type		D-pin																					
RSP60-2		●	△	△	●	●	●	●	△	△	△	△	△	△	△	△	△	△	△	△	△	△	

Note: 1. "●": Standard products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	**RSP60-2**	1.50	450	160

Note: 1. Chain type in boldface is a standard product. Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y, DIY: 1.65, DIA: 1.20
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Connecting Pin

1. SUS304 D-pin for RSP60-2
Tsubaki model no. **RSP60-2-SUS-JPD**

Model Numbering

Chain type	Chain size		Material mark		Chain type		Number of links	Unit
RSP	**60**	**-**	**LFB** Note: 2	**-**	**2**	**+**	**80** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

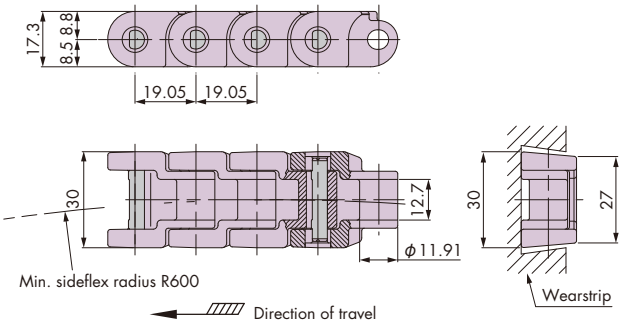
Plastic Block Chain
RSP-CU

Sideflexing Running

Features

RSP60 sideflexing chain. Can be used for curved conveyors.





Chain Material Table

Standard Chain										
Material		Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark		—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color		White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	Stainless steel pin	0.83{85}								
	Plastic pin	0.44{45}								
Max. allowable speed m/min	With lube	60								
	No lube									
Operating temperature range °C	Stainless steel pin	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
	Plastic pin	–20 to (60)80								
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic								
Pin type		D-pin Note: 3								
Stainless steel pin	RSP60-CU	●	△	△	○	○	○	○	△	△
Plastic pin	RSP60P-CU	△	△	△	△	△	△	△	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pin is orange. Base chain pins are white.

Tsubaki Model Table

Material		Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark		—			
Chain type	Stainless steel pin	**RSP60-CU**	0.70	250	160
	Plastic pin	RSP60P-CU	0.50		

Note: 1. Chain type in boldface is a standard product. Chain type in normal face is a made-to-order product.
Refer to the chain material table below for availability.
2. The chain masses of other materials available are the same with those described in the Tsubaki model table above.

Connecting Pin

1. SUS304 for RSP60-CU
Tsubaki model no. **RSP60-CU-SUS-JPD**

Sprockets

RS60 sprocket (with 14 or more teeth) can be used.

Model Numbering

Chain type	Chain size	Plastic pins		Chain type		Material mark		Number of links	Unit
RSP	**60**	**P** Note: 2	**-**	**CU**	**-**	**LFB** Note: 3	**+**	**80** Note: 4	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Enter "P" only when a plastic pin type is selected.
3. Please check the chain material and material marks in the chain material table below.
4. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain									
Material		Low friction/ Wear resistant	Electroconductive	Antibacterial/ Mold resistant	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	E	MWS	SE	MF	AR	UVR	PFS
Link color		Navy blue	Black	Cream	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}	Stainless steel pin	0.83{85}	0.58{59}	0.83{85}		0.61{63}	0.75{77}	0.83{85}	
	Plastic pin	0.44{45}	0.31{31}	0.44{45}		0.33{33}	–	0.44{45}	–
Max. allowable speed m/min	With lube	60				–	60		
	No lube					60			
Operating temperature range °C	Stainless steel pin	-20 to (65)80	-20 to 80	-20 to (65)80	-20 to 80		-20 to (60)80	-20 to 80	
	Plastic pin	-20 to (60)80				-20 to 80	–	-20 to (60)80	–
Pin material		Stainless steel pin/SUS304 Plastic pin/Special engineering plastic							
Pin type		D-pin Note: 3							
Stainless steel pin	RSP60-CU	△	△	○	△	△	△	△	△
Plastic pin	RSP60P-CU	△	△	△	△	△	×	△	×

Note: 1. "○": Made-to-order product, "△": Made-to-order products (RFQ), "×": Unable to produce.
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. The color of the connecting pin is orange. Base chain pins are white.

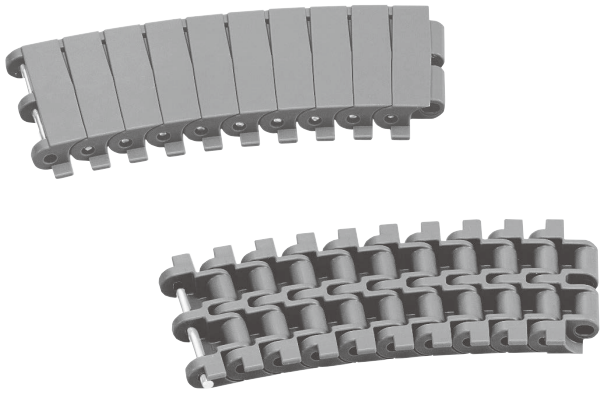
Plastic Block Chain

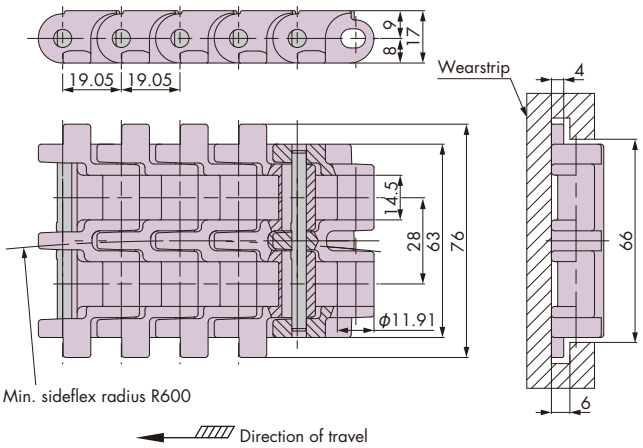
RSP-CU-2

Sideflexing Running

Features

1. Sideflexing version of RSP60-2; suitable for conveying wider products.
2. Suitable for higher applied load conditions due to approx. 1.3 times higher allowable load than RSP60-CU.
3. Tabs prevent chains from floating at curved sections.





Chain Material Table

Standard Chain									
Material	Standard			Low friction/Wear resistant			Advanced low friction/ Wear resistant	Low friction	
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR
Link color	Gray	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green
Max. allowable load kN {kgf}	1.08{110}								
Max. allowable speed m/min (With lube / No lube)	60								
Operating temperature range °C	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80
Pin material	SUS304								
Pin type	D-pin								
RSP60-CU-2	●	△	△	○	○	○	○	△	△

Note: 1. "●": Standard product, "○": Made-to-order products, "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	**RSP60-CU-2**	1.50	150	160

Note: 1. Chain type in boldface is a standard product. Refer to the chain material table below for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y, DIY: 1.88, DIA: 1.28, MPD: 1.4
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Connecting Pin

1. SUS304 D-pin for RSP60-CU-2
Tsubaki model no. **RSP60-2-SUS-JPD**

Model Numbering

Chain type	Chain size		Chain type		Material mark		Chain type		Number of links	Unit
RSP	**60**	**-**	**CU**	**-**	**LFB** Note: 2	**-**	**2**	**+**	**80** Note: 3	**L**

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table below.
3. Minimum quantity: 2, maximum quantity: 99999.

Chain Material Table

High-Function Chain													
Material		Low friction/ Wear resistant	Chemical resistant	Electroconductive	Impact resistant		Antibacterial/ Mold resistant	Metal detectable	Electrostatic preventive	Middle friction	Acid resistant	Ultraviolet resistant	Food conveying
Material mark		HG	Y	E	DIA	DIY	MWS	MPD	SE	MF	AR	UVR	PFS
Link color		Navy blue	Matte white	Black	Cream	Green	Cream	Black	Gray	Yellow	White	Light gray	Nile blue
Max. allowable load kN {kgf}		1.08 {110}	0.54 {55}	0.76 {77}	0.83{85}		1.08 {110}	0.83 {85}	1.08 {110}	0.80 {81}	0.97 {99}	1.08 {110}	
Max. allowable speed m/min	With lube	60			–	60		–	60	–	60		
	No lube				60			60		60			
Operating temperature range °C		-20 to (65)80	-20 to 80				-20 to (65)80	-20 to 80			-20 to (60)80	-20 to 80	
Pin material		SUS304											
Pin type		D-pin											
RSP60-CU-2		△	△	△	△	△	△	△	△	△	△	△	△

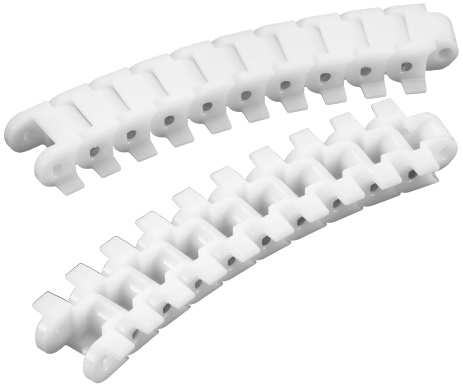
Note: 1. "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

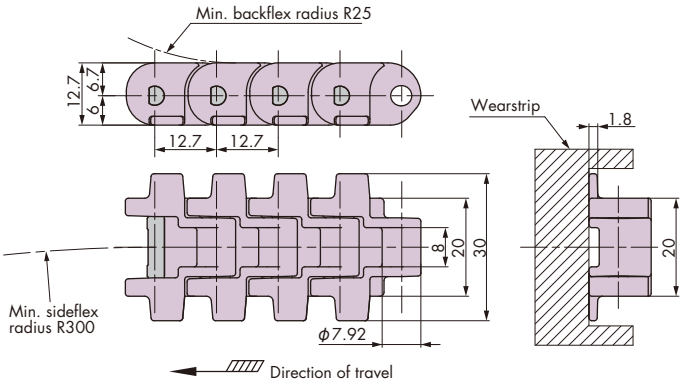
Plastic Block Chain
RSP40-T-CU
Sideflexing Running

Sprockets P.301 | Rails P.323 | Support Parts P.369 | Return-Way Parts P.359 | Allowable Load Graph P.433

Features

1. Straight and curved conveyance is allowed to achieve easy conveyor layouts.
2. The chain pitch of 12.7 mm and the minimum sideflexing radius of 300 mm enable space-saving layouts.
3. Tabs prevent chains from floating at curved sections.





Design registered

Chain Material Table

	Standard Chain									High-Function Chain							
Material	Standard			Low friction/Wear resistant			Advanced low friction/Wear resistant	Low friction		Low friction/Wear resistant	Chemical resistant	Electroconductive	Antibacterial/Mold resistant	Electrostatic preventive	Middle friction	Ultraviolet resistant	Food conveying
Material mark	—	B	BL	LFW	LFG	LFB	ALF	NLF	WR	HG	Y	E	MWS	SE	MF	UVR	PFS
Link color	White	Blue	Sky blue	White	Green	Brown	Light blue	Dark gray	Dark green	Navy blue	Matte white	Black	Cream	Gray	Yellow	Light gray	Nile blue
Max. allowable load kN {kgf}	0.36{36.7}										0.20 {20.4}	0.25 {25.7}	0.36{36.7}		0.27 {27}	0.36{36.7}	
Max. allowable speed m/min With lube	60														–	60	
Max. allowable speed m/min No lube															60		
Operating temperature range °C	–20 to 80			–20 to (65)80			–20 to 80	–20 to (65)80	–20 to 80	–20 to (65)80	–20 to 80		–20 to (65)80	–20 to 80			
Pin material	SUS304																
Pin type	D-pin																
RSP40-T-CU	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Note: 1. "△": Made-to-order products (RFQ).
Not available for other chain materials that are not listed in the chain material table above.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Plastic pin type is not available.

Tsubaki Model Table

Material	Standard	Chain mass kg/m Note: 2	Backflex radius mm	Number of links per unit
Material mark	—			
Chain type	RSP40-T-CU	0.36	25	240

Note: 1. Chain type in normal face is a made-to-order product.
Refer to the chain material table above for availability.
2. The chain mass of some chain materials are different from that shown in the Tsubaki model table above. Refer to the following information (unit: kg/m).
Y: 0.45
3. The chain mass of the chain materials available whose information are not described in note 2 are the same with that in the Tsubaki model table above.

Sprockets

RS40 sprocket (with 14 or more teeth) can be used.

Model Numbering

Chain type	Chain size		Tab		Chain type		Material mark		Number of links		Unit
RSP	40	-	T	-	CU	-	LFB Note: 2	+	80 Note: 3		L

L: Link

Note: 1. Do not leave space between letters and symbols.
2. Please check the chain material and material marks in the chain material table above.
3. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Snap Cover Chain
RF-SC/RS-SC
Straight Running

Features

1. A higher maximum allowable load than a plastic block chain (type RS60-SC approx. 7 times higher than RSP60 chain). Ideal for long conveyors.
2. Plastic cover protects conveyed products from damage.
3. Suitable for a diverse range of applications with six different chain pitches available.

Chain Material/Plastic Cover Material

The following types are available for the base chain of the snap cover chain.

Various surface treatments can be applied to the base chain. Please contact a Tsubaki representative.

◆Standard series: Base chain is steel, and main dimensions are the same as standard roller chain. Note, however, that the shape of the pin ends is different and that strength is lower than RS roller chain.

◆NP series (Nickel-plated): Base chain is nickel-plated standard chain. The nickel plating makes for a better appearance, as well as providing corrosion resistance.

◆LMCNP series (Lambda): By using a special oil-impregnated bush that uses NSF H1 compatible oil, it can be used without lubrication and with a long service life.

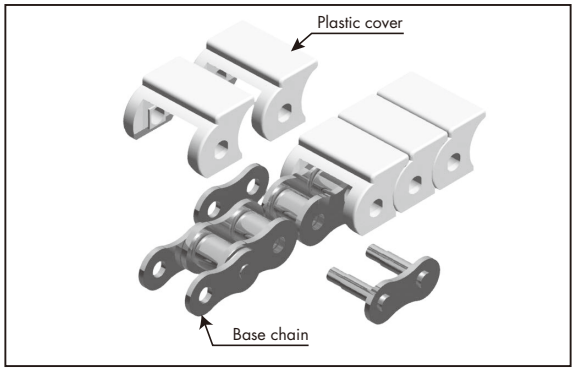
◆SS series: All base chain components are made of 304 stainless steel, and designed for use in environments where high corrosion resistance is required.

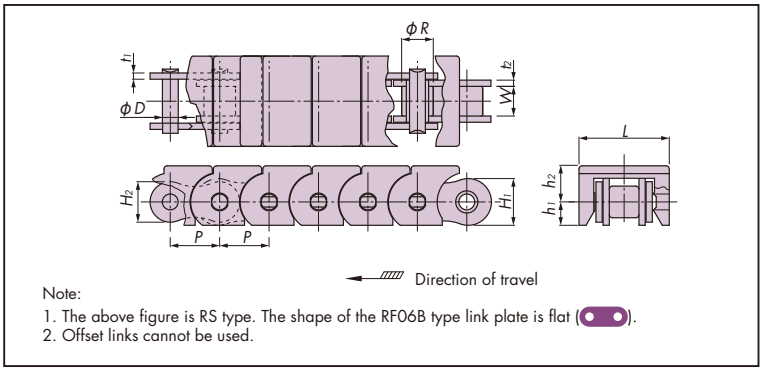
The following type of plastic covers are available for snap cover chains.

◆Standard series (color: white): The material (base body) is made of polyacetal and is used for general applications.

◆Standard series (color: light blue): The material (connecting part) is made of polyacetal, so the connecting part can be easily identified, but it cannot be used together with the electroconductive series because it maintains conductivity.

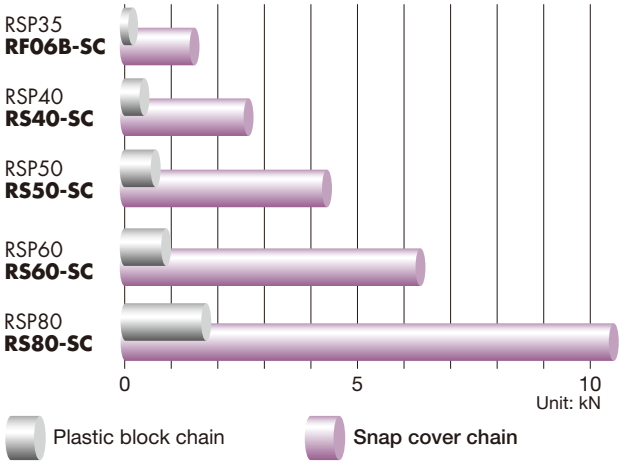
◆Electroconductive series (color: black): The material of the base body/connecting section are made of electroconductive polyacetal, and is used in applications where dust build-up from static, electrical noise and sparks must be avoided. (volume specific resistance 1 X $10^6\Omega$•cm)





Note:
1. The above figure is RS type. The shape of the RF06B type link plate is flat ( ).
2. Offset links cannot be used.

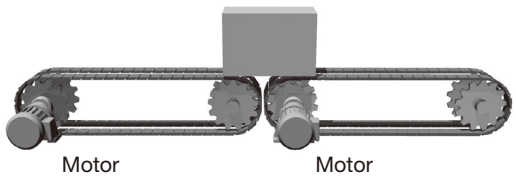
■ Allowable load comparison with plastic block chain



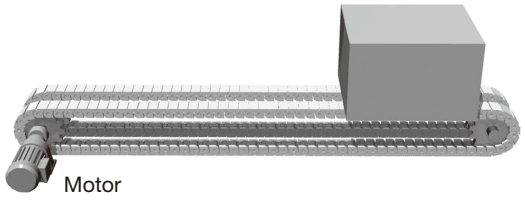
Note: No comparison with the RS100-SC as there are no corresponding plastic block chains.

■ Location of motors

Plastic block chain: two motors



Snap cover chain: one motor



Joint Link

A special joint link is necessary. A joint plate will be hold in place by attaching plastic snap cover. Standard joint links with cotters and spring clips for standard roller chains cannot be used.

Note: Refer to the above image for details.

Model Numbering

◆Base Chain

Material mark						
Chain size	Base chain material mark	Snap cover chain	Material of plastic cover		Number of links	End link
RS40 -	**SS**	**SC**	**A**	**+**	**100L** Note: 2	**-** **JR** Note: 3
	None: Standard LMC: Lambda NP: NP LM: Lambda SS: SS (only RF06B)		Chain with plastic covers A: Standard (color: white) E: Electroconductive (color: black)			

◆Joint Link

Material mark				
Chain size	Base chain material mark	Snap cover chain	Material of plastic cover	Joint link
RS40 -	**SS**	**SC**	**A**	**- JL**

Note: 1. Do not leave space between letters and symbols.
2. Minimum quantity: 3, maximum quantity: 99999.
3. Please refer on page 6.

Dimension Table

Chain size	Pitch P	Roller diameter ϕR	Innner width of inner link W	Pin diameter ϕD	Link plate				Plastic cover			Max. allowable load kN {kgf}		Chain mass kg/m	Max. allowable speed m/min	Operating temperature range °C	Number of links per unit
					Thickness t_1	Thickness t_2	Width H_1	Width H_2	h_1	h_2	L	Standard, NP, Lambda	SS				
RF06B	9.525	6.35	5.72	3.28	1.0	1.3	8.2	8.2	4.2	7.6	17.7	1.47{150}	0.26 {26.5}	0.55	60	–10 to 80	320
RS40	12.70	7.92	7.95	3.97	1.5	1.5	12.0	10.4	6.1	9.3	23.5	2.65{270}	0.44 {45}	0.8			240
RS50	15.875	10.16	9.53	5.09	2.0	2.0	15.0	13.0	7.5	12.1	29.0	4.31{440}	0.69 {70}	1.3			192
RS60	19.05	11.91	12.70	5.96	2.4	2.4	18.1	15.6	8.5	13.7	34.7	6.28{640}	1.03{105}	1.9			160
RS80	25.40	15.88	15.88	7.94	3.2	3.2	24.1	20.8	11.3	18.2	42.4	10.7{1090}	1.77{180}	2.9			120
RS100	31.75	19.05	19.05	9.54	4.0	4.0	30.1	26.0	14.5	21.6	49.4	17.1{1740}	2.55{260}	4.4			96

Base Chain Material Table

Base chain material	Standard		NP		Lambda				SS	
Base chain material mark	—		NP		LM		LMC		SS	
Plastic cover material	Standard	Electroconductive	Standard	Electroconductive	Standard	Electroconductive	Standard	Electroconductive	Standard	Electroconductive
RF06B-■SCA	○		○		○				○	
RS40-■SCA	●		●				○		●	
RS50-■SCA	●		●				○		●	
RS60-■SCA	●		●				○		●	
RS80-■SCA	○		○				○		○	
RS100-■SCA	○		○				○		○	
RF06B-■SCE		○		○		○				○
RS40-■SCE		○		○				○		○
RS50-■SCE		○		○				○		○
RS60-■SCE		○		○				○		○
RS80-■SCE		○		○				○		○
RS100-■SCE		○		○				○		○
RF06B-■SCA-JL	○		○		○				○	
RS40-■SCA-JL	●		●				○		●	
RS50-■SCA-JL	●		●				○		●	
RS60-■SCA-JL	●		●				○		●	
RS80-■SCA-JL	○		○				○		○	
RS100-■SCA-JL	○		○				○		○	
RF06B-■SCE-JL		○		○		○				○
RS40-■SCE-JL		○		○				○		○
RS50-■SCE-JL		○		○				○		○
RS60-■SCE-JL		○		○				○		○
RS80-■SCE-JL		○		○				○		○
RS100-■SCE-JL		○		○				○		○

Note: 1. "●": Standard products, "○": Made-to-order products. 2. Only **RS40-SC-PA, RS50-SC-PA, RS60-SC-PA** are in stock plastic covers. 3. ■ indicates the base chain material marks.

Sprockets

1. RS sprocket (with 13 or more teeth) can be used.
2. RF06B is up to British Standard, which is equivalent for ISO B, requires a special sprocket.
3. Refer to the separate catalog Tsubaki Drive Chains & Sprockets for information about sprockets for RF06B and RS100 .
4. When using Tsubaki RS40, RS50 or RS60 snap cover chains, there may be interference between the bottom of the plastic cover and the hub of the sprocket depending on the number of teeth of the sprocket used.

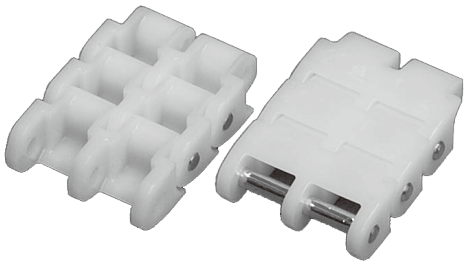
In case of using sprockets of the following number of teeth, the hub should be machined to size indicated. Sprockets labeled "–" do not need to be machined.

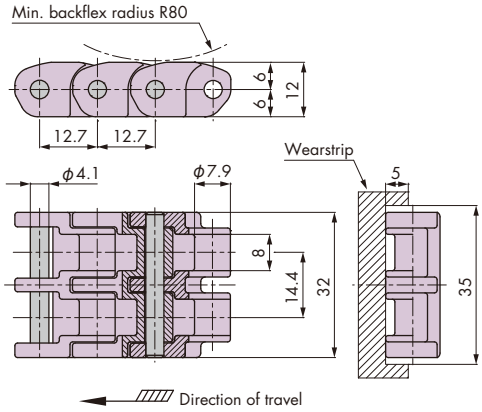
Teeth	13	14	15	16	17	18	19	20	21	22
RS40-SC	–	41	45	49	53	–	61	65	69	73
RS50-SC	46	–								
RS60-SC	54	–								

Note: 1. Sprockets for RF06B are made-to-order products.
2. Sprockets for the RS80 and RS100 series do not require hub machining.

Plastic Block Chain
Digest

■ RSP-PC082



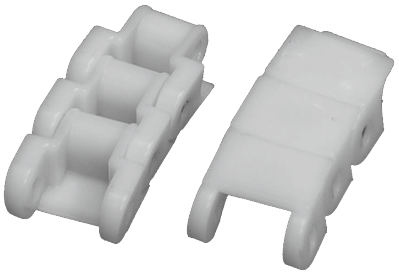


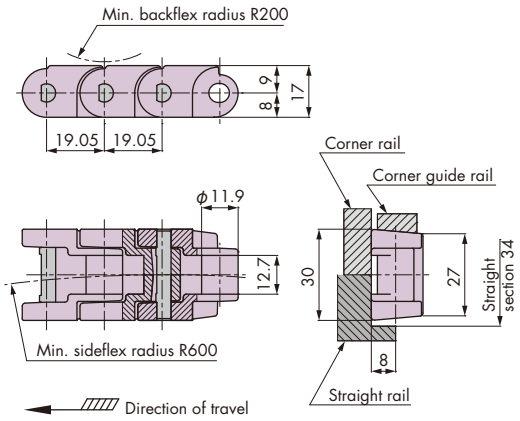
Chain Material Table

Material	Standard	Max. allowable load kN {kgf}	Chain mass kg/m
Material mark	—		
Link color	White		
Chain type	**RSP-PC082**	0.49{50}	0.6

Note: 1. Standard product.
2. The pin material is steel (unichrome plating).
3. Plastic pin type is not available.
4. RS40-2 sprocket (with 13 or more teeth) can be used.
5. Number of links per unit: 240

■ RSP-PO12SB





Chain Material Table

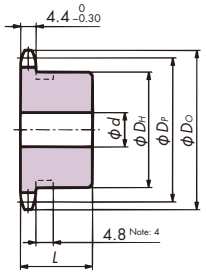
Material	Standard	Max. allowable load kN {kgf}	Chain mass kg/m
Material mark	—		
Link color	White		
Chain type	RSP-PO12SB	0.83{85}	0.8

Note: 1. Made-to-order product.
2. Plastic pin type is not available.
3. RS60 sprocket (with 12 or more teeth) can be used. The hub diameter (*Dh*) should be machined to size.
4. Number of links per unit: 160

MEMO

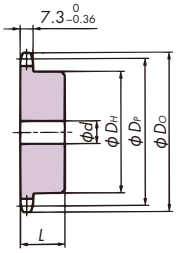
RS Sprockets

RS35



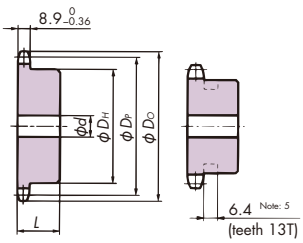
(machined type)
1B type

RS40



(machined type)
1B type

RS50



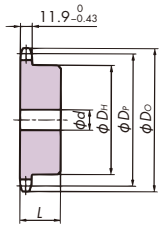
(machined type)
1B type

Sprocket Specification Table

Sprocket type	Teeth	Pitch diameter D_P	Outside diameter D_O	1B type				Approx mass kg	Material
				Bore diameter d		Hub			
				Plain bore	Max.	Diameter D_H	Length L		
RS35	**13** Note: 4	39.80	44	9.5	18	32 Note: 4	20	0.12	Machined type/Carbon steel for machine structural use
	14	42.80	47		16.5	30			
	15	45.81	51		19	35		0.16	
	16	48.82	54		20	37		0.19	
	17	51.84	57		24	41		0.22	
	18	54.85	60		24.5	44		0.25	
	19	57.87	63		28.5	47		0.28	
	20	60.89	66		30	50		0.32	
	21	63.91	69	32		53		0.36	
	22	66.93	72					0.37	
	23	69.95	75					0.40	
	24	72.97	78				22	0.43	
	25	76.00	81	12.7				0.44	
	26	79.02	84					0.45	
	27	82.05	87					0.46	
	28	85.07	90					0.48	
RS40	**13**	53.07	58	9.5	20	37	22	0.23	
	14	57.07	63		24	42		0.28	
	15	61.08	67		28.5	46		0.34	
	16	65.10	71	12.7	30	50		0.40	
	17	69.12	76		32	54		0.46	
	18	73.14	80		35	57		0.51	
	19	77.16	84		39.5	62		0.59	
	20	81.18	88		45.5	67	25	0.76	
	21	85.21	92			71		0.85	
	22	89.24	96		50	75		0.95	
	23	93.27	100			77		1.0	
	24	97.30	104		42	63		0.84	
	25	101.33	108					0.88	
	26	105.36	112					0.92	
	27	109.40	116					0.96	
	28	113.43	120					1.0	
RS50	**13** Note: 5	63.33	74	12.7	32	51 Note: 5	25	0.46	
	14	71.34	79			52		0.52	
	15	76.35	84		35	57		0.62	
	16	81.37	89		40	62		0.72	
	17	86.39	94		45.5	67		0.83	
	18	91.42	100		47.5	72	28	1.0	
	19	96.45	105	15.9	48	73		1.1	
	20	101.48	110					1.2	
	21	106.51	115						
	22	111.55	120					1.3	
	23	116.59	125						
	24	121.62	130					1.4	
	25	126.66	135						
	26	131.70	140	18				1.5	
	27	136.74	145						
	28	141.79	150					1.6	

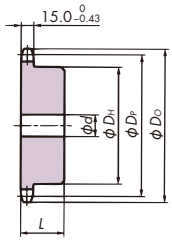
Note: 1. Standard products.
2. Teeth for all sprockets are hardened as standard products.
3. Maximum bore diameter represents the general case. Bore diameters and key/keyway contact stress should be determined based on general mechanical design.
4. The sprocket with 13 teeth has a groove of 28 mm diameter in the outer circumference. See the above RS35 drawing for details.
5. The sprocket with 13 teeth has a groove of 47 mm diameter in the outer circumference. See the above RS50 drawing for details.

RS60



(machined type)
1B type

RS80



(machined type)
1B type

Sprocket Specification Table

Sprocket type	Teeth	Pitch diameter D_P	Outside diameter D_O	1B type					
				Bore diameter d		Hub		Approx mass kg	Material
				Plain bore	Max.	Diameter D_H	Length L		
RS60	**12**	73.60	83	12.7	32	51	32	0.69	Machined type/Carbon steel for machine structural use
	13	79.60	89	15.9	35	57		0.81	
	14	85.61	95		39.5	62		0.96	
	15	91.63	101		45.5	68		1.1	
	16	97.65	107		47.5	73		1.3	
	17	103.67	113					1.4	
	18	109.70	119		55	83	40	2.0	
	19	115.74	126					2.1	
	20	121.78	132					2.2	
	21	127.82	138					2.3	
	22	133.86	144					2.5	
	23	139.90	150	18					
	24	145.95	156					2.6	
	25	151.99	162					2.7	
	26	158.04	168					2.9	
	27	164.09	174					3.0	
	28	170.14	181					3.1	
RS80	**13**	106.14	118	19	50	77	40	1.7	
	14	114.15	127					1.9	
	15	122.17	135		63	93		2.5	
	16	130.20	143					2.7	
	17	138.23	151					2.8	
	18	146.27	159					3.0	
	19	154.32	167	23				3.2	
	20	162.37	176					3.4	
	21	170.42	184					3.7	

Note: 1. Standard products.
2. Teeth for all sprockets are hardened as standard products.
3. Maximum bore diameter represents the general case. Bore diameters and key/keyway contact stress should be determined based on general mechanical design.

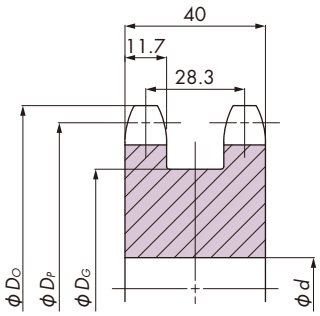
Model Numbering

Chain size		Number of strands	Hub	Teeth	Teeth hardening
RS80	-	**1**	**B**	**16T**	**Q**
		1: Single strand	B:B type (1B type)		None: Non-hardened teeth Q: Hardened teeth

Note: Do not leave space between letters and symbols.

Sprockets for Plastic Block Chain

Steel Sprockets for RSP-PO12-2S

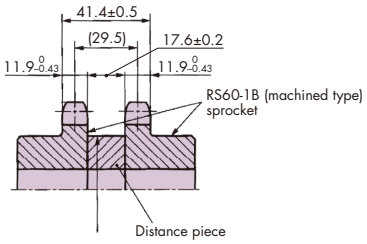


Tsubaki model no.	Teeth	Pitch diameter D_P	Outside diameter D_O	Groove diameter D_G	Bore diameter d		Approx mass kg	Material
					Plain bore	Max.		
RSP-UPO19T	19	115.7	125	90	20	50	2.7	Carbon steel for machine structural use
RSP-UPO21T	21	127.8	137	105		60	3.4	
RSP-UPO23T	23	139.9	149	115			4.0	
RSP-UPO25T	25	152.0	161	130		70	4.9	

Note: Made-to-order products.

Sprockets for RSP60-2 and RSP60-CU-2

1. For the sprocket, please use two RS60B (machined type) sprockets together.
2. Adjust the width between the two sprockets by inserting a distance piece.



Note: 1. RS60-2B or 2C sprockets cannot be used.
2. Match the phases of two sprockets.
3. Use sprockets with twelve teeth or greater.
4. A special distance piece will be available when ordering two sprockets and a distance piece as a set. An integrated type of two sprockets with a distance piece is also available.

MEMO

Stainless Steel Top Chain
TT
Straight Running

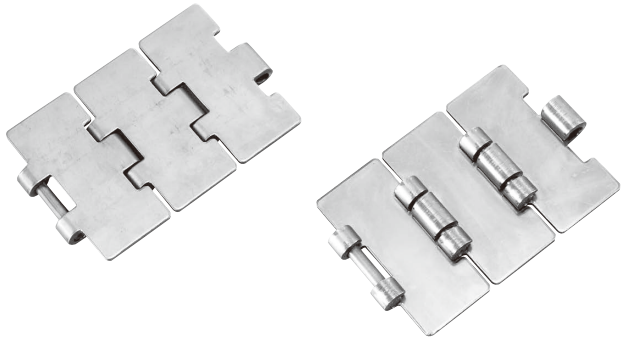
Sprockets P.254, 315, 318 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.435 | Disconnecting Tools P.399

Features

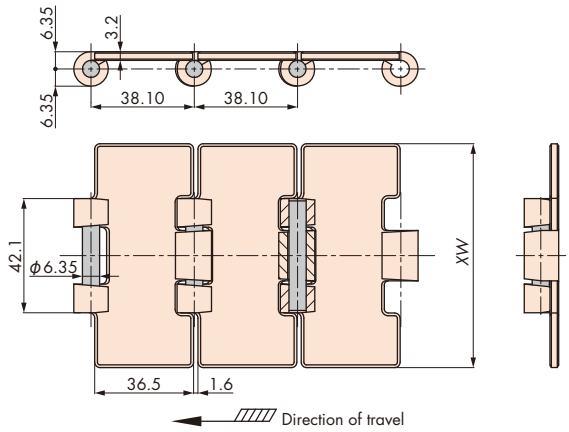
1. International standard shape.
2. All parts are made of stainless steel.
3. All edges of the top plates are smoothly chamfered, ensuring smooth transfer.

Chain Material

The following types are available for stainless steel top chains.
◆N series: Top plate is made of martensitic stainless steel.
◆SS series: Made of type 304 stainless steel or equivalent.
Highly resistant to corrosion and is clean and sanitary.
Note: Contact a Tsubaki representative if the chain will be used in extreme environments.



Drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
38.10	180	80

Tsubaki Model Table

Material	N	SS	Chain width *XW*	Chain mass kg/m
Max. allowable load kN {kgf}	2.16{220}			
Chain type	**TT635-N**	**TT635-SS**	63.5	2.3
	TT762-N	**TT762-SS**	76.2	2.5
	TT826-N	**TT826-SS**	82.6	2.6
	TT1016-N	**TT1016-SS**	101.6	3.0
	TT1143-N	**TT1143-SS**	114.3	3.3
	TT1270-N	**TT1270-SS**	127.0	3.8
	TT1524-N	**TT1524-SS**	152.4	4.2
	TT1905-N	**TT1905-SS**	190.5	5.1

Note: 1. Standard products.
2. As of October 2010, the standard product lineup was expanded.
3. The top surface of the plates are polished.
4. No additional machining or processing should be performed on N series top plate. Cracking or fracturing may occur during bending process.

Model Numbering

◆Chain

Chain type	Chain width		Base chain material mark		Number of links
TT	**826** Note: 2	**-**	**N** Note: 3	**+**	**20L** Note: 4

◆Connecting pin

Chain type		Base chain material mark		Connecting pin
TT	**-**	**N** Note: 3	**-**	**RP**

Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of chains in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 2, maximum quantity: 99999.

MEMO

Stainless Steel Top Chain

TS/TSA

Straight Running

Features

1. The conveyor chain with plate attached to ANSI double pitch chain. Sprockets for double pitch chains should be used.
2. Base chains made of NP (nickel-plated), LMCNP (Lambda) or SS (stainless steel) are available.
3. Available in a wide variety of special finishes to suit various applications and work environments, including hard chromium plated, buffed top plates, and heat-treated top plates for improved wear resistant.

Chain Material

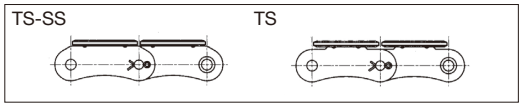
The following types are available for stainless steel top chains.

◆Standard series: Base chain is steel-made, SUS430 is used in top plates.

◆NP series (nickel-plated): Base chains are a standard type processed with nickel-plating, providing corrosion resistance and better appearance.

◆LMCNP series (Lambda type): Lube-free chain in combination with NP type base chain and oil impregnated sintered bushes.

◆SS series: Made of type 304 stainless steel and is suitable for an environment where corrosion resistance is to be prioritized.



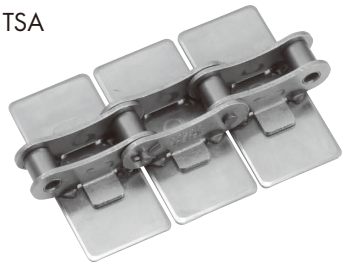
SS base chain plates differ slightly in shape.



TS



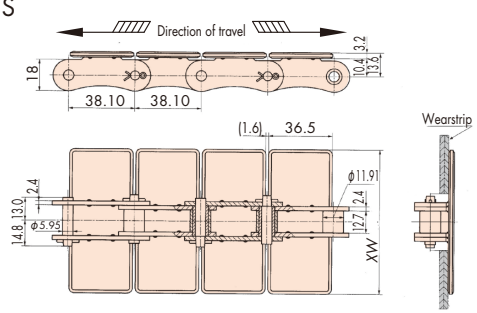
TSA



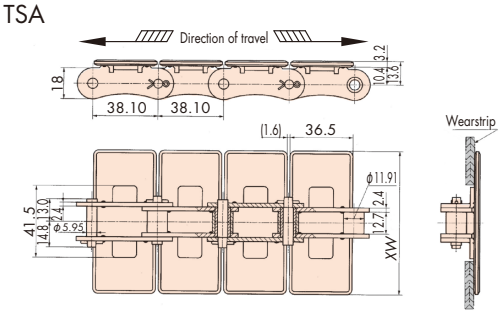
Chain pitch mm	Backflex radius mm	Number of links per unit
38.10	330	80

Drawing

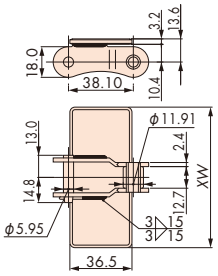
TS



TSA

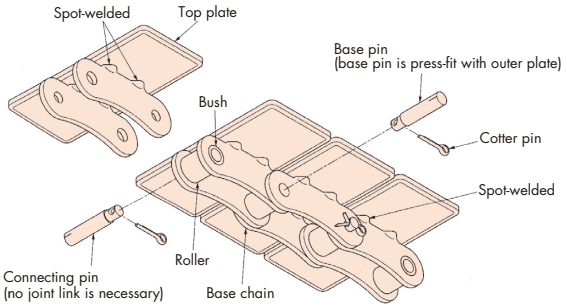


Offset link



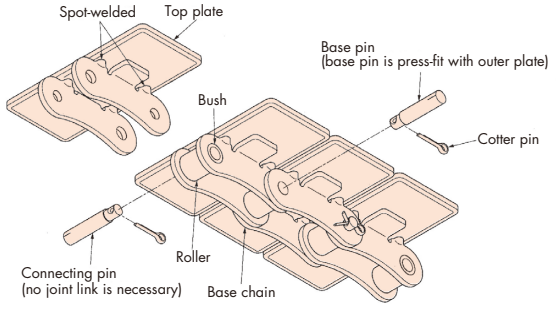
Three-dimensional drawing

TS



Loose-fit for rollers with bushes and press-fit for bushes with inner plates, due to the same structure as a standard roller chain.

TSA



Loose-fit for rollers with bushes and press-fit for bushes with inner plates, due to the same structure as a standard roller chain.

Sprockets

RF2060S sprocket (with 19 or more actual teeth) can be used.

Tsubaki Model Table

Material		Standard	NP	LMCNP (Lambda type)	SS	Top plate width *XW*	Chain mass kg/m
Max. allowable load kN {kgf}			2.94{300}		1.03{105}		
TS	Chain type	**TS550**	TS550-NP	TS550-LMCNP	TS550-SS	55.0	2.5
		TS635	TS635-NP	TS635-LMCNP	TS635-SS	63.5	2.7
		TS762	TS762-NP	TS762-LMCNP	TS762-SS	76.2	3.0
		TS826	TS826-NP	TS826-LMCNP	TS826-SS	82.6	3.2
		TS950	TS950-NP	TS950-LMCNP	TS950-SS	95.0	3.5
		TS1016	TS1016-NP	TS1016-LMCNP	TS1016-SS	101.6	3.7
		TS1100	TS1100-NP	TS1100-LMCNP	TS1100-SS	110.0	3.9
		TS1143	TS1143-NP	TS1143-LMCNP	TS1143-SS	114.3	4.0
		TS1270	TS1270-NP	TS1270-LMCNP	TS1270-SS	127.0	4.3
		TS1524	TS1524-NP	TS1524-LMCNP	TS1524-SS	152.4	4.9
		TS1905	TS1905-NP	TS1905-LMCNP	TS1905-SS	190.5	5.8
TSA	Chain type	TSA550	TSA550-NP	TSA550-LMCNP	TSA550-SS	55.0	2.8
		TSA635	**TSA635-NP**	TSA635-LMCNP	TSA635-SS	63.5	3.0
		TSA762	TSA762-NP	TSA762-LMCNP	TSA762-SS	76.2	3.3
		TSA826	**TSA826-NP**	TSA826-LMCNP	TSA826-SS	82.6	3.5
		TSA950	**TSA950-NP**	TSA950-LMCNP	TSA950-SS	95.0	3.8
		TSA1016	TSA1016-NP	TSA1016-LMCNP	TSA1016-SS	101.6	4.0
		TSA1100	TSA1100-NP	TSA1100-LMCNP	TSA1100-SS	110.0	4.2
		TSA1143	TSA1143-NP	TSA1143-LMCNP	TSA1143-SS	114.3	4.3
		TSA1270	TSA1270-NP	TSA1270-LMCNP	TSA1270-SS	127.0	4.6
		TSA1524	**TSA1524-NP**	TSA1524-LMCNP	TSA1524-SS	152.4	5.2
		TSA1905	**TSA1905-NP**	TSA1905-LMCNP	TSA1905-SS	190.5	6.1

Note: Chain type in boldface are standard products. Chain type in normal face are made-to-order products.

Type of Offset Link (Common for TS and TSA)

Material	Type of offset link (common for TS and TSA)				Top plate width *XW*
	Standard	NP	LMCNP (Lambda type)	SS	
Chain type	**TS550-OL**	TS550-NP-OL	TS550-LMCNP-OL	TS550-SS-OL	55.0
	TS635-OL	TS635-NP-OL	TS635-LMCNP-OL	TS635-SS-OL	63.5
	TS826-OL	TS826-NP-OL	TS826-LMCNP-OL	TS826-SS-OL	82.6
	TS950-OL	TS950-NP-OL	TS950-LMCNP-OL	TS950-SS-OL	95.0
	TS1016-OL	TS1016-NP-OL	TS1016-LMCNP-OL	TS1016-SS-OL	101.6
	TS1100-OL	TS1100-NP-OL	TS1100-LMCNP-OL	TS1100-SS-OL	110.0
	TS1143-OL	TS1143-NP-OL	TS1143-LMCNP-OL	TS1143-SS-OL	114.3
	TS1270-OL	TS1270-NP-OL	TS1270-LMCNP-OL	TS1270-SS-OL	127.0
	TS1524-OL	TS1524-NP-OL	TS1524-LMCNP-OL	TS1524-SS-OL	152.4
	TS1905-OL	TS1905-NP-OL	TS1905-LMCNP-OL	TS1905-SS-OL	190.5

Note: Chain type in boldface are standard products. Chain type in normal face are made-to-order products.

Model Numbering

◆Chain

Chain type	Top plate width		Base chain material mark		Number of links		End link		Options
TS	**826** Note: 2	-	**NP** Note: 3	+	**20L** Note: 4	-	**PKR** Note: 5	-	**P** Note: 5

TS: TS
TSA: TSA

◆Connecting Pin, Cotter Pin

Chain type		Base chain material mark		Part mark
TS	-	**NP** Note: 3	-	**CP** Note: 6

CP: Connecting pin
WARIPIN: Cotter pin

Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 3, maximum quantity: 99999.
5. Please refer on page 6.
6. A connecting pin and cotter pin are different products. Please enter the model number of the product you want to purchase.

Stainless Steel Top Chain

TS-CTP, TSA-HTP

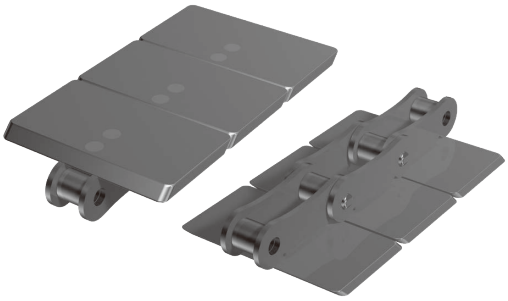
Design Stock

Straight Running

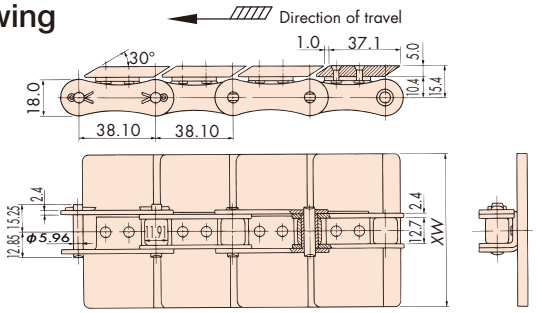
Sprockets P.319 Rails P.323 Return-Way Parts P.359

TS-CTP Features/Chain Material

The narrow gap between plates prevent catching of conveyed product.



Drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
38.10	1300	80

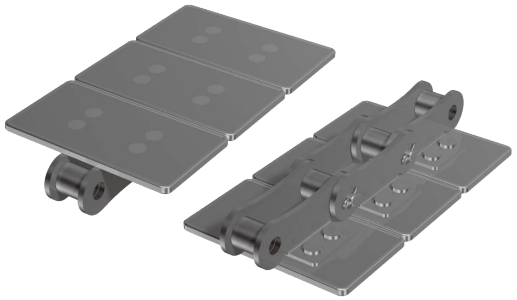
Tsubaki Model Table

Chain type	Top plate width *XW*
TS635-CTP	63.5
TS762-CTP	76.2

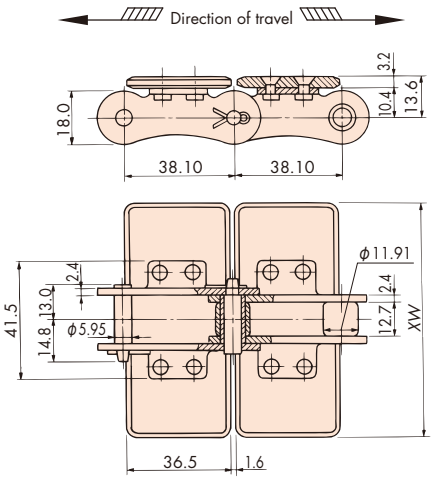
Note: 1. Made-to-order products.
2. Sprockets for double pitch chains can be used.

TSA-HTP Features/Chain Material

Hard to be scratched by quench hardening of the top plate (carbon steel).



Drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
38.10	330	80

Tsubaki Model Table

Chain type	Top plate width *XW*
TSA550-HTP	55.0
TSA635-HTP	63.5
TSA762-HTP	76.2

Chain type	Top plate width *XW*
TSA826-HTP	82.6
TSA950-HTP	95.0
TSA1016-HTP	101.6

Note: 1. Made-to-order products.
2. Top plate hardened to HRC40 (base chain standard carbon steel).
3. Top plate is riveted to the base chain.
4. Sprockets for double pitch chains can be used.

Model Numbering

◆Chain

Chain type	Top plate width		Top plate material mark		Number of links		End link		Options
TSA	762 Note: 2	-	HTP Note: 3	+	20L Note: 4	-	PKR Note: 5	-	P Note: 5

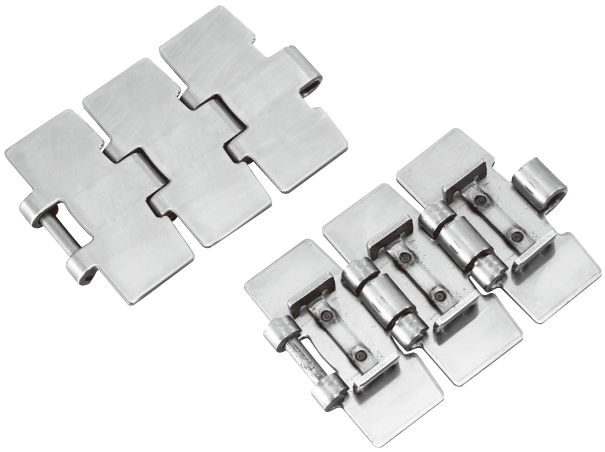
Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 3, maximum quantity: 99999.
5. Please refer on page 6.

Features

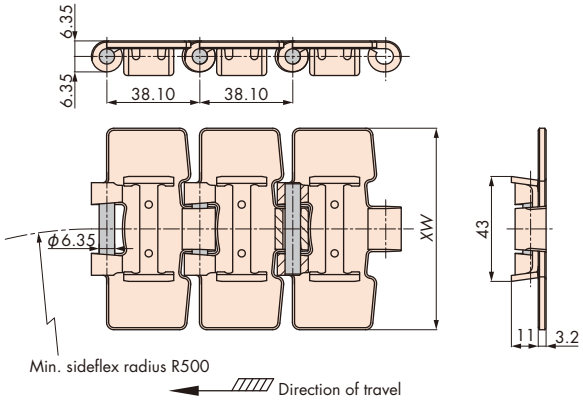
1. Standard stainless steel top chains designed for use in sideflexing conveyors.
2. All parts are made of stainless steel.
3. Suitable for stable transportation of conveyed products due to the wrapped hinge and top plate.
4. Top plates are smoothly polished with a grinder.

Chain Material

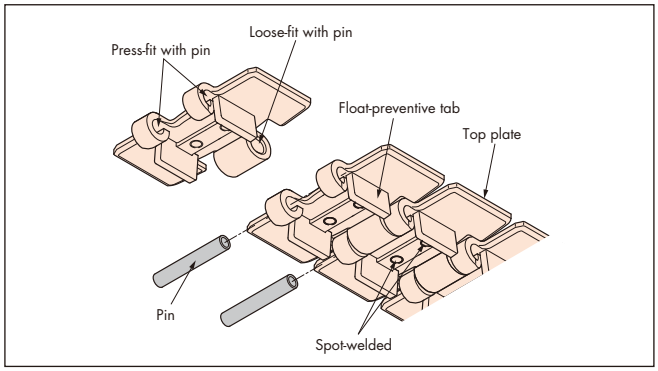
The following types are available for stainless steel top chains.
◆N series: Base chain is made of martensitic stainless steel.



Drawing



Three-dimensional drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
38.10	100	80

Tsubaki Model Table

Material	N	Chain width *XW*	Chain mass kg/m
Max. allowable load kN {kgf}	2.16{220}		
Chain type	**TTU762-N**	76.2	2.8
	TTU826-N	82.6	3.0
	TTU1143-N	114.3	3.7
	TTU1905-N	190.5	5.5

Note: 1. Standard products.
2. As of October 2010, the standard product lineup was expanded. (TTU762-N from 2011).
3. The top surfaces of the plates are polished.
4. TTU underwent design improvements in October 2003 and July 2009, as a result new chains cannot be connected to older existing ones. When replacing chains, whole chains must be replaced.
5. The minimum sideflexing radius of TTU was changed in October 2003. Be sure to check the minimum sideflex radius when replacing.

Model Numbering

◆Chain

Chain type	Chain width		Base chain material mark		Number of links
TTU	**826** Note: 2	**-**	**N** Note: 3	**+**	**20L** Note: 4

◆Joint Link

Chain type		Base chain material mark		Joint link
TTU	**-**	**N** Note: 3	**-**	**RP**

Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of chains in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 2, maximum quantity: 99999.

Stainless Steel Top Chain
TTKU
Sideflexing Running

Sprockets P.302 | Rails P.323 | Return-Way Parts P.359 | Allowable Load Graph P.435 | Disconnecting Tools P.399

Features

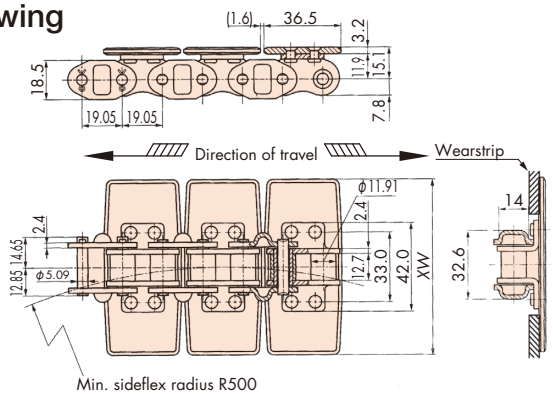
1. Sideflexing chain with protrusions on joint plates to guide sideflexing movement.
2. Higher allowable load than TTU.
3. Easy maintenance due to allowing chain to be lifted at corners.
4. Suitable for light loads or slow speed conveyance.
   Note: The chain may lift up at corners in case of heavy loads or high-speed transportation.

Chain Material

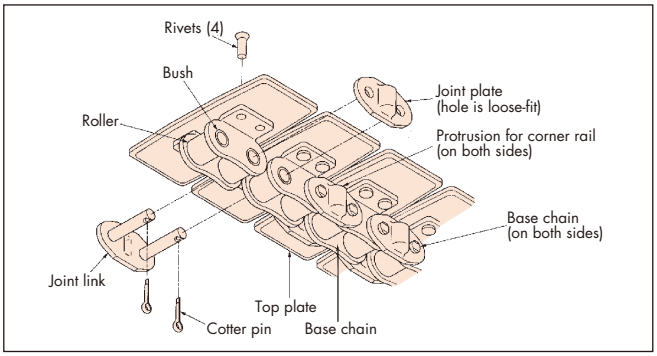
The following types are available for stainless steel top chains.
◆Standard series: Base chain is steel-made, SUS430 is used in top plates.



Drawing



Three-dimensional drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	300	160 Note:

Note: The number of links on the base chain.

Tsubaki Model Table

Material		Standard	Top plate width *XW*	Chain mass kg/m
Max. allowable load kN {kgf}		2.84{280}Note: 2		
Material	Top plate	SUS430(18Cr)		
	Rivets	(13Cr)		
	Base chain	Steel		
Chain type		**TTKU826**	82.6	3.8
		TTKU1100	110.0	4.5

Note: 1. Chain type in boldface is a standard product. Chain type in normal face is a made-to-order product.
2. SS series: Chains with a max. allowable load of 0.69 kN {70 kgf} can also be manufactured.
3. For low speed (45m/min or less) sideflex radius conveyance.

Sprockets

RS60 sprocket (with 12 or more teeth) can be used.

Model Numbering

◆Chain

Chain type	Top plate width		Number of links
TTKU	**826** Note: 2	+	**20L** Note: 3

◆Joint Link

Chain type		Joint link
TTKU	-	**JL**

Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Since the TTKU has a top plate for every two links of the main chain, be sure to specify the chain length when ordering with the number of links of the base chain.

Features

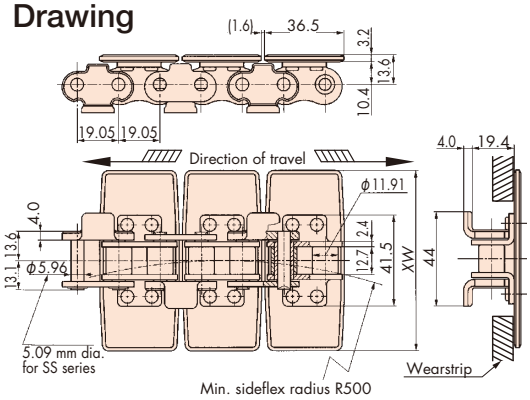
1. Higher allowable load than TTU.
2. Sideflexing chain equipped with tabs.

Chain Material

The following types are available for stainless steel top chains.
◆Standard series: Base chain is steel-made, SUS430 is used in top plates.
◆NP series (nickel-plated): Base chains are a standard type processed with nickel-plating, providing corrosion resistance and better appearance.
◆SS series: Made of type 304 stainless steel and is suitable for an environment where corrosion resistance is to be prioritized.
Note: Contact a Tsubaki representative if the chain will be used in extreme environments.



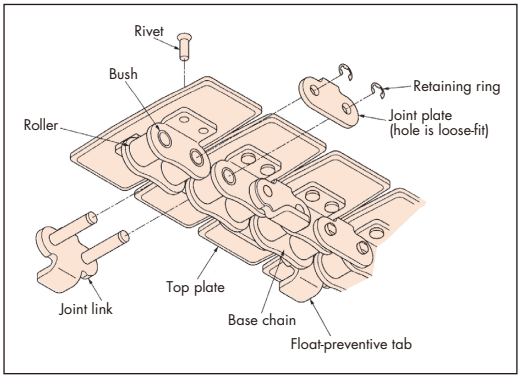
Drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
19.05	300	160Note

Note: The number of links on the base chain.

Three-dimensional drawing



Tsubaki Model Table

Material		Standard	SS	NP	Top plate width XW	Chain mass kg/m
Max. allowable load kN {kgf}		4.02{410}	0.69{70}	4.02{410}		
Material	Top plate	SUS430(18Cr)	SUS304	SUS430(18Cr)		
	Rivets	(13Cr)		18-8US		
	Base chain	Steel		Steel + nickel-plated		
Chain type		TRU762-T	TRU762-T-SS	TRU762-T-NP	76.2	3.9
		TRU826-T	TRU826-T-SS	TRU826-T-NP	82.6	4.1
		TRU1016-T	TRU1016-T-SS	TRU1016-T-NP	101.6	4.6
		TRU1100-T	TRU1100-T-SS	TRU1100-T-NP	110.0	4.8
		TRU1143-T	TRU1143-T-SS	TRU1143-T-NP	114.3	4.9
		TRU1270-T	TRU1270-T-SS	TRU1270-T-NP	127.0	5.2

Note: Chain type in boldface is a standard product. Chain type in normal face are made-to-order products.

Sprockets

RS60 sprocket (with 19 or more teeth) can be used.

Model Numbering

◆Chain

Chain type	Top plate width		Tab		Base chain material mark		Number of links		Options
TRU	826 Note: 2	-	T	-	SS Note: 3	+	20L Note: 4	-	P Note: 5

↓ With tab, which prevents chains from floating

◆Joint Link

Chain type		Tab		Base chain material mark		Joint link
TRU	-	T	-	SS Note: 3	-	JL

↓ With tab, which prevents chains from floating

Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Since the TRU has a top plate for every two links of the main chain, be sure to specify the chain length when ordering with the number of links of the base chain.
5. Please refer on page 6.

Stainless Steel Top Chain
TO
Sideflexing Running

Sprockets P.321 Rails P.323 Allowable Load Graph P.435

Features

1. Stainless steel top chain designed for use in horizontal conveyors.
2. Suitable for horizontal conveyance in tight spaces.

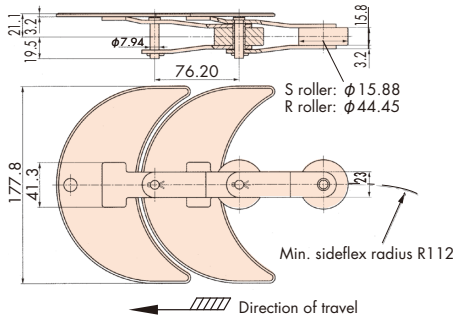
Chain Material

The following types are available for stainless steel top chains.
◆Standard series: Base chain is steel-made, SUS430 is used in top plates.
◆SS series: Made of type 304 stainless steel and is suitable for an environment where corrosion resistance is to be prioritized.
Note: Contact a Tsubaki representative if the chain will be used in extreme environments.

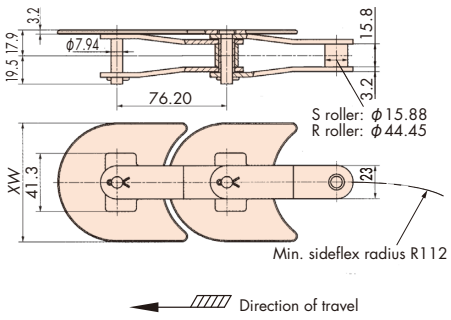


Drawing

TOS(R) 1778



TOS(R) 826, 1143



Chain pitch mm	Backflex radius mm	Number of links per unit
76.20	–	40

Tsubaki Model Table

Material		Standard	SS	Top plate width XW	Chain mass kg/m
Max. allowable load kN {kgf}		2.94{300}	1.77{180}		
Material	Top plate	SUS430(18Cr)	SUS304		
	Base chain	Steel			
Chain type	S roller	TOS826	TOS826-SS	82.6	4.1
		TOS1143	TOS1143-SS	114.3	4.8
		TOS1778	TOS1778-SS	177.8	6.3
	R roller	TOR826	TOR826-SS	82.6	5.9
		TOR1143	TOR1143-SS	114.3	6.9
		TOR1778	TOR1778-SS	177.8	8.1

Note: Made-to-order products.

Model Numbering

◆Chain

Chain type	Top plate width		Base chain material mark		Number of links		Options
TOS	826 Note: 2	-	SS Note: 3	+	20L Note: 4	-	P Note: 5

◆Connecting Pin, Cotter Pin

Chain type		Base chain material mark		Part mark
TO	-	SS Note: 3	-	CP Note: 6

CP: Connecting pin
WARIPIN: Cotter pin

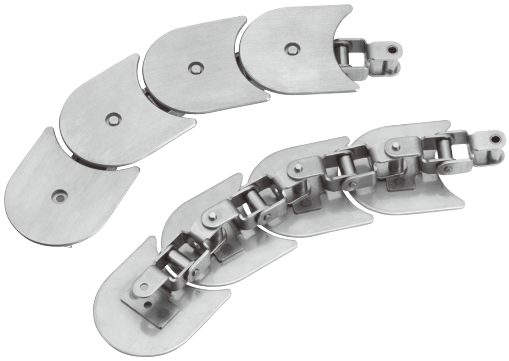
Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 2, maximum quantity: 99999.
5. Please refer on page 6.
6. A connecting pin and cotter pin are different products. Please enter the model number of the product you want to purchase.

Features

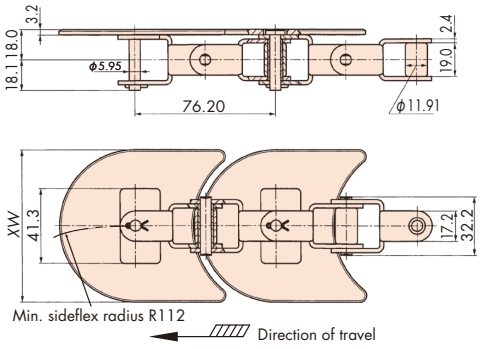
1. Vertical bendable stainless steel chain designed for use in horizontal conveyors.
2. Provides flexible layout including three-dimensional.

Chain Material

The following types are available for stainless steel top chains.
◆Standard series: Base chain is steel-made, SUS430 is used in top plates.
◆SS series: Made of type 304 stainless steel and available to use in an environment where corrosion resistance is to be prioritized.
Note: Contact a Tsubaki representative if the chain will be used in extreme environments.



Drawing



Chain pitch mm	Backflex radius mm	Number of links per unit
76.20	–	40

Tsubaki Model Table

Material		Standard	SS	Top plate width XW	Chain mass kg/m
Max. allowable load kN {kgf}		0.98{100}			
Material	Top plate	SUS430(18Cr)	SUS304		
	Base chain	Steel			
Chain type		TU826	TU826-SS	82.6	3.8
		TU1143	TU1143-SS	114.3	4.5

Note: Made-to-order products.

Model Numbering

◆Chain

Chain type	Top plate width		Base chain material mark		Number of links		Options
TU	826 Note: 2	-	SS Note: 3	+	20L Note: 4	-	P Note: 5

◆Connecting Pin, Cotter Pin

Chain type		Base chain material mark		Part mark
TU	-	SS Note: 3	-	CP Note: 6

CP: Connecting pin
WARIPIN: Cotter pin

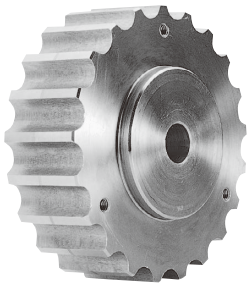
Note: 1. Do not leave space between letters and symbols.
2. Please check the widths of top plates in the above Tsubaki model table.
3. Please check the materials of base chains in the above Tsubaki model table.
4. Minimum quantity: 2, maximum quantity: 99999.
5. Please refer on page 6.
6. A connecting pin and cotter pin are different products. Please enter the model number of the product you want to purchase.

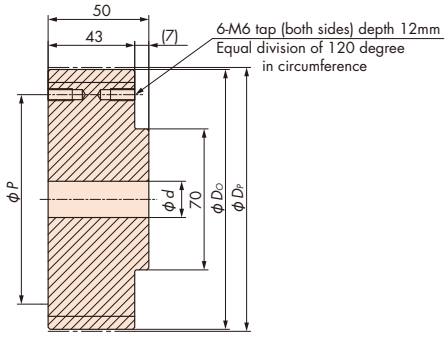
Sprockets for TT Chains

Steel

Applicable Chain: TT

◆With Plain Bore

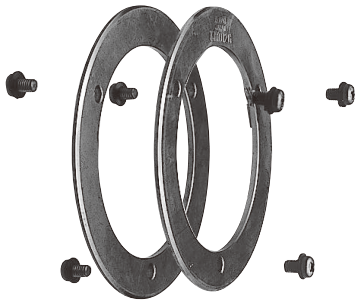


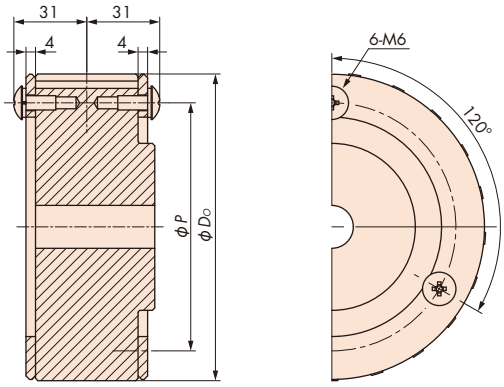


Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	P	Bore diameter d		Approx mass kg	Material
						Plain bore	Max.		
TT912T	19	9 ½	117.34	117	92	18	40	2.8	Carbon steel for machine structural use
TT1012T	21	10 ½	129.26	129	104			3.7	
TT1112T	23	11 ½	141.22	141	116			4.3	
TT1212T	25	12 ½	153.20	153	128			5.0	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. The teeth of all sprockets table above have not been hardened.

◆Guide Rings for TT Steel Sprockets





Tsubaki model no.	Applicable sprocket Tsubaki model no.	Outside diameter D_O	Installed pitch diameter P	Approx. mass kg
TT912G	TTP912T TT912T	116	92	0.17
TT1012G	TTP1012T TT1012T	128	104	0.19
TT1112G	TTP1112T TT1112T	140	116	0.21
TT1212G	TTP1212T TT1212T	152	128	0.23

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. A set consists of two guide rings and six bolts.
3. Common with TTP guide rings.
4. Guide rings are shipped separately with sprockets.

Model Numbering

◆Sprockets

Chain type	Effective teeth	Sprocket		Sleeve no.	Number of tightening bolts	Bore diameter
TT	**1012**	**T**	-	**S4** Note: 2, 3	**4** Note: 3	**30** Note: 3
TTU: TTU		T: Sprocket		S4: Sleeve no. S4	4: Four bolts	30: ϕ30 mm

Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions on the right page.
3. Enter only for Lock series.

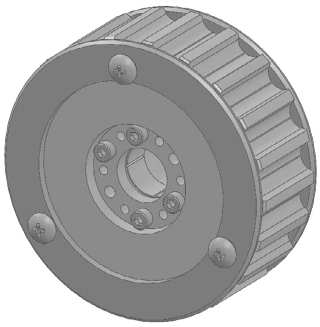
◆Guide Rings

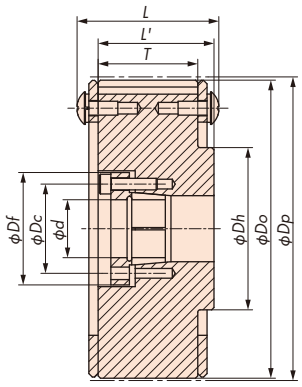
Chain type	Effective teeth	Guide rings
TT	**1012**	**G**
TTU: TTU		G: Guide rings

Note: Do not leave space between letters and symbols.

Applicable Chain	TT

◆Sprockets (Lock Series)





Tsubaki model no.	Actual teeth	Effective teeth	Dimensions						Applicable bore diameter *d*						
			Pitch diameter *DP*	Outside diameter *DO*	Tooth width *T*	Hub diameter *Dh*	*L*	*L'*	15	20	25	30	35	40	45
TT912T-S24□□	19	9 ½	117.34	117	43	70	62	50	●	●					
TT912T-S34□□											●				
TT912T-S44□□												●	●		
TT912T-S55□□														●	●
TT1012T-S24□□	21	10 ½	129.26	129					●	●					
TT1012T-S34□□											●				
TT1012T-S44□□												●	●		
TT1012T-S55□□														●	●
TT1112T-S25□□	23	11 ½	141.22	141					●	●					
TT1112T-S34□□											●				
TT1112T-S44□□												●	●		
TT1112T-S55□□														●	●
TT1212T-S25□□	25	12 ½	153.20	153					●	●					
TT1212T-S34□□											●				
TT1212T-S44□□												●	●		
TT1212T-S55□□														●	●

Note: 1. Contact a Tsubaki representative for the applicable bore diameters other than what is described above.
2. Guide rings are shipped separately with sprockets.

■ S Type Lock Sleeve Dimensions

Sleeve no.	*Df*	*Dc*	Bolt size M×L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	
S4	56.0	46.0		
S5	66.0	56.0	M5×22	

■ Sleeve Combinations and Transfer Torque Values

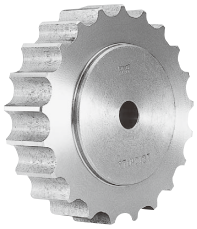
Sleeve no.	S2							S3			S4			S5			
Bore diameter *d*	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45
Sprocket type	Max. allowable transfer torque N·m																
TT912T	139	149	158	167	177	186	205	167	174	195	279	298	325	442	465	488	523
TT1012T																	
TT1112T	174	186	198	209	221	232	256										
TT1212T																	

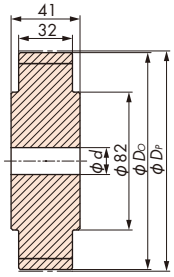
Sprockets for TTU Chains

Steel

Applicable Chain: TTU

◆With Plain Bore





Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx mass kg	Material
					Plain bore	Max.		
TTU1012T	21	10 ½	129.26	129	16	55	3.3	Carbon steel for machine structural use
TTU1112T	23	11 ½	141.22	141			3.9	
TTU1212T	25	12 ½	153.20	153			4.6	

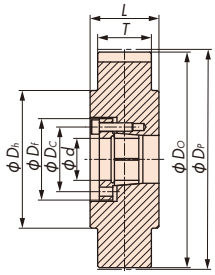
Note: Standard products.

Model Numbering

Chain type	Effective teeth	Sprocket
TTU	**1012**	**T**
TTU: TTU		T: Sprocket

Note: Do not leave space between letters and symbols.

◆Steel Lock Sprockets



Tsubaki model no.	Actual teeth	Effective teeth	Dimensions					Applicable bore diameter d						
			Pitch diameter D_P	Outside diameter D_O	Tooth width T	Hub diameter D_h	L	15	20	25	30	35	40	45
TTU1012T-S24□□	21	10 ½	129.26	129	32	82	41	●	●					
TTU1012T-S34□□										●				
TTU1012T-S44□□											●	●		
TTU1012T-S55□□													●	●
TTU1112T-S25□□	23	11 ½	141.22	141				●	●					
TTU1112T-S34□□										●				
TTU1112T-S44□□											●	●		
TTU1112T-S55□□													●	●
TTU1212T-S25□□	25	12 ½	153.20	153				●	●					
TTU1212T-S34□□										●				
TTU1212T-S44□□											●	●		
TTU1212T-S55□□													●	●

Note: Contact a Tsubaki representative for the applicable bore diameters other than what is described above.

■ S Type Lock Sleeve Dimensions

Sleeve no.	D_f	D_C	Bolt size M×L	Bolt tightening torque N·m
S2	42.0	32.0	M5×18	8.3
S3	48.5	38.5	M5×20	
S4	56.0	46.0		
S5	66.0	56.0	M5×22	

■ Sleeve Combinations and Transfer Torque Values

Sleeve no.	S2							S3			S4			S5			
Bore diameter d	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45
Sprocket type	Max. allowable transfer torque N·m																
TTU1012T	139	149	158	167	177	186	205	167	174	195	279	298	325	442	465	488	523
TTU1112T																	
TTU1212T	174	186	198	209	221	232	256										

Model Numbering

◆Sprockets

Chain type	Effective teeth	Sprocket		Sleeve no.	Number of tightening bolts	Bore diameter
TTU	**1012**	**T**	-	**S4** Note: 2, 3	**4** Note: 3	**30** Note: 3
TTU: TTU		T: Sprocket		S4: Sleeve no. S4	4: 4 bolts	30: φ30 mm

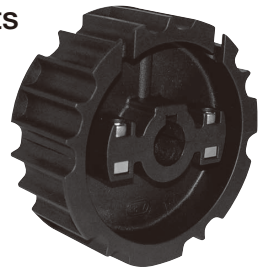
Note: 1. Do not leave space between letters and symbols.
2. Refer to the lock sleeve dimensions.
3. Enter only for Lock series.

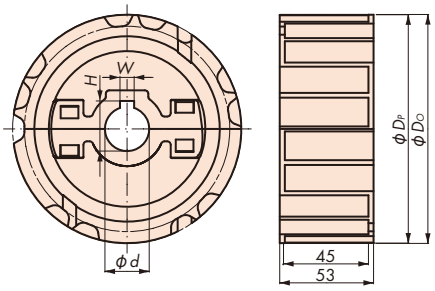
Sprockets for TT Chains

Engineering Plastic

Applicable Chain: TT

◆Split Sprockets





Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d	Keyway W	Keyway H	Approx mass kg	Material: Body	Material: Bolt	Material: Nut	Bolt tightening torque N·m {kgf·m}
TP-C12053NT-SPR	21	10 ½	129.26	129	φ25	8	28.3	0.50	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	6 {0.61}
TP-C12054NT-SPR					φ30	8	33.3	0.49				
TP-C12055NT-SPR					φ35	10	38.3	0.48				
TP-C12056NT-SPR					φ40	12	43.3	0.46				
TP-C12099NT-SPR	23	11 ½	141.22	142	φ25	8	28.3	0.53				
TP-C12100NT-SPR					φ30	8	33.3	0.50				
TP-C12101NT-SPR					φ35	10	38.3	0.50				
TP-C12102NT-SPR					φ40	12	43.3	0.53				
TP-C12065NT-SPR	25	12 ½	153.20	154	φ25	8	28.3	0.66				
TP-C12066NT-SPR					φ30	8	33.3	0.64				
TP-C12067NT-SPR					φ35	10	38.3	0.63				
TP-C12068NT-SPR					φ40	12	43.3	0.62				

Note: 1. Standard products.
2. Operating temperature range: −20°C to 80°C.
3. Use a cold rolled steel shaft.

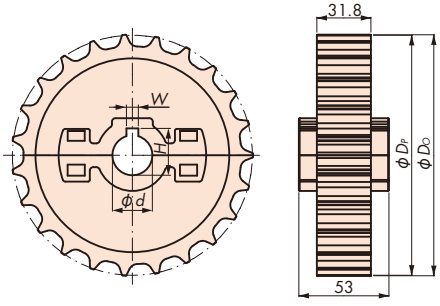
Sprockets for TTU Chains

Engineering Plastic

Applicable Chain: TTU

◆Split Sprockets





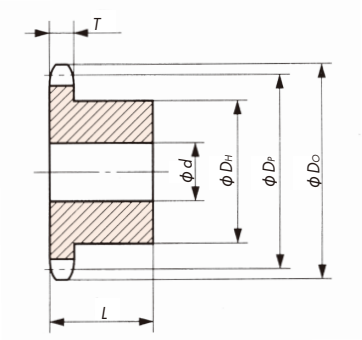
Tsubaki model no.	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d	Keyway W	Keyway H	Approx mass kg	Material: Body	Material: Bolt	Material: Nut	Bolt tightening torque N·m {kgf·m}
TP-C12061NT-SPR	21	10 ½	129.26	129	φ25	8	28.3	0.42	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	6 {0.61}
TP-C12062NT-SPR					φ30	8	33.3	0.41				
TP-C12063NT-SPR					φ35	10	38.3	0.39				
TP-C12064NT-SPR					φ40	12	43.3	0.39				
TP-C12109NT-SPR	23	11 ½	141.22	142	φ25	8	28.3	0.43				
TP-C12110NT-SPR					φ30	8	33.3	0.41				
TP-C12111NT-SPR					φ35	10	38.3	0.44				
TP-C12112NT-SPR					φ40	12	43.3	0.39				
TP-C12073NT-SPR	25	12 ½	153.20	154	φ25	8	28.3	0.45				
TP-C12074NT-SPR					φ30	8	33.3	0.43				
TP-C12075NT-SPR					φ35	10	38.3	0.42				
TP-C12076NT-SPR					φ40	12	43.3	0.42				

Note: 1. Standard products.
2. Operating temperature range: −20°C to 80°C.
3. Use a cold rolled steel shaft.

Sprockets for Double Pitch Chain Steel, Stainless Steel, Engineering Plastic

Applicable Chain	TPRF2040, TPRF2060, TS, TSA

◆For S Roller



Standard sprockets	Environmental resistance sprocket		Effective teeth	Actual teeth	Pitch diameter D_P	Outside diameter D_O	Tooth width T	Bore diameter d		Hub			Approx. mass kg	
Steel	Stainless steel	Engineering plastic Note: 3, 4, 5						Plain bore	Max.	Diameter D_H		Length L		
Tsubaki model no.	Tsubaki model no.	Tsubaki model no.								Steel stainless steel	Engineering plastic		Steel stainless steel	Engineering plastic
RF2040S-1B912T	**RF2040S-1B912T-SS**	RF2040S-1B912T-P	9 ½	19	78.23	84	7.3	12.7	38	60	60	25	0.6	0.1
RF2040S-1B1012T	**RF2040S-1B1012T-SS**	RF2040S-1B1012T-P	10 ½	21	86.17	92			46	69	69		0.9	0.13
RF2040S-1B1112T	**RF2040S-1B1112T-SS**	RF2040S-1B1112T-P	11 ½	23	94.14	100			50	77	77		1.0	0.16
RF2040S-1B1200T	**RF2040S-1B1200T-SS**	–	12	24	98.14	104			42	63	–		0.8	–
RF2040S-1B1212T	**RF2040S-1B1212T-SS**	RF2040S-1B1212T-P	12 ½	25	102.14	108					80		0.9	0.18
RF2060S-1B912T	**RF2060S-1B912T-SS**	RF2060S-1B912T-P	9 ½	19	117.34	126	11.9	15.9	55	83	85	40	2.1	0.35
RF2060S-1B1012T	**RF2060S-1B1012T-SS**	RF2060S-1B1012T-P	10 ½	21	129.26	138					95		2.3	0.43
RF2060S-1B1112T	**RF2060S-1B1112T-SS**	RF2060S-1B1112T-P	11 ½	23	141.22	150		18			100	45	2.7	0.53
RF2060S-1B1200T	**RF2060S-1B1200T-SS**	–	12	24	147.21	156					–		2.9	–
RF2060S-1B1212T	**RF2060S-1B1212T-SS**	RF2060S-1B1212T-P	12 ½	25	153.20	162					120		3.0	0.71

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Teeth on all sprockets have not been hardened.
Materials of each sprocket are shown below.
Standard sprocket (steel): Carbon steel for machine structural use
Environmental resistant sprocket (stainless steel): Stainless steel
Environmental resistant sprocket (engineering plastic): Special MC901
3. Operating temperature range of environmental resistant sprocket (engineering plastic): –10 to 60°C
4. Maximum allowable speed of environmental resistant sprocket (engineering plastic): 70 m/min under operation without lubrication
The maximum speed is up to 150 m/min if the chain is lubricated during or before operation.
5. Food and chemical for which environmental resistant sprocket (engineering plastic) can be used: Refer to the table on the right showing the corrosion resistance of environmental resistant sprocket.

Model Numbering

Chain/roller type		Hub	Effective teeth		Material
RF2040S	-	**1B**	**912T**	-	**SS**

912T: 9½T

Blank: Steel
SS: Stainless steel
P: Engineering plastic

Note: Do not leave space between letters and symbols.

Corrosion resistance of environment resistant sprockets

Corrosion resistance varies considerably depending on the conditions of use, so this table does not represent the extent of warranty. Please refer to this table and check the corrosion resistance of the chain in advance under actual usage conditions to determine the product type.

Drug/food name		Engineering plastic	Stainless steel
Acetone	20°C	○	○
Oils (vegetable, mineral)	20°C	○	○
Flaxseed oil	100% 20°C	○	○
Sulfurous acid gas (wet)	20°C	–	○
Alcohol (methyl, ethyl, propyl, butyl)		○	○
Aqueous ammonia	20°C	○	○
Whiskey	20°C	○	○
Ether (ethyl ether)	20°C	○	○
Zinc chloride	50% 20°C	×	△
Ammonium chloride	50% Boiling point	–	△
Potassium chloride	Saturated 20°C	○	○
Calcium chloride	Saturated 20°C	○	△
Ferric chloride	5% 20°C	×	△
Sodium chloride	5% 20°C	○	○
Hydrochloric acid	2% 20°C	×	×
Chlorine gas (dry)	20°C	×	△
Chlorine gas (wet)	20°C	×	×
Chlorine water		×	×
Oleic acid	20°C	○	○
Seawater	20°C	○	△
Sodium perchlorate	10% boiling point	–	○
Hydrogen peroxide	30% 20°C	×	○
Gasoline	20°C	○	○
Potassium permanganate	Saturated 20°C	×	○
Formic acid	50% 20°C	×	○
Milk	20°C	○	○
Citric acid	50% 20°C	○	○
Glycerin	20°C	○	○
Creosote	20°C	–	○
Chromic acid	5% 20°C	×	○
Ketchup	20°C	○	○
Developer (photo)	20°C	○	○
Synthetic detergent		○	○
Boiling coffee		○	○
Cola syrup		○	○
Acetic acid	10% 20°C	△	○
Sugar solution	20°C	○	○
Calcium hypochlorite (bleached powder)	Effective chlorine 11 to 14% 20°C	△	○
Sodium hypochlorite	10% 20°C	△	×
Sodium cyanide	20°C	–	○
Carbon tetrachloride (dry)	20°C	○	○
Potassium dichromate	10% 20°C	○	○
Oxalic acid	10% 20°C	○	○
Tartaric acid	10% 20°C	○	○
Nitric acid	5% 20°C	×	○
Ammonium nitrate	Saturated boiling	○	○

Drug/food name		Engineering plastic	Stainless steel
Potassium nitrate	25% 20°C	○	○
Potassium nitrate	25% boiling point	–	○
Vinegar	20°C	△	△
Potassium hydroxide (caustic potash)	20%20°C	○	○
Calcium hydroxide (slaked lime)	20% boiling	–	○
Sodium hydroxide (caustic soda)	25% 20°C	○	○
Stearic acid	100% boiling point	○	×
Soft drink	20°C	○	○
Carboxylic acid	20°C	×	○
Oil	20°C	○	○
Soap water	20°C	○	○
Carbonated water		–	○
Sodium hydrogen carbonate	20°C	○	○
Sodium carbonate	Saturated boiling point	△	○
Sodium thiosulfate	25% boiling point	–	○
Turpentine oil	35°C	–	○
Kerosene	20°C	–	○
Varnish		–	○
Concentrated nitric acid	65% 20°C	×	○
Concentrated nitric acid	65% boiling	×	△
Lactic acid	10% 20°C	○	○
Honey, molasses		○	○
Paraffin	20°C	○	○
Beer	20°C	○	○
Picric acid	Saturated 20°C	–	○
Fruit juice	20°C	○	○
Benzene	20°C	○	○
Boric acid	50% 100°C	–	○
Formalin (formaldehyde)	40% 20°C	△	○
Mayonnaise	20°C	○	○
Water		○	○
Vegetable juice	20°C	○	○
Lard		–	○
Butyric acid	20°C	○	○
Hydrogen sulfide (dry)		○	○
Hydrogen sulfide (wet)		–	×
Sulfuric acid	5% 20°C	×	×
Zinc sulfate	25% saturated 20°C	–	○
Aluminum sulfate	20°C saturated	–	○
Ammonium sulfate	20°C saturated	–	○
Sodium sulfate	20°C saturated	–	○
Malic acid	50% 50°C	○	○
Phosphoric acid	5% 20°C	×	○
Phosphoric acid	10% 20°C	×	△
Wine	20°C	○	○

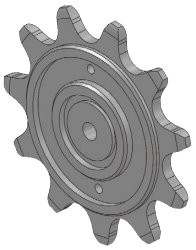
○: Totally resistant
△: Partially resistant (depending on operating conditions)
×: Not resistant
–: No data

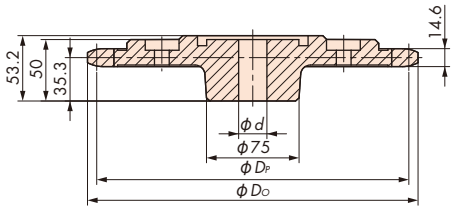
Sprockets for TO Chains

Steel

Applicable Chain	TORP, TOSP, TOR, TOS

◆With Plain Bore





Tsubaki model no.	Applicable chain	Actual teeth	Effective teeth	Pitch diameter D_P	Outside diameter D_O	Bore diameter d		Approx. mass kg	Material
						Plain bore	Max.		
TOS1013T	TOSP1143	31	10 ⅓	254.54	269	23	45	7.2	Gray cast iron
TOR1100T	TORP1143	11	11	270.47	305			7.6	

Note: Standard products.

Model Numbering

Chain type	Effective teeth
TOS	**1013T** (1013T=10⅓T)
TOR	**1100T** 1100T = teeth 11T

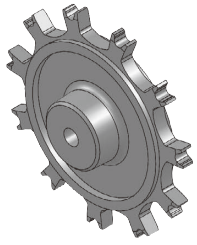
Note: Do not leave space between letters and symbols.

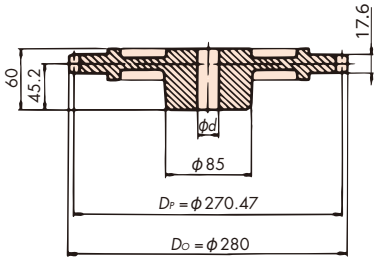
Sprockets for TU Chains

Steel

Applicable Chain	TU

◆With Plain Bore





Tsubaki model no.	Actual teeth	Effective teeth	Bore diameter d		Approx. mass kg	Material
			Plain bore	Max.		
TU1100T	11	11	23	50	7.4	Gray cast iron

Note: Standard product.

Model Numbering

Chain type	Effective teeth
TU	**1100T** 1100T = teeth 11T

Note: Do not leave space between letters and symbols.

MEMO

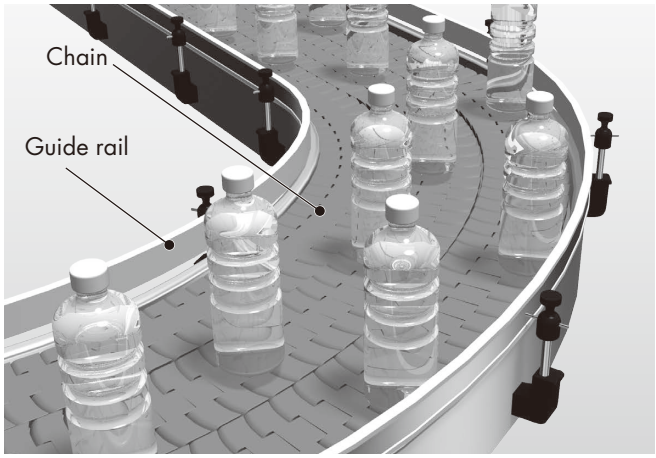
Plastic Rails

Applications

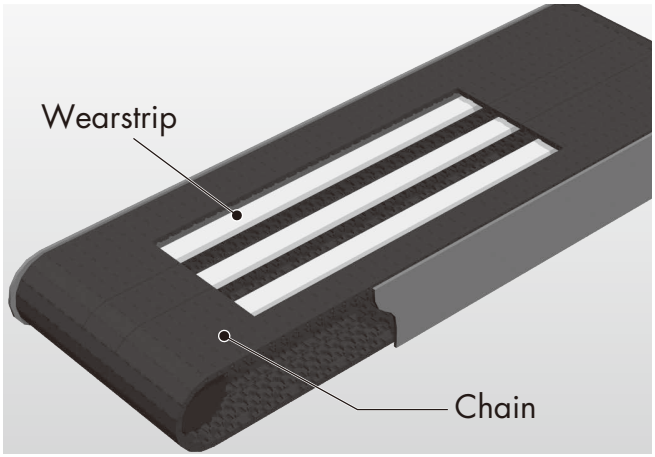
Using ultra-high molecular weight polyethylene (UHMW-PE) as the material, it exhibits excellent sliding characteristics and wear resistance. We have a wide variety of products that are widely used for rails.

Installation Example

■ Use as Guide Rail for Supporting Products



■ Use as Wearstrips for Plastic Modular Chains



List of Material Grades

Feature	Standard				Anti-thermal degradtion	High-density polyethylene	Wear resistant	
Material grade	P	10-100	10-301	10-801	16-100E	84-100	10-605SS	10-365CP
Color	White	White	Green	Black	White	White	Yellow	Greenish brown

Feature	Electrostatic preventive	Standard extrusions		Electrostatic preventive extrusions	Only for dry condition	Oil impregnated	Special polyamide	Low friction/Wear resistant	
Material grade	10-806	10-100EX	10-301EX	10-806EX	M	10-309	SJ-CNO	PLF	PMW
Color	Black	White	Green	Black	Blue	Green	Purple	White	

Note: 1. The rail length expands and contracts due to temperature changes.
As a guide, it expands and contracts 0.2 mm every 1°C change per 1 m.
[Except only for dry condition (M) and special polyamide (SJ-CNO)]
Coefficient of thermal expansion
Material grade [excluding only for dry condition (M) and special polyamide (SJ-CNO)]: 1.7×10^{-4}/°C
Only for dry condition (M)/Special polyamide (SJ-CNO): 9×10^{-5}/°C

2. We use materials that comply with the Food Sanitation Act (Japan's Ministry of Health Notification No. 370).
[Not compatible with electrostatic preventive extrusions (10-806EX), only for dry condition (M) and special polyamide (SJ-CNO)]

Features of Material Grade

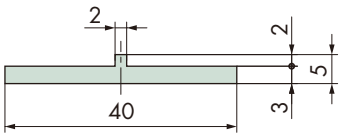
Feature	Material grade	Features
Standard	P	The most common material grade uses ultra-high molecular weight polyethylene (UHMW-PE) with low water absorption, superior sliding properties, wear resistant, and chemical resistance.
	10-100	
	10-301	
	10-801	
Standard extrusions	10-100EX	
	10-301EX	
Low friction/Wear resistant	PLF	It has lower friction than the standard, wear resistance, and is recommended for wear particles and scratches on conveyed products, that is, when you have trouble with countermeasures.
	PMW	
Anti-thermal degradtion	16-100E	Suppresses deterioration due to heat compared to the standard.
High-density polyethylene	84-100	Good dimensional stability and less strain.
Wear resistant	10-605SS	Greater wear resistance than standard.
	10-365CP	Further improved wear resistance than wear resistant (10-605SS).
Electrostatic preventive	10-806	Add electrostatic preventive performance based on standard, standard extrusion.
Electrostatic preventive extrusions	10-806EX	
Only for dry condition	M	Dedicated to dry conditions, it has excellent wear resistance and is recommended when you are having trouble generating abrasion powder.

⚠ Caution The material for low friction and wear resistance (PLF and PMW) contains silicone-based lubricant. Therefore, do not use these rails for printing processes, or in cases where silicone will have an effect.

Extruded Rail

T Rails

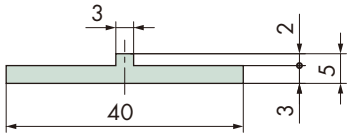
■ T Rails



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-T-W-26M	10-100EX	White	26	–20 to 60
PR-T-G-26M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.

■ T-403 Rails

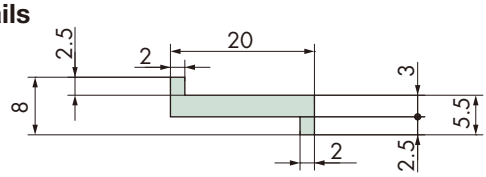


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-T403-W-26M	10-100EX	White	26	–20 to 60
PR-T403-G-26M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.
3. Equivalent to PRT340-P-G (color: green).

Z Rails

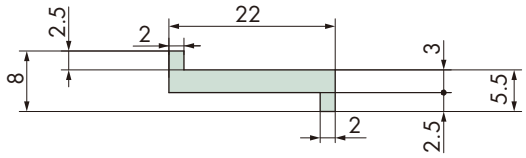
■ Z Rails



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-Z-W-26M	10-100EX	White	26	–20 to 60
PR-Z-G-26M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.
3. Equivalent to PRZ320-P-G (color: green).

■ Z22 Rails

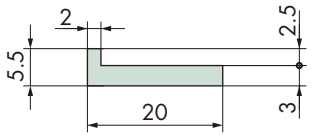


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-Z22-W-26M	10-100EX	White	26	–20 to 60
PR-Z22-G-26M	10-301EX	Green		

Note: 1. Made-to-order products.
2. Dimensions are nominal due to extruded products.

L Rails

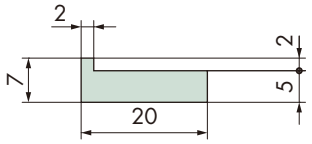
■ L Rails



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-L-W-26M	10-100EX	White	26	–20 to 60
PR-L-G-26M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.
3. Equivalent to PRL320-P-G (color: green).

■ L-5 Rails

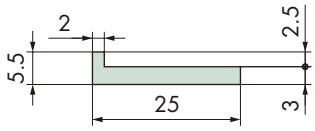


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-L5-W-20M	10-100EX	White	20	–20 to 60
PR-L5-G-20M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.

L Rails

■ L-25 Rails

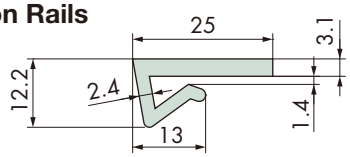


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-L25-W-20M	10-100EX	White	20	–20 to 60
PR-L25-G-20M	10-301EX	Green		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.

Snap-on Rails

■ Snap-on Rails

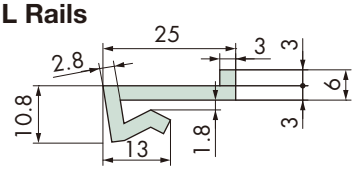


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-SPR-W-30M	10-100EX	White	30	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

Snap-on Rails

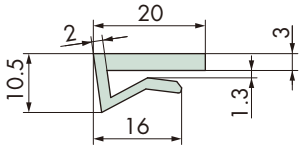
■ Snap-on L Rails



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-SPRL-W-3M	10-100EX	White	3	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

■ Snap-on 20 Rail



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-SNA20-W-3M	10-100EX	White	3	–20 to 60

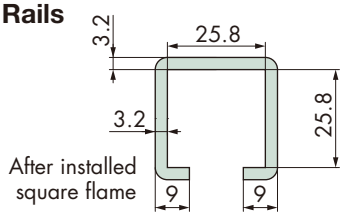
Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

Plastic Rails

Extruded Rail

SJQ-5 Rails

■ **SJQ-5 Rails**

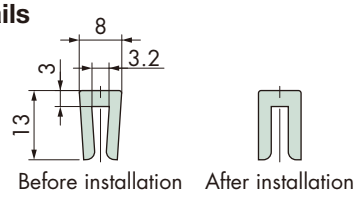


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-SJQ5-W-3M	10-100EX	White	3	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

V Rails

■ **V-3L Rails**

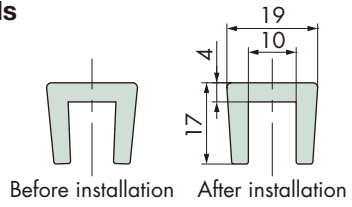


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-V3L-W-100M	10-100EX	White	100	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

V Rails

■ **V-10 Rails**

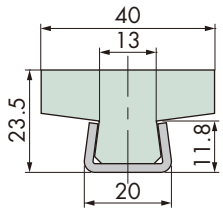


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-V10-W-50M	10-100EX	White	50	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

U Rails

■ **U-40 Rails**

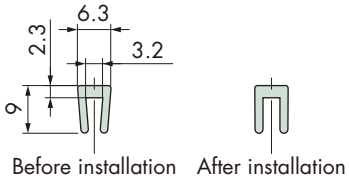


Tsubaki model no.	Material grade	Color	Material of Channel	Length m	Operating temperature range °C
PR-U40-W-15M	10-100EX	White	Stainless steel	1.5	–20 to 60
PR-U40-W-20M				2.0	
PR-U40-W-24M				2.4	

Note: 1. Made-to-order products.
2. Dimensions are nominal due to extruded products.
3. Electrostatic preventive (10-806) (color: black) and oil-impregnated (10-309) (color: green) types are also available.

V Rails

■ **V-3 Rails**

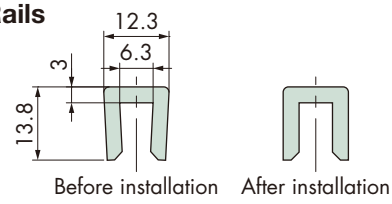


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-V3-W-100M	10-100EX	White	100	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

V Rails

■ **V-6S Rails**

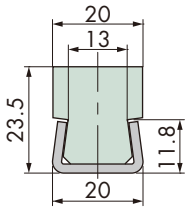


Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-V6S-W-30M	10-100EX	White	30	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

U Rails

■ **U-20 Rails**



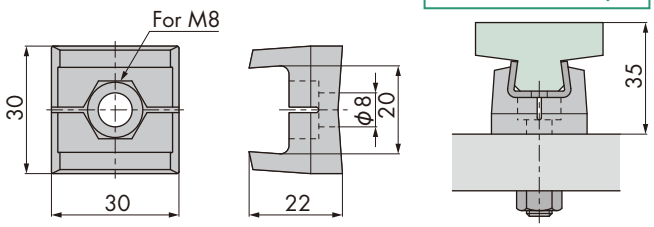
Tsubaki model no.	Material grade	Color	Material of Channel	Length m	Operating temperature range °C
PR-U20-W-15M	10-100EX	White	Stainless steel	1.5	–20 to 60
PR-U20-W-20M				2.0	
PR-U20-W-24M				2.4	

Note: 1. Made-to-order products.
2. Dimensions are nominal due to extruded products.
3. Electrostatic preventive (10-806) (color: black) and oil-impregnated (10-309) (color: green) types are also available.

U Rails

■ **Clamp for U Rail**

Installation example



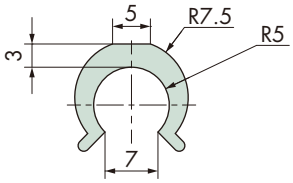
Tsubaki model no.	Material	Color
PR-UK	Polyacetal	Black

Note: 1. Made-to-order product.
2. To install, tighten the M8 nut (bolt) to a torque of 9.8 to 14.7 N·m (1.0 to 1.5 kgf·m).
3. Plastic guide rails and stainless steel channel may slip and change position due to creepage. At the upstream position of the conveyed product flow, fix the wear strip and channel together using knock-pins, etc.

Extruded Rail

R Rails

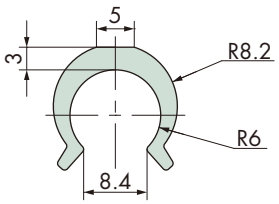
■ R-10 Rails



Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-R10-W-3M	10-100EX	White	3	ϕ10	–20 to 60
PR-R10-B-3M	10-806EX	Black			

Note: 1. Tsubaki model no. in boldface is a standard product. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.

■ R-12 Rails

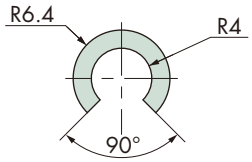


Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-R12-W-3M	10-100EX	White	3	ϕ12	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

C Rails

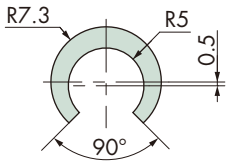
■ C-8 Rails



Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-C8-W-3M	10-100EX	White	3	ϕ8	–20 to 60
PR-C8-B-3M	10-806EX	Black			

Note: 1. Tsubaki model no. in boldface is a standard product. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.

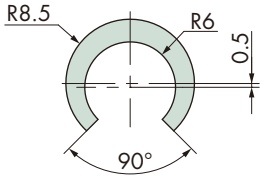
■ C-10 Rails



Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-C10-W-3M	10-100EX	White	3	ϕ10	–20 to 60
PR-C10-B-3M	10-806EX	Black			

Note: 1. Tsubaki model no. in boldface is a standard product. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.

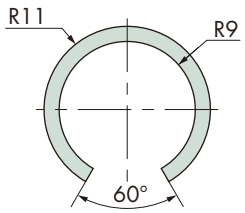
■ C-12 Rails



Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-C12-W-3M	10-100EX	White	3	ϕ12	–20 to 60
PR-C12-B-3M	10-806EX	Black			

Note: 1. Tsubaki model no. in boldface is a standard product. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.

■ C-18 Rails

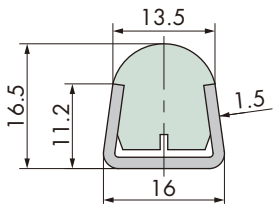


Tsubaki model no.	Material grade	Color	Length m	Applicable round bar	Operating temperature range °C
PR-C18-W-3M	10-100EX	White	3	ϕ18	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

D Rails

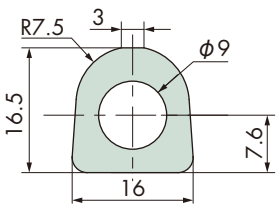
■ D Rails



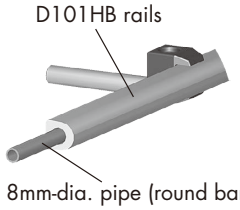
Tsubaki model no.	Material grade	Color	Material of channel	Length m	Operating temperature range °C
PR-D-W-2M	10-100EX	White	Stainless steel	2	–20 to 60
PR-D-B-2M	10-806EX	Black			

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.

■ D101HB Rails



Installation examples



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-D101HB-W-2M	10-100EX	White	2	–20 to 60

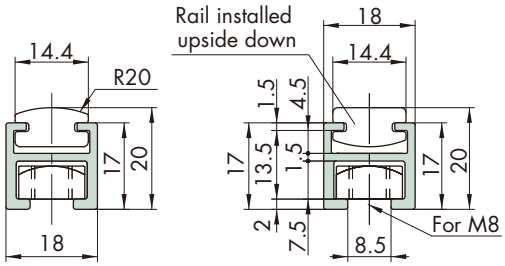
Note: 1. Made-to-order product.
2. Dimensions is a nominal due to extruded product.
3. Pipes (round bars) with an 8 mm diameter are not included.

Plastic Rails

Extruded Rail

DR Rails

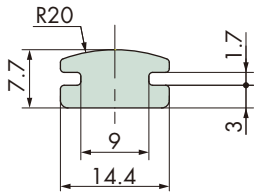
■ Set of Rail and Channel



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-DRP-W-3M	10-100EX	White	3	–20 to 60
PR-DRP-B-3M	10-806EX	Black		

Note: 1. Made-to-order products.
2. Dimensions are nominal due to extruded products.

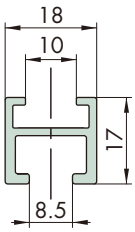
■ Plastic Rails for DR



Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-DR-W-3M	10-100EX	White	3	–20 to 60
PR-DR-B-3M	10-806EX	Black		

Note: 1. Made-to-order products.
2. Dimensions are nominal due to extruded products.

■ Aluminum Channel for DR Rails

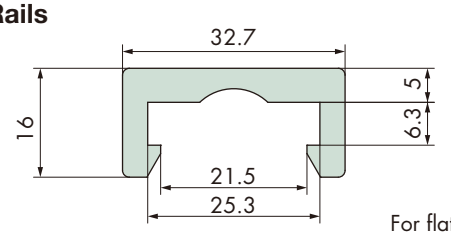


Tsubaki model no.	Material	Length m
PR-P-3M	Aluminum	3

Note: Made-to-order products.

FA Rails

■ FA Rails

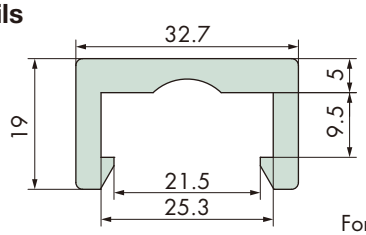


For flat bar 6 x 25

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-FA-W-3M	10-100EX	White	3	–20 to 60
PR-FA-B-3M	10-806EX	Black		
PR-FA-PLF-3M	PLF Note: 3	White		

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.
3. Available with standard length per unit only.

■ FA-2 Rails



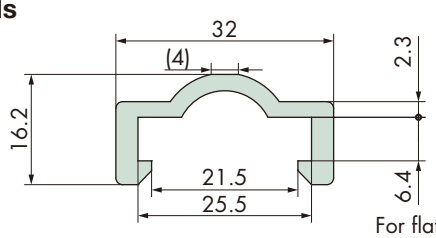
For flat bar 9 x 25

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-FA2-W-3M	10-100EX	White	3	–20 to 60

Note: 1. Standard product.
2. Dimensions is a nominal due to extruded product.

A Rails

■ A Rails



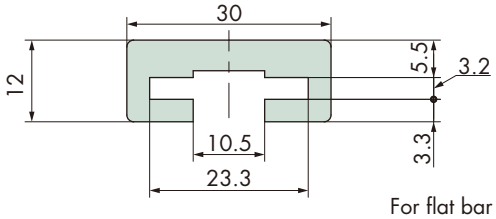
For flat bar 6 x 25

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-A-W-3M	10-100EX	White	3	–20 to 60
PR-A-B-3M	10-806EX	Black		

Note: 1. Tsubaki model no. in boldface is a standard product. Tsubaki model no. in normal face is a made-to-order product.
2. Dimensions are nominal due to extruded products.

K Rails

■ K Rails



For flat bar 3 x 22

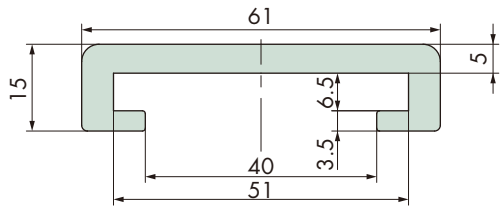
Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-K-W-3M	10-100EX	White	3	–20 to 60
PR-K-B-3M	10-806EX	Black		
PR-K-PLF-3M	PLF Note: 3	White		

Note: 1. Standard products.
2. Dimensions are nominal due to extruded products.
3. Available with standard length per unit only.

Extruded Rail

C650 Rails

■ C650 Rails



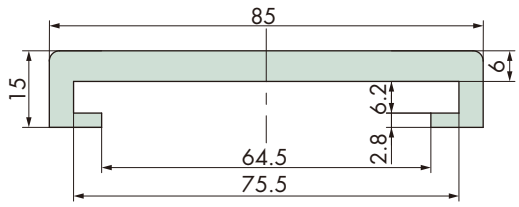
For flat bar 6 x 50

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-C650-W-2M	10-100EX	White	2	-20 to 60
PR-C650-W-3M			3	
PR-C650-W-4M			4	
PR-C650-B-2M	10-806EX	Black	2	
PR-C650-PLF-2M	PLF Note: 3	White	2	
PR-C650-PLF-3M			3	
PR-C650-PLF-4M			4	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Dimensions are nominal due to extruded products.
3. Available with standard length per unit only.

C675 Rails

■ C675 Rails



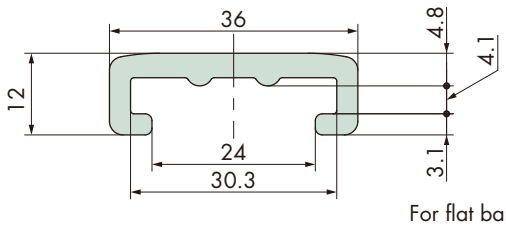
For flat bar 6 x 75

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-C675-W-2M	10-100EX	White	2	-20 to 60
PR-C675-W-4M			4	
PR-C675-PLF-2M	PLF Note: 3		2	
PR-C675-PLF-3M			3	
PR-C675-PLF-4M			4	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Dimensions are nominal due to extruded products.
3. Available with standard length per unit only.

GR4301 Rails

■ GR4301 Rails



For flat bar 4 x 30

Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-GR4301-W-3M	10-100EX	White	3	-20 to 60

Note: 1. Made-to-order product.
2. Dimensions is a nominal due to extruded product.

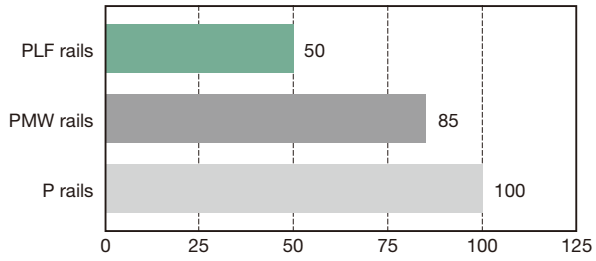
Plastic Rails

Standard Rail

■ PH Rails: Low Friction/Wear Resistant (PLF)

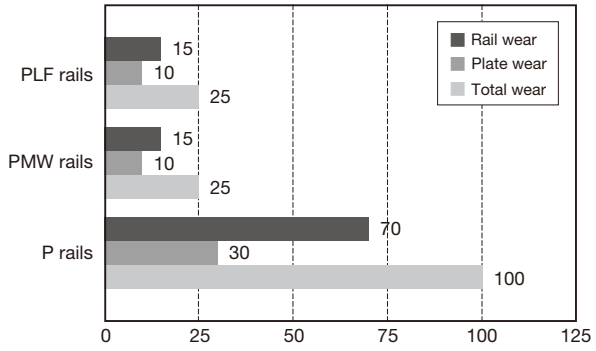
● Can reduce the coefficient of dynamic friction compared to traditional plastic rails.
(in-house tests) 10 – 40% lower than PMW rails,
30 – 50% lower than P rails.

Comparison of dynamic coefficient of friction after 500 hours operation



● Suppresses the generation of wear debris in dry conditions.

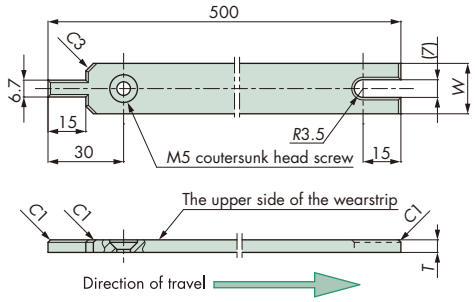
Comparison of wear after 500 hours operation



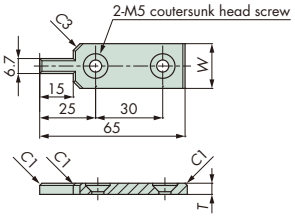
● We use materials that comply with the Food Sanitation Act (Japan's Ministry of Health Notification No. 370).

[Coefficient of dynamic friction and wear under in-house test conditions]
Chain: TTP826-LFB, Chain speed: 60m/min, Condition: Dry, ambient temperature (with P rails as 100) *Live load: 10 kg (wear comparison graph)

Rails



End plate



End plates are used as an anti-vibration brace on the very last section of the PH rail.

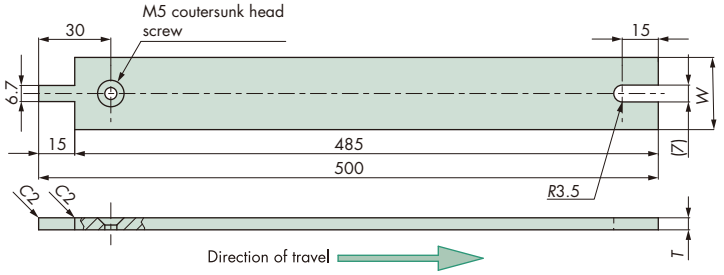
Rail width *W*	Material grade	Color	Rail thickness *T*				Operating temperature range °C
			3		5		
			Rail	End plate	Rail	End plate	
			Tsubaki model no.	Tsubaki model no.	Tsubaki model no.	Tsubaki model no.	
20	PLF	White	PR-PH320-PLF	PR-PH320E-PLF	**PR-PH520-PLF**	**PR-PH520E-PLF**	–20 to 60
30					PR-PH530-PLF	PR-PH530E-PLF	
40			PR-PH340-PLF	PR-PH340E-PLF	PR-PH540-PLF	PR-PH540E-PLF	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. When replacing from PR rail, which is made of low friction and wear resistant PMW, a countersunk size will be M4 for a 3 mm thick rail.
3. Sizes other than those shown above are also available upon request. Contact a Tsubaki representative for more information.

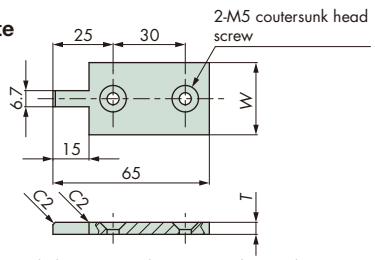
Standard Rail

■ PH Rails: Standard

Rails



End plate



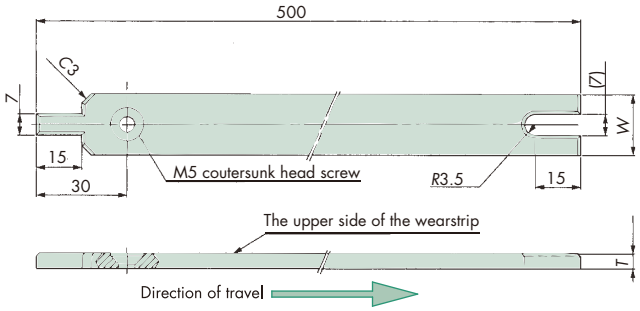
End plates are used as an anti-vibration brace on the very last section of the PH rail.

Rail width *W*	Material grade	Color	Rail thickness *T* 3 Rail Tsubaki model no.	3 End plate Tsubaki model no.	5 Rail Tsubaki model no.	5 End plate Tsubaki model no.	6 Rail Tsubaki model no.	6 End plate Tsubaki model no.	Operating temperature range °C
10	10-100	White			PR-PH510-W	PR-PH510E-W			-20 to 60
	10-301	Green			PR-PH510-G	PR-PH510E-G			
11	10-100	White					**PR-PH611-W**	**PR-PH611E-W**	
	10-301	Green					**PR-PH611-G**	**PR-PH611E-G**	
12	10-100	White			**PR-PH512-W**	**PR-PH512E-W**			
	10-301	Green			**PR-PH512-G**	**PR-PH512E-G**			
14	10-100	White					PR-PH614-W	PR-PH614E-W	
	10-301	Green					PR-PH614-G	PR-PH614E-G	
15	10-100	White			PR-PH515-W	PR-PH515E-W	**PR-PH615-W**	**PR-PH615E-W**	
	10-301	Green			PR-PH515-G	PR-PH515E-G	**PR-PH615-G**	**PR-PH615E-G**	
16	10-100	White					**PR-PH616-W**	**PR-PH616E-W**	
	10-301	Green					**PR-PH616-G**	**PR-PH616E-G**	
19	10-100	White					PR-PH619-W	PR-PH619E-W	
	10-301	Green					PR-PH619-G	PR-PH619E-G	
20	10-100	White	**PR-PH320-W**	**PR-PH320E-W**	**PR-PH520-W**	**PR-PH520E-W**	**PR-PH620-W**	**PR-PH620E-W**	
	10-301	Green	**PR-PH320-G**	**PR-PH320E-G**	**PR-PH520-G**	**PR-PH520E-G**	**PR-PH620-G**	**PR-PH620E-G**	
25	10-100	White			**PR-PH525-W**	**PR-PH525E-W**	**PR-PH625-W**	**PR-PH625E-W**	
	10-301	Green			**PR-PH525-G**	**PR-PH525E-G**	**PR-PH625-G**	**PR-PH625E-G**	
30	10-100	White			**PR-PH530-W**	**PR-PH530E-W**	**PR-PH630-W**	**PR-PH630E-W**	
	10-301	Green			**PR-PH530-G**	**PR-PH530E-G**	**PR-PH630-G**	**PR-PH630E-G**	
35	10-100	White	PR-PH335-W	PR-PH335E-W	**PR-PH535-W**	**PR-PH535E-W**	**PR-PH635-W**	**PR-PH635E-W**	
	10-301	Green	PR-PH335-G	PR-PH335E-G	**PR-PH535-G**	**PR-PH535E-G**	**PR-PH635-G**	**PR-PH635E-G**	
40	10-100	White	PR-PH340-W	PR-PH340E-W	**PR-PH540-W**	**PR-PH540E-W**	**PR-PH640-W**	**PR-PH640E-W**	
	10-301	Green	PR-PH340-G	PR-PH340E-G	**PR-PH540-G**	**PR-PH540E-G**	**PR-PH640-G**	**PR-PH640E-G**	
50	10-100	White			**PR-PH550-W**	**PR-PH550E-W**	PR-PH650-W	PR-PH650E-W	
	10-301	Green			**PR-PH550-G**	**PR-PH550E-G**	PR-PH650-G	PR-PH650E-G	
55	10-100	White			**PR-PH555-W**	**PR-PH555E-W**			
	10-301	Green			**PR-PH555-G**	**PR-PH555E-G**			
75	10-100	White			PR-PH575-W	PR-PH575E-W			
	10-301	Green			PR-PH575-G	PR-PH575E-G			

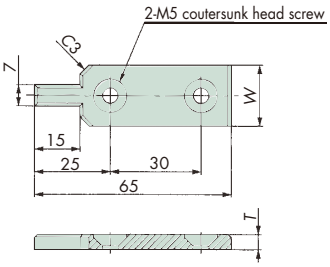
Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Sizes other than those shown above are also available upon request. Contact a Tsubaki representative for more information.

■ PR and PRE Rails (PMW and M)

Rails



End plate



End plates are used as an anti-vibration brace on the very last section of the PR rail.

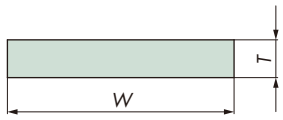
Rail width *W*	Material grade	Color	Rail thickness *T* 5 Rail Tsubaki model no.	5 End plate Tsubaki model no.	Operating temperature range °C	Screw for countersunk section
20	PMW	White	PR520-PMW	PRE520-PMW	-20 to 60	M5 flathead screw
	M Note: 3	Blue	PR520-M	PRE520-M	-20 to 80	

Note: 1. Made-to-order products.
2. Material grade: M is designed to be used only for dry condition.
3. PH rail which is made of PMW grade has a notch on the convex portion to differentiate it from PH rail made of other material grade.
4. A countersunk size of M4 is required for a 3 mm thick rail.

Plastic Rails

Standard Rail

■ Flat Rails



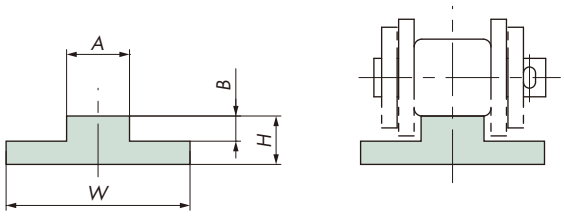
Rail width W	Material grade	Color	Rail thickness T				Operating temperature range °C
			3	4	5	6	
15	10-100	White	PR-FR3-15-W-50M	PR-FR4-15-W-40M	PR-FR5-15-W-30M	PR-FR6-15-W-25M	–20 to 60
	10-301	Green	PR-FR3-15-G-50M	PR-FR4-15-G-40M	PR-FR5-15-G-30M	PR-FR6-15-G-25M	
20	10-100	White	**PR-FR3-20-W-50M**		**PR-FR5-20-W-30M**	**PR-FR6-20-W-25M**	
	10-301	Green	**PR-FR3-20-G-50M**		**PR-FR5-20-G-30M**	**PR-FR6-20-G-25M**	
25	10-100	White	**PR-FR3-25-W-50M**	PR-FR4-25-W-40M	**PR-FR5-25-W-30M**	**PR-FR6-25-W-25M**	
	10-301	Green	**PR-FR3-25-G-50M**	PR-FR4-25-G-40M	**PR-FR5-25-G-30M**	**PR-FR6-25-G-25M**	
30	10-100	White	**PR-FR3-30-W-50M**	PR-FR4-30-W-40M	**PR-FR5-30-W-30M**	**PR-FR6-30-W-25M**	
	10-301	Green	**PR-FR3-30-G-50M**	PR-FR4-30-G-40M	**PR-FR5-30-G-30M**	**PR-FR6-30-G-25M**	
35	10-100	White	PR-FR3-35-W-50M	PR-FR4-35-W-40M	PR-FR5-35-W-30M	PR-FR6-35-W-25M	
	10-301	Green	PR-FR3-35-G-50M	PR-FR4-35-G-40M	PR-FR5-35-G-30M	PR-FR6-35-G-25M	
40	10-100	White	PR-FR3-40-W-50M	PR-FR4-40-W-40M	PR-FR5-40-W-30M	PR-FR6-40-W-25M	
	10-301	Green	PR-FR3-40-G-50M	PR-FR4-40-G-40M	PR-FR5-40-G-30M	PR-FR6-40-G-25M	
45	10-100	White	PR-FR3-45-W-50M		PR-FR5-45-W-30M	PR-FR6-45-W-25M	
	10-301	Green	PR-FR3-45-G-50M		PR-FR5-45-G-30M	PR-FR6-45-G-25M	
50	10-100	White	PR-FR3-50-W-50M	PR-FR4-50-W-40M	PR-FR5-50-W-30M	PR-FR6-50-W-25M	
	10-301	Green	PR-FR3-50-G-50M	PR-FR4-50-G-40M	PR-FR5-50-G-30M	PR-FR6-50-G-25M	
55	10-100	White	PR-FR3-55-W-50M		PR-FR5-55-W-30M		
	10-301	Green	PR-FR3-55-G-50M		PR-FR5-55-G-30M		
60	10-100	White	PR-FR3-60-W-50M		PR-FR5-60-W-30M	PR-FR6-60-W-25M	
	10-301	Green	PR-FR3-60-G-50M		PR-FR5-60-G-30M	PR-FR6-60-G-25M	
Coil length m			50	40	30	25	

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Sizes other than those shown above are also available upon request. Contact a Tsubaki representative for more information.

Wearstrip

Wearstrip for RS Roller Chains

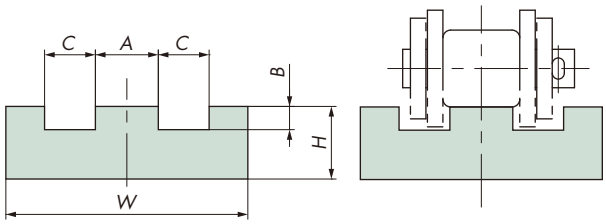
■ SR Rails



Plastic rail type	Tsubaki model no.	Applicable chain type	Dimensions				Material grade	Color	Length m	Operating temperature range °C
			W	H	A	B				
SR-1	PR-SR1-B-2M	RS40 / RF2040S	25	8	6.6	2.5	10-801	Black	2	-20 to 60
SR-140	PR-SR140-B-2M	RS40 / RF2040S	40							
SR-2	PR-SR2-B-2M	RS50 / RF2050S	32		8.0	3.5				
SR-3	PR-SR3-B-2M	RS60 / RF2060S			11.0	3.8				
SR-4	PR-SR4-B-2M	RS80 / RF2080S	38	10	13.0	5.2				

Note: 1. Made-to-order products.
2. PLF can also be manufactured. Contact a Tsubaki representative for more information.

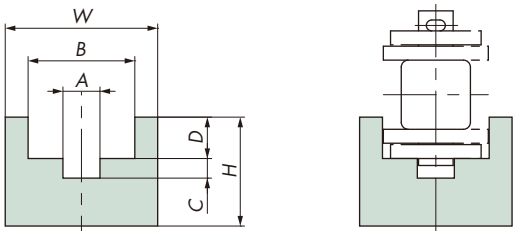
■ SSR Rails



Plastic rail type	Tsubaki model no.	Applicable chain type	Dimensions					Material grade	Color	Length m	Operating temperature range °C
			W	H	A	B	C				
SSR-1	PR-SSR1-B-2M	RS40 / RF2040S	25	8	6.6	2.0	4.7	10-801	Black	2	-20 to 60
SSR-2	PR-SSR2-B-2M	RS50 / RF2050S	32	10	8.0	3.0	6.0				
SSR-3	PR-SSR3-B-2M	RS60 / RF2060S	38	15	11.0	3.5	8.4				
SSR-4	PR-SSR4-B-2M	RS80 / RF2080S	50	15	13.0	4.8	10.5				

Note: 1. Made-to-order products.
2. PLF can also be manufactured. Contact a Tsubaki representative for more information.

■ Straight Rails – Type A (Solid)



Tsubaki model no.	Applicable chain type	Dimensions						Material grade	Color	Length m	Operating temperature range °C
		H	W	A	B	C	D				
PR-A2040-W-2M	RS40 / RF2040S	15	25	4.5	12.8	4.0	4.5	10-100	White	2	-20 to 60
PR-A2040-G-2M								10-301	Green		
PR-AJIS50-W-2M	RS50 / RF2050S	15	25	5.6	15.7	4.0	5.5	10-100	White		
PR-AJIS50-G-2M								10-301	Green		
PR-AJIS60-W-2M	RS60	20	30	6.5	18.5	4.0	6.3	10-100	White		
PR-AJIS60-G-2M								10-301	Green		
PR-A2060-W-2M	RF2060S	20	30	6.5	18.5	4.0	7.9	10-100	White		
PR-A2060-G-2M								10-301	Green		
PR-AJIS80-W-2M	RS80	25	35	8.5	24.5	4.5	7.9	10-100	White		
PR-AJIS80-G-2M								10-301	Green		
PR-A2080-W-2M	RF2080S	25	35	8.5	24.5	4.5	9.5	10-100	White		
PR-A2080-G-2M								10-301	Green		

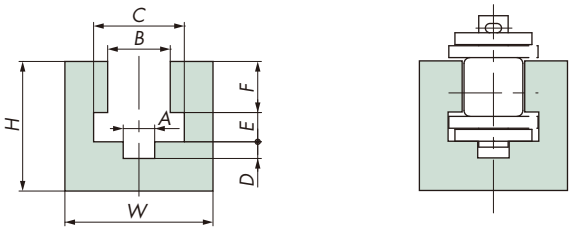
Note: Made-to-order products.

Plastic Rails

Wearstrip

Wearstrip for RS Roller Chains

■ Straight Rails—Type B (Split)

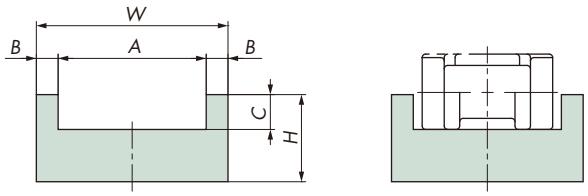


Tsubaki model no.	Applicable chain type	Dimensions								Material grade	Color	Length m	Operating temperature range °C
		H	W	A	B	C	D	E	F				
PR-B2040-W-2M	RS40 / RF2040S	25	30	4.5	9.0	12.8	4.0	4.5	5.8	10-100	White	2	–20 to 60
PR-B2040-G-2M										10-301	Green		
PR-B2050-W-2M	RS50 / RF2050S	25	30	5.6	11.1	15.7	4.0	5.5	7.2	10-100	White		
PR-B2050-G-2M										10-301	Green		
PR-BJIS60-W-2M	RS60	30	35	6.5	13.0	18.5	4.0	6.3	10.4	10-100	White		
PR-BJIS60-G-2M										10-301	Green		
PR-B2060-W-2M	RF2060S	30	35	6.5	13.0	18.5	4.0	7.9	10.4	10-100	White		
PR-B2060-G-2M										10-301	Green		
PR-BJIS80-W-2M	RS80	35	40	8.5	16.9	24.5	4.5	7.9	13.8	10-100	White		
PR-BJIS80-G-2M										10-301	Green		
PR-B2080-W-2M	RF2080S	35	40	8.5	16.9	24.5	4.5	9.5	13.8	10-100	White		
PR-B2080-G-2M										10-301	Green		

Note: Made-to-order products.

Wearstrip for Plastic Block Chains

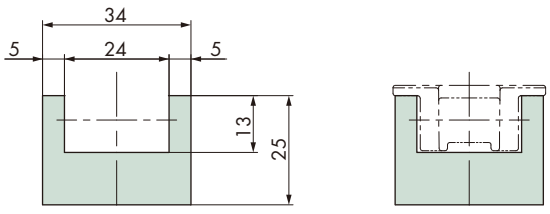
■ Plastic Rails for RSP and RSP80



Tsubaki model no.	Applicable chain type	Dimensions					Material grade Note 2	Color	Length m	Operating temperature range °C
		W	H	A	B	C				
PR-PO6-W-2M	RSP35	27	10	17	5	4	10-100	White	2	–20 to 60
PR-PO6-G-2M							10-301	Green		
PR-PO8-W-2M	RSP40	33	15	23	5	5	10-100	White		
PR-PO8-G-2M							10-301	Green		
PR-PO10-W-2M	RSP50	36	20	26	5	7	10-100	White		
PR-PO10-G-2M							10-301	Green		
PR-PO12-W-2M	RSP40-T-CU/RSP60	44	20	34	5	8	10-100	White		
PR-PO12-G-2M							10-301	Green		
PR-RSP80-W-2M	RSP80	53	20	43	5	8	10-100	White		
PR-RSP80-G-2M							10-301	Green		

Note: 1.Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Sizes other than those shown above are also available upon request. Contact a Tsubaki representative for more information.
3. PLF can also be manufactured. Contact a Tsubaki representative for more information.

■ Plastic Rails for RSP50-SL350



Tsubaki model no.	Applicable chain type	Material grade Note: 4	Color	Length m	Operating temperature range °C
PR-RSP50-SL350-W-2M	RSP50-SL350	10-100	White	2	–20 to 60
PR-RSP50-SL350-G-2M		10-301	Green		

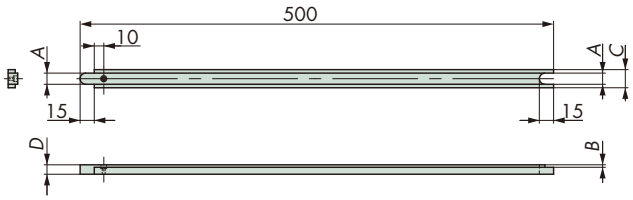
Note: 1. Made-to-order products.
2. Sizes other than those shown above are also available upon request. Contact a Tsubaki representative for more information.
3. Plastic rail for plastic block chain [PR-PO10-W(G)-2M] can be used for single strand chains.
4. PLF can also be manufactured. Contact a Tsubaki representative for more information.

Wearstrip

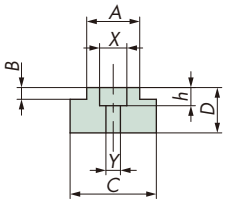
Wearstrip for Plastic Roller Table (ST and RT)

■ For 1 Strand of Plastic Roller Table

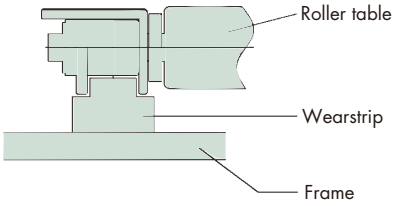
PR-ST(RT) rails



Mounting screw hole diagram



Installation examples

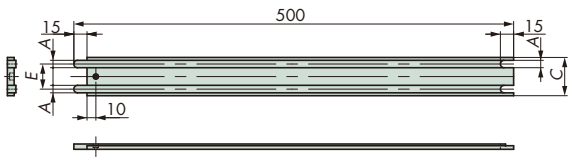


Tsubaki model no.	Applicable chain type	Dimensions				Mounting screws	X:Depth h	Y	Material grade	Color	Operating temperature range °C
		A	B	C	D						
PR-ST300-P	ST300	4.0	2.7	9.5	10.0	M1.6 pan-head screw	ϕ3.2×3	ϕ1.8	P	White	−20 to 60
PR-RT300-P	RT300		1.6								
PR-ST400-P	ST400	7.0	3.1	12.0		M2 pan-head screw	ϕ4.0×4	ϕ2.2			
PR-RT400-P	RT400		1.7								
PR-ST500-P	ST500	8.5	3.5	15.0		M3 pan-head screw	ϕ6.0×4	ϕ3.2			
PR-RT500-P	RT500		2.0								
PR-RT600-P	RT600	11.7	2.6	19.0							

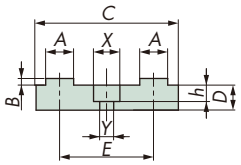
Note: 1. Made-to-order products.
2. Shape, material or color other than shown above may be available. Contact a Tsubaki representative for more information.

■ For 2 Strands of Plastic Roller Tables

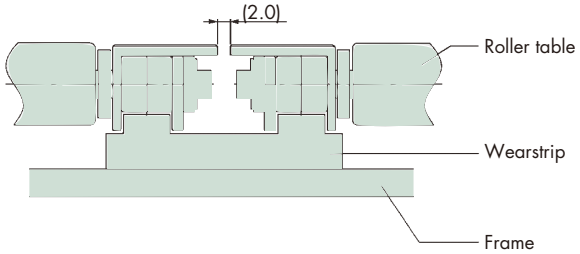
PR-ST-2 rails



Mounting screw hole diagram



Installation examples



Tsubaki model no.	Applicable chain type	Dimensions					Mounting screws	X:Depth h	Y	Material grade	Color	Operating temperature range °C
		A	B	C	D	E						
PR-ST300-P-2	ST300	4.0	2.7	26.0	10	16.5	M4 pan-head screw	ϕ8×5	ϕ4.2	P	White	−20 to 60
PR-ST400-P-2	ST400	7.0	3.1	36.5		24.5						
PR-ST500-P-2	ST500	8.5	3.5	43.5		28.5						

Note: 1. Made-to-order products.
2. Shape, material or color other than shown above may be available. Contact a Tsubaki representative for more information.

Plastic Rails

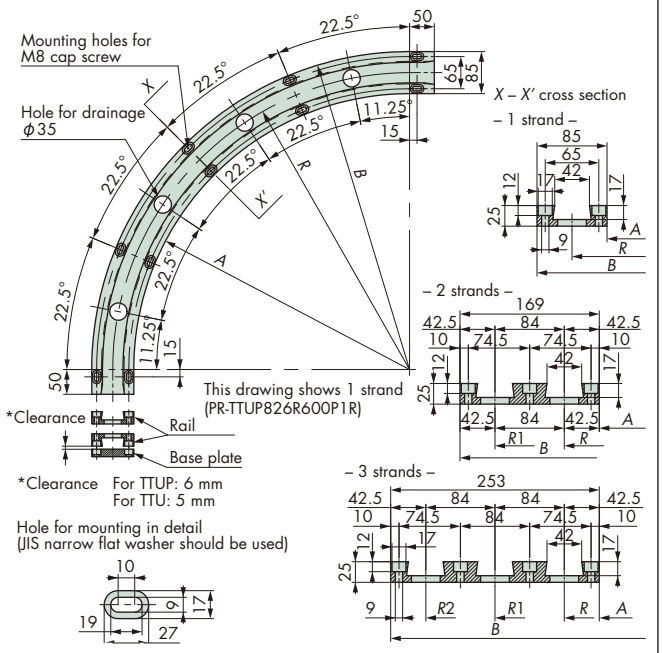
Finished Rail

Curved Plastic Rail

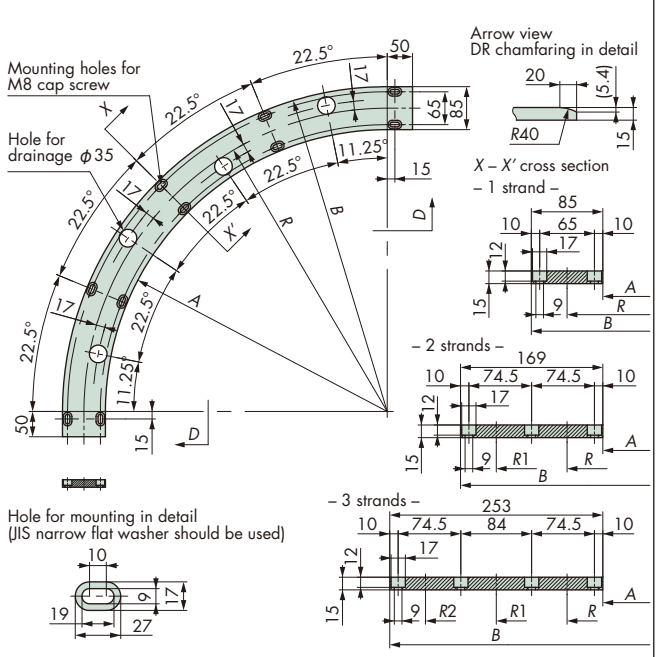
■ Curved Plastic Rails for TTUP826

Applicable Chain	TTUP826, TTUPH826, TTUP826P, TTU826-N (Cannot be used with TTUP-M and TTUP-LLPC)

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	–20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TTUP826R600P1S	PR-TTUP826R600P1R	PR-TTUP826R600P1B	R600	–	–	R557.5	R642.5
	PR-TTUP826R700P1S	PR-TTUP826R700P1R	PR-TTUP826R700P1B	R700	–	–	R657.5	R742.5
	PR-TTUP826R800P1S	PR-TTUP826R800P1R	PR-TTUP826R800P1B	R800	–	–	R757.5	R842.5
	PR-TTUP826R900P1S	PR-TTUP826R900P1R	PR-TTUP826R900P1B	R900	–	–	R857.5	R942.5
	PR-TTUP826R1000P1S	PR-TTUP826R1000P1R	PR-TTUP826R1000P1B	R1000	–	–	R957.5	R1042.5
2	PR-TTUP826R600P2S	PR-TTUP826R600P2R	PR-TTUP826R600P2B	R600	R684	–	R557.5	R726.5
	PR-TTUP826R700P2S	PR-TTUP826R700P2R	PR-TTUP826R700P2B	R700	R784	–	R657.5	R826.5
	PR-TTUP826R800P2S	PR-TTUP826R800P2R	PR-TTUP826R800P2B	R800	R884	–	R757.5	R926.5
	PR-TTUP826R900P2S	PR-TTUP826R900P2R	PR-TTUP826R900P2B	R900	R984	–	R857.5	R1026.5
	PR-TTUP826R1000P2S	PR-TTUP826R1000P2R	PR-TTUP826R1000P2B	R1000	R1084	–	R957.5	R1126.5
3	PR-TTUP826R600P3S	PR-TTUP826R600P3R	PR-TTUP826R600P3B	R600	R684	R768	R557.5	R810.5
	PR-TTUP826R700P3S	PR-TTUP826R700P3R	PR-TTUP826R700P3B	R700	R784	R868	R657.5	R910.5
	PR-TTUP826R800P3S	PR-TTUP826R800P3R	PR-TTUP826R800P3B	R800	R884	R968	R757.5	R1010.5
	PR-TTUP826R900P3S	PR-TTUP826R900P3R	PR-TTUP826R900P3B	R900	R984	R1068	R857.5	R1110.5
	PR-TTUP826R1000P3S	PR-TTUP826R1000P3R	PR-TTUP826R1000P3B	R1000	R1084	R1168	R957.5	R1210.5

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

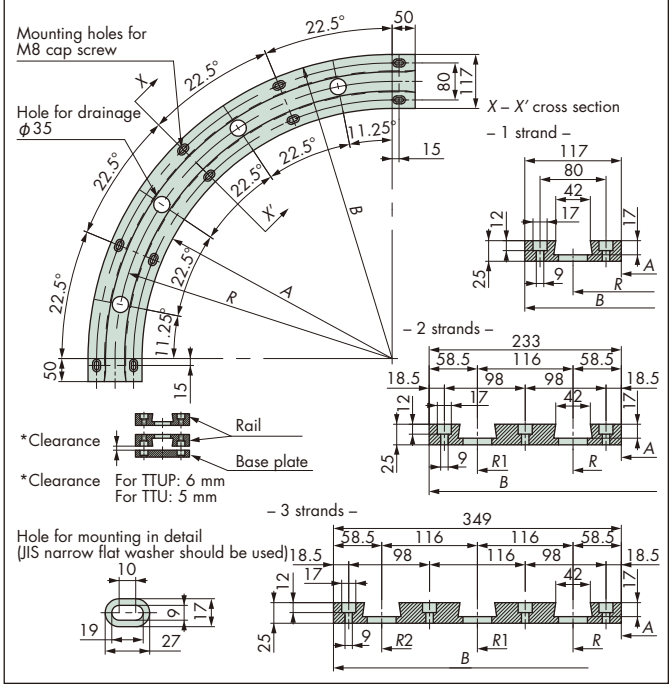
Finished Rail

Curved Plastic Rail

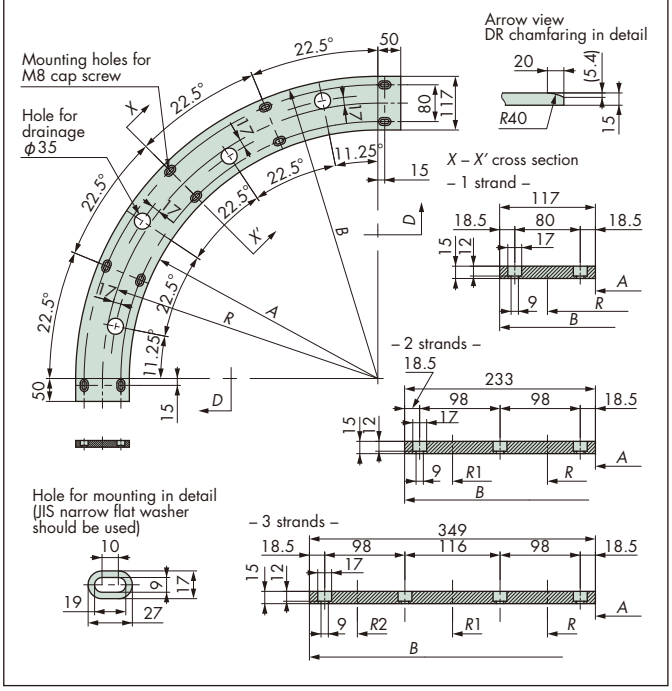
■ Curved Plastic Rails for TTUP1143

Applicable Chain	TTUP1143, TTUP1143P, TTU1143-N

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TTUP1143R600P1S	PR-TTUP1143R600P1R	PR-TTUP1143R600P1B	R600	–	–	R541.5	R658.5
	PR-TTUP1143R700P1S	PR-TTUP1143R700P1R	PR-TTUP1143R700P1B	R700	–	–	R641.5	R758.5
	PR-TTUP1143R800P1S	PR-TTUP1143R800P1R	PR-TTUP1143R800P1B	R800	–	–	R741.5	R858.5
	PR-TTUP1143R900P1S	PR-TTUP1143R900P1R	PR-TTUP1143R900P1B	R900	–	–	R841.5	R958.5
	PR-TTUP1143R1000P1S	PR-TTUP1143R1000P1R	PR-TTUP1143R1000P1B	R1000	–	–	R941.5	R1058.5
2	PR-TTUP1143R600P2S	PR-TTUP1143R600P2R	PR-TTUP1143R600P2B	R600	R716	–	R541.5	R774.5
	PR-TTUP1143R700P2S	PR-TTUP1143R700P2R	PR-TTUP1143R700P2B	R700	R816	–	R641.5	R874.5
	PR-TTUP1143R800P2S	PR-TTUP1143R800P2R	PR-TTUP1143R800P2B	R800	R916	–	R741.5	R974.5
	PR-TTUP1143R900P2S	PR-TTUP1143R900P2R	PR-TTUP1143R900P2B	R900	R1016	–	R841.5	R1074.5
	PR-TTUP1143R1000P2S	PR-TTUP1143R1000P2R	PR-TTUP1143R1000P2B	R1000	R1116	–	R941.5	R1174.5
3	PR-TTUP1143R600P3S	PR-TTUP1143R600P3R	PR-TTUP1143R600P3B	R600	R716	R832	R541.5	R890.5
	PR-TTUP1143R700P3S	PR-TTUP1143R700P3R	PR-TTUP1143R700P3B	R700	R816	R932	R641.5	R990.5
	PR-TTUP1143R800P3S	PR-TTUP1143R800P3R	PR-TTUP1143R800P3B	R800	R916	R1032	R741.5	R1090.5
	PR-TTUP1143R900P3S	PR-TTUP1143R900P3R	PR-TTUP1143R900P3B	R900	R1016	R1132	R841.5	R1190.5
	PR-TTUP1143R1000P3S	PR-TTUP1143R1000P3R	PR-TTUP1143R1000P3B	R1000	R1116	R1232	R941.5	R1290.5

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

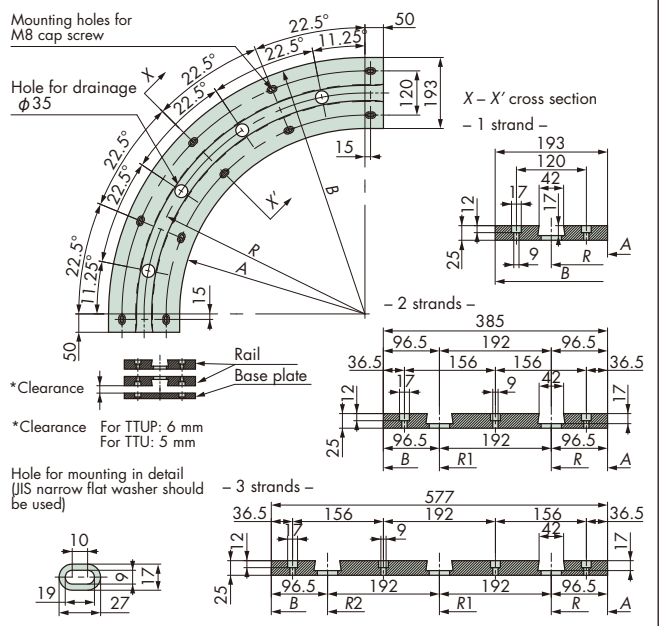
Finished Rail

Curved Plastic Rail

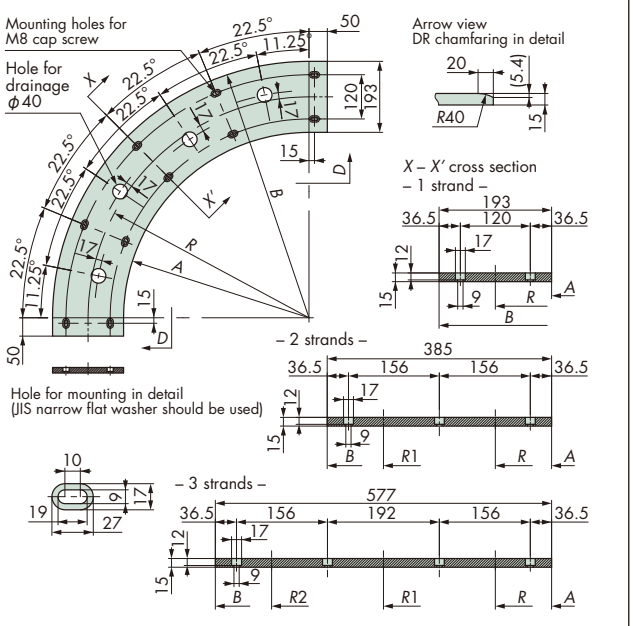
■ Curved Plastic Rails for TTUP1905

Applicable Chain	TTUP1905, TTU1905-N

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	–20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TTUP1905R600P1S	PR-TTUP1905R600P1R	PR-TTUP1905R600P1B	R600	–	–	R503.5	R696.5
	PR-TTUP1905R700P1S	PR-TTUP1905R700P1R	PR-TTUP1905R700P1B	R700	–	–	R603.5	R796.5
	PR-TTUP1905R800P1S	PR-TTUP1905R800P1R	PR-TTUP1905R800P1B	R800	–	–	R703.5	R896.5
	PR-TTUP1905R900P1S	PR-TTUP1905R900P1R	PR-TTUP1905R900P1B	R900	–	–	R803.5	R996.5
	PR-TTUP1905R1000P1S	PR-TTUP1905R1000P1R	PR-TTUP1905R1000P1B	R1000	–	–	R903.5	R1096.5
2	PR-TTUP1905R600P2S	PR-TTUP1905R600P2R	PR-TTUP1905R600P2B	R600	R792	–	R503.5	R888.5
	PR-TTUP1905R700P2S	PR-TTUP1905R700P2R	PR-TTUP1905R700P2B	R700	R892	–	R603.5	R988.5
	PR-TTUP1905R800P2S	PR-TTUP1905R800P2R	PR-TTUP1905R800P2B	R800	R992	–	R703.5	R1088.5
	PR-TTUP1905R900P2S	PR-TTUP1905R900P2R	PR-TTUP1905R900P2B	R900	R1092	–	R803.5	R1188.5
	PR-TTUP1905R1000P2S	PR-TTUP1905R1000P2R	PR-TTUP1905R1000P2B	R1000	R1192	–	R903.5	R1288.5
3	PR-TTUP1905R600P3S	PR-TTUP1905R600P3R	PR-TTUP1905R600P3B	R600	R792	R984	R503.5	R1080.5
	PR-TTUP1905R700P3S	PR-TTUP1905R700P3R	PR-TTUP1905R700P3B	R700	R892	R1084	R603.5	R1180.5
	PR-TTUP1905R800P3S	PR-TTUP1905R800P3R	PR-TTUP1905R800P3B	R800	R992	R1184	R703.5	R1230.5
	PR-TTUP1905R900P3S	PR-TTUP1905R900P3R	PR-TTUP1905R900P3B	R900	R1092	R1284	R803.5	R1380.5
	PR-TTUP1905R1000P3S	PR-TTUP1905R1000P3R	PR-TTUP1905R1000P3B	R1000	R1192	R1384	R903.5	R1480.5

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Curved plastic rail is delivered with divided units by an angle of 30° or 45°, depending on its shape.
5. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
6. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
7. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Finished Rail

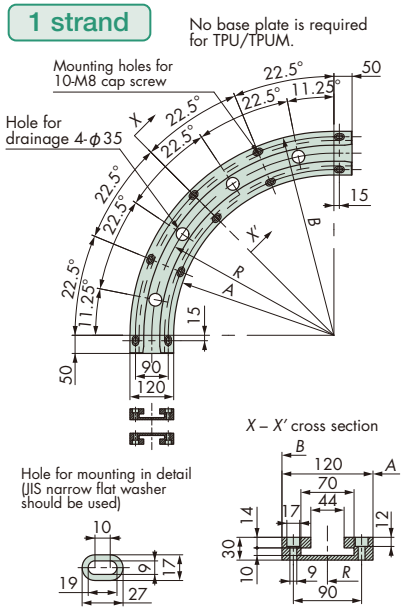
Curved Plastic Rail

■ Curved Plastic Rails for TPU826

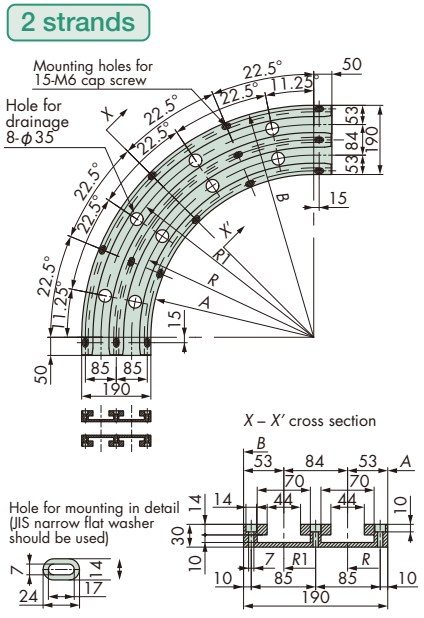
Applicable Chain	TPU826-T, TPU826P-T, TPUM826-T (Cannot be used for TPU-LH, TPUT-LH, TP-880TAB, TPU-USR)

Rails (Same with both carry and return ways)

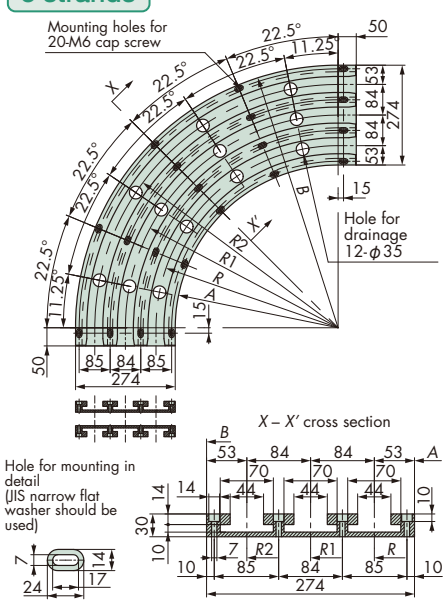
1 strand



2 strands



3 strands



* No base plate is required for TPU/TPUM. Use the same rail for both carry-way and return-way.

Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TPU826R500P1S	PR-TPU826R500P1R	R500	–	–	R440	R560
	PR-TPU826R600P1S	PR-TPU826R600P1R	R600	–	–	R540	R660
	PR-TPU826R700P1S	PR-TPU826R700P1R	R700	–	–	R640	R760
	PR-TPU826R800P1S	PR-TPU826R800P1R	R800	–	–	R740	R860
	PR-TPU826R900P1S	PR-TPU826R900P1R	R900	–	–	R840	R960
	PR-TPU826R1000P1S	PR-TPU826R1000P1R	R1000	–	–	R940	R1060
2	PR-TPU826R500P2S	PR-TPU826R500P2R	R500	R584	–	R447	R637
	PR-TPU826R600P2S	PR-TPU826R600P2R	R600	R684	–	R547	R737
	PR-TPU826R700P2S	PR-TPU826R700P2R	R700	R784	–	R647	R837
	PR-TPU826R800P2S	PR-TPU826R800P2R	R800	R884	–	R747	R937
	PR-TPU826R900P2S	PR-TPU826R900P2R	R900	R984	–	R847	R1037
	PR-TPU826R1000P2S	PR-TPU826R1000P2R	R1000	R1084	–	R947	R1137
3	PR-TPU826R500P3S	PR-TPU826R500P3R	R500	R584	R668	R447	R721
	PR-TPU826R600P3S	PR-TPU826R600P3R	R600	R684	R768	R547	R821
	PR-TPU826R700P3S	PR-TPU826R700P3R	R700	R784	R868	R647	R921
	PR-TPU826R800P3S	PR-TPU826R800P3R	R800	R884	R968	R747	R1021
	PR-TPU826R900P3S	PR-TPU826R900P3R	R900	R984	R1068	R847	R1121
	PR-TPU826R1000P3S	PR-TPU826R1000P3R	R1000	R1084	R1168	R947	R1221

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two rails.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

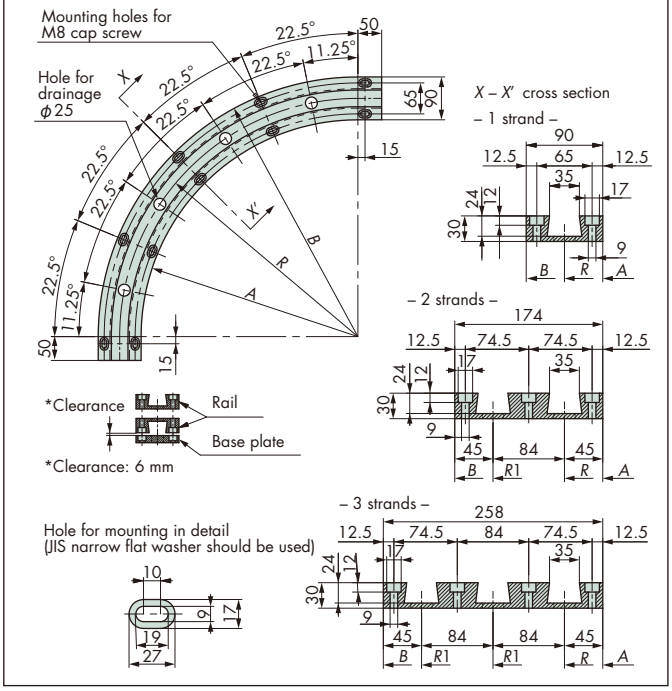
Finished Rail

Curved Plastic Rail

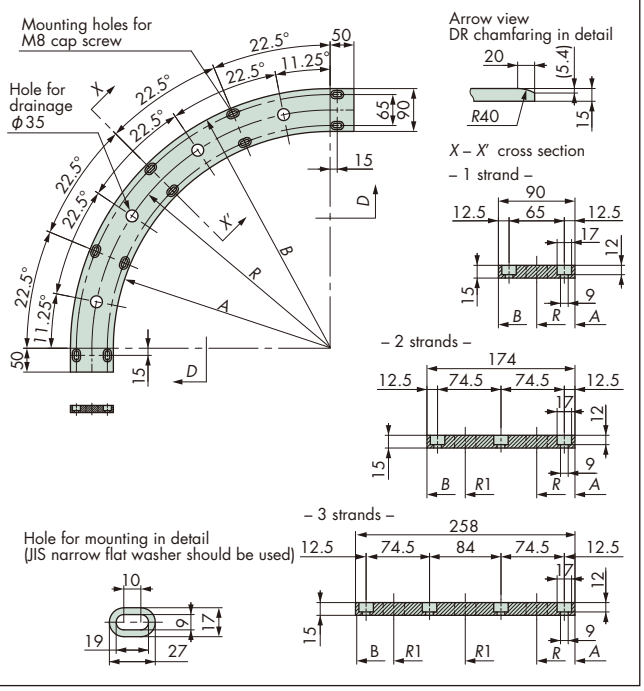
■ Curved Plastic Rails for TNU826

Applicable Chain	TNU826

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	–20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TNU826R500P1S	PR-TNU826R500P1R	PR-TNU826R500P1B	R500	–	–	R455	R545
	PR-TNU826R600P1S	PR-TNU826R600P1R	PR-TNU826R600P1B	R600	–	–	R555	R645
	PR-TNU826R700P1S	PR-TNU826R700P1R	PR-TNU826R700P1B	R700	–	–	R655	R745
	PR-TNU826R800P1S	PR-TNU826R800P1R	PR-TNU826R800P1B	R800	–	–	R755	R845
	PR-TNU826R900P1S	PR-TNU826R900P1R	PR-TNU826R900P1B	R900	–	–	R855	R945
	PR-TNU826R1000P1S	PR-TNU826R1000P1R	PR-TNU826R1000P1B	R1000	–	–	R955	R1045
2	PR-TNU826R500P2S	PR-TNU826R500P2R	PR-TNU826R500P2B	R500	R584	–	R455	R629
	PR-TNU826R600P2S	PR-TNU826R600P2R	PR-TNU826R600P2B	R600	R684	–	R555	R729
	PR-TNU826R700P2S	PR-TNU826R700P2R	PR-TNU826R700P2B	R700	R784	–	R655	R829
	PR-TNU826R800P2S	PR-TNU826R800P2R	PR-TNU826R800P2B	R800	R884	–	R755	R929
	PR-TNU826R900P2S	PR-TNU826R900P2R	PR-TNU826R900P2B	R900	R984	–	R855	R1029
	PR-TNU826R1000P2S	PR-TNU826R1000P2R	PR-TNU826R1000P2B	R1000	R1084	–	R955	R1129
3	PR-TNU826R500P3S	PR-TNU826R500P3R	PR-TNU826R500P3B	R500	R584	R668	R455	R713
	PR-TNU826R600P3S	PR-TNU826R600P3R	PR-TNU826R600P3B	R600	R684	R768	R555	R813
	PR-TNU826R700P3S	PR-TNU826R700P3R	PR-TNU826R700P3B	R700	R784	R868	R655	R913
	PR-TNU826R800P3S	PR-TNU826R800P3R	PR-TNU826R800P3B	R800	R884	R968	R755	R1013
	PR-TNU826R900P3S	PR-TNU826R900P3R	PR-TNU826R900P3B	R900	R984	R1068	R855	R1113
	PR-TNU826R1000P3S	PR-TNU826R1000P3R	PR-TNU826R1000P3B	R1000	R1084	R1168	R955	R1213

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R*1: sideflex radius of the second strand, *R*2: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

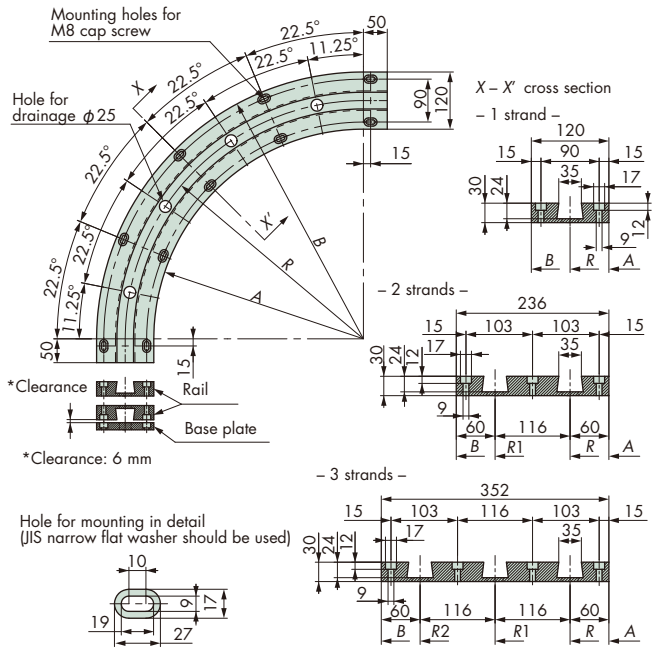
Finished Rail

Curved Pastic Rail

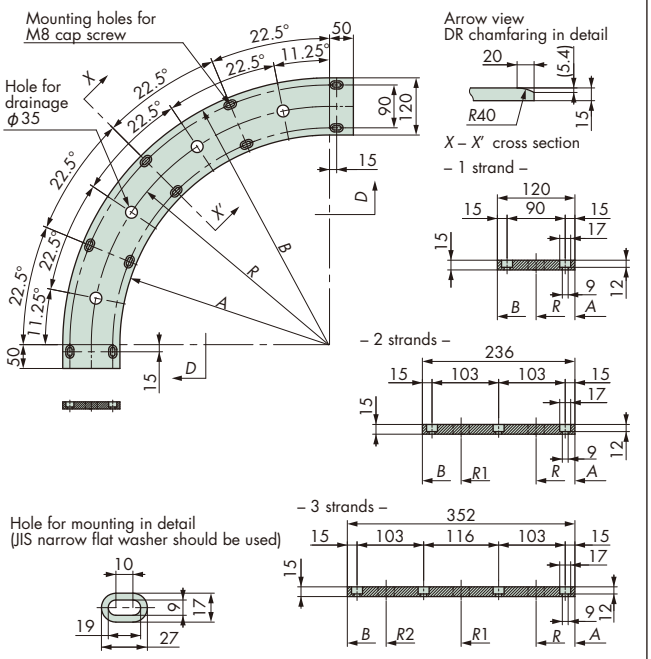
■ Curved Plastic Rails for TNU1143

Applicable Chain	TNU1143

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TNU1143R500P1S	PR-TNU1143R500P1R	PR-TNU1143R500P1B	R500	–	–	R440	R560
	PR-TNU1143R600P1S	PR-TNU1143R600P1R	PR-TNU1143R600P1B	R600	–	–	R540	R660
	PR-TNU1143R700P1S	PR-TNU1143R700P1R	PR-TNU1143R700P1B	R700	–	–	R640	R760
	PR-TNU1143R800P1S	PR-TNU1143R800P1R	PR-TNU1143R800P1B	R800	–	–	R740	R860
	PR-TNU1143R900P1S	PR-TNU1143R900P1R	PR-TNU1143R900P1B	R900	–	–	R840	R960
	PR-TNU1143R1000P1S	PR-TNU1143R1000P1R	PR-TNU1143R1000P1B	R1000	–	–	R940	R1060
2	PR-TNU1143R500P2S	PR-TNU1143R500P2R	PR-TNU1143R500P2B	R500	R616	–	R440	R676
	PR-TNU1143R600P2S	PR-TNU1143R600P2R	PR-TNU1143R600P2B	R600	R716	–	R540	R776
	PR-TNU1143R700P2S	PR-TNU1143R700P2R	PR-TNU1143R700P2B	R700	R816	–	R640	R876
	PR-TNU1143R800P2S	PR-TNU1143R800P2R	PR-TNU1143R800P2B	R800	R916	–	R740	R976
	PR-TNU1143R900P2S	PR-TNU1143R900P2R	PR-TNU1143R900P2B	R900	R1016	–	R840	R1076
	PR-TNU1143R1000P2S	PR-TNU1143R1000P2R	PR-TNU1143R1000P2B	R1000	R1116	–	R940	R1176
3	PR-TNU1143R500P3S	PR-TNU1143R500P3R	PR-TNU1143R500P3B	R500	R616	R732	R440	R792
	PR-TNU1143R600P3S	PR-TNU1143R600P3R	PR-TNU1143R600P3B	R600	R716	R832	R540	R892
	PR-TNU1143R700P3S	PR-TNU1143R700P3R	PR-TNU1143R700P3B	R700	R816	R932	R640	R992
	PR-TNU1143R800P3S	PR-TNU1143R800P3R	PR-TNU1143R800P3B	R800	R916	R1032	R740	R1092
	PR-TNU1143R900P3S	PR-TNU1143R900P3R	PR-TNU1143R900P3B	R900	R1016	R1132	R840	R1192
	PR-TNU1143R1000P3S	PR-TNU1143R1000P3R	PR-TNU1143R1000P3B	R1000	R1116	R1232	R940	R1292

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

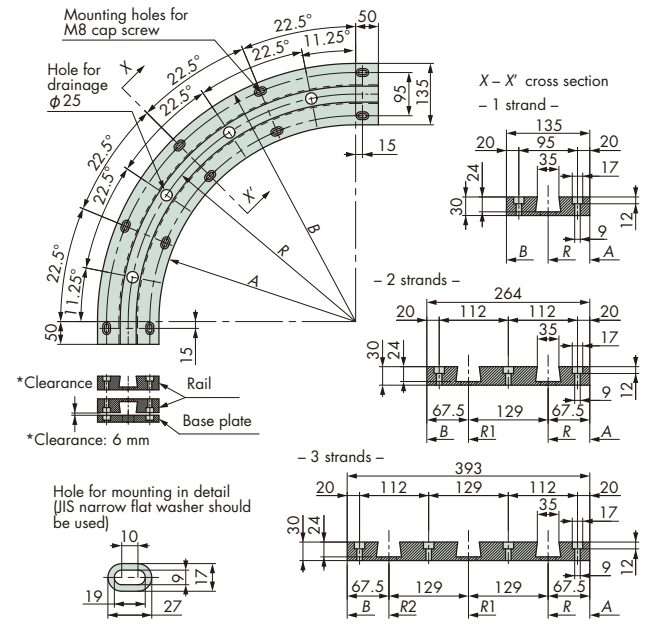
Finished Rail

Curved Plastic Rail

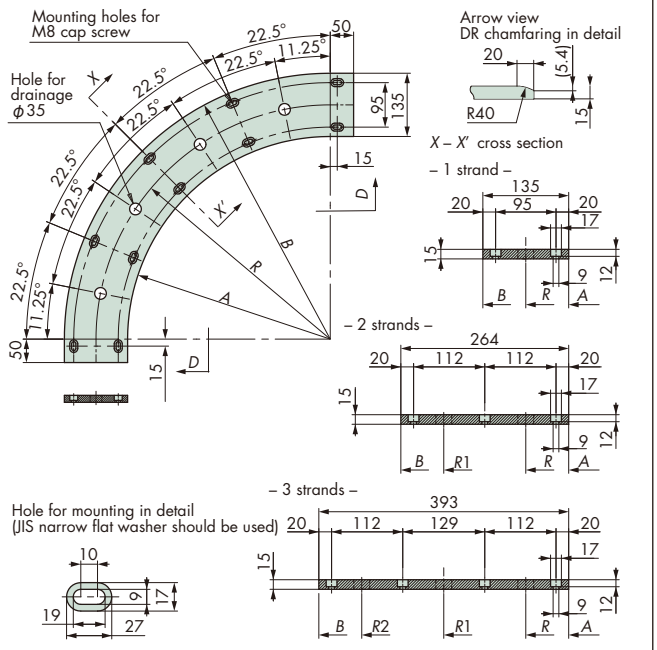
■ Curved Plastic Rails for TNU1270

Applicable Chain	TNU1270

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TNU1270R500P1S	PR-TNU1270R500P1R	PR-TNU1270R500P1B	R500	–	–	R432.5	R567.5
	PR-TNU1270R600P1S	PR-TNU1270R600P1R	PR-TNU1270R600P1B	R600	–	–	R532.5	R667.5
	PR-TNU1270R700P1S	PR-TNU1270R700P1R	PR-TNU1270R700P1B	R700	–	–	R632.5	R767.5
	PR-TNU1270R800P1S	PR-TNU1270R800P1R	PR-TNU1270R800P1B	R800	–	–	R732.5	R867.5
	PR-TNU1270R900P1S	PR-TNU1270R900P1R	PR-TNU1270R900P1B	R900	–	–	R832.5	R967.5
	PR-TNU1270R1000P1S	PR-TNU1270R1000P1R	PR-TNU1270R1000P1B	R1000	–	–	R932.5	R1067.5
2	PR-TNU1270R500P2S	PR-TNU1270R500P2R	PR-TNU1270R500P2B	R500	R629	–	R432.5	R696.5
	PR-TNU1270R600P2S	PR-TNU1270R600P2R	PR-TNU1270R600P2B	R600	R729	–	R532.5	R796.5
	PR-TNU1270R700P2S	PR-TNU1270R700P2R	PR-TNU1270R700P2B	R700	R829	–	R632.5	R896.5
	PR-TNU1270R800P2S	PR-TNU1270R800P2R	PR-TNU1270R800P2B	R800	R929	–	R732.5	R996.5
	PR-TNU1270R900P2S	PR-TNU1270R900P2R	PR-TNU1270R900P2B	R900	R1029	–	R832.5	R1096.5
	PR-TNU1270R1000P2S	PR-TNU1270R1000P2R	PR-TNU1270R1000P2B	R1000	R1129	–	R932.5	R1196.5
3	PR-TNU1270R500P3S	PR-TNU1270R500P3R	PR-TNU1270R500P3B	R500	R629	R758	R432.5	R825.5
	PR-TNU1270R600P3S	PR-TNU1270R600P3R	PR-TNU1270R600P3B	R600	R729	R858	R532.5	R925.5
	PR-TNU1270R700P3S	PR-TNU1270R700P3R	PR-TNU1270R700P3B	R700	R829	R958	R632.5	R1025.5
	PR-TNU1270R800P3S	PR-TNU1270R800P3R	PR-TNU1270R800P3B	R800	R929	R1058	R732.5	R1125.5
	PR-TNU1270R900P3S	PR-TNU1270R900P3R	PR-TNU1270R900P3B	R900	R1029	R1158	R832.5	R1225.5
	PR-TNU1270R1000P3S	PR-TNU1270R1000P3R	PR-TNU1270R1000P3B	R1000	R1129	R1258	R932.5	R1325.5

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R*1: sideflex radius of the second strand, *R*2: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

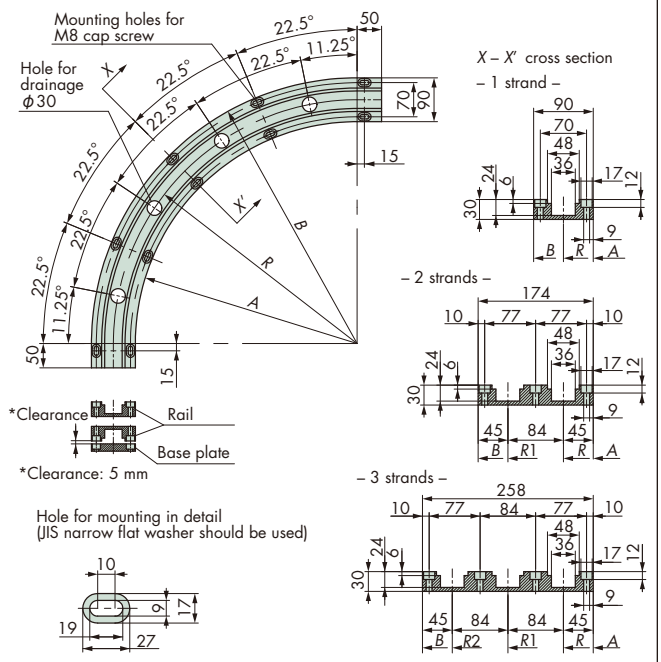
Finished Rail

Curved Pastic Rail

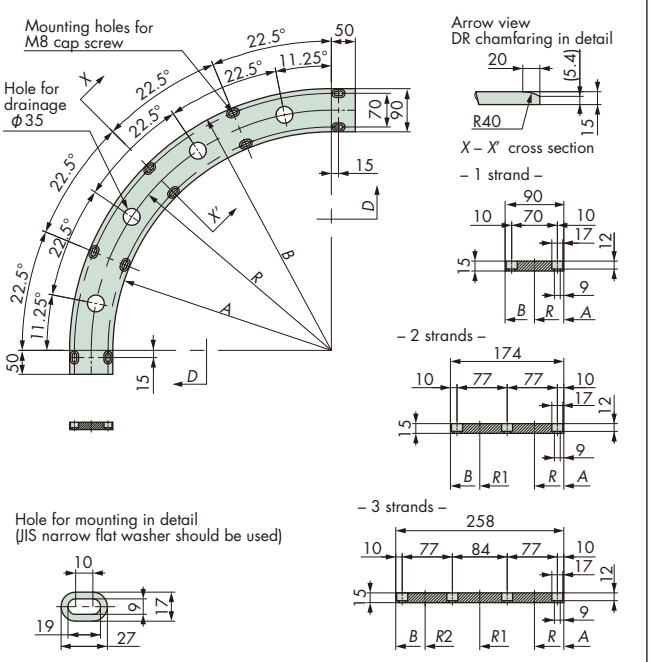
■ Curved Plastic Rails for TTKU826

Applicable Chain	TTKU826

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TTKU826R500P1S	PR-TTKU826R500P1R	PR-TTKU826R500P1B	R500	–	–	R455	R545
	PR-TTKU826R600P1S	PR-TTKU826R600P1R	PR-TTKU826R600P1B	R600	–	–	R555	R645
	PR-TTKU826R700P1S	PR-TTKU826R700P1R	PR-TTKU826R700P1B	R700	–	–	R655	R745
	PR-TTKU826R800P1S	PR-TTKU826R800P1R	PR-TTKU826R800P1B	R800	–	–	R755	R845
	PR-TTKU826R900P1S	PR-TTKU826R900P1R	PR-TTKU826R900P1B	R900	–	–	R855	R945
	PR-TTKU826R1000P1S	PR-TTKU826R1000P1R	PR-TTKU826R1000P1B	R1000	–	–	R955	R1045
2	PR-TTKU826R500P2S	PR-TTKU826R500P2R	PR-TTKU826R500P2B	R500	R584	–	R455	R629
	PR-TTKU826R600P2S	PR-TTKU826R600P2R	PR-TTKU826R600P2B	R600	R684	–	R555	R729
	PR-TTKU826R700P2S	PR-TTKU826R700P2R	PR-TTKU826R700P2B	R700	R784	–	R655	R829
	PR-TTKU826R800P2S	PR-TTKU826R800P2R	PR-TTKU826R800P2B	R800	R884	–	R755	R929
	PR-TTKU826R900P2S	PR-TTKU826R900P2R	PR-TTKU826R900P2B	R900	R984	–	R855	R1029
	PR-TTKU826R1000P2S	PR-TTKU826R1000P2R	PR-TTKU826R1000P2B	R1000	R1084	–	R955	R1129
3	PR-TTKU826R500P3S	PR-TTKU826R500P3R	PR-TTKU826R500P3B	R500	R584	R668	R455	R713
	PR-TTKU826R600P3S	PR-TTKU826R600P3R	PR-TTKU826R600P3B	R600	R684	R768	R555	R813
	PR-TTKU826R700P3S	PR-TTKU826R700P3R	PR-TTKU826R700P3B	R700	R784	R868	R655	R913
	PR-TTKU826R800P3S	PR-TTKU826R800P3R	PR-TTKU826R800P3B	R800	R884	R968	R755	R1013
	PR-TTKU826R900P3S	PR-TTKU826R900P3R	PR-TTKU826R900P3B	R900	R984	R1068	R855	R1113
	PR-TTKU826R1000P3S	PR-TTKU826R1000P3R	PR-TTKU826R1000P3B	R1000	R1084	R1168	R955	R1213

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

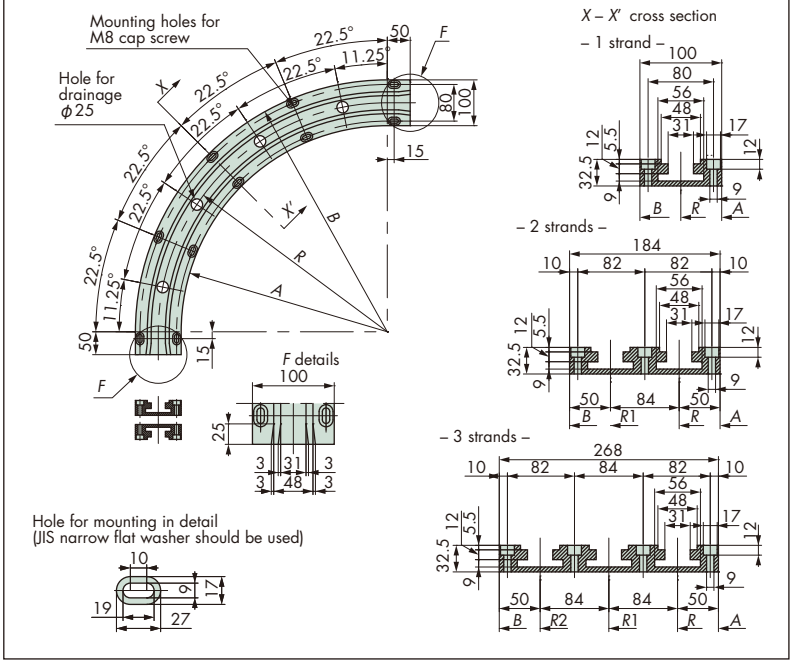
Finished Rail

Curved Plastic Rail

■ Curved Plastic Rails for TRU826

Applicable Chain	TRU826-T

Rails (Same with both carry and return ways)



* No base plate is required for TRU. Use the same rail for both carry-way and return-way.

Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	*R* Note: 2	*R1* Note: 2	*R2* Note: 2	*A*	*B*
1	PR-TRU826R500P1S	PR-TRU826R500P1R	R500	–	–	R450	R550
	PR-TRU826R600P1S	PR-TRU826R600P1R	R600	–	–	R550	R650
	PR-TRU826R700P1S	PR-TRU826R700P1R	R700	–	–	R650	R750
	PR-TRU826R800P1S	PR-TRU826R800P1R	R800	–	–	R750	R850
	PR-TRU826R900P1S	PR-TRU826R900P1R	R900	–	–	R850	R950
	PR-TRU826R1000P1S	PR-TRU826R1000P1R	R1000	–	–	R950	R1050
2	PR-TRU826R500P2S	PR-TRU826R500P2R	R500	R584	–	R450	R634
	PR-TRU826R600P2S	PR-TRU826R600P2R	R600	R684	–	R550	R734
	PR-TRU826R700P2S	PR-TRU826R700P2R	R700	R784	–	R650	R834
	PR-TRU826R800P2S	PR-TRU826R800P2R	R800	R884	–	R750	R934
	PR-TRU826R900P2S	PR-TRU826R900P2R	R900	R984	–	R850	R1034
	PR-TRU826R1000P2S	PR-TRU826R1000P2R	R1000	R1094	–	R950	R1134
3	PR-TRU826R500P3S	PR-TRU826R500P3R	R500	R584	R668	R450	R718
	PR-TRU826R600P3S	PR-TRU826R600P3R	R600	R684	R768	R550	R818
	PR-TRU826R700P3S	PR-TRU826R700P3R	R700	R784	R868	R650	R918
	PR-TRU826R800P3S	PR-TRU826R800P3R	R800	R884	R968	R750	R1018
	PR-TRU826R900P3S	PR-TRU826R900P3R	R900	R984	R1068	R850	R1118
	PR-TRU826R1000P3S	PR-TRU826R1000P3R	R1000	R1084	R1168	R950	R1218

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R1*: sideflex radius of the second strand, *R2*: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

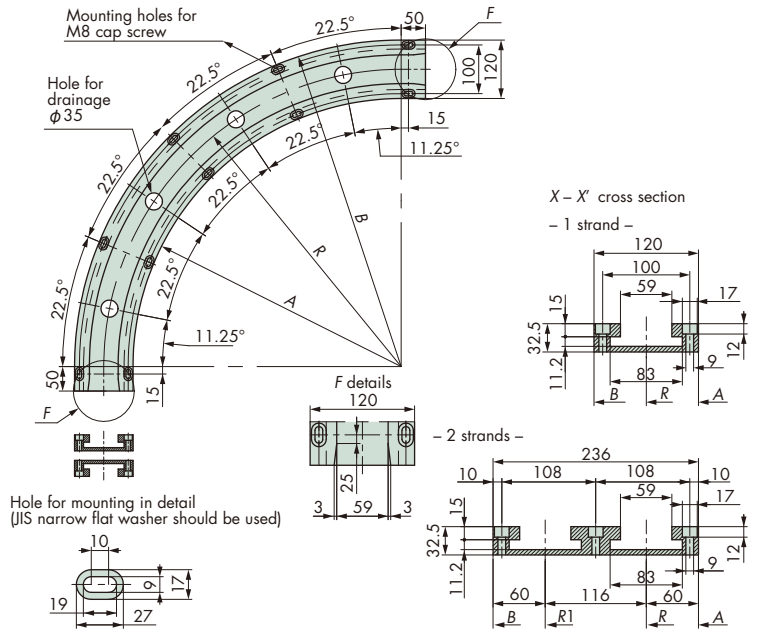
Finished Rail

Curved Plastic Rail

■ Curved Plastic Rails for TPUS1143

Applicable Chain	TPUS1143-T-LFB, TPU953-T-LBP, TPUS-Y-LAP

Rails (Same with both carry and return ways)



* No base plate is required for TPUS. Use the same rail for both carry-way and return-way.

Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	*R* Note: 2	*R*1 Note: 2	*A*	*B*
1	PR-TPUS1143R610P1S	PR-TPUS1143R610P1R	R610	–	R550	R670
	PR-TPUS1143R700P1S	PR-TPUS1143R700P1R	R700	–	R640	R760
	PR-TPUS1143R800P1S	PR-TPUS1143R800P1R	R800	–	R740	R860
	PR-TPUS1143R900P1S	PR-TPUS1143R900P1R	R900	–	R840	R960
	PR-TPUS1143R1000P1S	PR-TPUS1143R1000P1R	R1000	–	R940	R1060
2	PR-TPUS1143R610P2S	PR-TPUS1143R610P2R	R610	R726	R550	R786
	PR-TPUS1143R700P2S	PR-TPUS1143R700P2R	R700	R816	R640	R876
	PR-TPUS1143R800P2S	PR-TPUS1143R800P2R	R800	R916	R740	R976
	PR-TPUS1143R900P2S	PR-TPUS1143R900P2R	R900	R1016	R840	R1076
	PR-TPUS1143R1000P2S	PR-TPUS1143R1000P2R	R1000	R1116	R940	R1176

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R*1: sideflex radius of the second strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

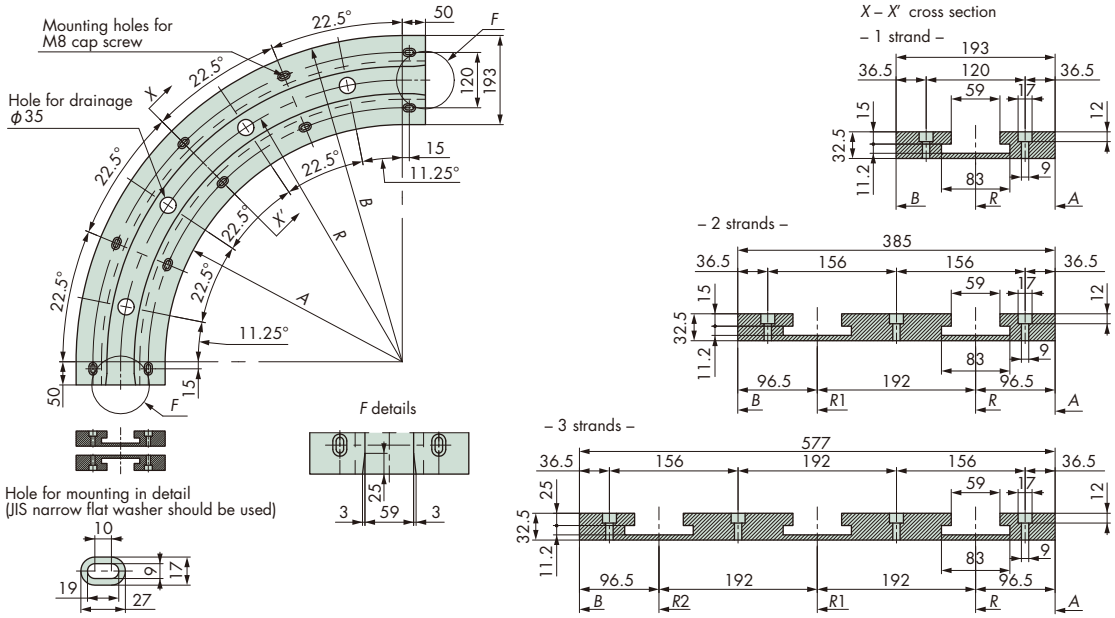
Finished Rail

Curved Plastic Rail

■ Curved Plastic Rails for TPUS1905

Applicable Chain	TPUS1905-T-LFB, TPUS1905-T-LBP

Rails (Same with both carry and return ways)



* No base plate is required for TPUS. Use the same rail for both carry-way and return-way.

Material grade	Color	Operating temperature range °C
P Note	White	–20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

No. of strands	Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	*R* Note: 2	*R*1 Note: 2	*R*2 Note: 2	A	B
1	PR-TPUS1905R610P1S	PR-TPUS1905R610P1R	R610	–	–	R513.5	R706.5
	PR-TPUS1905R700P1S	PR-TPUS1905R700P1R	R700	–	–	R603.5	R796.5
	PR-TPUS1905R800P1S	PR-TPUS1905R800P1R	R800	–	–	R703.5	R896.5
	PR-TPUS1905R900P1S	PR-TPUS1905R900P1R	R900	–	–	R803.5	R996.5
	PR-TPUS1905R1000P1S	PR-TPUS1905R1000P1R	R1000	–	–	R903.5	R1096.5
2	PR-TPUS1905R610P2S	PR-TPUS1905R610P2R	R610	R802	–	R513.5	R898.5
	PR-TPUS1905R700P2S	PR-TPUS1905R700P2R	R700	R892	–	R603.5	R988.5
	PR-TPUS1905R800P2S	PR-TPUS1905R800P2R	R800	R992	–	R703.5	R1088.5
	PR-TPUS1905R900P2S	PR-TPUS1905R900P2R	R900	R1092	–	R803.5	R1188.5
	PR-TPUS1905R1000P2S	PR-TPUS1905R1000P2R	R1000	R1192	–	R903.5	R1288.5
3	PR-TPUS1905R610P3S	PR-TPUS1905R610P3R	R610	R802	R994	R513.5	R1090.5
	PR-TPUS1905R700P3S	PR-TPUS1905R700P3R	R700	R892	R1084	R603.5	R1180.5
	PR-TPUS1905R800P3S	PR-TPUS1905R800P3R	R800	R992	R1184	R703.5	R1280.5
	* PR-TPUS1905R900P3S	* PR-TPUS1905R900P3R	R900	R1092	R1284	R803.5	R1380.5
	* PR-TPUS1905R1000P3S	* PR-TPUS1905R1000P3R	R1000	R1192	R1384	R903.5	R1480.5

Note: 1. Made-to-order products.
2. *R*: sideflex radius of the first strand, *R*1: sideflex radius of the second strand, *R*2: sideflex radius of the third strand.
3. Set: Combination of two curved plastic rails and one base plate.
4. Curved plastic rails are delivered with divided units by an angle of 30° or 45°, depending on its shape.
5. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
6. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
7. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

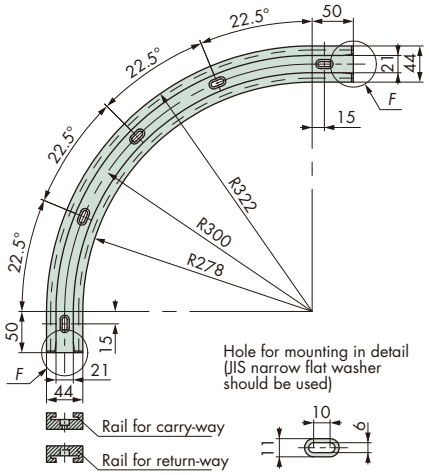
Finished Rail

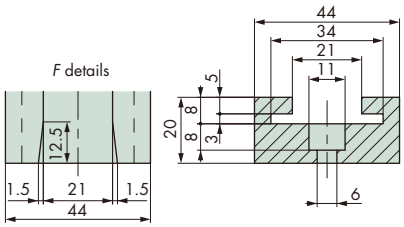
Curved Plastic Rail

■ Curved Plastic Rails for RSP40-T-CU

Note: Use PR-PO12-W-2M and PR-PO12-G-2M rails on page 333 for straight section.

Applicable Chain	RSP40-T-CU





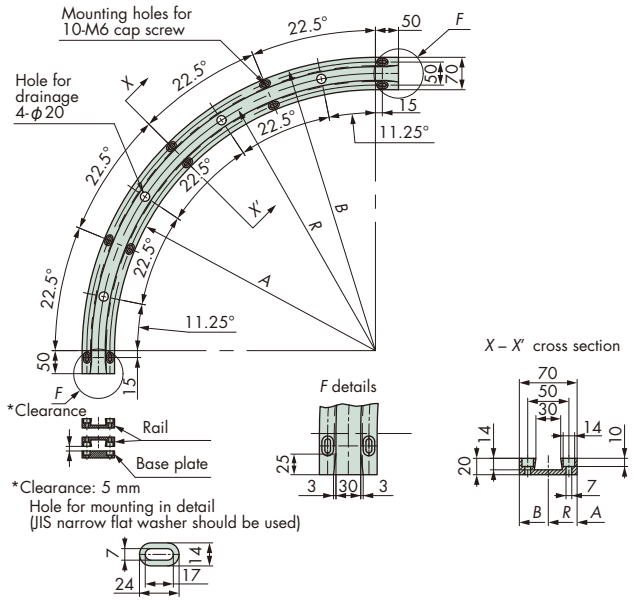
Tsubaki model no. set	Carry-way/ Return-way rail	Material grade	Color	Center radius R mm	Inner circumference A	Outer circumference B
PR-RSP40R300P1S	PR-RSP40R300P1R	10-100	White	R300	R278	R322

Note: 1. Made-to-order product.
2. Set: Combination of two rails of carry and return ways.
3. The above model numbers indicate ultra-high molecular weight polyethylene (UHMW-PE).
4. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
5. Contact a Tsubaki representative if you're considering dimensions other than the above.
6. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

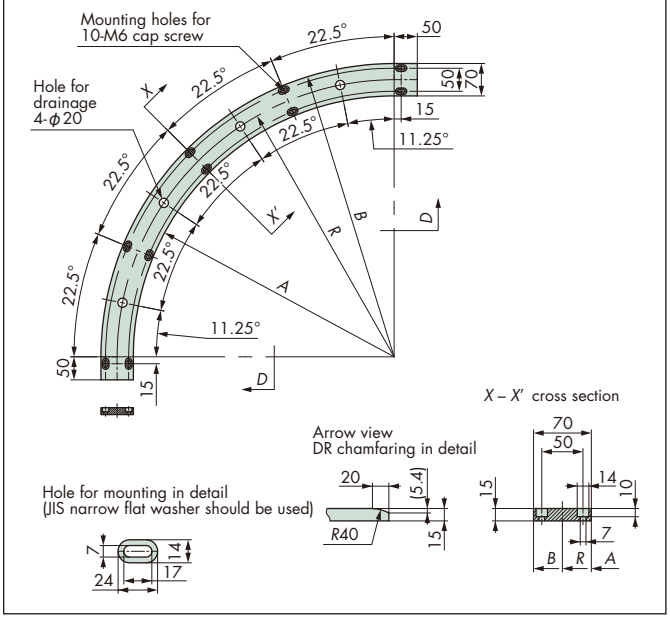
■ Curved Plastic Rails for RSP60-CU

Applicable Chain	RSP60-CU, RSP60P-CU

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	R	A	B
PR-RSP60R600P1S	PR-RSP60R600P1R	PR-RSP60R600P1B	R600	R565	R635
PR-RSP60R700P1S	PR-RSP60R700P1R	PR-RSP60R700P1B	R700	R665	R735
PR-RSP60R800P1S	PR-RSP60R800P1R	PR-RSP60R800P1B	R800	R765	R835
PR-RSP60R900P1S	PR-RSP60R900P1R	PR-RSP60R900P1B	R900	R865	R935
PR-RSP60R1000P1S	PR-RSP60R1000P1R	PR-RSP60R1000P1B	R1000	R965	R1035

Note: 1. Made-to-order products.
2. Set: Combination of two base rails and one base.
3. The use of curved plastic rails with an inscribed angle of 180° or higher may cause failure under unlubricated conditions.
4. Please contact us when you're considering the use of sideflex radius, number of rows, material of chains other than the above.
5. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

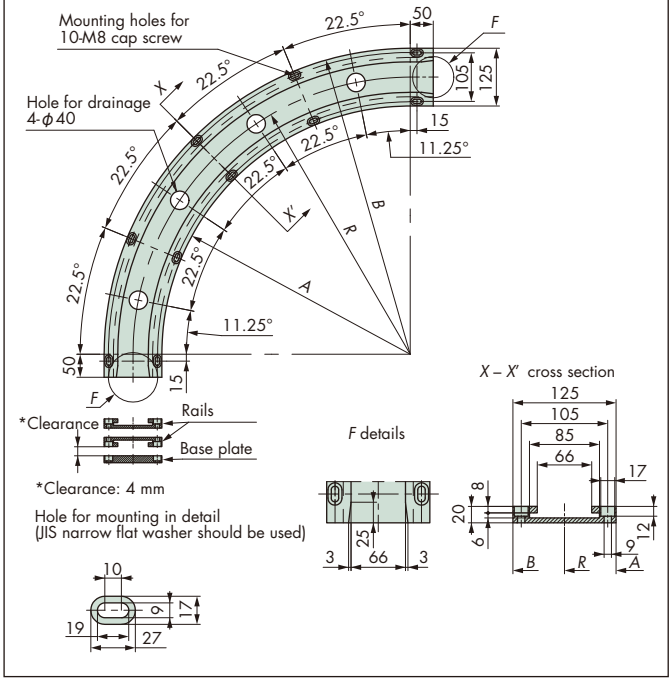
Finished Rail

Curved Plastic Rail

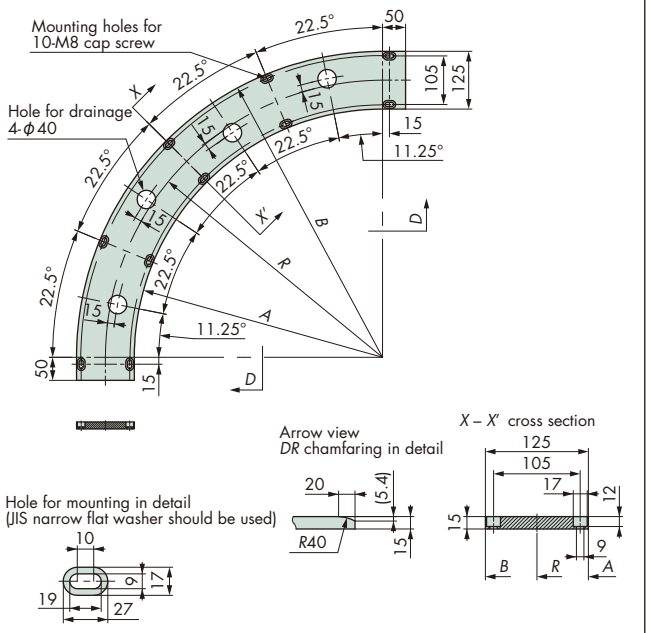
■ Curved Plastic Rails for RSP60-CU-2

Applicable Chain	RSP60-CU-2

Rails (Same with both carry and return ways)



Base plate



Material grade	Color	Operating temperature range °C
P Note	White	-20 to 60

Note: Models dedicated to for only dry conditions (M) as well as low friction/wear resistant (PMW, PLF) can also be manufactured.

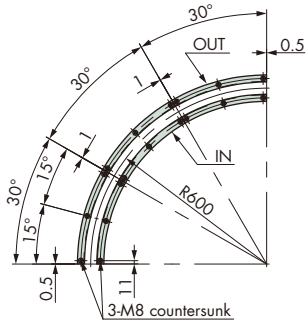
Tsubaki model no. set	Tsubaki model no. carry-way/return-way rail	Tsubaki model no. return-way/base plate	*R*	*A*	*B*
PR-RSP60-2R600P1S	PR-RSP60-2R600P1R	PR-RSP60-2R600P1B	R600	R537.5	R662.5
PR-RSP60-2R700P1S	PR-RSP60-2R700P1R	PR-RSP60-2R700P1B	R700	R637.5	R762.5
PR-RSP60-2R800P1S	PR-RSP60-2R800P1R	PR-RSP60-2R800P1B	R800	R737.5	R862.5
PR-RSP60-2R900P1S	PR-RSP60-2R900P1R	PR-RSP60-2R900P1B	R900	R837.5	R962.5
PR-RSP60-2R1000P1S	PR-RSP60-2R1000P1R	PR-RSP60-2R1000P1B	R1000	R937.5	R1062.5

Note: 1. Made-to-order products.
2. Set: Combination of two curved plastic rails and one base plate.
3. Failure may result if curved plastic rails with an angle of 180° or larger are used under unlubricated condition.
4. Contact a Tsubaki representative if you're considering the use of curved plastic rails with other sideflex radius, number of strands and material shown above.
5. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

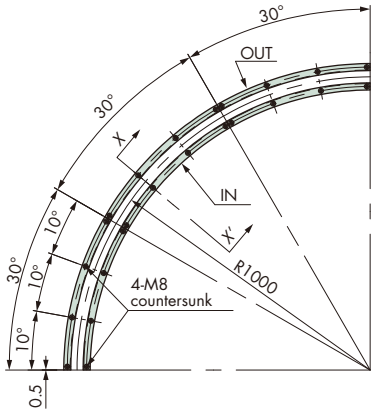
Other Rails

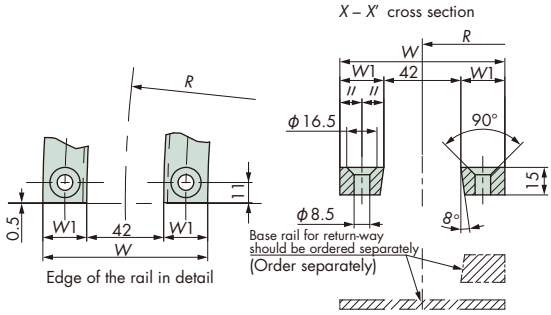
■ Curved Plastic Rails for TTUP

for R600



for R1000





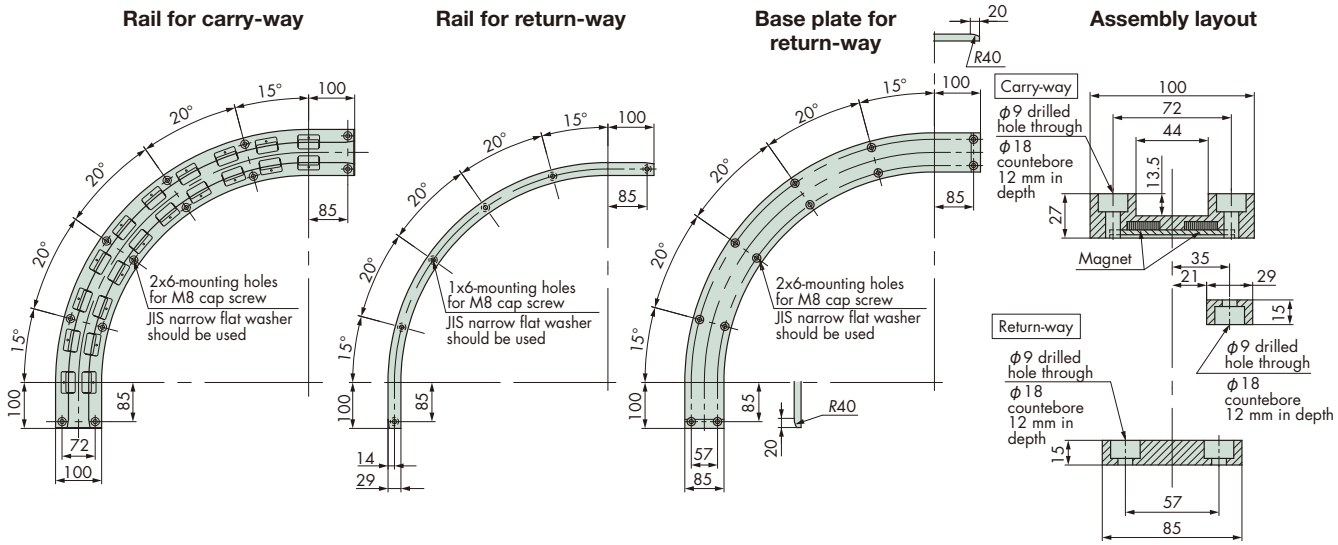
Applicable chain	Tsubaki model no. Note: 4	Center radius *R* mm	Side	Material grade	Color	Angle	Dimensions			Number of holes	Operating temperature range °C
							Total width *W*	Rail width *W1*	Pitch of holes *C*		
TTUP826 TTUP826P TTUPH826 TTU826	PR-32R60030-W-IN	600	Inside	10-100	White	30°	90	24	66	3	-20 to 60
	PR-32R60030-W-OUT		Outside								
	PR-32R60030-G-IN	600	Inside	10-301	Green						
	PR-32R60030-G-OUT		Outside								
	PR-32R80030-W-IN	800	Inside	10-100	White						
	PR-32R80030-W-OUT		Outside								
	PR-32R80030-G-IN	800	Inside	10-301	Green						
	PR-32R80030-G-OUT		Outside								
	PR-32R100030-W-IN	1000	Inside	10-100	White					4	
	PR-32R100030-W-OUT		Outside								
	PR-32R100030-G-IN	1000	Inside	10-301	Green						
	PR-32R100030-G-OUT		Outside								
TTUP1143 TTUP1143P TTU1143	PR-44R60030-W-IN	600	Inside	10-100	White	30°	122	40	82	3	
	PR-44R60030-W-OUT		Outside								
	PR-44R60030-G-IN	600	Inside	10-301	Green						
	PR-44R60030-G-OUT		Outside								
	PR-44R80030-W-IN	800	Inside	10-100	White						
	PR-44R80030-W-OUT		Outside								
	PR-44R80030-G-IN	800	Inside	10-301	Green						
	PR-44R80030-G-OUT		Outside								
	PR-44R100030-W-IN	1000	Inside	10-100	White					4	
	PR-44R100030-W-OUT		Outside								
	PR-44R100030-G-IN	1000	Inside	10-301	Green						
	PR-44R100030-G-OUT		Outside								
TTUP1905 TTU1905	PR-74R60030-W-IN	600	Inside	10-100	White	30°	192	75	117	3	
	PR-74R60030-W-OUT		Outside								
	PR-74R60030-G-IN	600	Inside	10-301	Green						
	PR-74R60030-G-OUT		Outside								
	PR-74R80030-W-IN	800	Inside	10-100	White						
	PR-74R80030-W-OUT		Outside								
	PR-74R80030-G-IN	800	Inside	10-301	Green						
	PR-74R80030-G-OUT		Outside								
	PR-74R100030-W-IN	1000	Inside	10-100	White					4	
	PR-74R100030-W-OUT		Outside								
	PR-74R100030-G-IN	1000	Inside	10-301	Green						
	PR-74R100030-G-OUT		Outside								

Note: 1. Made-to-order products.
2. Mounting holes are drilled to the indicated dimensions.
3. A custom base may be available upon request.
4. The product with the above Tsubaki model number is a curved plastic rail with an angle of 30°. Please add the number of rails as necessary.

Plastic Rails

Other Rails

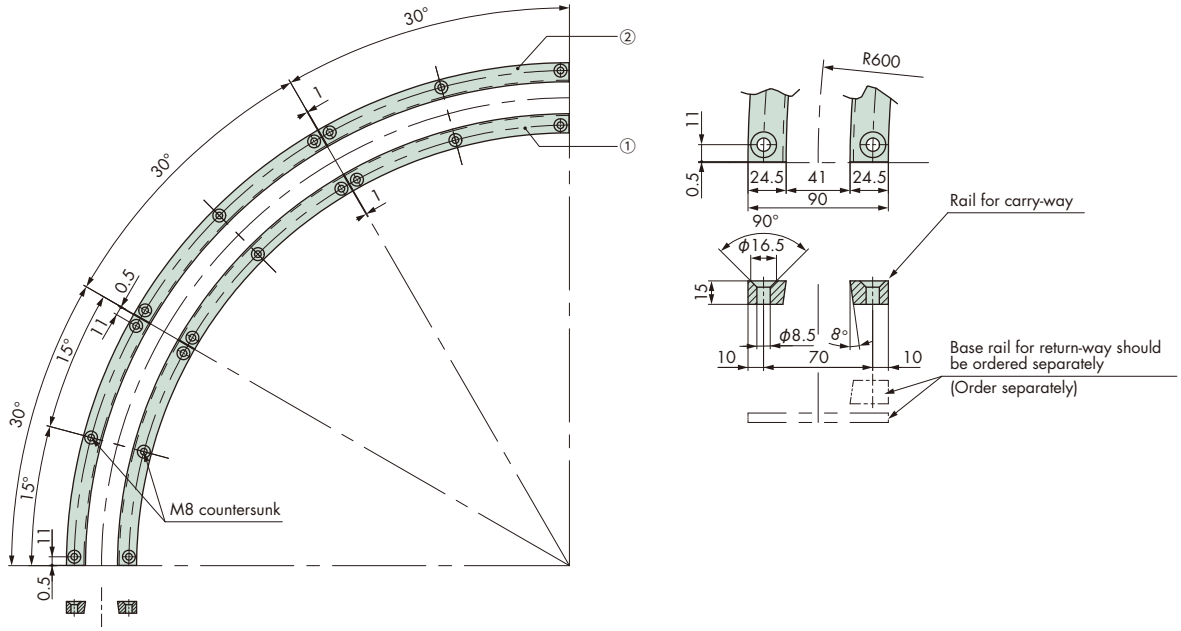
■ Curved Plastic Rails with Magnet for TTUPM838H



Tsubaki model no.	Installation position	Center radius *R* mm	Material grade	Color	Operating temperature range ˚C
PR-TTUPMHR500P1R1	Rail for carry-way	500	10-100	White	-20 to 60
PR-TTUPMHR500P1R2	Rail for return-way				
PR-TTUPMHR500P1B	Base plate for return-way				

Note: 1. Made-to-order products. Contact a Tsubaki representative for more information.
2. Contact a Tsubaki representative if you're considering the use of plastic rails with other shown above (sideflex radius, num-ber of strands and material).
3. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.
4. The shapes of both inlet and outlet of the base plate have changed to the shapes of round-chamfering as of April, 2020.

■ Curved Plastic Rails for TTUPS-H

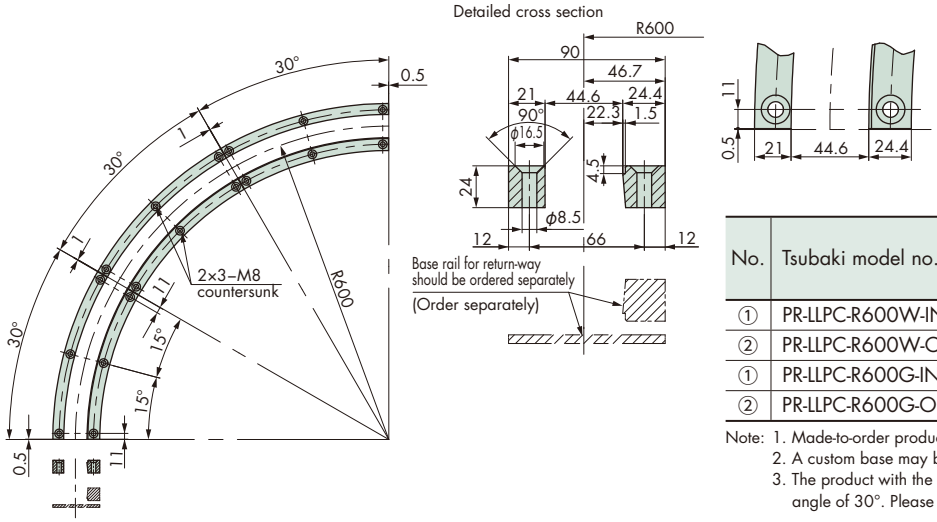


No.	Tsubaki model no. Note: 3	Center radius *R* mm	Side	Material grade	Color	Angle	Operating temperature range ˚C
①	PR-TTUPSH-R600WIN30	600	Inside	10-100	White	30°	-20 to 60
②	PR-TTUPSH-R600WOUT30		Outside				
①	PR-TTUPSH-R600GIN30	600	Inside	10-301	Green	30°	
②	PR-TTUPSH-R600GOUT30		Outside				

Note: 1. Made-to-order products.
2. A custom base may be available upon request.
3. The product with the above model number is a curved plastic rail with an angle of 30°. Please add the number of rails as necessary.

Other Rails

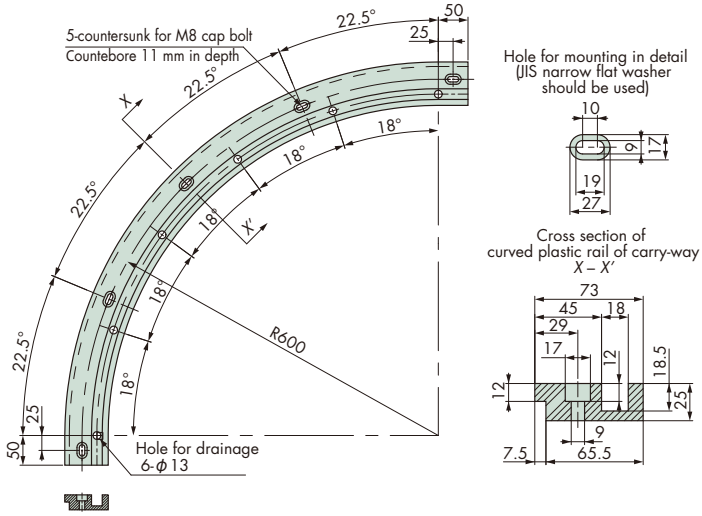
■ Curved Plastic Rails for TTUP-LLPC



No.	Tsubaki model no.Note: 3	Center radius *R* mm	Side	Material grade	Color	Angle
①	PR-LLPC-R600W-IN30	600	Inside	10-100	White	30°
②	PR-LLPC-R600W-OUT30		Outside			
①	PR-LLPC-R600G-IN30	600	Inside	10-301	Green	30°
②	PR-LLPC-R600G-OUT30		Outside			

Note: 1. Made-to-order products.
2. A custom base may be available upon request.
3. The product with the above mod-el number is a curved plastic rail with an angle of 30°. Please add the number of rails as necessary.

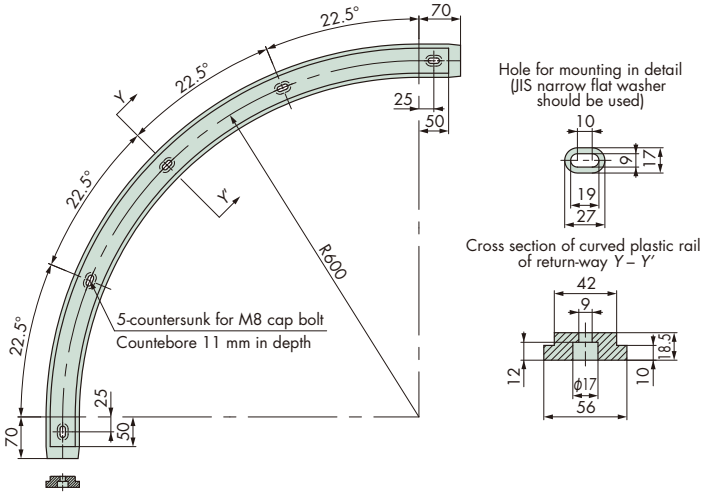
■ Curved Plastic Rails of Carry-way for WT3085C325



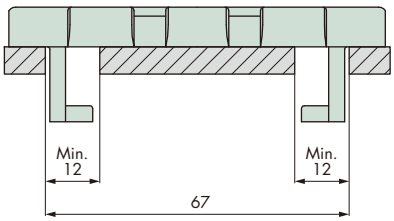
Tsubaki model no.	Material grade	Color	Operating temperature range °C
PR-WT3085R600C-W	10-100M9	White	–20 to 60
PR-WT3085R600C-CNO	SJ-CNO	Purple	–20 to 80

Note: 1. Made-to-order products.
2. Material grade: SJ-CNO (special polyamide) must be used under dry conditions.
3. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

■ Curved Plastic Rails of Return-way for WT3085C325



■ Plastic Rails of Straight Section for WT3085C325



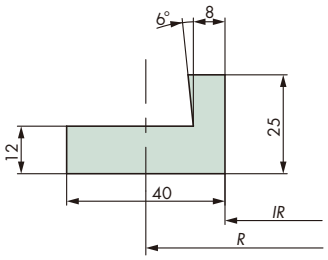
Tsubaki model no.	Material grade	Color	Operating temperature range °C
PR-WT3085R600R-W	10-100M9	White	–20 to 60
PR-WT3085R600R-CNO	SJ-CNO	Purple	–20 to 80

Note: 1. Made-to-order products.
2. Material grade: SJ-CNO (special polyamide) must be used under dry conditions without lubrication.
3. The dimension for mounting has changed to the dimension for JIS small plain washer, as of April, 2020.

Plastic Rails

Other Rails

■ Curved Plastic Rails for RSP60-CU/RSP-PO12SB

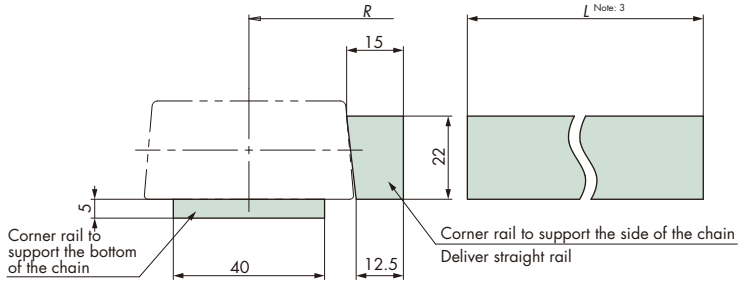


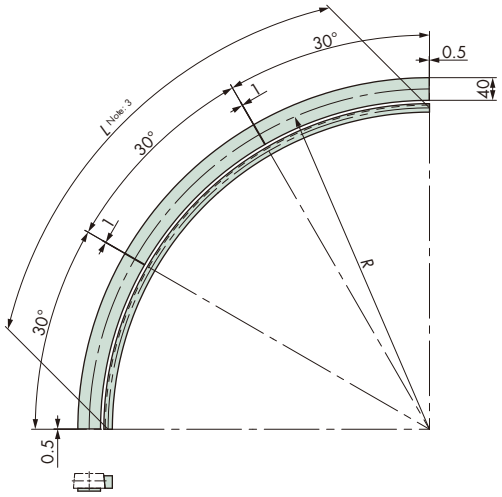
Tsubaki model no.	Material grade	Color	Center radius *R* mm	*IR*	Angle	Operating temperature range °C
PR-12SBR60030-W	10-100	White	600	577	30°	–20 to 60
PR-12SBR60030-G	10-301	Green				
PR-12SBR80030-W	10-100	White	800	777		
PR-12SBR80030-G	10-301	Green				
PR-12SBR100030-W	10-100	White	1000	977		
PR-12SBR100030-G	10-301	Green				
PR-12SBR120030-W	10-100	White	1200	1177		
PR-12SBR120030-G	10-301	Green				

Note: Made-to-order products.

■ Curved Plastic Rails for TP-50UNS

There are two kinds of rails, one to support the bottom and the other to support the sides of the chain.





• Plastic rail for bottom

Tsubaki model no.	Center radius *R* mm	Material grade	Color	Angle	Operating temperature range °C
PR-5UNKR55030-W	550	10-100	White	30°	–20 to 60
PR-5UNKR55030-G		10-301	Green		
PR-5UNKR60030-W	600	10-100	White		
PR-5UNKR60030-G		10-301	Green		
PR-5UNKR80030-W	800	10-100	White		
PR-5UNKR80030-G		10-301	Green		
PR-5UNKR100030-W	1000	10-100	White		
PR-5UNKR100030-G		10-301	Green		
PR-5UNKR120030-W	1200	10-100	White		
PR-5UNKR120030-G		10-301	Green		
PR-5UNKR150030-W	1500	10-100	White		
PR-5UNKR150030-G		10-301	Green		

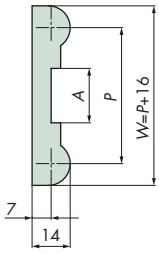
• Plastic rail for side

Tsubaki model no.	Material grade	Color	*L* Note: 3 mm	Angle	Operating temperature range °C	Remarks
PR-5UNSR55090-W	10-100	White	815	90°	–20 to 60	For R550
PR-5UNSR55090-G	10-301	Green				
PR-5UNSR60090-W	10-100	White	900			For R600
PR-5UNSR60090-G	10-301	Green				
PR-5UNSR80090-W	10-100	White	1210			For R800
PR-5UNSR80090-G	10-301	Green				
PR-5UNSR100090-W	10-100	White	1530			For R1000
PR-5UNSR100090-G	10-301	Green				
PR-5UNSR120090-W	10-100	White	1840			For R1200
PR-5UNSR120090-G	10-301	Green				
PR-5UNSR150090-W	10-100	White	2320			For R1500
PR-5UNSR150090-G	10-301	Green				

Note: 1. Made-to-order products.
2. Mounting holes are modified upon request.
3. Plastic rails for side guides are manufactured longer than standard nominal length. Cut as necessary for use.

Other Rails

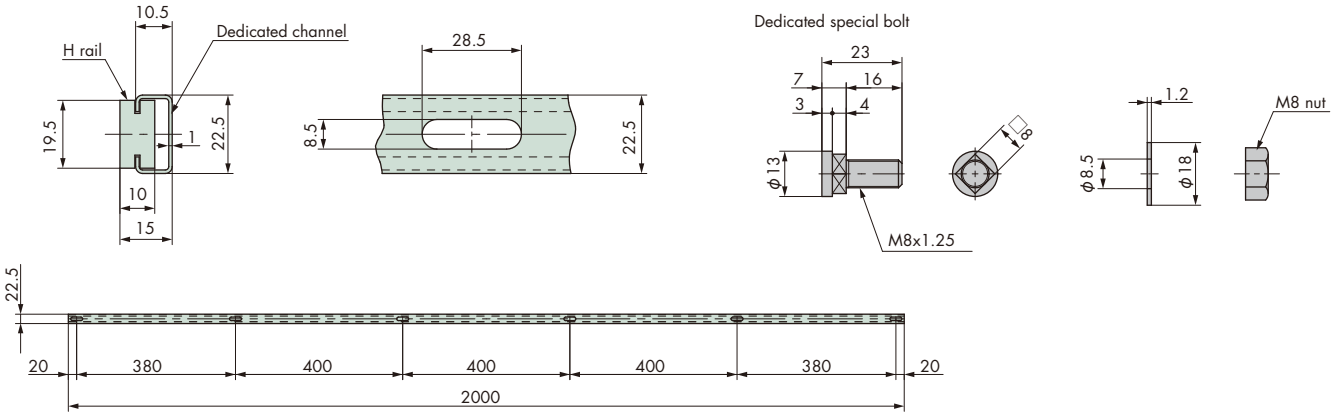
■ B Rails



Tsubaki model no.	P	W	A	Length m	Material grade	Color	Operating temperature range °C
PR-B40-W-2M	40	56	20	2	10-100	White	-20 to 60
PR-B40-G-2M					10-301	Green	
PR-B50-W-2M	50	66	20		10-100	White	
PR-B50-G-2M					10-301	Green	
PR-B65-W-2M	65	81	23		10-100	White	
PR-B65-G-2M					10-301	Green	

Note: Made-to-order products.

■ H Rails



H rails				
Tsubaki model no.	Material grade	Color	Length m	Operating temperature range °C
PR-HR-W-2M	10-100	White	2	-20 to 60
PR-HR-G-2M	10-301	Green		

Dedicated channel			
Tsubaki model no.	Material	Number of slotted holes	Length m
PR-HCSS0-2M	Stainless steel	0	2
PR-HCSS6-2M		6	

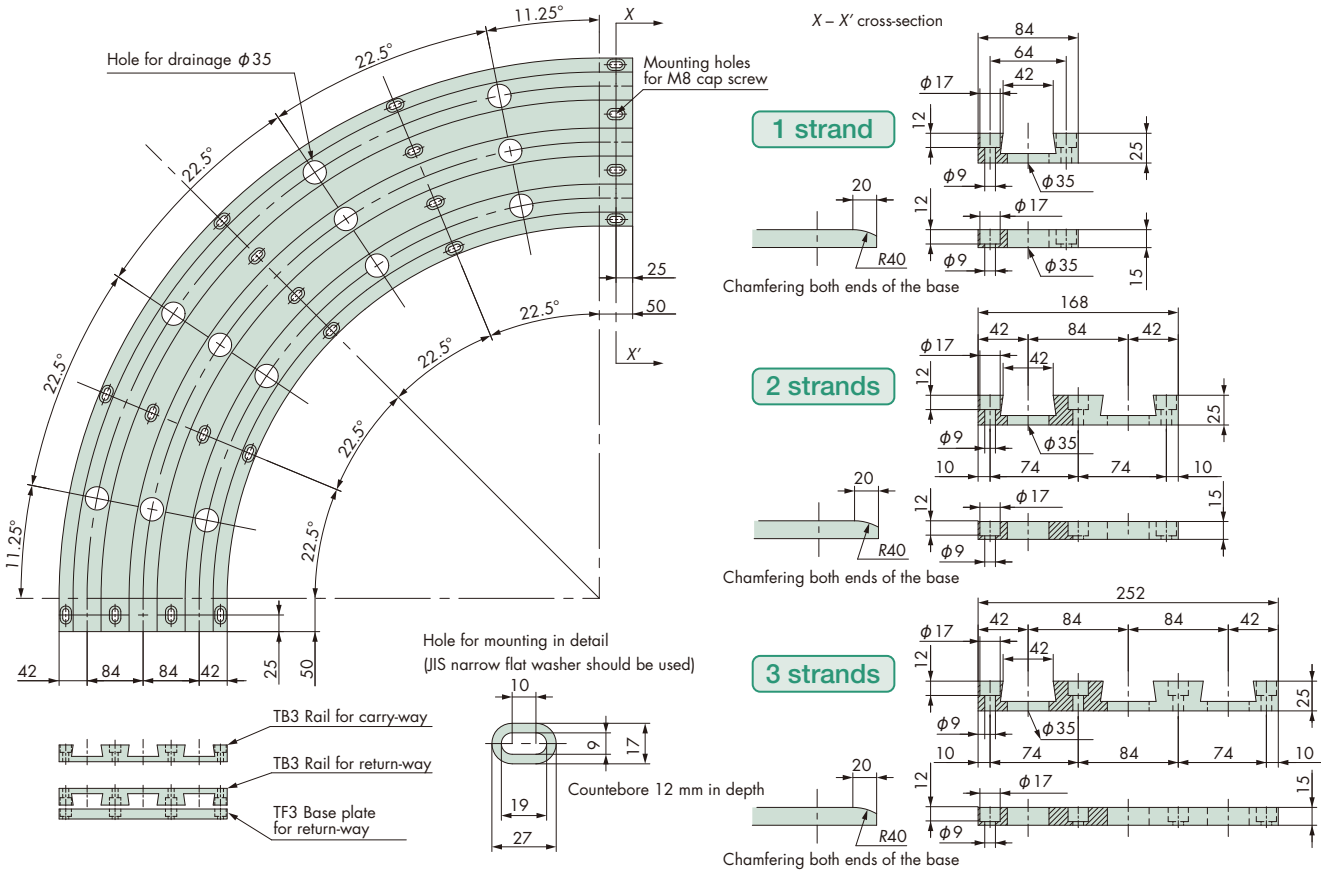
Dedicated special bolt		
Tsubaki model no.	Material	Remarks
PR-HBNP1S	Unichrome plated	With washer and nut
PR-HBSS1S	Stainless steel	

Note: 1. Standard products.
2. Special bolt for H rail includes six of each bolts, nuts and washers.

Plastic Rails

Other Rails

■ Curved Plastic Rails for TTUP

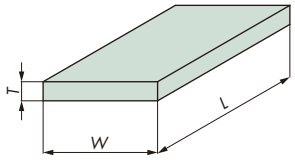


Chain type	No. of strands	Center radius *R* mm						Material grade	Color	Tsubaki model no.			Operating temperature range °C
		1st strand	2nd strand	3rd strand	4th strand	5th strand	6th strand			Carry-way/ Return-way rail	Return-way/ Base plate	Set	
TTUP826 TTUP826P TTUPH826	1	600	—	—	—	—	—	10-301	Green	PR-TB3-16-3	PR-TF3-16-3	PR-TB3-16-3SET	-20 to 60
	2	600	684	—	—	—	—			PR-TB3-26-3	PR-TF3-26-3	PR-TB3-26-3SET	
	3	600	684	768	—	—	—			PR-TB3-36-3	PR-TF3-36-3	PR-TB3-36-3SET	
	4	600	684	768	852	—	—			PR-TB3-46-3	PR-TF3-46-3	PR-TB3-46-3SET	
	5	600	684	768	852	936	—			PR-TB3-56-3	PR-TF3-56-3	PR-TB3-56-3SET	
	6	600	684	768	852	936	1020			PR-TB3-66-3	PR-TF3-66-3	PR-TB3-66-3SET	
	1	800	—	—	—	—	—			PR-TB3-18-3	PR-TF3-18-3	PR-TB3-18-3SET	
	2	800	884	—	—	—	—			PR-TB3-28-3	PR-TF3-28-3	PR-TB3-28-3SET	
	3	800	884	968	—	—	—			PR-TB3-38-3	PR-TF3-38-3	PR-TB3-38-3SET	
	4	800	884	968	1052	—	—			PR-TB3-48-3	PR-TF3-48-3	PR-TB3-48-3SET	
	5	800	884	968	1052	1136	—			PR-TB3-58-3	PR-TF3-58-3	PR-TB3-58-3SET	
	6	800	884	968	1052	1136	1220			PR-TB3-68-3	PR-TF3-68-3	PR-TB3-68-3SET	
	1	1000	—	—	—	—	—			PR-TB3-10-3	PR-TF3-10-3	PR-TB3-10-3SET	
	2	1000	1084	—	—	—	—			PR-TB3-20-3	PR-TF3-20-3	PR-TB3-20-3SET	
	3	1000	1084	1168	—	—	—			PR-TB3-30-3	PR-TF3-30-3	PR-TB3-30-3SET	
	4	1000	1084	1168	1252	—	—			PR-TB3-40-3	PR-TF3-40-3	PR-TB3-40-3SET	
	5	1000	1084	1168	1252	1336	—			PR-TB3-50-3	PR-TF3-50-3	PR-TB3-50-3SET	
	6	1000	1084	1168	1252	1336	1420			PR-TB3-60-3	PR-TF3-60-3	PR-TB3-60-3SET	

Note: 1. Made-to-order products.
2. The set model number is assigned to the set product comprising three components: the rails for the carry and return ways and the base for the return-way.
3. The products including rails for TTUP1143 (top plate width of 114.3 mm) and other specifications such as for multiple number of strands, different size and colors are available upon request.
4. Contact a Tsubaki representative for special specifications such as for super-high-speed operation.
5. Curved plastic rails are delivered with divided units by an angle of 30° or 45°, depending on its shape.
6. The shapes of both inlet and outlet of the base plate have changed to the shapes of round-chamfering as of April 2020.

Standardized Product

■ Sheet—Standard Product



Size mm *T*: Thickness x *W*: Width x *L*: Length	Material grade (Feature: Color)			Manufacturing method	Operating temperature range °C
	10-100 (Standard: White)	10-301 (Standard: Green)	10-806 (Electrostatic preventive: Black)		
	Tsubaki model no.				
1 × 1000 × 2000	**PR-ST1-1000-W-2000**	PR-ST1-1000-G-2000	PR-ST1-1000-B-2000	Skiving Note: 5	-20 to 60
2 × 1000 × 2000	**PR-ST2-1000-W-2000**	PR-ST2-1000-G-2000	PR-ST2-1000-B-2000		
3 × 1000 × 2000	**PR-ST3-1000-W-2000**	**PR-ST3-1000-G-2000**	**PR-ST3-1000-B-2000**		
4 × 1000 × 2000	**PR-ST4-1000-W-2000**	**PR-ST4-1000-G-2000**	PR-ST4-1000-B-2000		
5 × 1000 × 2000	**PR-ST5-1000-W-2000**	**PR-ST5-1000-G-2000**	**PR-ST5-1000-B-2000**		
6 × 1000 × 2000	**PR-ST6-1000-W-2000**	**PR-ST6-1000-G-2000**	**PR-ST6-1000-B-2000**		
8 × 1000 × 2000	**PR-ST8-1000-W-2000**	PR-ST8-1000-G-2000	PR-ST8-1000-B-2000	Press Note: 2	
10 × 1000 × 2000 A Note: 3	**PR-ST10-1000-W-2000A**	**PR-ST10-1000-G-2000**	**PR-ST10-1000-B-2000**		
10 × 1000 × 2000 B Note: 3	PR-ST10-1000-W-2000B				
12 × 1000 × 2000 A Note: 3	**PR-ST12-1000-W-2000A**	**PR-ST12-1000-G-2000**	**PR-ST12-1000-B-2000**		
12 × 1000 × 2000 B Note: 3	PR-ST12-1000-W-2000B				
15 × 1000 × 2000 A Note: 3	**PR-ST15-1000-W-2000A**	**PR-ST15-1000-G-2000**	**PR-ST15-1000-B-2000**		
15 × 1000 × 2000 B Note: 3	PR-ST15-1000-W-2000B				
20 × 1000 × 2000	**PR-ST20-1000-W-2000**	**PR-ST20-1000-G-2000**	**PR-ST20-1000-B-2000**		
25 × 1000 × 2000	**PR-ST25-1000-W-2000**	**PR-ST25-1000-G-2000**	PR-ST25-1000-B-2000		
30 × 1000 × 2000	**PR-ST30-1000-W-2000**	**PR-ST30-1000-G-2000**	PR-ST30-1000-B-2000		
35 × 1000 × 2000	PR-ST35-1000-W-2000	PR-ST35-1000-G-2000	PR-ST35-1000-B-2000		
40 × 1000 × 2000	**PR-ST40-1000-W-2000**	PR-ST40-1000-G-2000	PR-ST40-1000-B-2000		
45 × 1000 × 2000	**PR-ST45-1000-W-2000**	PR-ST45-1000-G-2000	PR-ST45-1000-B-2000		
50 × 1000 × 2000	**PR-ST50-1000-W-2000**	PR-ST50-1000-G-2000	PR-ST50-1000-B-2000		
55 × 1000 × 2000	PR-ST55-1000-W-2000				
60 × 1000 × 2000	PR-ST60-1000-W-2000	PR-ST60-1000-G-2000	PR-ST60-1000-B-2000		
70 × 1000 × 2000	PR-ST70-1000-W-2000	PR-ST70-1000-G-2000			
80 × 1000 × 2000	PR-ST80-1000-W-2000	PR-ST80-1000-G-2000			
90 × 1000 × 2000	PR-ST90-1000-W-2000	PR-ST90-1000-G-2000			
100 × 1000 × 2000	PR-ST100-1000-W-2000	PR-ST100-1000-G-2000			
8 × 1220 × 3000	**PR-ST8-1220-W-3000**	PR-ST8-1220-G-3000	PR-ST8-1220-B-3000		
10 × 1220 × 3000	**PR-ST10-1220-W-3000**	**PR-ST10-1220-G-3000**	PR-ST10-1220-B-3000		
12 × 1220 × 3000	**PR-ST12-1220-W-3000**	**PR-ST12-1220-G-3000**	PR-ST12-1220-B-3000		
15 × 1220 × 3000	**PR-ST15-1220-W-3000**	**PR-ST15-1220-G-3000**	PR-ST15-1220-B-3000		
20 × 1220 × 3000	**PR-ST20-1220-W-3000**	**PR-ST20-1220-G-3000**	PR-ST20-1220-B-3000		
25 × 1220 × 3000	**PR-ST25-1220-W-3000**	**PR-ST25-1220-G-3000**	PR-ST25-1220-B-3000		
30 × 1220 × 3000	**PR-ST30-1220-W-3000**	**PR-ST30-1220-G-3000**	PR-ST30-1220-B-3000		
35 × 1220 × 3000	PR-ST35-1220-W-3000	PR-ST35-1220-G-3000	PR-ST35-1220-B-3000		
40 × 1220 × 3000	PR-ST40-1220-W-3000	PR-ST40-1220-G-3000	PR-ST40-1220-B-3000		
45 × 1220 × 3000	PR-ST45-1220-W-3000	PR-ST45-1220-G-3000	PR-ST45-1220-B-3000		
50 × 1220 × 3000	PR-ST50-1220-W-3000	PR-ST50-1220-G-3000	PR-ST50-1220-B-3000		
60 × 1220 × 3000	PR-ST60-1220-W-3000	PR-ST60-1220-G-3000	PR-ST60-1220-B-3000		
70 × 1220 × 3000	PR-ST70-1220-W-3000	PR-ST70-1220-G-3000	PR-ST70-1220-B-3000		
80 × 1220 × 3000	PR-ST80-1220-W-3000	PR-ST80-1220-G-3000	PR-ST80-1220-B-3000		
90 × 1220 × 3000	PR-ST90-1220-W-3000	PR-ST90-1220-G-3000			
100 × 1220 × 3000	PR-ST100-1220-W-3000	PR-ST100-1220-G-3000			

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. The products are made by press working and their sizes as shown are nominal values. (Their thickness varies.)
3. The following two types of processing are available for standard products (10-100) (color: white) with thicknesses of 10/12/15 x *W*1000 x *L*2000.
A: Pressed products
B: Finished products (Thickness sides are finished.)
4. Depending on the size, wear resistance (10-605SS) (color: yellow) and (10-365CP) (color: olive green) can be manufactured.
5. It is sliced from a thick material and is warped and distorted.

Plastic Rails

Standardized Product

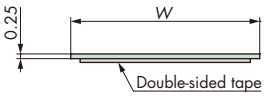
■ Round Bar

Diameter mm	Unit mass kg/m	Material grade (Feature: Color) 10-100EX (Standard extrusions: White)	10-301EX (Standard extrusions: Green)	10-806 (Electrostatic preventive: Black)	10-605SS (Wear resistant: Yellow)	10-365CP (Wear resistant: Greenish brown)	Operating temperature range °C
		Tsubaki model no.					
10	0.08	**PR-MR10-W-1M**	**PR-MR10-G-1M**	**PR-MR10-B-1M**	PR-MR10-Y-1M	PR-MR10-CP-1M	-20 to 60
15	0.18	**PR-MR15-W-1M**	**PR-MR15-G-1M**	**PR-MR15-B-1M**	PR-MR15-Y-1M	PR-MR15-CP-1M	
20	0.31	**PR-MR20-W-1M**	**PR-MR20-G-1M**	**PR-MR20-B-1M**	PR-MR20-Y-1M	PR-MR20-CP-1M	
25	0.49	**PR-MR25-W-1M**	**PR-MR25-G-1M**	**PR-MR25-B-1M**	PR-MR25-Y-1M	PR-MR25-CP-1M	
30	0.71	**PR-MR30-W-1M**	**PR-MR30-G-1M**	**PR-MR30-B-1M**	PR-MR30-Y-1M	PR-MR30-CP-1M	
35	0.96	**PR-MR35-W-1M**	**PR-MR35-G-1M**	**PR-MR35-B-1M**	PR-MR35-Y-1M	PR-MR35-CP-1M	
40	1.26	**PR-MR40-W-1M**	**PR-MR40-G-1M**	**PR-MR40-B-1M**	PR-MR40-Y-1M	PR-MR40-CP-1M	
45	1.59	**PR-MR45-W-1M**	**PR-MR45-G-1M**	**PR-MR45-B-1M**	PR-MR45-Y-1M	PR-MR45-CP-1M	
50	1.96	**PR-MR50-W-1M**	**PR-MR50-G-1M**	**PR-MR50-B-1M**	PR-MR50-Y-1M	PR-MR50-CP-1M	
55	2.38	**PR-MR55-W-1M**	PR-MR55-G-1M	PR-MR55-B-1M	PR-MR55-Y-1M	PR-MR55-CP-1M	
60	2.83	**PR-MR60-W-1M**	PR-MR60-G-1M	**PR-MR60-B-1M**	PR-MR60-Y-1M	PR-MR60-CP-1M	
65	3.32	**PR-MR65-W-1M**					
70	3.85	**PR-MR70-W-1M**	PR-MR70-G-1M	PR-MR70-B-1M			
75	4.42	**PR-MR75-W-1M**					
80	5.02	**PR-MR80-W-1M**	PR-MR80-G-1M	PR-MR80-B-1M			
85	5.67	**PR-MR85-W-1M**					
90	6.36	**PR-MR90-W-1M**	PR-MR90-G-1M	PR-MR90-B-1M			
100	7.85	**PR-MR100-W-1M**	PR-MR100-G-1M	PR-MR100-B-1M			
110	9.50	**PR-MR110-W-1M**					
120	11.30	**PR-MR120-W-1M**					
130	13.27	**PR-MR130-W-1M**					
140	15.39	**PR-MR140-W-1M**					
150	17.66	**PR-MR150-W-1M**					
160	20.01	**PR-MR160-W-1M**					
180	26.01	**PR-MR180-W-1M**					
200	31.40	**PR-MR200-W-1M**					
250	49.06	**PR-MR250-W-1M**					

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.
2. Sizes (outside diameter, length, material grade) other than those shown above can be manufactured upon request.
3. Circular plates with a thickness up to 150 mm are used to manufacture products with a diameter over ϕ250.
4. Standard length is 1 m.
5. Machining product.

■ Wear Tape

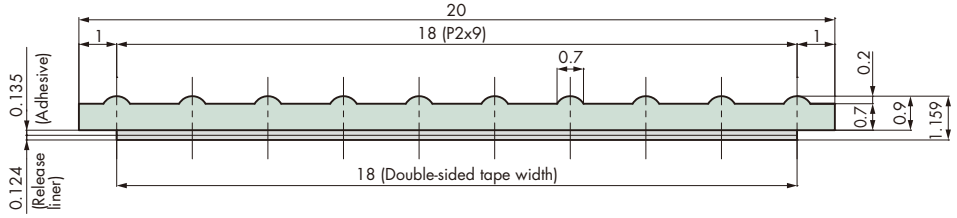
Wear tape is a special tape made of ultra- high molecular weight polyethylene (UHMW-PE) tape with an adhesive.



Tsubaki model no.	Width	Thickness	Coil length m	Material grade	Color	Operating temperature range °C
PR-WT15-20M	15	0.25	20	10-100	White	1 to 30
PR-WT20-20M	20					
PR-WT25-20M	25					
PR-WT30-20M	30					
PR-WT40-20M	40					
PR-WT50-20M	50					
PR-WT75-20M	75					
PR-WT100-20M	100					
PR-WT150-20M	150					
PR-WT300-20M	300					

Note: 1. Standard products.
2. Sizes other than those shown above and electrostatic preventive material, 10-806 (color: black) may be available upon request. Contact a Tsubaki representative for more information.

■ White Slippery Tape



Tsubaki model no.	Material	Color	Operating temperature range °C	Lengh m
PR-WS-20M	High-density polyethylene	White	1 to 30	20
PR-WS-200M				200

Note: Made-to-order products.

MEMO

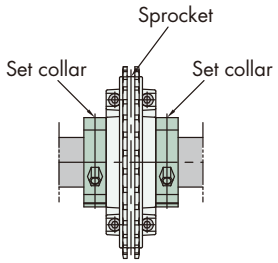
Set Collar

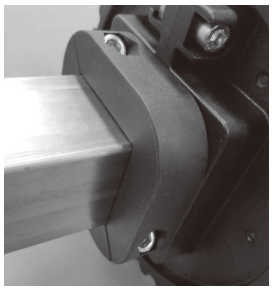
Applications

Suitable for preventing misalignment of idlers and sprockets for top chains in the shaft direction caused by operating temperature changes or chain meandering.

Fixing Method

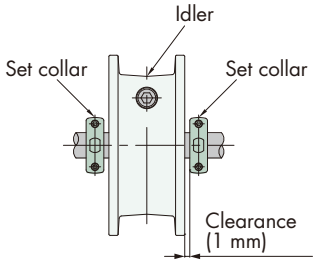
■ Method of Fixing Sprockets for Plastic Top Chains

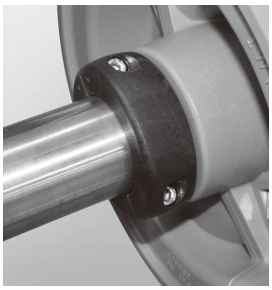




Place set collars tightly on both sides of a sprocket without leaving any clearances between them and use bolts to fix each set collar using the specified bolt tightening torque.

■ Method of Fixing Idlers





Place set collars on both sides of an idler and fix each set collars using the specified bolt tightening torque. Ensure that there is clearance between the idler and set collar and that the idler rotates.

Note 1. This product can be used for fixing idlers and sprockets. Be mindful that it cannot be used for positioning machines and fixing bearings, etc.
2. Operating temperature range: –20 to 40°C. Fixed set collars may loosen due to thermal expansion particularly when used at over 40°C.
3. Tightening bolts with a torque exceeding the recommended value may cause idle rotation of the nut or damage to the set collar itself. Refer to page 358 for bolt tightening torque specifications.

■ Method of Fixing Sprockets for Plastic Modular Chains (With a Chain Width of 150 mm or Greater)

Sprockets for plastic modular chains are designed to fit loosely on the shaft to absorb differences in thermal expansion between the chain and conveyor, and alignment errors between the chain and sprockets. In order to prevent the chain from meandering, install set collars on both sides of a sprocket near the center of the chain with clearances of approx. 0.5 mm (1.6 mm for WT) between the collar and the sprocket.

Note: The required widths of clearances differ depending on the Tsubaki model numbers of sprockets for plastic modular chains. Contact Tsubaki representatives for details.

Corrosion Resistance

Name of liquid	Set collar		
	Bolt/Nut		Body
	SUS304	Brass + nickel-plated	Polyamide
Acetone	○	○	○
Oils (vegetable, mineral)	○	○	○
Alcohol	○	○	○
Aqueous ammonia	○	△	○
Whisky	○	○	○
Sodium chloride	○	○	○
Hydrochloric acid (2%)	×	×	×
Seawater	△	△	△
Hydrogen peroxide (3%)	○	×	○
Sodium hydroxide [caustic soda (25%)]	○	△	△
Gasoline	○	○	○
Formic acid (50%)	○	△	○
Milk/butter	○	–	○
Citric acid	○	○	△
Chromic acid (5%)	○	×	×
Acetic acid (10%)	○	×	×
Carbon tetrachloride	○	△	○
Sodium hypochlorite	×	×	×

Name of liquid	Set collar		
	Bolt/Nut		Body
	SUS304	Brass + nickel-plated	Polyamide
Nitric acid (5%)	○	×	×
Vinegar	△	×	×
Potassium hydroxide	○	△	×
Drinking water/Coffee	○	○	○
Soapy water	○	○	○
Lactic acid	○	○	△
Paraffin	○	○	○
Beer	○	○	○
Fruit juice	○	×	○
Benzene	○	×	○
Water	○	○	○
Vegetable juice	○	–	×
Iodine	×	–	×
Sulfuric acid (5%)	×	×	×
Phosphoric acid (10%)	△	×	○
Wine	○	–	○
Xylene	○	–	–

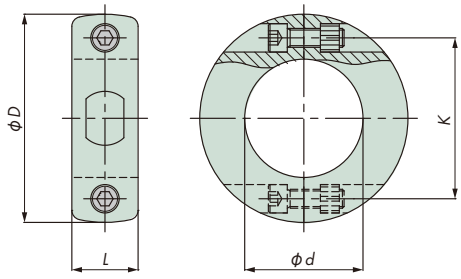
Note: 1. This corrosion resistance table shows the results measured at an ambient temperature of 20°C.
2. For the actual use of set collars, comprehensively examine the humidity, use conditions, etc.
3. This table lists the individual materials of components of set collars. Check the corrosion resistance of set collars to each liquid type based on combinations of components.
4. Reagents without a description of condensation are saturated or 100% solutions.
5. Please note that measuring conditions will change when mixed solutions are used.

○: Totally resistant
△: Partially resistant (depending on operating conditions)
×:Not resistant
–: No data

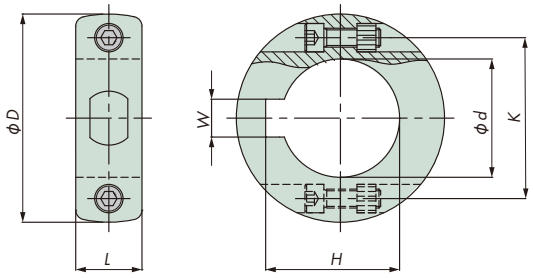
Specification Table

■ For Round Shaft

TP-C-SC-R



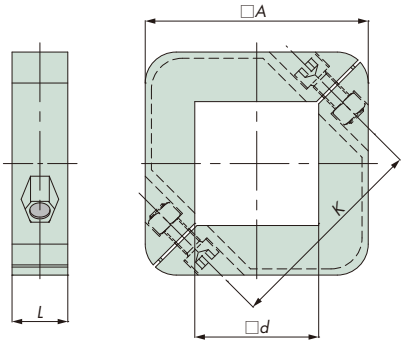
TP-C-SCK-R



Tsubaki model no.	Bore shape	Body						Fasteners		Approx. mass g	Bolt tightening torque N·m{kgf·m}	Material	Operating temperature range °C
		ϕd	W	H	ϕD	L	K	Bolt	Nut				
TP-C-SC-R20M	Round	20	–	–	39	14	29	M4x*L*12 (two)	Fastened product M4 (two)	22	1.2{0.122}	Body: Polyamide (color: black) Bolt: SUS304 Nut: SUS304	-20 to 40
TP-C-SC-R25M		25	–	–	45		34			24			
TP-C-SC-R30M		30	–	–	50	16	39	M4x*L*16 (two)		32			
TP-C-SC-R35M		35	–	–	57		45			39			
TP-C-SC-R40M		40	–	–	64	18	51.5	M5x*L*20 (two)	Fastened product M5 (two)	58	2.5{0.255}		
TP-C-SCK-R25M	Round key	25	8	28.3	45	14	34	M4x*L*12 (two)	Fastened product M4 (two)	24	1.2{0.122}		
TP-C-SCK-R30M		30	8	33.3	50	16	39	M4x*L*16 (two)		31			
TP-C-SCK-R35M		35	10	38.3	57		45			38			
TP-C-SCK-R40M		40	12	43.3	64	18	51.5	M5x*L*20 (two)	Fastened product M5 (two)	56	2.5{0.255}		

Note: 1. Standard products.
2. Do not pair half with half of other set collar.

■ For Square Shaft



Tsubaki model no.	Bore shape	Body				Fasteners		Approx. mass g	Bolt tightening torque N·m{kgf·m}	Material	Operating temperature range °C
		□d	□A	L	K	Bolt	Nut				
TP-C-SC-S40M	Square	40	72	18	67	M6x*L*20 (two)	Fastened product M6 (two)	78	4.5{0.459}	Body: Polyamide (color: black) Bolt: SUS304 Nut: Brass + nickel-plated	-20 to 40
TP-C-SC-S60M		60	95		98.5			104			

Note: 1. Standard products.
2. Do not pair half with half of other set collar.

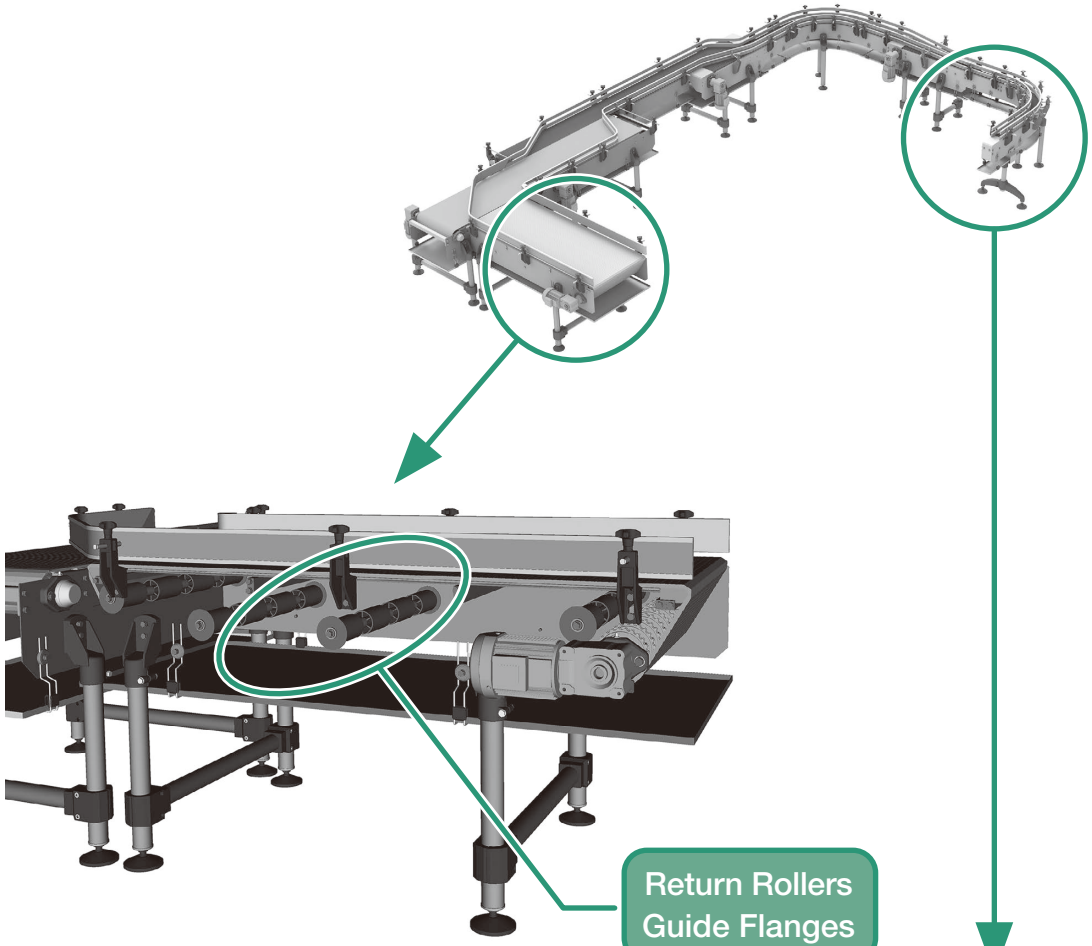
Model Numbering

Top chain components		Set collar type	Keyway		Bore shape		Bore diameter
TP-C	-	**SC**	**K**	-	**R**		**25M**
			None: Without keyway K: With keyway		R: Round S: Square		25M: 25 mm

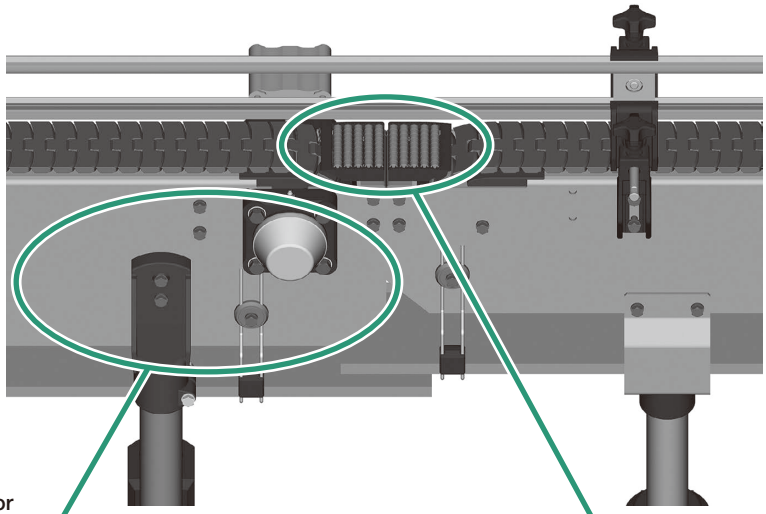
Note: Do not leave space between letters and symbols.

Chain Guide Parts

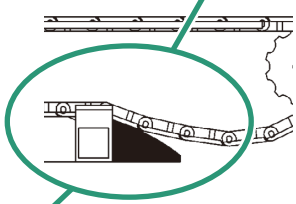
Chain guide parts are used at different positions on the conveyor as shown in the following.



Return Rollers
Guide Flanges



Inside a conveyor



Module Transfer Roller Plates

Sliding Shoes
Spacer
Washer
Dedicated Rail

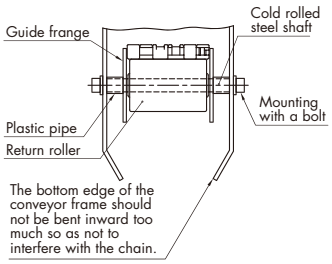
Return Rollers/Guide Flanges

Applications

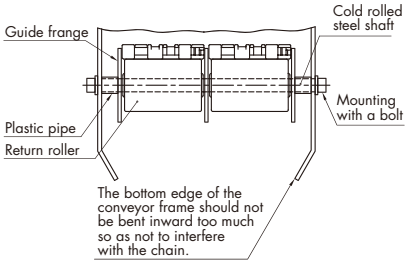
Use return rollers on the return-way of the conveyor to support the top surface of the chain. Rotating rollers reduce the sliding resistance and damage on the top surface of the chain.

Installation Example

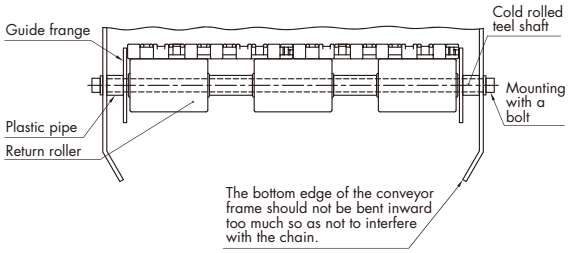
For single strand



For multi strands

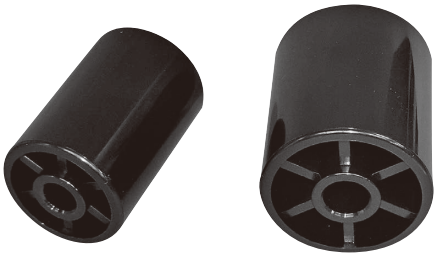


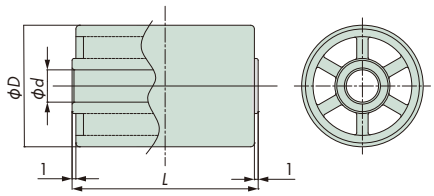
For wide type



Specification Table

■ Small Diameter Return Roller

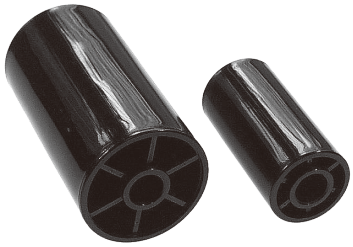


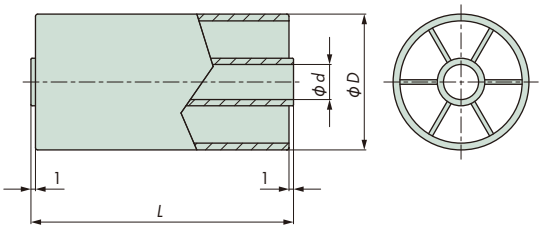


Tsubaki model no.	Diameter			Material	Operating temperature range °C	Applicable guide flange
	ϕD	ϕd	L			
TP-RR30850	32	8.5	49	Polyamide (color: black)	-20 to 80	TP-DP308
TP-RR41050	40	10.5				TP-DP410

Note: 1. Standard products.
2. Contact a Tsubaki representative as these products may not be used for some types of chains.

■ Return Roller





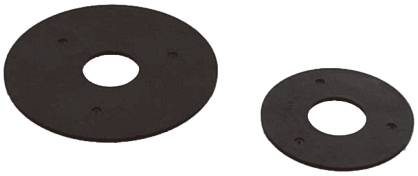
Tsubaki model no.	Diameter			Material	Operating temperature range °C	Applicable guide flange
	ϕD	ϕd	L			
TP-RR41532	40	15.5	82	Polyamide (color: black)	-20 to 80	TP-DP415
TP-RR41544	40	15.5	114			
TP-RR42032	40	20.5	82			TP-DP420
TP-RR42044	40	20.5	114			
TP-RR61532	60	15.5	82			TP-DP615
TP-RR61544	60	15.5	114			
TP-RR62032	60	20.5	82			TP-DP620
TP-RR62044	60	20.5	114			

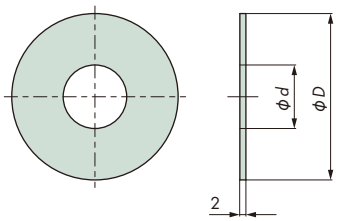
Note: 1. Standard products.
2. Use ϕd=15.5 return rollers for plastic chain.
3. Use products with an outer diameter ϕD = 40 in combination with stainless steel top chains.
4. Use products with an outer diameter ϕD = 60 in combination with plastic top chains.

Return Rollers/Guide Flanges

Specification Table

■ Guide Flange





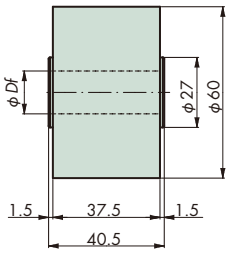
Tsubaki model no.	Diameter		Material	Operating temperature range °C
	ϕD	ϕd		
TP-DP308	45	8.5	Polyamide (color: black)	–20 to 80
TP-DP410	55	10.5		
TP-DP415		16		
TP-DP420		21		
TP-DP615	80	16		
TP-DP620		21		

Note: Standard products.

■ Split Return Roller

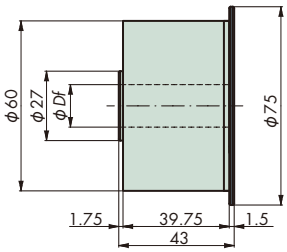
Without guide flange





With guide flange

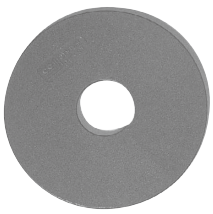


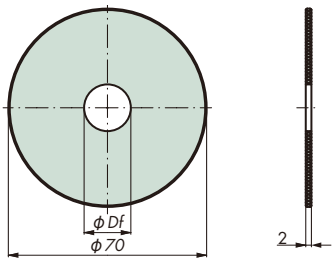


Tsubaki model no.	Specifications	Bore diameter *Df*	Material	Operating temperature range °C
TP-C122113NT-RR	Without guide flange	15.5	High-density polyethylene (color: black)	–20 to 60
TP-C12535NT-RR Note: 2		20.5		
TP-C122116NT-RR	With guide flange	15.5		
TP-C12536NT-RR Note: 2		20.5		

Note: 1. Standard products.
2. Suitable for use with wide chains.

■ Guide Flange (For Split Return Roller without Guide Flange)





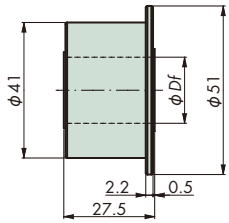
Tsubaki model no.	Bore diameter *Df*	Material	Operating temperature range °C
TP-C12842T-GF	15.5	Polypropylene (color: green)	0 to 80
TP-C12534T-GF	20.5		

Note: 1. Standard products.
2. Use with split return rollers (without guide flange).

Specification Table

■ Return Roller (For Stainless Steel Top Chain)



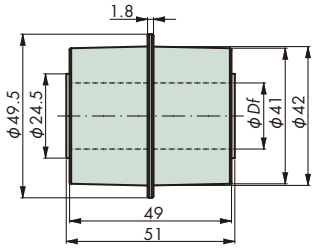


Tsubaki model no.	Bore diameter *Df*	Material	Operating temperature range °C
TP-C12822NT-RR	20.5	High-density polyethylene (color: black)	-20 to 60 (except in hot water environments)

Note: Standard product.

■ Return Roller (For Stainless Steel Top Chain)



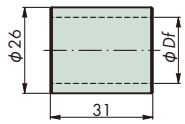


Tsubaki model no.	Bore diameter *Df*	Material	Operating temperature range °C
TP-C12862NT-DR	20.5	High-density polyethylene (color: black)	-20 to 60 (except in hot water environments)

Note: Standard product.

■ Spacer (For 82.6 mm Plate Width)

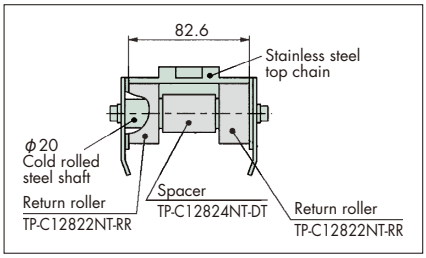


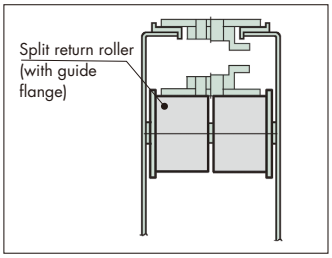


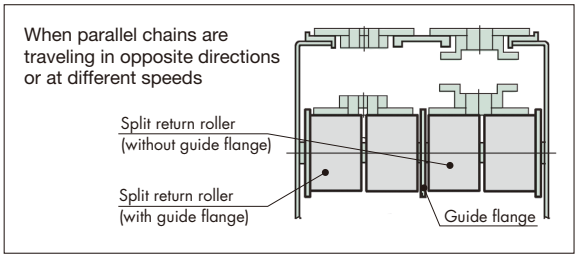
Tsubaki model no.	Bore diameter *Df*	Material	Operating temperature range °C
TP-C12824NT-DT	20.5	Polyamide (color: black)	-20 to 80 (except in hot water environments)

Note: 1. Standard product.
2. For plate widths other than 82.6 mm, cut a plastic pipe or something similar to the required width and assemble with the return roller shown above.

Installation Example







- When the plate width is greater than 83 mm, use a plastic pipe or something similar instead of the spacer shown above to adjust the distance between return rollers.
- Return rollers for stainless steel top chain will not rotate when combined with plastic chain, and may cause uneven wear of top plate surfaces.

Highly Rotational Return Roller/Guide Flanges

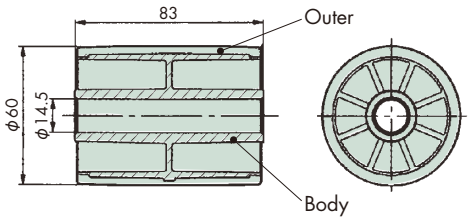
Applications

Highly rotational return rollers should be used to support the upper surface of the chain on the return-way.
Rotation of rollers reduces coefficient of rolling friction and thus prevents scratching on the surface of the chain.
Excellent rotatability is enabled due to the combination of materials of low frictional engineering plastic on the inner surface and highly frictional soft plastic on the outer surface. Suitable to use to prevent the surface from scratching and also effective to reduce noise level of the return-way.

Specification Table

■ Highly Rotational Return Roller



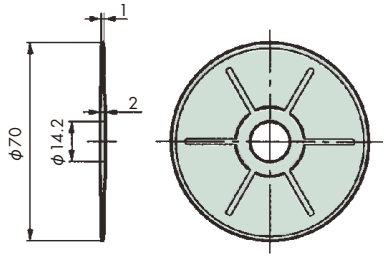


Tsubaki model no.	Material		Operating temperature range °C
	Body	Outer	
TP-IR60	Polyamide (color: light gray)	High friction polyamide (color: blue)	–20 to 80

Note: 1. Made-to-order product.
2. Should not be used under wet conditions.
3. For use at chain speed of less than 50 m/min.

■ Guide Flange (For TP-IR60)

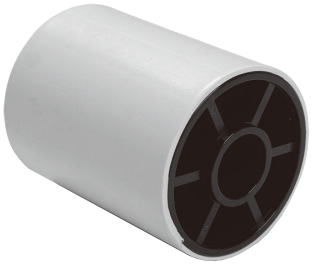


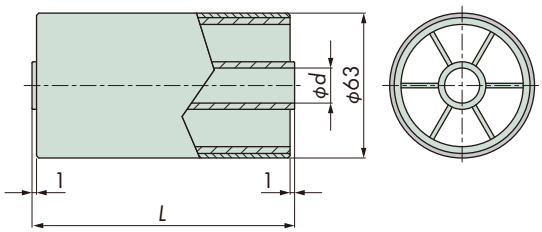


Tsubaki model no.	Material	Operating temperature range °C
TP-GF70	Electrostatic preventive polyacetal (color: light gray)	–20 to 80

Note: Made-to-order product.

■ Highly Rotational Return Roller





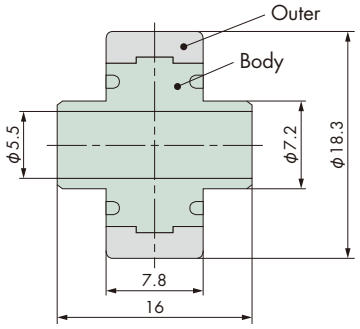
Tsubaki model no.	Diameter		Material		Operating temperature range °C	Applicable guide flange
	ϕd	L	Body	Outer		
TP-RR61544-RB	15.5	114	Polyamide (color: black)	Olefinic elastomer (color: white)	–20 to 80	TP-DP615
TP-RR62032-RB	20.5	82				TP-DP620
TP-RR62044-RB		114				TP-DP620

Note: 1. Made-to-order products.
2. Chain speed under dry conditions: 50 m/min or lower. Chain speed under wet conditions: 100 m/min or lower.
3. Contact a Tsubaki representative for sizes other than shown above.

Specification Table

■ Highly Rotational Return Roller (For BTC4-500-M)



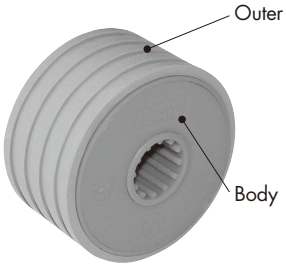


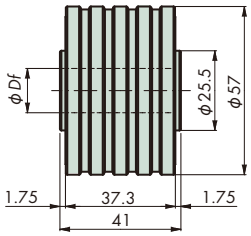
Tsubaki model no.	Material		Operating temperature range °C
	Body	Outer	
TP-IR18	Polyamide (color: light gray)	High friction polyamide (color: matte white)	-20 to 80

Note: 1. Made-to-order product.
2. Should not be used under wet conditions.
3. For use with BTC4-500-M.

■ Split Return Roller

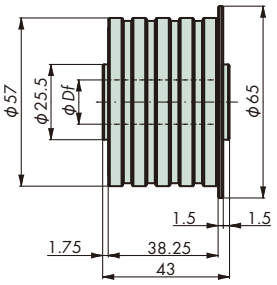
Without guide flange





With guide flange





Tsubaki model no.	Specifications	Bore diameter *Df*	Material		Operating temperature range °C
			Body	Outer	
TP-C121963RNT-RR	Without guide flange	15.5	High-density polyethylene (color: green)	Thermoplastic rubber (color: gray)	-20 to 60
TP-C121966RNT-RR Note: 3		20.5			
TP-C121967RNFT-RR	With guide flange	15.5			
TP-C121970RNFT-RR Note: 3		20.5			

Note: 1. Standard products.
2. For use at chain speed of less than 50 meters/minute.
3. Suitable for use with wide chains.

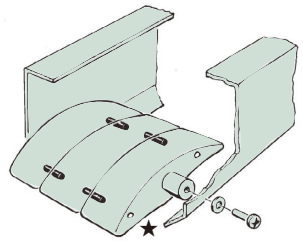
Sliding Shoes

Applications

Sliding shoes can be used to support the top surface of the chain on the return-way of the conveyor.
Generally suitable to use with accumulation chains and plastic roller tables at low speed (50 m/min or lower) .
These can also be used with wearstrips.

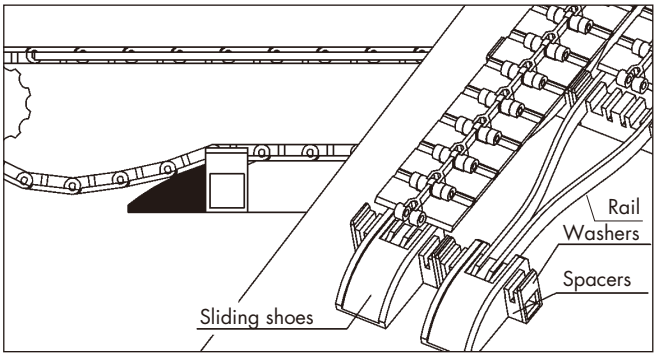
Installation Example

■ Support by Sliding Shoe (Rocking Method)



Fix the cold rolled steel shaft (ϕ20) to the frame and snap to mount the sliding shoes on the bar. At this point, use set collars, etc. to prevent the sliding shoes from moving left or right. The sliding shoes swing around the bar as a pivot in sync with the movement of the chain.
The ★ mark indicates the hole bored on sliding shoes for connecting the sliding shoes when they are lined up in a single row for multiple strand conveyor.

■ Support by Sliding Shoe with Wearstrip (Fixing Method)

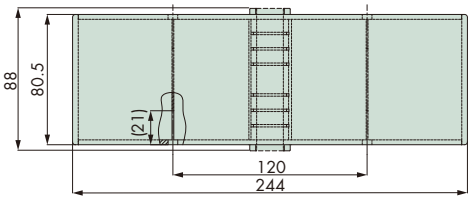


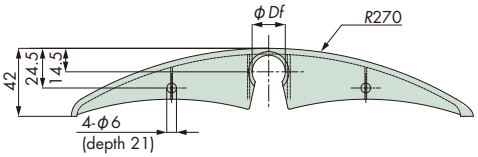
Place rails so that they are in uniform contact with the chain along its width direction in consideration of the wear reduction of the chain conveying surface. Avoid using many rails for supporting the entire area of the chain and create a support structure to allow foreign materials, etc. to easily come off.

Specification Table

■ Sliding Shoe

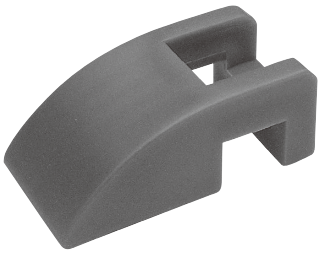


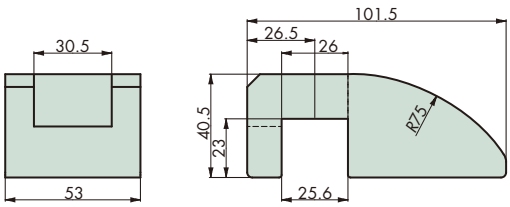




Tsubaki model no.	Bore diameter ϕDf	Material	Operating temperature range °C
TP-C14833BT-SD	20.5	Polyethylene (color: black)	-20 to 60

Note: 1. Standard product.
2. For use plastic accumulation chain or plastic roller table.
3. For top chains with a width of 82.6 mm.
4. Mount on ϕ20 mm diameter round bar.
5. For use at chain speeds of less than 50 m/min.





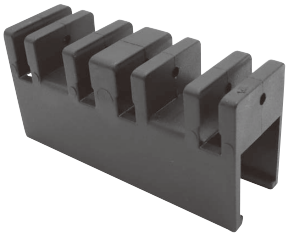
Tsubaki model no.	Max. allowable speed by material m/min Note: 4		Material	Operating temperature range °C
	Stainless steel	Polyacetal		
TP-C14343T-SD	100 (60)	60 (40)	Polyethylene (color: green)	-20 to 60

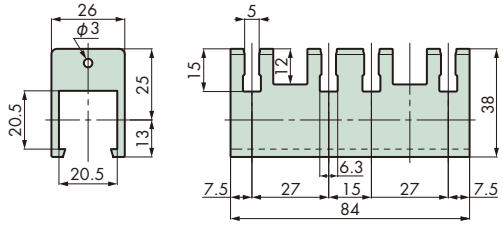
Note: 1. Standard product.
2. Please use with TP-C14320T-SP (spacer).
3. For top chains with a width of 82.6 mm.
4. The allowable speed for each chain material (the value in parentheses) is for use without lubrication.

Spacers/Washer/Dedicated Rails

Specification Table

■ Spacer



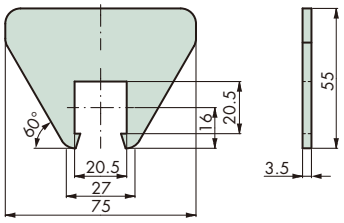


Tsubaki model no.	Material	Operating temperature range °C
TP-C14320T-SP	Polyamide (color: black)	-20 to 80

Note: 1. Standard product.
2. For use with TP-C19067VT-PR guide rail.
3. Mount on 20 x 20 mm square shaft.

■ Washer

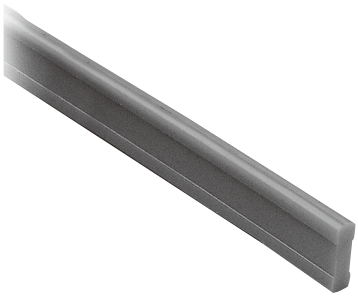


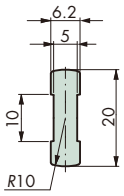


Tsubaki model no.	Material	Operating temperature range °C
TP-C14322T-WS	Polyamide (color: black)	-20 to 80

Note: 1. Standard product.
2. Use to prevent top chains from interference with multiple strands conveyor.
3. Please use with TP-C14320T-SP (spacer).

■ Dedicated Rail





Tsubaki model no.	Standard length per unit m	Material	Operating temperature range °C
TP-C19067VT-PR	60	UHMW-PE (color: green)	-20 to 60

Note: 1. Standard product.
2. Dedicated rail for TP-C14320T-SP. Available to purchase per meter.
3. When a rail has become worn, its service life can be extended by flipping it over.

Model Numbering

■ Dedicated Rail

Top chain components	Code		Length	Unit
TP-C	**19067VT-PR**	**+**	**60** Note: 2, 3	**M**
				M: m

Note: 1. Do not leave space between letters and symbols.
2. The unit of length is 1 m.
3. Minimum length: 1, maximum length: 60.

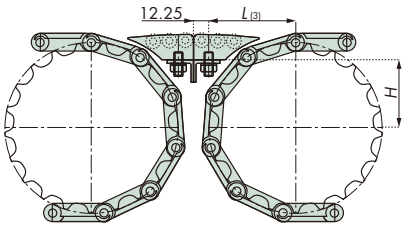
Module Transfer Roller Plates

Applications

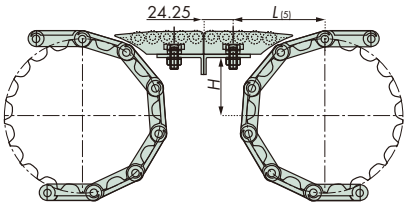
Installing rollers at transferring point prevents jams and ensures smooth transfer. In addition, the rotation of the rollers reduces resistance, making it possible to reduce toppling of conveyed items.

Installation Example

Combination of roller plates with 2 three rows

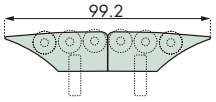


Combination of roller plates with 2 five rows

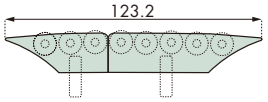


Width of the combination

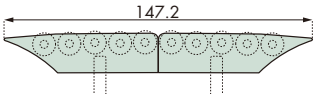
2 three rows



Three rows and five rows



2 five rows



Dimensions will vary depending on the chain and sprockets used.
See the table below for details in relation to the dimensions, *H*, *L*(3) and *L*(5).

■ Plastic Top Chain (Straight Running)

Chain type	Sprocket teeth								
	21			23			25		
	H	*L*(3)	*L*(5)	*H*	*L*(3)	*L*(5)	*H*	*L*(3)	*L*(5)
TT	51.5	71.8	80.6	57.5	72.2	82.0	63.5	74.6	83.4
TTP, TTPH, TTPT	52.1	69.7	81.6	58.1	73.1	82.9	64.1	76.3	84.4
TTPDH	—	—	—	—	—	—	64.9	76.5	83.8
TTPDH-LBP	—	—	—	—	—	—	79.4	—	85.1

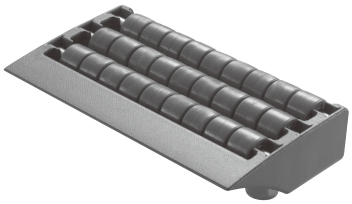
Note: The values are reference values. Adjust according to the transfer status of the transported object.

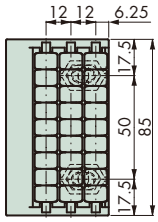
■ Plastic Top Chain (Sideflexing)

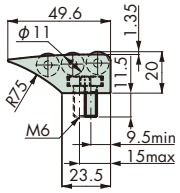
Chain type	Sprocket teeth		
	12		
	H	*L*(3)	*L*(5)
TTUP, TPU, TTUPH, TTUP-M, TTUPT-M	61.0	73.9	83.5
TPUH-BO	61.4	74.2	83.8
TPUS	63.5	75.4	83.8
TPUS-LBP	78.0	—	86.8

Specification Table

◆Module Transfer Roller Plate (Three Rows)



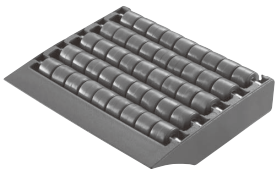


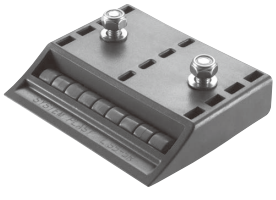


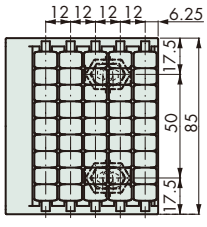
Tsubaki model no.	Material		Color		Operating temperature range °C
	Body/Roller	Pin, hex head cap screw Note: 3	Body	Roller	
TP-C16770ST-MTRP	Low-friction polyacetal	Stainless steel	Dark gray	Light blue	-20 to (65)80

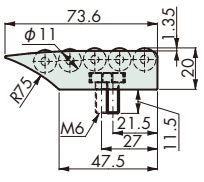
Note: 1. Standard product.
2. Operating temperature of (the value in parentheses) is for wet conditions.
3. Nuts not included.

◆Module Transfer Roller Plate (Five Rows)









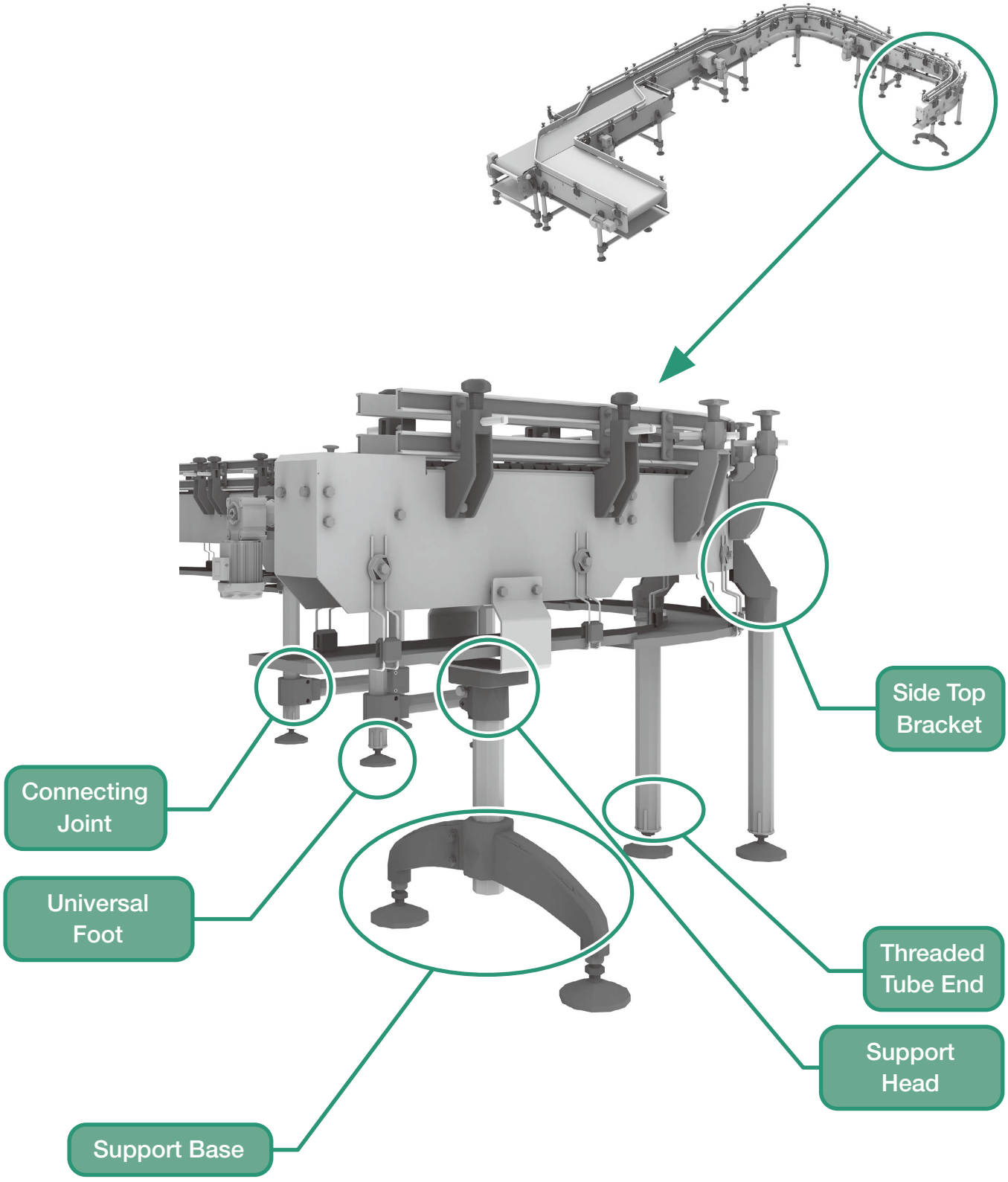
Tsubaki model no.	Material		Color		Operating temperature range °C
	Body/Roller	Pin, hex head cap screw Note: 3	Body	Roller	
TP-C16772ST-MTRP	Low-friction polyacetal	Stainless steel	Dark gray	Light blue	-20 to (65)80

Note: 1. Standard product.
2. Operating temperature of (the value in parentheses) is for wet condition.
3. Nuts not included.

MEMO

Frame Support Parts

The frame support parts are used in the place as shown below in the conveyor.
For features and installation examples other than conveyors, please refer to each product page described in “Applicable parts combination by pipe size” in the figure on the right page.



■ Applicable Parts Combination by Pipe Size

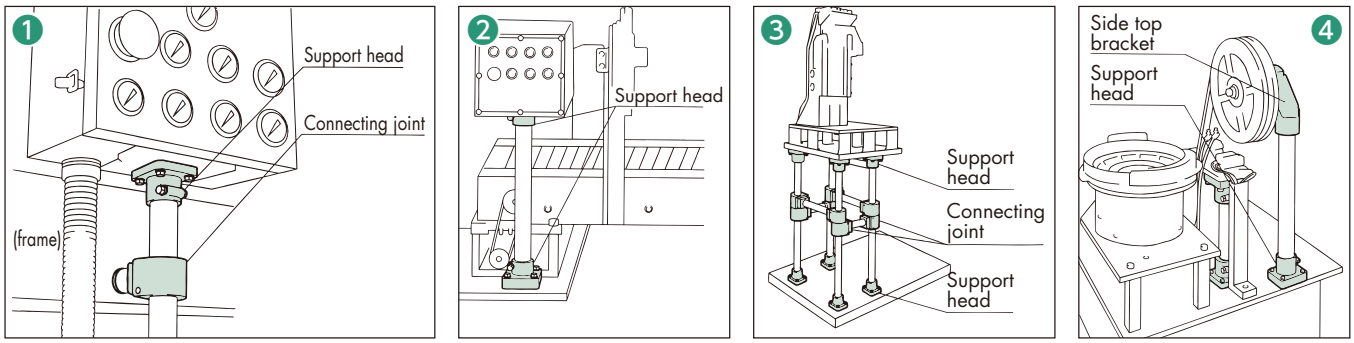
Applicable parts \ Pipe used			Nominal diameter	2	1 1/2	1 1/4
			Outer diameter	ϕ60.5	ϕ48.6	ϕ42.7
Support head			Tsubaki model no.	TP-C14739T-BH Page 371 TP-CPSH60 Page 371	TP-C14741T-BH Page 371 TP-C14050T-BH Page 371 TP-CPSH48 Page 371	
Side top bracket			Tsubaki model no.	–	TP-C14748NT-STB Page 372	–
Connecting joint			Tsubaki model no.	TP-C14746T-CJ Page 372 Reinforcing pipe…ϕ42.7	TP-C14733T-CJ Page 372 Reinforcing pipe…ϕ42.7	
Support base	Two-legged		Tsubaki model no.	TP-C15064T-SB Page 374 TP-C15064TSS-SB Page 374 TP-2SB60 Page 373	TP-C15060T-SB Page 374 TP-C15060TSS-SB Page 374 TP-2SB48 Page 373	TP-2SB43 Page 373
	Three-legged		Tsubaki model no.	TP-C15088T-SB Page 374 TP-C15088TSS-SB Page 374	TP-C15084T-SB Page 374 TP-C15084TSS-SB Page 374	TP-3SB43 Page 373
	Two legged + joint		Tsubaki model no.	TP-C15072T-SB Page 374 TP-C15072TSS-SB Page 374 Reinforcing pipe…ϕ42.7	TP-C15068T-SB Page 374 TP-C15068TSS-SB Page 374 Reinforcing pipe…ϕ42.7	–
Threaded tube end			Tsubaki model no.	TP-C14791T-SRB Page 375 Pipe thickness…1.65	TP-C14767T-SRB Page 375 Pipe thickness…1.65	
• Universal foot • Support foot			Tsubaki model no.	TP-C17107T-UF, Page 376 TP-C171054T-UF, Page 376 TP-C171056T-UF, Page 376 TP-C171060T-UF, Page 376 TP-C17715T-UF, Page 377 TP-C17532T-UF, Page 377 TP-TA16SUS, Page 378 TP-TB12SUS Page 378 Types that can be fixed to the floor: TP-C17570CT-UF, Page 377 TP-C176450T-UF, Page 378 TP-C176453T-UF, Page 378 TP-C17237T-UF Page 378		

Support Head/Side Top Bracket/Connecting Joint

Applications

Support head: Supports the conveyor frame from underneath. Use support head to attach support pipe to conveyor frame. Wiring can be installed through the inside of the support head.
Side top bracket: Supports conveyor frame from the side. It is suitable for installing a tray under a conveyor or for using with a conveyor of simple structure.
Connecting joint: Makes conveyor stable by connecting two legs.

Installation Example

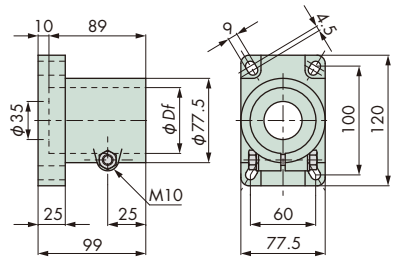


❶❷ : Installation on control panels.
❸ : Use as joint parts instead of using metal parts or installation by welding. (Easy installation and removal)
❹ : Use as joint parts for machines.

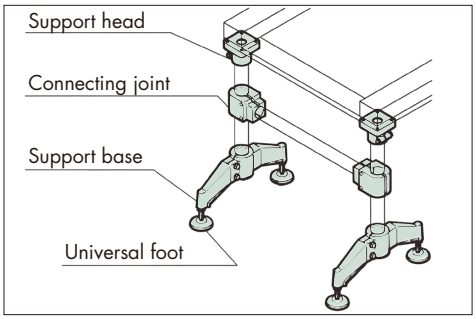
Specification Table

■ Support Head





■ Support Head Installation Example

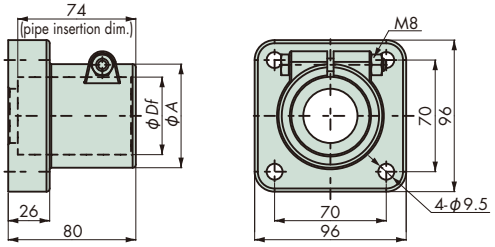


Tsubaki model no.	Applicable pipe outer diameter ϕ*Df* (nominal diameter)	Material	
		Body	Bolt/Nut/Washer
TP-CPSH48	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel
TP-CPSH60	60.5 (2)		

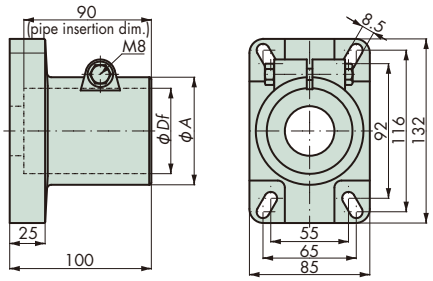
Note: Standard products.



Fixed mounting hole type



Adjustable mounting hole type Note: 4

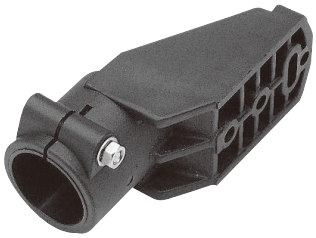


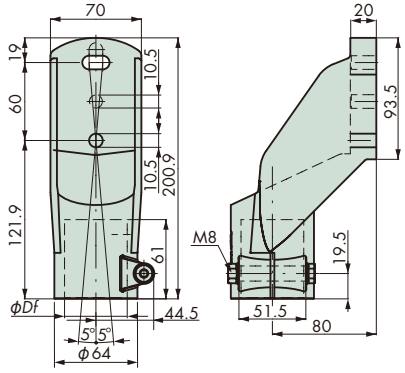
Type	Tsubaki model no.	Applicable pipe outer diameter ϕ*Df* (nominal diameter)	ϕ*A*	Material	
				Body	Bolt/Nut/Washer
Fixed mounting hole type	**TP-C14050T-BH**	48.6 (1½)	65	Reinforced polyamide (color: black)	Stainless steel
Adjustable mounting hole type	**TP-C14741T-BH**				
	TP-C14739T-BH	60.5 (2)	76		

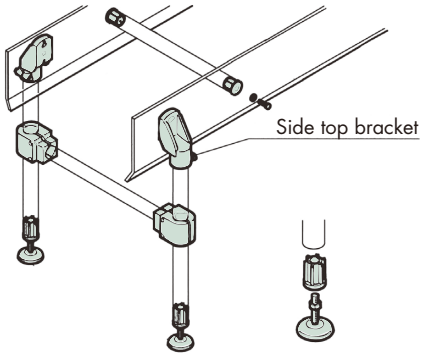
Note: 1. Standard products.
2. Withstand load (all sizes): 9.8kN {1000kgf} when the pipe is inserted and the load is applied vertically.
3. Pipe retention force (all sizes): Consider the pipe retention force to be 0.78kN {80kgf} (reference value) when tightening the bolt with a tightening torque of 14.7N·m {1.5kgf·m}.
4. As of June 2011, dimensions were changed as shown above.

Specification Table

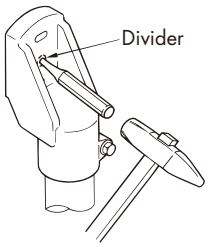
■ Side Top Bracket







Notes for handling side top brackets



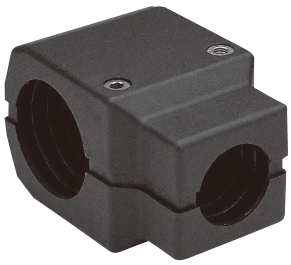
When the side top bracket divider is removed, the hole can be used for mounting a round bar for reinforcement.

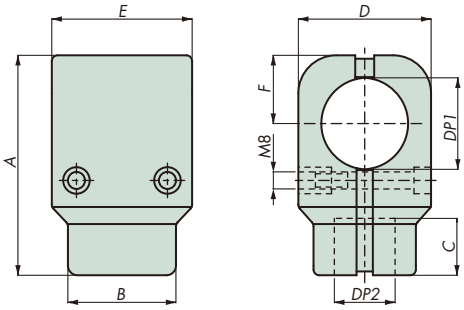
[Work procedure]
As shown in the figure on the left, place the punch on the broken line and tap it with a hammer to remove the divider.

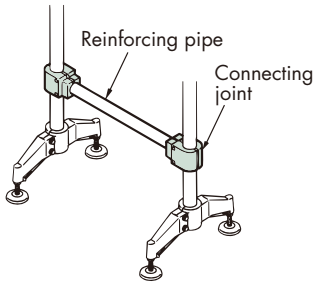
Tsubaki model no.	Applicable pipe outer diameter ϕDf (nominal diameter)	Material	
		Body	Bolt/Nut/Washer
TP-C14748NT-STB	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel

Note: 1. Standard product.
2. Side top bracket tilt angle: 5°

■ Connecting Joint







Note: Do not step on the reinforcing pipe. The connecting joint could be displaced.

Tsubaki model no.	Diameter									Material		
	Applicable pipe outer diameter (nominal diameter)	DP1	DP2	A	B	C	D	E	F	Body	Bolt	Bush
TP-C14733T-CJ	48.6 & 42.7 (1½ & 1¼)	48.6	42.7	122	62	40	78		39	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated
TP-C14746T-CJ	60.5 & 42.7 (2 & 1¼)	60.5		130	65	41	82		42.5			

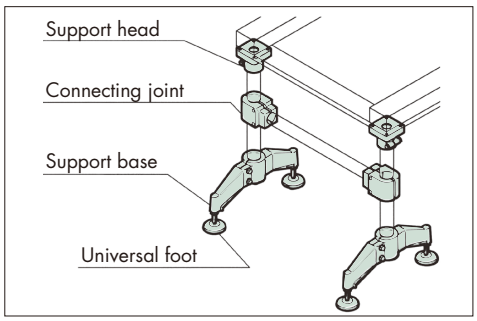
Note: Standard products.

Support Base

Applications

The support base supports a conveyor at the foot. There are three types of support bases—a two-legged type, a three-legged type, and a two-legged + joint type—each capable of matching various usage conditions. The three-legged support base allows stable support while using a small number of parts.

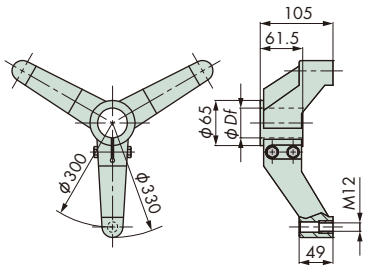
■ Support Base Installation Example



Specification Table

■ Three-legged



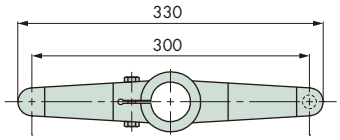


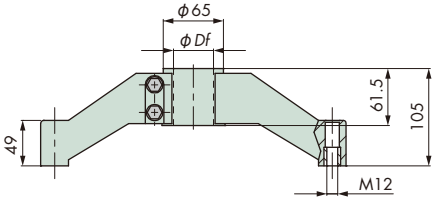
Tsubaki model no.	Applicable pipe outer diameter ϕDf (nominal diameter)	Material			Allowable load kN{kgf}	Tightening torque bolt, nut N·m{kgf·m}
		Body	Bolt/Nut/Washer	Bush		
TP-3SB43	42.7 (1¼)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	2.45{250}	9.8{1.0}

Note: Standard product.

■ Two-legged



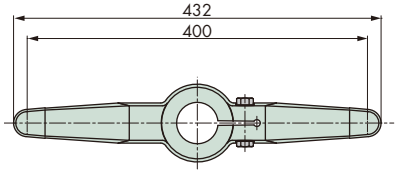


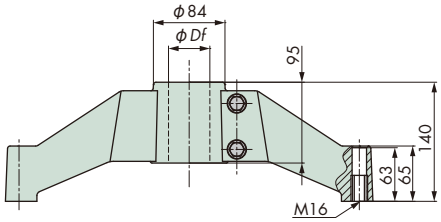


Tsubaki model no.	Applicable pipe outer diameter ϕDf ((nominal diameter)	Material			Allowable load kN{kgf}	Tightening torque bolt, nut N·m{kgf·m}
		Body	Bolt/Nut/Washer	Bush		
TP-2SB43	42.7 (1¼)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	2.45{250}	9.8{1.0}

Note: Standard product.







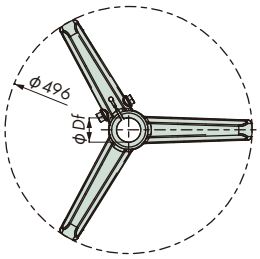
Tsubaki model no.	Applicable pipe outer diameter ϕDf (nominal diameter)	Material			Allowable load kN{kgf}	Tightening torque bolt, nut N·m{kgf·m}
		Body	Bolt/Nut/Washer	Bush		
TP-2SB48	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	3.43{350}	14.7{1.5}
TP-2SB60	60.5 (2)					

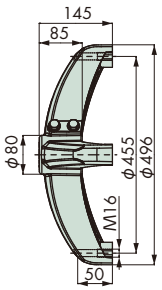
Note: Standard products.

Specification Table

■ Three-legged





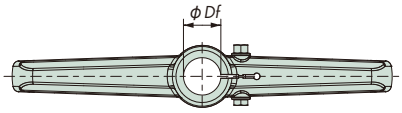


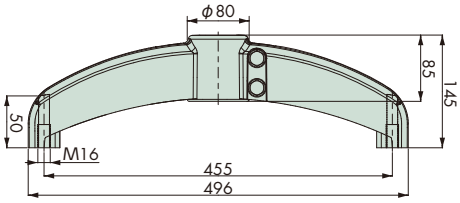
Tsubaki model no.	Applicable pipe outer diameter ϕ*Df* (nominal diameter)	Material		
		Body	Bolt/Nut/Washer	Bush
TP-C15084T-SB	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated
TP-C15088T-SB	60.5 (2)			
TP-C15084TSS-SB	48.6 (1½)			Stainless steel
TP-C15088TSS-SB	60.5 (2)			

Note: Standard products.

■ Two-legged





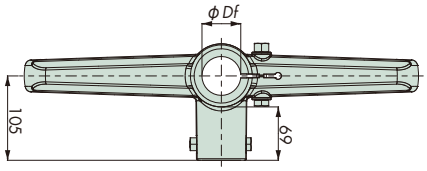


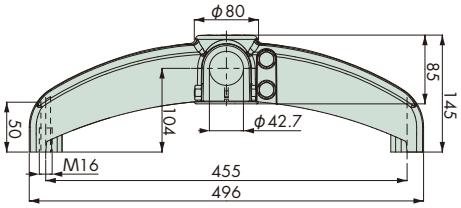
Tsubaki model no.	Applicable pipe outer diameter ϕ*Df* (nominal diameter)	Material		
		Body	Bolt/Nut/Washer	Bush
TP-C15060T-SB	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated
TP-C15064T-SB	60.5 (2)			
TP-C15060TSS-SB	48.6 (1½)			Stainless steel
TP-C15064TSS-SB	60.5 (2)			

Note: Standard products.

■ Two-legged + Joint



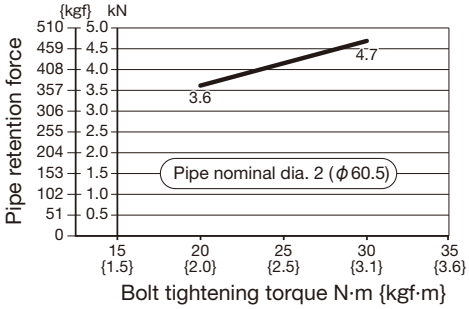


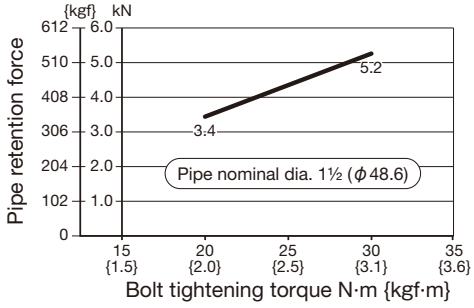


Tsubaki model no.	Applicable pipe outer diameter ϕ*Df* (nominal diameter)	Material		
		Body	Bolt/Nut/Washer	Bush
TP-C15068T-SB	48.6 (1½)	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated
TP-C15072T-SB	60.5 (2)			
TP-C15068TSS-SB	48.6 (1½)			Stainless steel
TP-C15072TSS-SB	60.5 (2)			

Note: Standard products.

Allowable Load of Support Base Pipe





Note: Allowable load of support base pipe is the measured value when a polished pipe is used. This is not a guaranteed value.

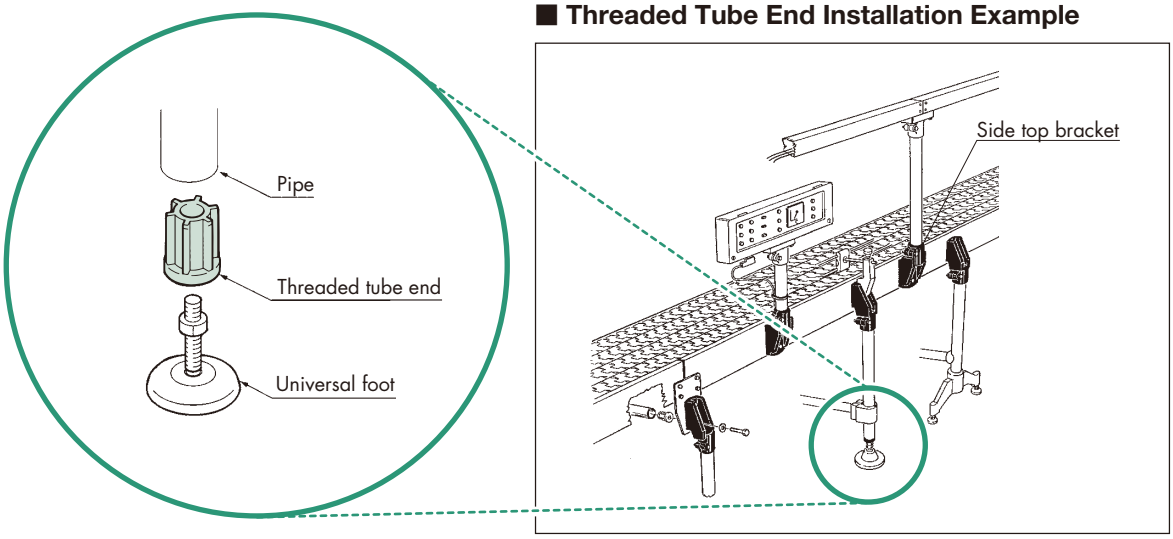
Threaded Tube End

Applications

When this part is inserted into a pipe and used in combination with a universal foot, it can be used as a leg for a conveyor frame.

Installation Example

■ **Threaded Tube End Installation Example**



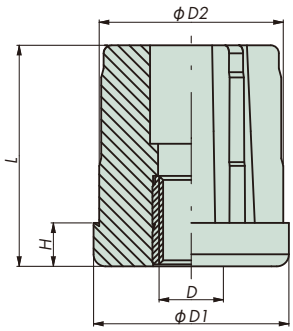
Specification Table

■ **Threaded Tube End**





(Attached)



Tsubaki model no.	Diameter						Material	
	Applicable pipe outer diameter (nominal diameter)	*D*	*ϕD1*	*ϕD2*	*H*	*L*	Body	Bush
TP-C14767T-SRB	48.6 (1½)	M16	48	45.8	10	55	Polyamide (color: black)	Brass + nickel-plated
TP-C14791T-SRB	60.5 (2)		60	58	12	50		

Note: 1. Standard products.
2. Use a pipe with a thickness of 1.65 mm.
3. Not available.

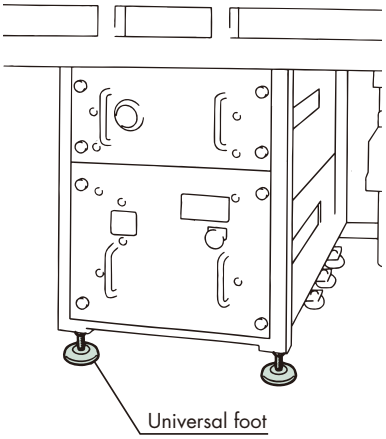
Universal Foot

Applications

The universal foot can be used as a foot for a conveyor or other equipment. Use it on an inclined floor or in a place where the level needs adjustment. The hole-drillable type can be fixed to the floor.

Installation Example

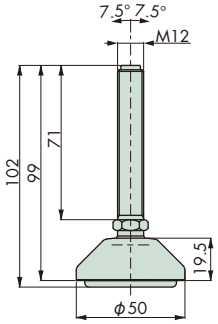
Use for leg parts of food machines.



Specification Table

■ Universal Foot

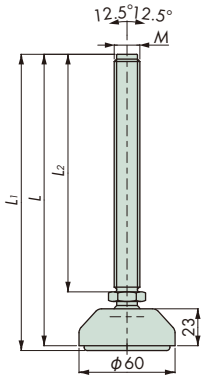




Tsubaki model no.	Material			Allowable load kN {kgf}
	Bolt	Base plate	Antiskid rubber pad	
TP-C17107T-UF	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	12.0 {1220}

Note: 1. Standard product.
2. The allowable load is the maximum allowable load in a static state.





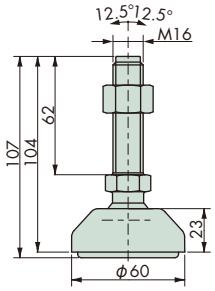
Tsubaki model no.	Diameter			M	Material			Allowable load kN {kgf}
	L	L_1	L_2		Bolt	Base plate	Antiskid rubber pad	
TP-C171054T-UF	94	97	60	M16	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	15.0{1530}
TP-C171056T-UF	179	182	145					
TP-C171060T-UF				M20				

Note: 1. Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face is a made-to-order product.
2. The allowable load is the maximum allowable load in a static state.

Universal Foot

Specification Table

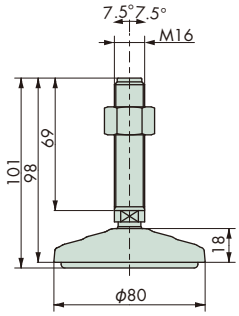




Tsubaki model no.	Material				Allowable load kN {kgf}
	Bolt	Nut	Base plate	Antiskid rubber pad	
TP-C17715T-UF	Polyamide with steel insert (color: black)	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	0.78 {80}

Note: 1. Standard product.
2. The allowable load is the maximum allowable load in a static state.



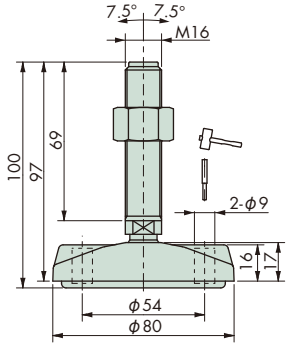


Tsubaki model no.	Material			Allowable load kN {kgf}
	Bolt/Nut	Base plate	Antiskid rubber pad	
TP-C17532T-UF	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	15.0 {1530}

Note: 1. Standard product.
2. The allowable load is the maximum allowable load in a static state.

■ Mounting Hole Processable Type





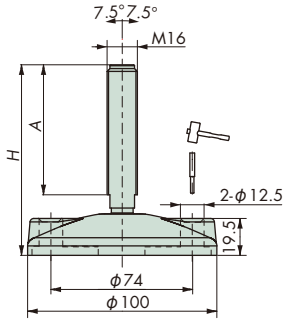
Tsubaki model no.	Material			Allowable load kN {kgf}
	Bolt/Nut	Base plate	Antiskid rubber pad	
TP-C17570CT-UF	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	15.0 {1530}

Note: 1. Standard product.
2. This is the same specifications as TP-C17532T-UF, except that it can be fixed to the floor.
3. The allowable load is the maximum allowable load in a static state.
4. The fixing hole is not completely drilled through so as to prevent the accumulation of foreign matter. If a fixing hole is needed, punch a hole with a punch and hammer as shown.

Specification Table

■ Mounting Hole Processable Type

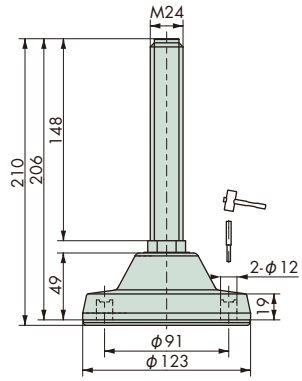




Tsubaki model no.	Diameter		Material			Allowable load kN {kgf}
	H	*A*	Bolt	Base plate	Antiskid rubber pad	
TP-C176450T-UF	100	70	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	18.0 {1830}
TP-C176453T-UF	210	180				

Note: 1. Standard products.
2. The allowable load is the maximum allowable load in a static state.
3. The fixing hole is not completely drilled through so as to prevent the accumulation of foreign matter. If a fixing hole is needed, punch a hole with a punch and hammer as shown.



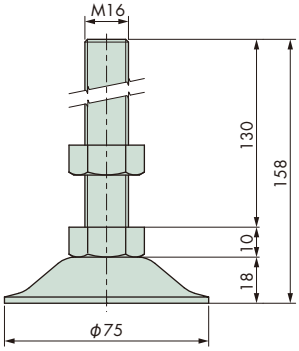


Tsubaki model no.	Material			Allowable load kN {kgf}
	Bolt	Base plate	Antiskid rubber pad	
TP-C17237T-UF	Stainless steel	Reinforced polyamide (color: black)	Oil proof rubber shore hardness 70 (color: black)	30.0 {3060}

Note: 1. Made-to-order product.
2. The allowable load is the maximum allowable load in a static state.
3. The fixing hole is not completely drilled through so as to prevent the accumulation of foreign matter. If a fixing hole is needed, punch a hole with a punch and hammer as shown.

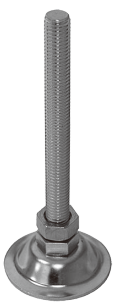
■ Support Foot

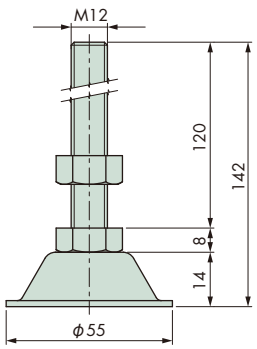




Tsubaki model no.	Material	Allowable load kN {kgf}
	Foot/Bolt/Nut	
TP-TA16SUS	Stainless steel	11{1122}

Note: Made-to-order product.



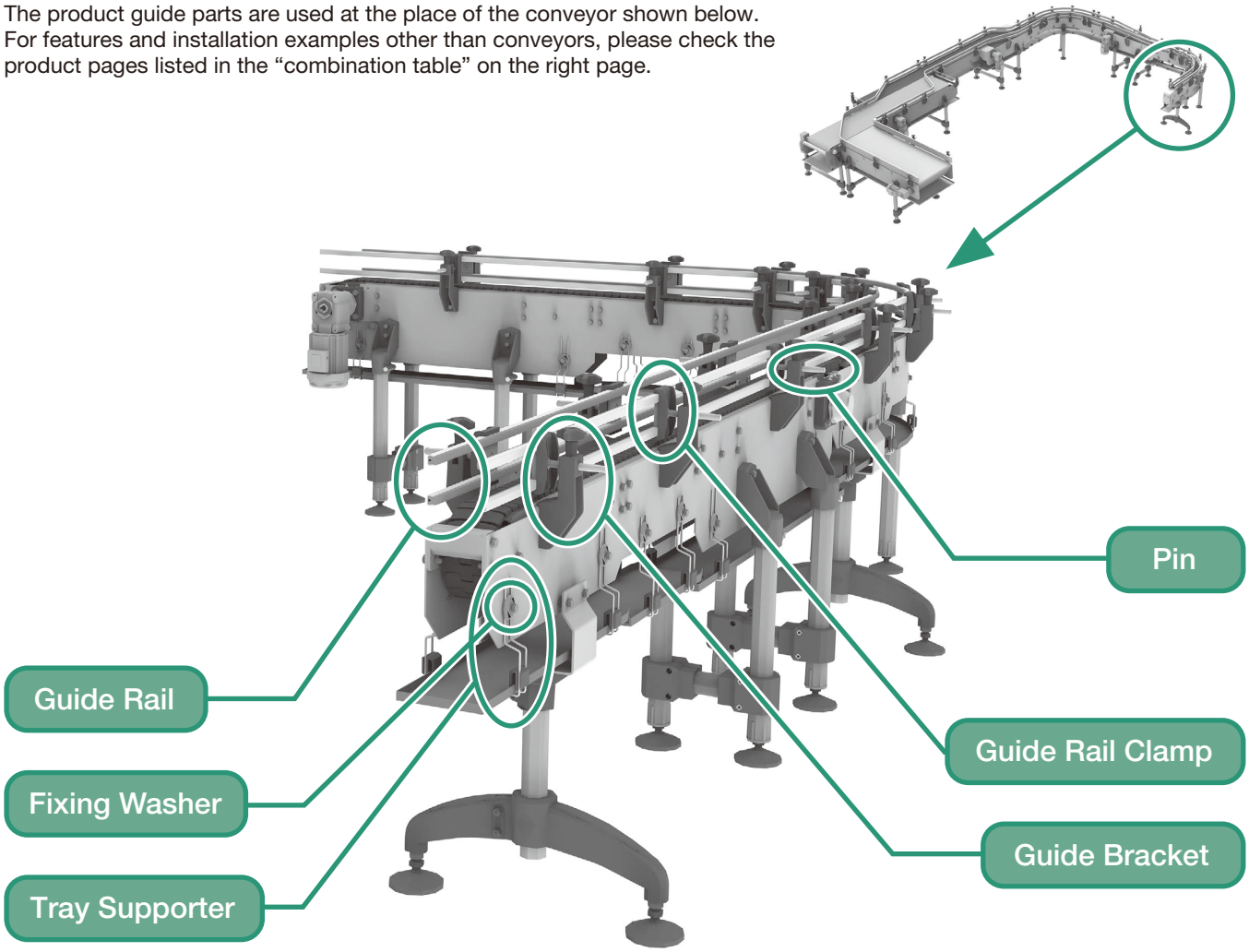


Tsubaki model no.	Material	Allowable load kN {kgf}
	Foot/Bolt/Nut	
TP-TB12SUS	Stainless steel	10{1020}

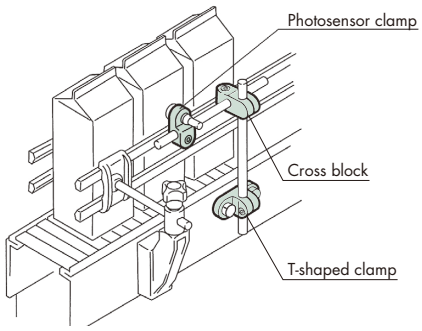
Note: Made-to-order product.

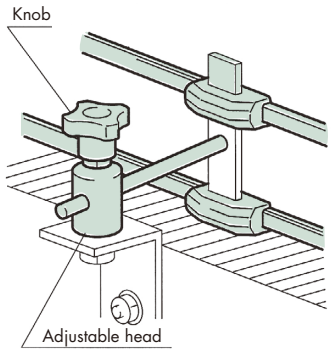
Product Guide Parts

The product guide parts are used at the place of the conveyor shown below.
For features and installation examples other than conveyors, please check the product pages listed in the “combination table” on the right page.

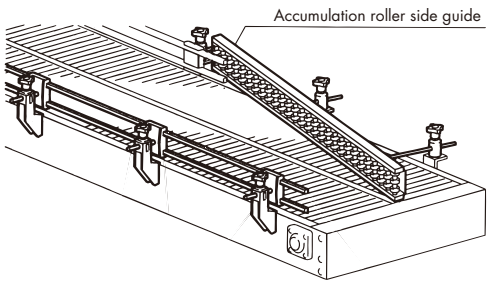


Products that are Used in the Same Way as Guide Brackets and Guide Rail Clamps

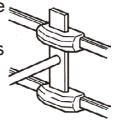




Products that are Used in the Same Way as Guide Rails



■ Combination Table

<table>
<tr><th rowspan="3">Guide rail</th><th rowspan="3" colspan="2">Applicable clamp</th><th colspan="3">Pin
Page 393</th><th rowspan="3">Guide bracket</th><th rowspan="3">Adjustable head</th></tr>
<tr><th>Clamp pin</th><th>Bracket Pin</th><th>Guide Pin</th></tr>
<tr><th>Pin diameter
ϕ12 , ϕ14, ϕ16</th><th>Pin diameter
ϕ12, ϕ14, ϕ16</th><th>Pin diameter
ϕ14</th></tr>
<tr><td rowspan="2">Round bar
</td><td>
Pages 385, 386</td><td>For 8 mm dia. round bar
TP-C13743T-GRC
For 10 mm dia. round bar
TP-C13741T-GRC
TP-GHB
For 12 mm dia. round bar
TP-C13744NVT-GRC</td><td colspan="2">Clamp, bracket can be used all pin sizes.
Take care to ensure the screw end of the clamp pin does not protrude from the guide rail.
</td><td>–</td><td rowspan="2">Fixed type

Page 390
Pin dia. | Description
ϕ12 | TP-C13696T-GRB
ϕ14 | TP-C13697T-GRB
TP-A0

Rotating type

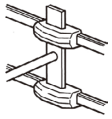
Page 390
Pin dia. | Description
ϕ12 | TP-C13054T-GRB
ϕ14 | TP-C13055T-GRB</td><td rowspan="9">
Page 392
Pin dia. | Description
ϕ12 | TP-C13028T-SH
ϕ14 | TP-C13029T-SH


Page 392
Pin dia. | Description
ϕ12 | TP-C13037T-SH
ϕ14 | TP-C13038T-SH
* Use TP-C13355T-HD as knob.</td></tr>
<tr><td>
Page 386</td><td>For 12 mm dia. round bar
TP-C13761XPT-GRC</td><td>Can be used all pin sizes.</td><td>–</td><td>–</td></tr>
<tr><td rowspan="6">TP-C19S00130-3MT-GR

Page 381

TP-C19S00165-3MT-GR

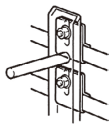
Page 381</td><td colspan="2">TP-C13007T-GRC

Page 383</td><td colspan="2">Clamp, bracket can be used all pin sizes.
</td><td>–</td></tr>
<tr><td colspan="2">TP-C13008NVT-GRC

Page 383</td><td>Can be used all pin sizes.</td><td>–</td><td>–</td></tr>
<tr><td colspan="2">TP-C13012T-GRC

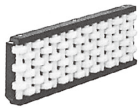
Page 384</td><td>–</td><td>Can be used only a 14 mm dia. pin.</td><td>–</td></tr>
<tr><td colspan="2">TP-C13006NVT-GRC

Page 383</td><td>–</td><td>–</td><td>Can be used all pin sizes.</td></tr>
<tr><td colspan="2">TP-C13014T-GRC

Page 384</td><td colspan="2">Clamp, bracket can be used all pin sizes.
</td><td>–</td></tr>
<tr><td colspan="2">TP-C13120T-GRC
(for rail joint)

Page 384</td><td>–</td><td>–</td><td>–</td></tr>
<tr><td>TP-C19050LT-GR

Page 381</td><td colspan="2">TP-C13718T-GRC

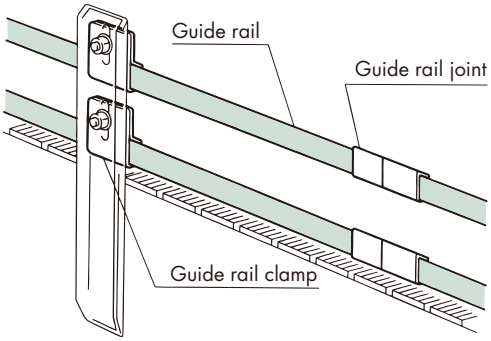
Page 384</td><td>Can be used all pin sizes.</td><td>–</td><td>–</td></tr>
<tr><td>Accumulation roller side guide

Page 382</td><td colspan="2"></td><td>–</td><td>Can be used all pin sizes.</td><td>–</td></tr>
</table>

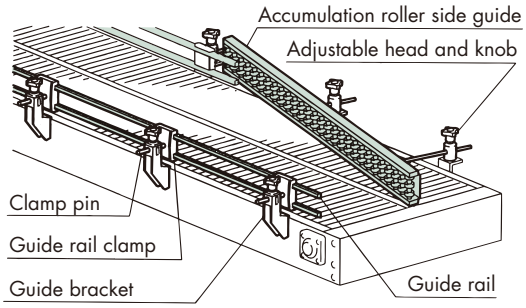
Guide Rail/Accumulation Roller Side Guide/ Roller Module Side Guide (For Curved Section)

Applications

Guide Rail: Use to prevent conveyed products from falling down or being scratched.
Accumulation roller side guide: Reduces the chances of conveyed products being scratched. Use this part as a guide in the accumulation areas of the conveyor.
Roller module side guide (For curved section):
Reduces the chances of conveyed products on the curved section from being scratched.

Installation Example

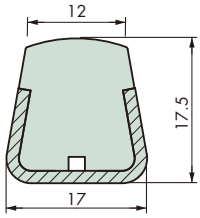




Specifications

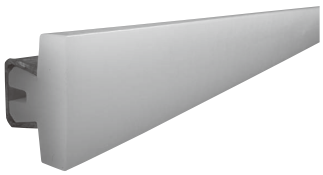
■ Guide Rail

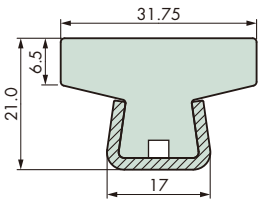




Tsubaki model no.	Standard length per unit m	Material		Approx. mass kg/m
		Guide rail	Frame	
TP-C19S00130-3MT-GR	3	UHMW-PE (color: white)	Stainless steel	0.6

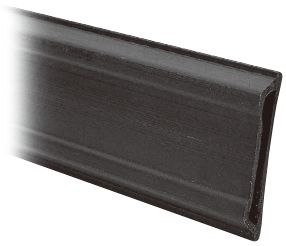
Note: Standard product.

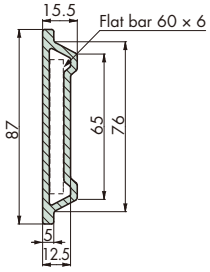




Tsubaki model no.	Standard length per unit m	Material		Approx. mass kg/m
		Guide rail	Frame	
TP-C19S00165-3MT-GR	3	UHMW-PE (color: white)	Stainless steel	0.86

Note: Standard product.

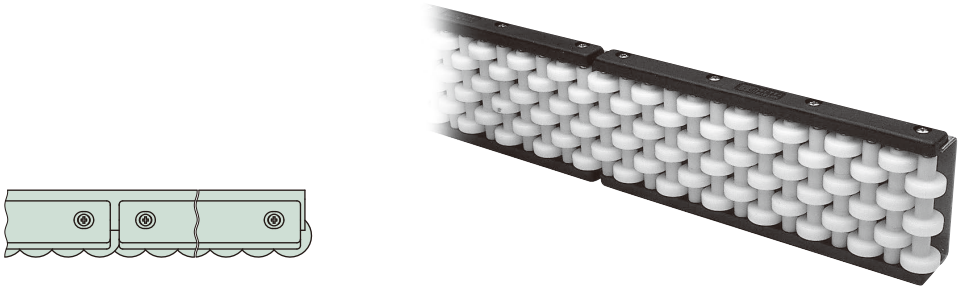




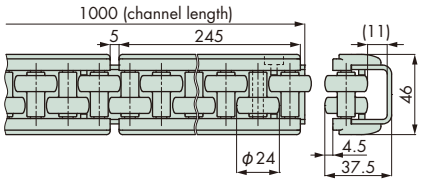
Tsubaki model no.	Standard length per unit m	Material	Approx. mass kg/m
TP-C19050LT-GR	3	UHMW-PE (color: black)	0.6

Note: Made-to-order product.

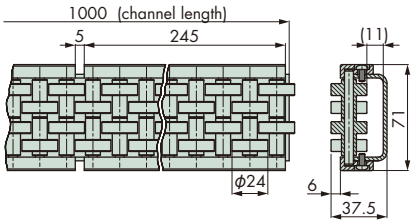
■ Accumulation Roller Side Guide



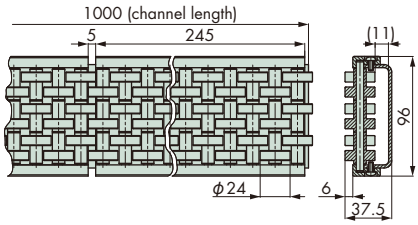
TP-C16686LSST-ARG



TP-C16683LSST-ARG



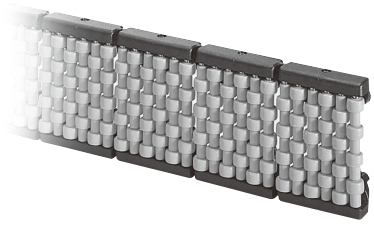
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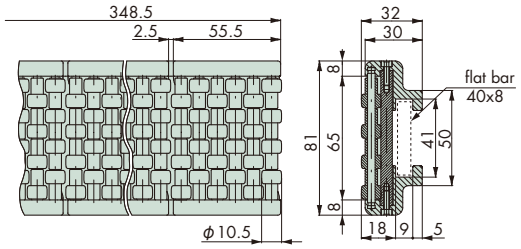


Tsubaki model no.	Standard length per unit m	Material				Approx. mass kg/m
		Roller	Pin	Retainer	Channel	
TP-C16686LSST-ARG	1	Polyacetal (color: white)	Polyacetal (color: black)	Reinforced polyamide (color: black)	Stainless steel	2.6
TP-C16683LSST-ARG			Stainless steel			3.8
TP-C16689LT-ARG						5

Note: Standard products.

■ Roller Module Side Guide (For Curved Section)

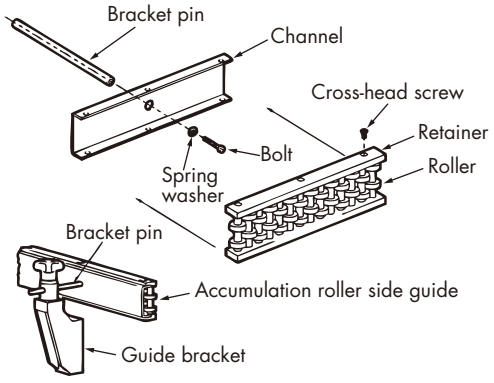




Tsubaki model no.	Standard length per unit m	Material		
		Frame	Roller	Pin
TP-C16801KT-ARG	348.5	Reinforced polyamide (color: black)	Polyacetal (color: white)	Polyacetal (color: black)

Note: 1. Standard product.
2. Use this part in combination with a 40 x 8 flat bar
3. Minimum sideflex radius: inner radius R250, outer radius R300

Notes for Handling Accumulation Roller Side Guide



[Assembly procedure]

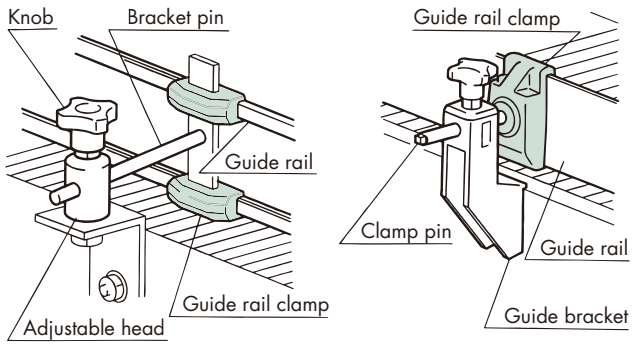
1. Remove the cross-head screw on the retainer and remove the retainer from the channel. (The length of the retainer is 245 mm, and it is installed at 4 places per standard length.)
2. Drill holes for bolts to fit in the channels. Select a bolt that does not interfere with or contact the roller.
3. Bolt the channel and bracket pin together.
4. After fixing, insert the retainer to the channel.
5. Align the screw holes on the channel with the mounting holes on the retainer, and secure with the cross-head screws.

Guide Rail Clamp

Applications

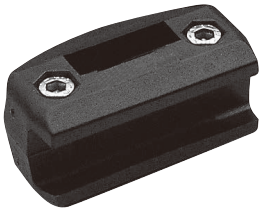
Use to fix the guide rails.

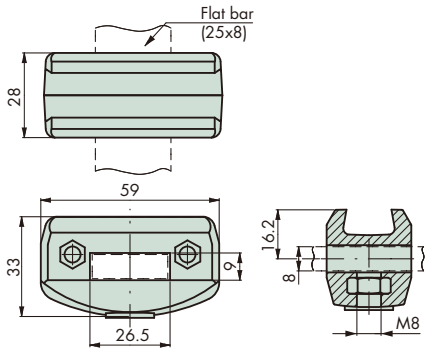
Installation Example



Specifications

■ Guide Rail Clamp (GRC)

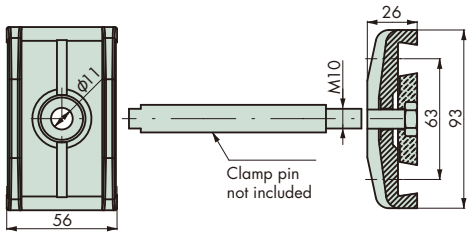




Tsubaki model no.	Material			Applicable guide rail	Applicable support
	Body	Bolt	Nut		
TP-C13007T-GRC	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR	Flat bar 25x8

Note: Standard product.

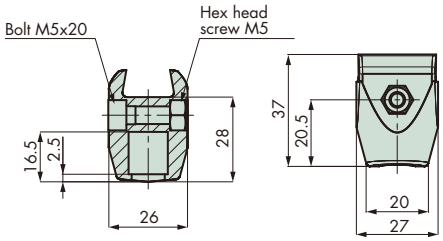


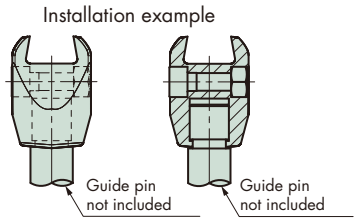


Tsubaki model no.	Material	Applicable guide rail	Applicable support
TP-C13008NVT-GRC	Reinforced polyamide (color: black)	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR	Clamp pin

Note: Standard product.







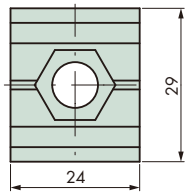
Tsubaki model no.	Material			Applicable guide rail	Applicable support
	Body	Bolt	Nut		
TP-C13006NVT-GRC	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR	Guide pin

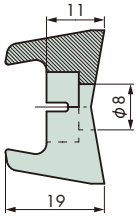
Note: 1. Standard product.
2. This guide rail clamp is stronger than the TP-C13012T-GRC clamp. Use this clamp in places where a stronger pressure is applied to rails (such as corner areas and accumulation lines).

Specifications

■ Guide Rail Clamp



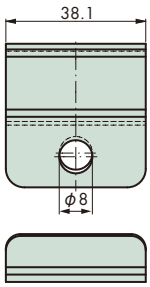


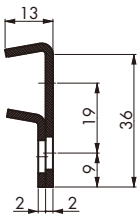


Tsubaki model no.	Material	Applicable guide rail	Applicable support
TP-C13012T-GRC	Reinforced polyamide (color: black)	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR	Bracket pin ϕ14

Note: Standard product.





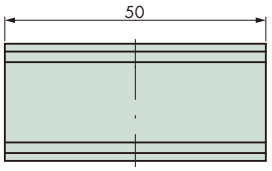


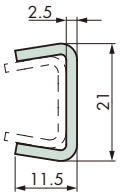
Tsubaki model no.	Material	Applicable guide rail	Applicable support
TP-C13014T-GRC	Stainless steel	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR	Frame

Note: Standard product.

■ Guide Rail Joint





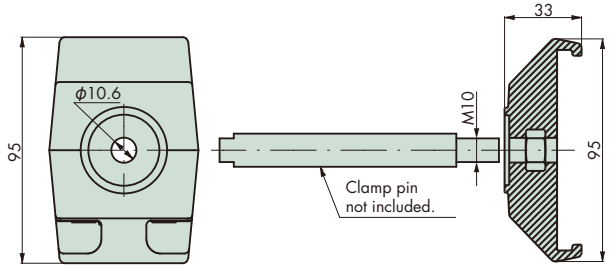


Tsubaki model no.	Material	Applicable guide rail
TP-C13120T-GRC	Stainless steel	TP-C19S00130-3MT-GR TP-C19S00165-3MT-GR

Note: 1. Standard product.
2. Use this part as a joint between guide rails. It eliminates the difference in level and any clearance between guide rails. Use a hammer to install.

■ Guide Rail Clamp (Exclusively for TP-C19050LT-GR Guide Rail)





Tsubaki model no.	Material		Applicable guide rail	Applicable support
	Body	Nut/Washer		
TP-C13718T-GRC	Reinforced polyamide (color: black)	Stainless steel	TP-C19050LT-GR	Clamp pin

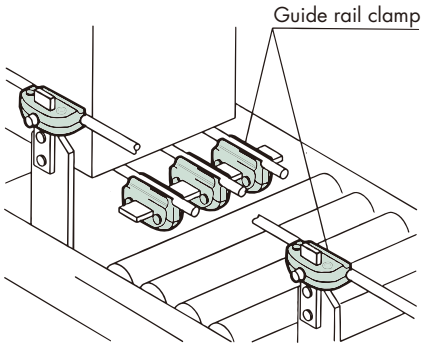
Note: Made-to-order product.

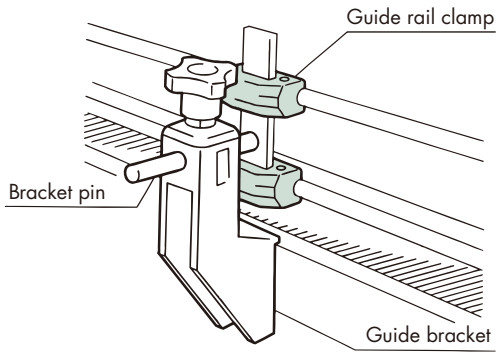
Guide Rail Clamp

Applications

Use to fix the round bar guide.

Installation Example

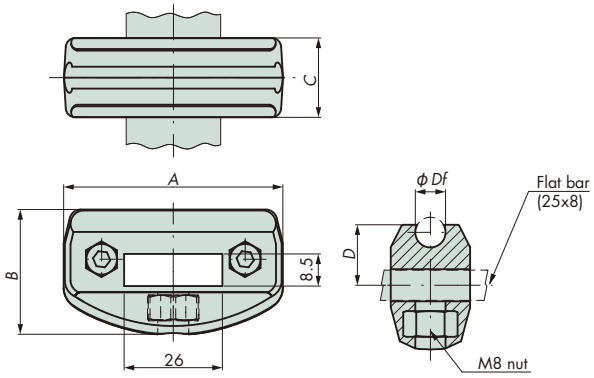




Specifications

■ Guide Rail Clamp (For Round Bar)

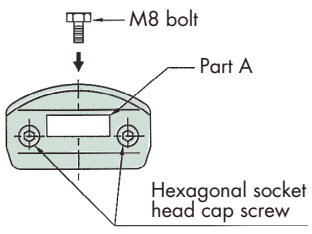


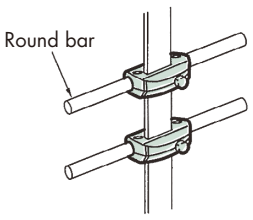


Tsubaki model no.	Diameter					Material			Flat bar
	ϕ Df	A	B	C	D	Body	Bolt	Nut	
TP-C13743T-GRC	8	58	33	21	16	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	25x8
TP-C13741T-GRC	10								
TP-C13744NVT-GRC	12	59	34.5	24	19				

Note: Standard products.

Notes for Handling Guide Rail Clamp





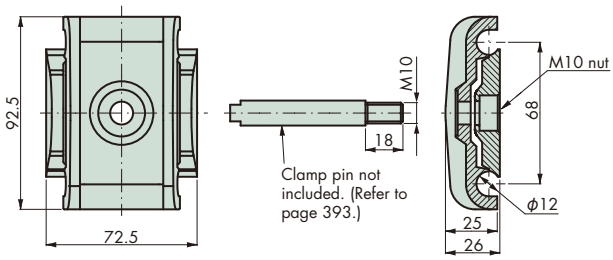
[Assembly procedure]

1. When the hexagonal socket head cap screw fitted on the clamp is removed, the clamp is split into two parts.
2. Hold the round bar with the two clamp parts, and fasten the hexagonal socket head cap screw again.
3. Insert the flat bar (25 x 8) into part A, and secure it with the bolt (M8). (Hold the flat bar at the tip of the bolt.)
4. Adjust the position according to the height of the products to be conveyed.
5. The TP-C13007T-GRC guide rail clamp (page 383) can also be installed by the following procedure.

Specifications

■ Guide Rail Clamp (For Round Bar)



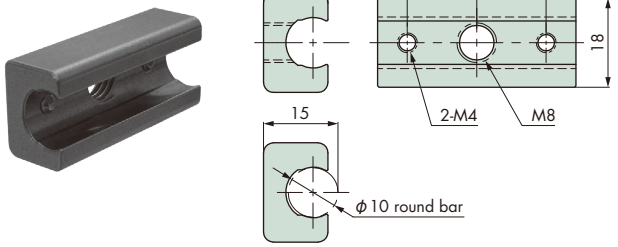


Tsubaki model no.	Material		Applicable round bar
	Body	Nut/Washer	
TP-C13761XPT-GRC	Reinforced polyamide (color: black)	Stainless steel	ϕ12

Note: Standard product.

■ Guide Rail Clamp

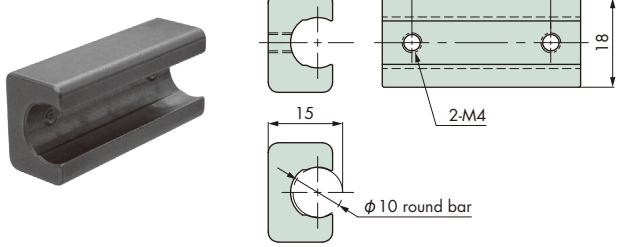
◆ For Bracket



Tsubaki model no.	Material
TP-GHB	Stainless steel (sintered)

Note: Made-to-order product.

◆ For Connection



Tsubaki model no.	Material
TP-GHA	Stainless steel (sintered)

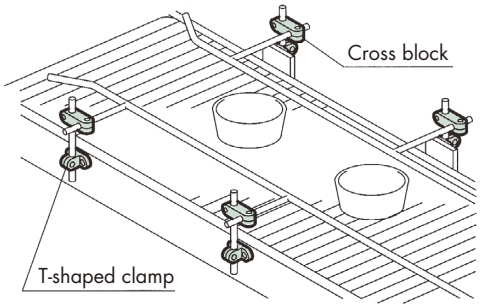
Note: Made-to-order product.

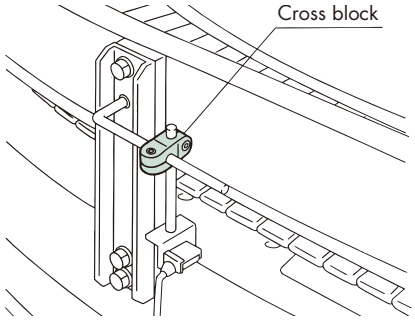
Cross Block/T-Shaped Clamp/L-Shaped Clamp

Applications

Use in combination with a T-shaped clamp or cross block to install a guide or a sensor.

Installation Example



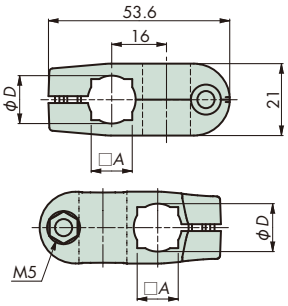


Specifications

■ Cross Block

◆ **For Use with Round Bar or Square Bar Guide**



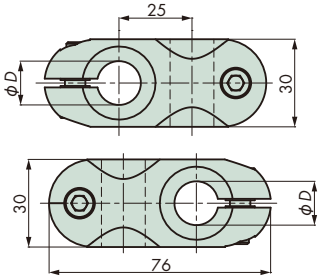


Tsubaki model no.	Diameter		Material		Bolt tightening torque N·m {kgf·m}	Allowable load (retainable load) N{kgf}
	ϕD	□A	Body	Bolt/Nut		
TP-C13S00114T-CC	10	8	Polyacetal (color: black)	Stainless steel	2.94 {0.3}	49.0 {5}
TP-C13S00115T-CC	12	10				
TP-C13S00116T-CC	14	12				

Note: Standard products.

◆ **High-strength Type (Exclusively for a Round Bar)**



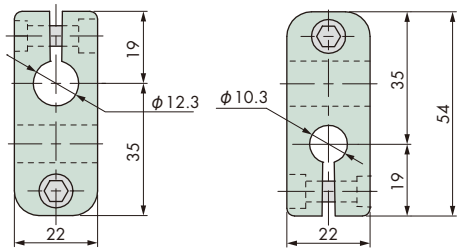


Tsubaki model no.	ϕD	Material			Bolt tightening torque N·m {kgf·m}	Allowable load (retainable load) N{kgf}
		Body	Bolt	Nut		
TP-C13108T-CC	15	Reinforced polyamide (color: black)	Stainless steel	Brass + nickel-plated	4.9 {0.5}	98.1 {10}

Note: Standard product.

■ Cross Block





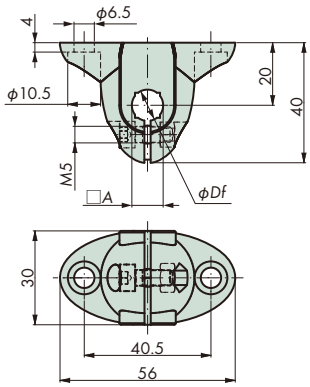
Tsubaki model no.	Material	
	Body	Bolt/Nut
TP-CRB	Reinforced polyamide (color: black)	Stainless steel

Note: Standard product.

■ T-shaped Clamp

◆ For Use with Round Bar or Square Bar Guide



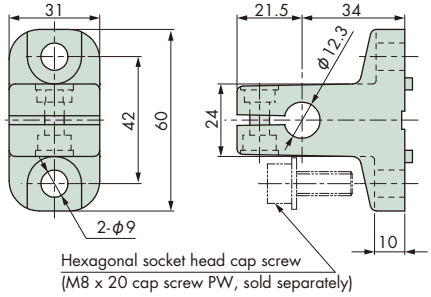


Tsubaki model no.	Diameter		Material		Bolt tightening torque N·m {kgf·m}	Allowable load (retainable load) N{kgf}
	ϕ Df	□*A*	Body	Bolt/Nut		
TP-C13152T-TC	10	8	Reinforced polyamide (color: black)	Stainless steel	2.94 {0.3}	49.0 {5}
TP-C13115T-TC	12	10				

Note: Standard products.

◆ For Use with Round Bar





Tsubaki model no.	Material	
	Body	Bolt/Nut
TP-TC	Reinforced polyamide (color: black)	Stainless steel

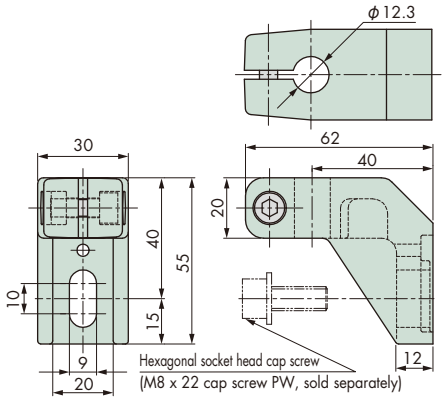
Note: Standard product.

■ L-shaped Clamp



Tsubaki model no.	Material	
	Body	Bolt/Nut
TP-LC	Reinforced polyamide (color: black)	Stainless steel

Note: Standard product.

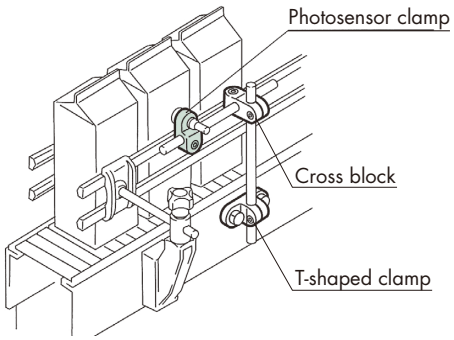


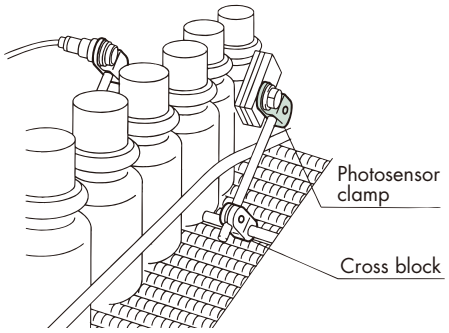
Photosensor Clamp/Clamp Lever

Applications

Use this clamp in combination with a cross block or T-shaped clamp when installing a sensor.

Installation Example

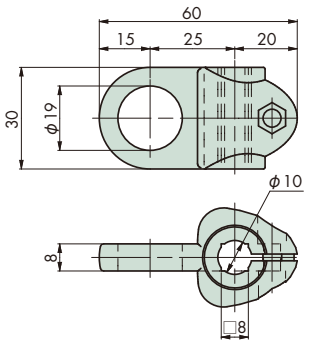




Specifications

■ Photosensor Clamp



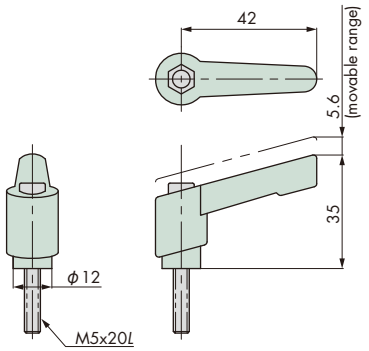


Tsubaki model no.	Material		Bolt tightening torque N·m {kgf·m}	Allowable load (retainable load) N{kgf}
	Body	Bolt/Nut		
TP-C13153T-FSC	Reinforced polyamide (color: black)	Stainless steel	2.94 {0.3}	49.0 {5}

Note: Standard product.

■ Clamp Lever





Tsubaki model no.	Material	
	Body	Bolt/Nut
TP-CL	Reinforced polyamide (color: black)	Stainless steel

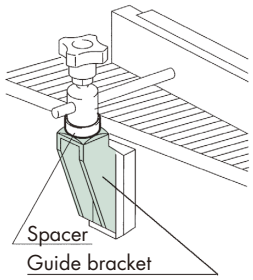
Note: Made-to-order product.

Guide Bracket

Applications

Use in combination with a guide rail clamp and clamp pin to fix the guide rails.

Installation Example

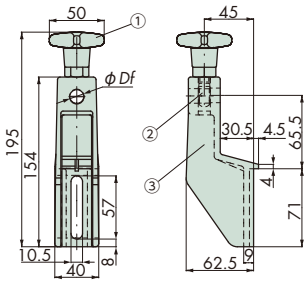


Specifications

■ Guide Bracket

◆ Fixed Type



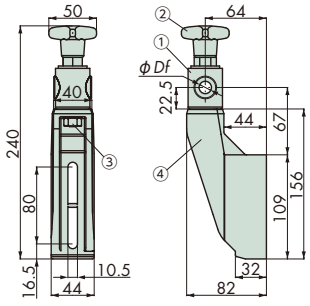


Tsubaki model no.	ϕ Df	Material		
		① Knob	② Eyebolt	③ Body
TP-C13696T-GRB	12	Polyamide brass + nickel-plated nut inserted nut inserted (color: black)	Stainless steel	Reinforced polyamide (color: black)
TP-C13697T-GRB	14			

Note: 1. Standard products.
2. TP-C13250T-TS or TP-C13255-TS (tray supporter) can be installed in the groove on the back of the body.

◆ Rotating Type



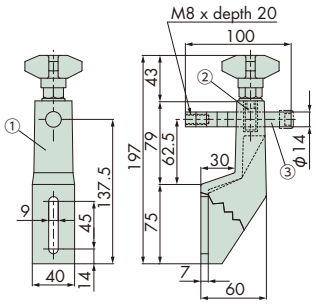


Tsubaki model no.	ϕ Df	Material			
		① Adjustable head (rotatable 360-degree)	② Knob	③ Bolt/Nut	④ Body
TP-C13054T-GRB	12	Reinforced polyamide (color: black)	Polyamide brass + nickel-plated nut inserted (color: black)	Stainless steel	Reinforced polyamide (color: black)
TP-C13055T-GRB	14				

Note: 1. Standard products.
2. TP-C13250T-TS or TP-C13255-TS (tray supporter) can be installed in the groove on the back of the body.

◆ Fixed Type





Tsubaki model no.	Material		
	① Body	② Eyebolt	③ Adjust pin
TP-A0	Reinforced polyamide (color: black)	Brass	Stainless steel

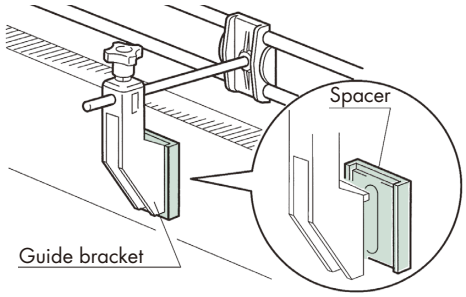
Note: 1. Standard product.
2. The model number is "A zero".

Spacer

Applications

Use the spacer to adjust the height and width of the guide bracket.

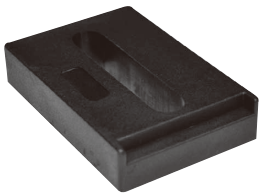
Installation Example

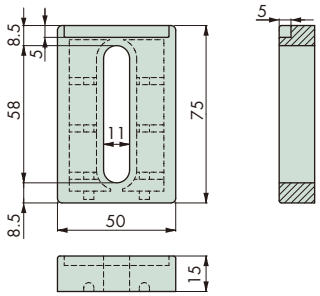


Specifications

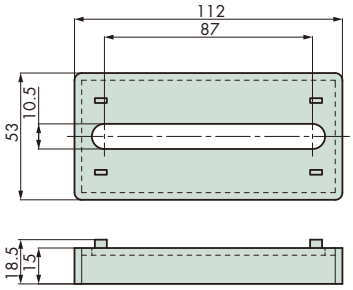
■ Spacer

(For width adjustment)









Tsubaki model no.	Material	Applicable guide rail
TP-C13400T-SP	Reinforced polyamide (color: black)	TP-C13696T-GRB TP-C13697T-GRB

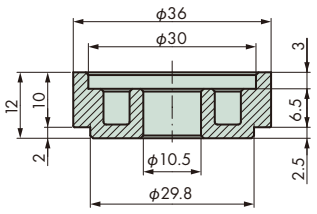
Note: 1. Standard product.
2. TP-C13250T-TS or TP-C13255-TS (tray supporter) can be installed in the groove on the back of the body.

Tsubaki model no.	Material	Applicable guide rail
TP-C13019T-SP	Reinforced polyamide (color: black)	TP-C13054T-GRB TP-C13055T-GRB

Note: 1. Standard product.
2. TP-C13250T-TS or TP-C13255-TS (tray supporter) can be installed in the groove on the back of the body.
3. This product can be stacked multiple number of times.

(For height adjustment)



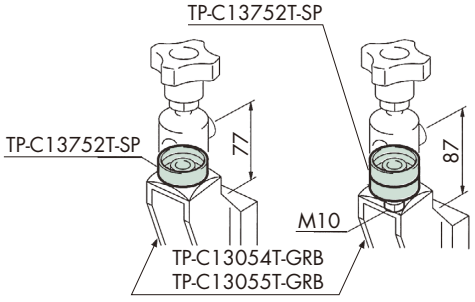


Tsubaki model no.	Material	Applicable guide rail
TP-C13752T-SP	Reinforced polyamide (color: black)	TP-C13054T-GRB TP-C13055T-GRB

Note: Standard product.

Notes for Handling Spacer for Height Adjustment

Install the spacer under the adjustable head of the rotating adjustable bracket. One spacer increases the height by 10 mm.



A long-length M10 bolt is needed to use the spacer.

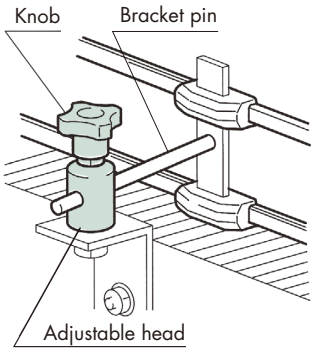
Bolt size
M10 x 30 *L* hexagonal head bolt for using one spacer
M10 x 40 *L* hexagonal head bolt for using two spacers

Addjustable Head/Knob

Applications

Use in combination with a guide rail clamp and clamp pin to fix the guide rails.

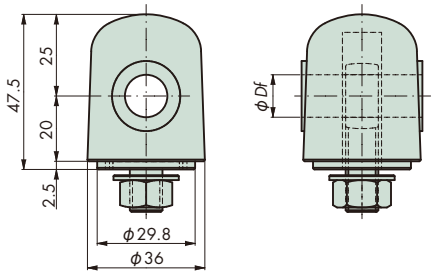
Installation Example



Specifications

■ Adjustable Head

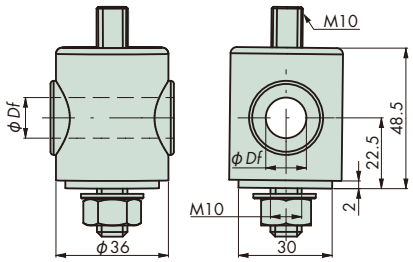




Tsubaki model no.	ϕ Df	Material	
		Head	Others
TP-C13028T-SH	12	Reinforced polyamide (color: black)	Stainless steel
TP-C13029T-SH	14		

Note: Standard products.



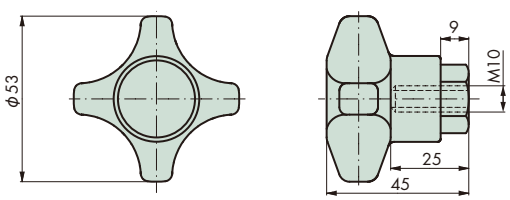


Tsubaki model no.	ϕ Df	Material	
		Head	Others
TP-C13037T-SH	12	Reinforced polyamide (color: black)	Stainless steel
TP-C13038T-SH	14		

Note: 1. Standard products.
2. Use with TP-C13355T-HD knob.

■ Knob





Tsubaki model no.	Material		Applicable adjustable Head
	Knob	Thread	
TP-C13355T-HD	Reinforced polyamide (color: black)	Brass + nickel-plated	TP-C13037T-SH TP-C13038T-SH

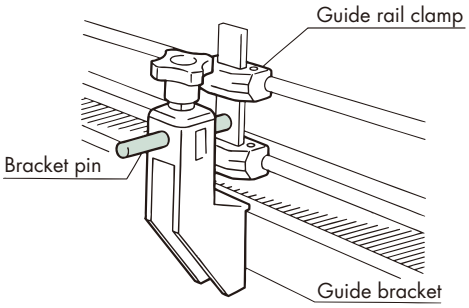
Note: Standard product.

Guide Pin/Clamp Pin/Bracket Pin

Applications

Guide Pin: Pin for exclusive use with the TP-C13006NVT-GRC guide rail clamp.
Clamp Pin: The external thread is on the securing side. Use clamp pin in combination with guide rail clamp and guide bracket.
Bracket Pin: The internal thread is on the securing side. Use bracket pin in combination with guide rail clamp and guide bracket.

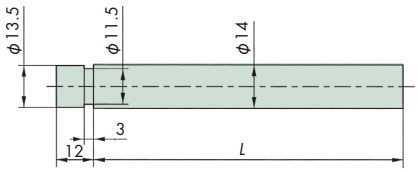
Installation Example



Specifications

■ Guide Pin

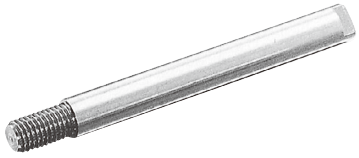


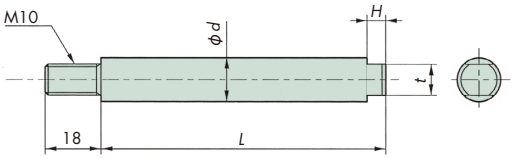


Tsubaki model no.	L	Material
TP-C14-100T-GP	100	Stainless steel
TP-C14-200T-GP	200	

Note: Standard products.

■ Clamp Pin

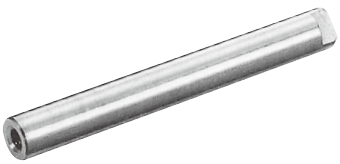


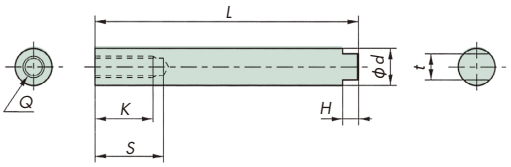


Tsubaki model no.	Diameter				Material
	ϕd	L	H	t	
TP-C12-100T-CP	12	100	5	8	Stainless steel
TP-C12-200T-CP		200			
TP-C14-100T-CP	14	100	6	10	
TP-C14-200T-CP		200			
TP-C16-100T-CP	16	100	8	13	
TP-C16-200T-CP		200			

Note: Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.

■ Bracket Pin





Tsubaki model no.	Diameter							Material
	ϕd	L	H	t	Q	S	K	
TP-C12-100T-BP	12	100	5	8	M6	24	20	Stainless steel
TP-C12-200T-BP		200						
TP-C14-100T-BP	14	100	6	10	M8	26	22	
TP-C14-200T-BP		200						
TP-C16-100T-BP	16	100	8	13	M10	30	27	
TP-C16-200T-BP		200						

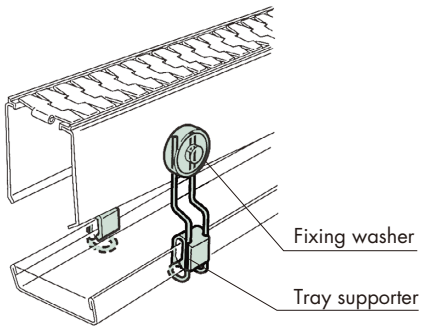
Note: Tsubaki model no. in boldface are standard products. Tsubaki model no. in normal face are made-to-order products.

Tray Supporter/Fixing Washer

Applications

Use it for installing a tray such as a drain pan. Use fixing washer in combination with tray supporter and M10 bolt.

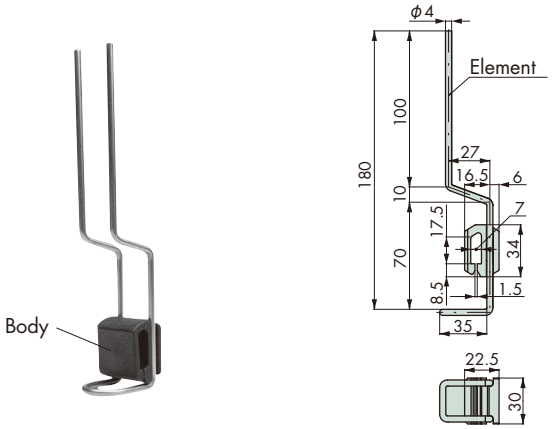
Installation Example



Specifications

■ Tray Supporter

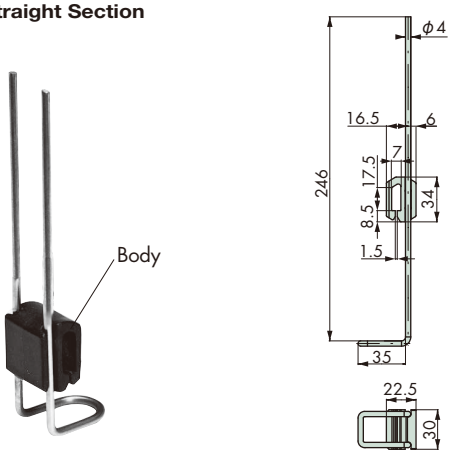
◆ **For Curved Section**



Tsubaki model no.	Material	
	Body	Element
TP-C13250T-TS	Polyamide (color: black)	Stainless steel

Note: 1. Standard product.
2. The tray is to be prepared by the customer.

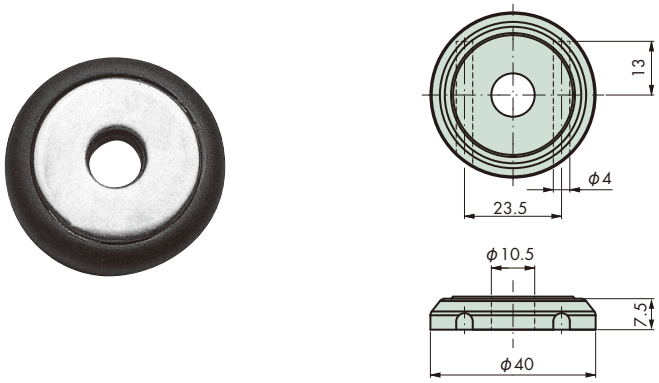
◆ **For Straight Section**



Tsubaki model no.	Material	
	Body	Element
TP-C13255T-TS	Polyamide (color: black)	Stainless steel

Note: 1. Standard product.
2. The tray is to be prepared by the customer.

■ Fixing Washer



Tsubaki model no.	Material	
	Plate	Washer
TP-C13252T-MP	Polyamide (color: black)	Stainless steel

Note: Standard product.

Bearing Units

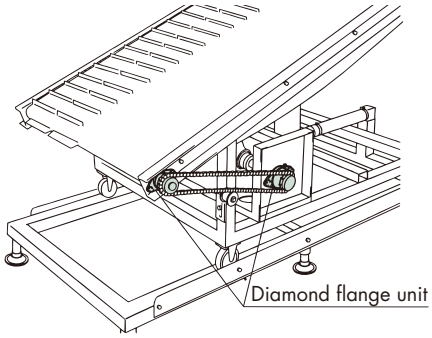
Applications

Since the bearing unit is sealed both on the top and bottom surfaces, it can have a longer service life when used in a wet or dusty environment.

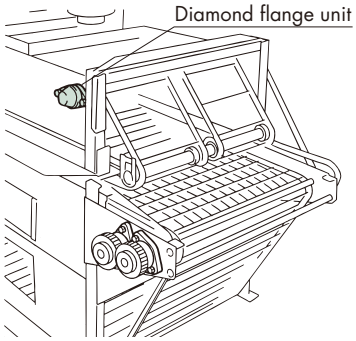
Diamond Flange Unit

Installation Example

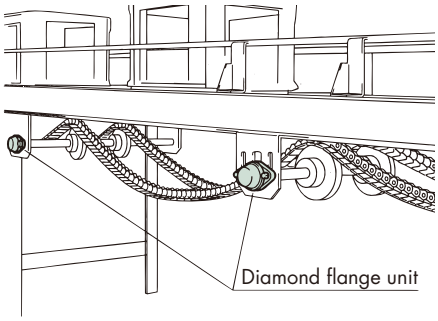
Washing machine



Washing machine



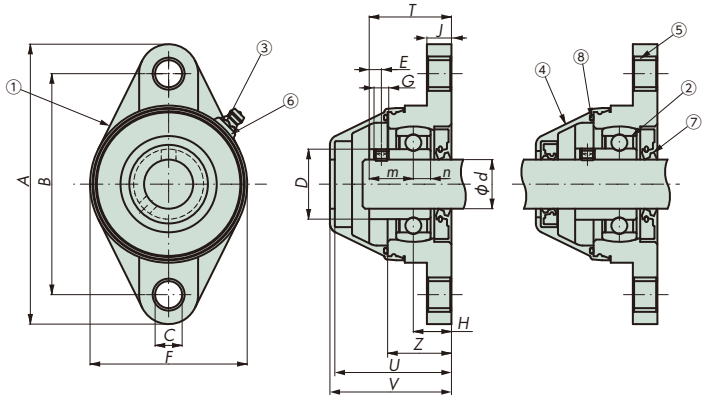
Bottle filling equipment (in a wet or dusty environment)



Dimension Table

■ Closed Type





■ Open Type



■ Part Description

Part no.	Description	Material
①	Housing	Reinforced polyamide (color: black)
②	Ball bearing Note: 1	Steel
③	Grease nipple Note: 2	Stainless
④	Safety cap	Polypropylene (color: yellow)
⑤	Spacer bush	Brass + nickel-plated
⑥	Grease nipple washer	Polyethylene (color: yellow)
⑦	Seal	NBR (color: black)
⑧	O-ring	

Note: 1. The bearing is of the set-screw type.
2. The position of the grease nipple for the bore diameter of ϕ20 is different from the left figure.

Tsubaki model no.	Diameter															
	Bore diameter ϕd	A	B	C	D	E	F	G	H	J	Z	T	m	n	U	V
TP-C54204NR-ECT-UCFL	20	114	90	11	29	5	70	M6×0.75	15.5	10	26	33.5	18	7	47.5	49.5
TP-C59204NR-ECT-UCFL																
TP-C54205NR-ECT-UCFL	25	130	99		34	5.5			17	12.5	29	36.5	19.5	7.5	52.2	54.2
TP-C59205NR-ECT-UCFL																

Specifications

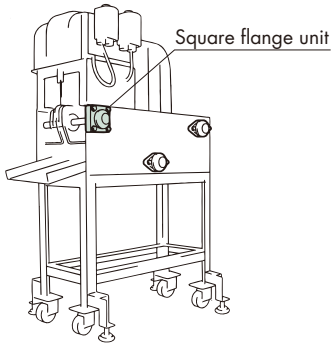
Tsubaki model no.	Shape	Basic load rating: bearing kN{kgf}		Max. allowable load kN{kgf}	Approx. mass kg	Operating temperature range °C
		(basic) dymanic load rating Cr	(basic) static load rating Cor			
TP-C54204NR-ECT-UCFL	Closed	9.9 {1000}	6.6 {670}	7.5 {765}	0.21	0 to 80
TP-C59204NR-ECT-UCFL	Open					
TP-C54205NR-ECT-UCFL	Closed	10.8 {1100}	7.8 {795}	8.0 {815}	0.31	
TP-C59205NR-ECT-UCFL	Open					

Note: 1. Standard products.
2. Self-alignment: maximum angle error between housing and shaft: 2°

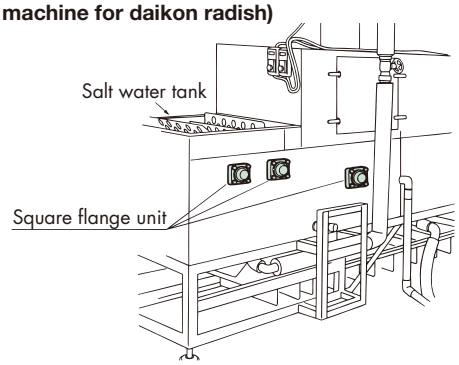
Square Flange Unit

Installation Example

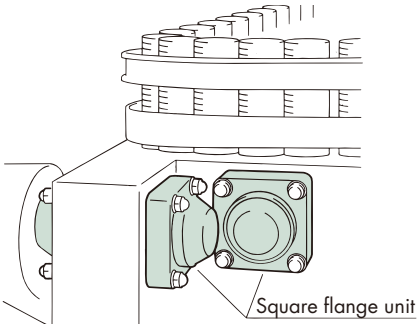
Food processing equipment (belt conveyor for food)



Food processing equipment (peeling machine for daikon radish)



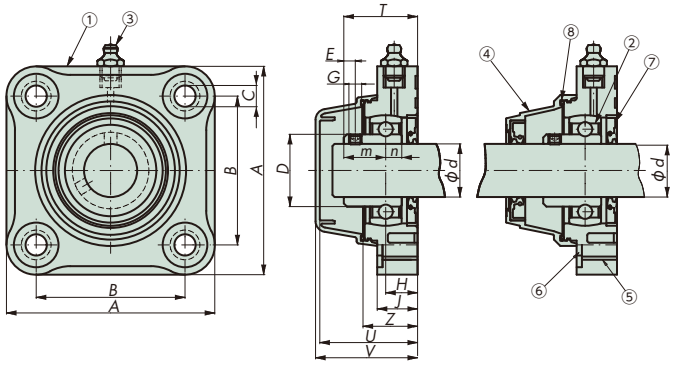
Beverage equipment (in wet conditions)



Dimension Table

■ Closed Type





■ Open Type



■ Part Description

Part no.	Part name	Material
①	Housing	Reinforced polyamide (color: black)
②	Ball bearing Note	Steel
③	Grease nipple	Stainless
④	Safety cap	Polypropylene (color: yellow)
⑤	Spacer bush	Brass + nickel-plated
⑥	Washer	SUS304
⑦	Seal	NBR (color: black)
⑧	O-ring	

Note: The bearing is of the set-screw type.

Tsubaki model no.	Diameter														
	Bore diameter φd	A	B	C	D	E	G	H	J	Z	T	m	n	U	V
TP-C50205ART-UCF	25	98	70	11	34	5.5	M6×0.75	15	19	25	34.5	19.5	7.5	50	52
TP-C55205ART-UCF															
TP-C50206RT-UCF	30	110	83		40.3	6.0		18	25	31	40	22	8	53	55
TP-C55206RT-UCF															
TP-C50207NT-UCF	35	118	92	14	48	6.5	M8×1.00	20		35	43.5	23.5	8.5	67	69
TP-C55207NT-UCF															
TP-C50208FRT-UCF	40	130	101.5		53	7.0					45	25	9		
TP-C55208FRT-UCF															

Specifications

Tsubaki model no.	Shape	Basic load rating: bearing kN{kgf}		Max. allowable load kN{kgf}	Approx. mass kg	Operating temperature range °C
		(basic) dymanic load rating Cr	(basic) static load rating Cor			
TP-C50205ART-UCF	Closed type	10.8 {1100}	7.8 {795}	13.0 {1320}	0.42	0 to 80
TP-C55205ART-UCF	Open type					
TP-C50206RT-UCF	Closed type	15.0 {1530}	11.3 {1150}		0.59	
TP-C55206RT-UCF	Open type					
TP-C50207NT-UCF	Closed type	19.7 {2000}	15.3 {1560}		0.9	
TP-C55207NT-UCF	Open type					
TP-C50208FRT-UCF	Closed type	22.4 {2280}	17.9 {1830}	12.5 {1270}	0.98	
TP-C55208FRT-UCF	Open type					

Note: 1. Standard products.
2. Self-alignment: maximum angle error between housing and shaft: 2°

Bearing Units

Notes for Handling

1. Shaft design

Chamfer the corners of the shaft (approx. R1.5) so as not to damage a seal or other parts when the bearing is inserted. The shaft is loosely fitted in general. Refer to Table 1 for the shaft's dimensional tolerance.

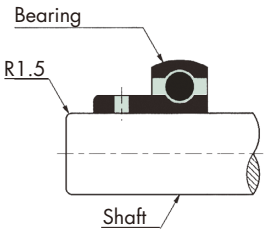
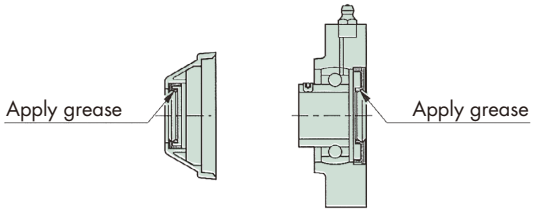


Table 1: Dimensional tolerance of shaft

Low speed	h9
Normal speed	h8
High speed	h7

2. Installation to shaft

2-1. Apply grease to the seal inner surface (surface in contact with the shaft) before installation.



2-2. The bearing is of the set-screw type. Clamp the two screws uniformly as referenced to the tightening force in table 2.

Table 2: Tightening torque of set screw

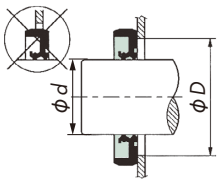
Bore diameter ϕd	Nominal size of screw	Recommended tightening torque N·m {kgf·m}
20	M6×0.75	3 {0.3}
25		
30		
35	M8×1.00	7 {0.7}
40		

3. Installation of housing

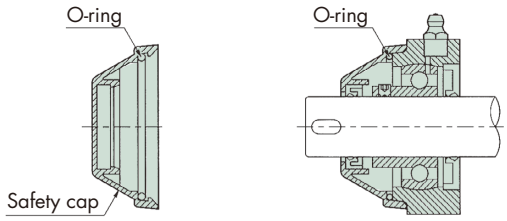
3-1. Make the hole diameter *D* in the frame installing surface smaller than *D*max so that the seal is not removed. Make the hole diameter *D* larger than *D*min so as to allow grease to be discharged.

Table 3: Mounting surface hole diameter

Bore diameter ϕd	*D*min	*D*max
20	30	42
25	35	45
30	45	55
35	50	60
40	55	70



3-2. Set the O-ring on the safety cap, and fit it securely in the body.



Maintenance

■ Grease Nipple

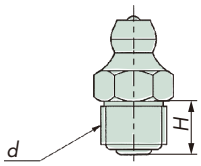


Table 4: Grease nipple dimensions

	Screw *d*	*H*
Diamond flange type	M6	6.5
Square flange type	1/8" GAS	

■ Grease

The bearing units are lubricated with H1-grade grease for food machines prior to shipment (Nevastane SFG2 of Total S.A.). Supply grease equivalent to this when replenishing.

Note: Nevastane is a registered trademark of Total S.A.

■ Lubrication Interval

Use only grease for lubrication. Do not use oil. The lubrication interval changes depending on operating conditions such as temperature, load, and speed. Refer to table 5 as a guide for the lubrication interval. Supply grease slowly when lubricating the machine so as not to damage the seal.

Also, the grease gun pressure should be within the range of 0.13MPa to 0.2MPa.

Table 5: Grease lubrication interval (reference)

Environmental condition	Operating temperature °C	Lubrication interval
Clean	0 to 50	Every 6 to 12 months
	50 to 70	Every 4 to 8 months
	70 to 80	Every 1 to 3 months
Dirty	0 to 70	Every 0.5 to 2 months
	70 to 80	Every 0.5 to 1 month
Humid wet	–	Every 0.5 months

MEMO

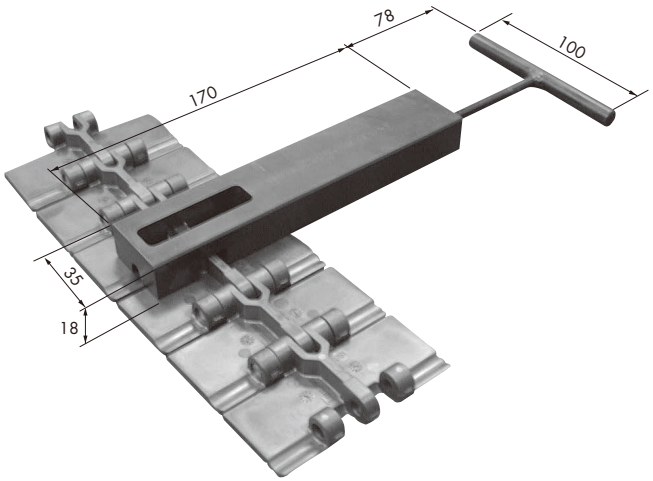
Disconnecting and Connecting Tools for Plastic Top Chain and Stainless Steel Top Chain

Applications

By using a tool, the chain can be easily disconnected and connected.

For Plastic Top Chain TTP

Applicable Chain	TTP Note: 2

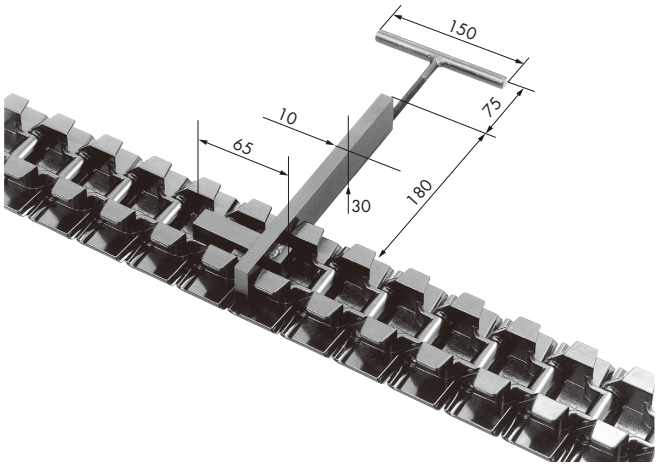


Tsubaki model no.	Color
TTP-KV-AST	Black

Note: 1. Made-to-order product.
2. It can be used for plastic top chain TTP top plate width 114.3 mm or less.
3. Only stainless steel pin types can be used.
4. This tool can be used both for disconnecting and connecting a chain.

For Plastic Top Chain TPS, TTUP, TPU

Applicable Chain	TPS, TTUP, TPU Note: 2, 3

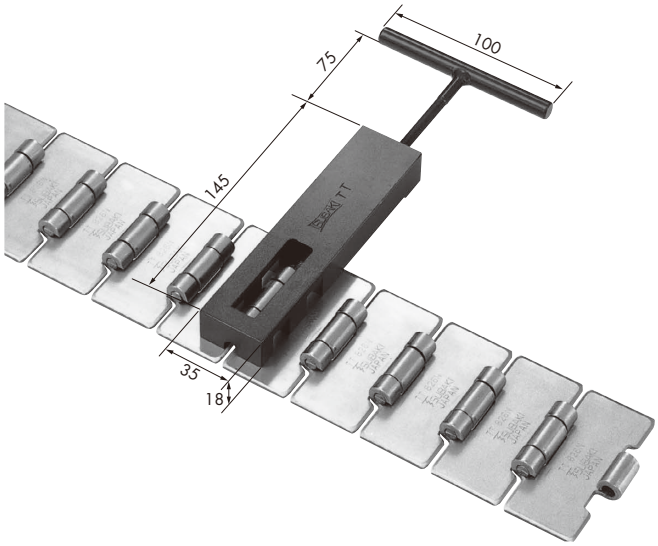


Tsubaki model no.	Color
TPS-TPU-KV-AST	Black

Note: 1. Made-to-order product.
2. Plastic top chains TPS and TTUP can be used for top plate width of 190.5 mm or less.
3. TPU826 can be used only for TPU826-KV150, TPU826-KV180, TPU826-KV250.
4. Set the tool on the chain as shown and turn the handle until the pin is removed.
5. Only stainless pin type can be used.
6. This tool can be used both for disconnecting and connecting a chain.

For Stainless Steel Top Chain TT

Applicable Chain	TT Note: 2

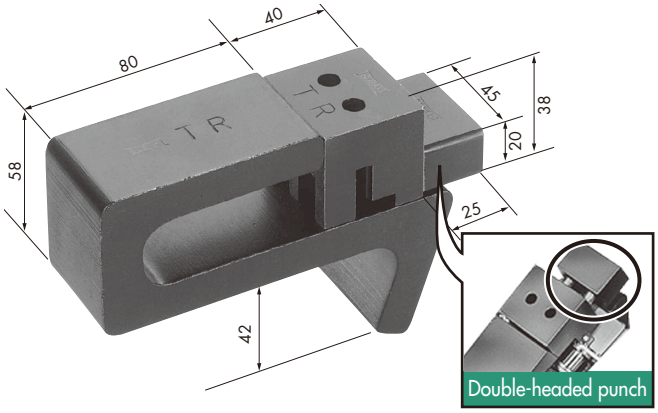


Tsubaki model no.	Color
TT-AST	Black

Note: 1. Made-to-order product.
2. It can be used for stainless steel top chain TT top plate width 190.5 mm or less
3. Set the tool on the chain as shown and turn the handle until the pin is removed.
4. This tool is specifically to be used only for disconnecting.

For Stainless Steel Top Chain TRU, TTKU

Applicable Chain	TRU, TTKU



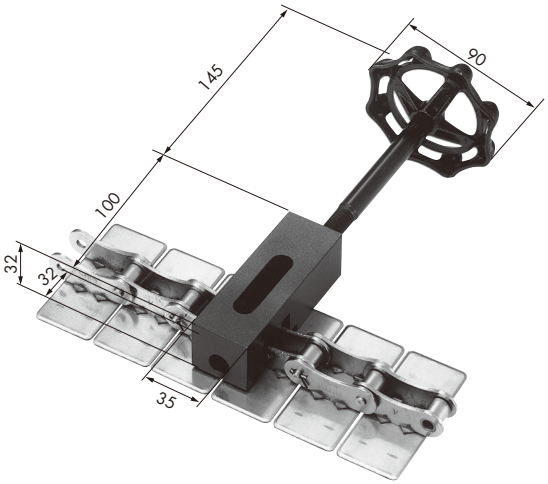
Tsubaki model no.	Color
TRU-TTKU-AST	Black

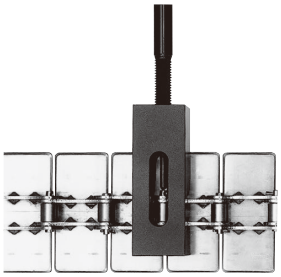
Note: 1. Made-to-order product.
2. Grind off the rivets at the end of the two pins of the outer link to be cut, using a hand grinder. Take care not to damage the inner links on both sides. In the case of a TRU chain, grind off the rivet on the side having no float-preventive tabs.
3. Set the link with the rivet of the pin ground off on the tool.
4. Tap the double punch with a hammer, and pull out the two ground-off pins of the chain until they are removed from the outer plate.
5. This tool is specifically to be used for disconnecting.

Disconnecting and Connecting Tools for Plastic Top Chain and Stainless Steel Top Chain

For Stainless Steel Top Chain TS

Applicable Chain	TS Note: 2



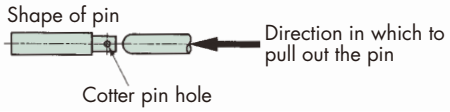


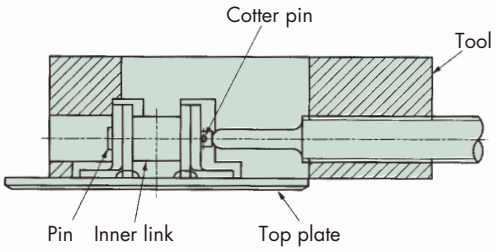
Tsubaki model no.	Color	
	Body	Knob
TS-AST	Black	Red

Note: 1. Made-to-order product.
2. It can be used for stainless steel top chain TS top plate width 300 mm or less.
3. A chain can be disconnected by removing pins on the chain body one by one.
4. The tool can also be used for connecting chains since the pins on the chain body can be press-fitted one by one.

Procedure for Disconnecting Chain

1. Close the legs of the cotter pin and pull it out from the body pin.
2. Set the tool as shown in the photos above or diagrams on the right. Set it so that the tool is in contact with the surface of the top plate.
3. Turn the handle of the tool and push out the pin of the chain from one direction (cotter pin side).





Procedure for Connecting Chain

1. Pass the chain pin through the outer plate (larger diameter hole side), inner link, and outer plate (smaller diameter hole side), in this order. Turn the pin so that the cotter pin hole is level with the other pin, and stop turning it at the position where it feels a little tight.
2. Set the chain on the tool as shown in the diagram 1. (Press-fit the pin from the direction opposite to the removal procedure.)
3. Turn the handle of the tool and press-fit the pin of the chain. The position to stop press-fitting of the body pin is the position where the step of the body pin comes in contact with the outer plate. You can know the position because the turning force of the handle will feel heavy. You can also know it by looking at the position of the other body pins that have not been removed.
4. Pass the cotter pin through the hole of the body pin of the chain, then open the legs of the cotter pin about 60 degrees, to prevent the body pin from being removed.

Fig 1. Set the chain on the tool

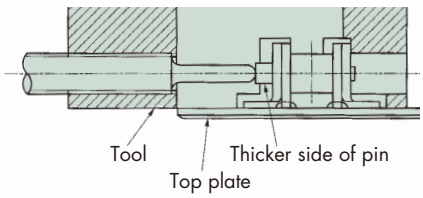
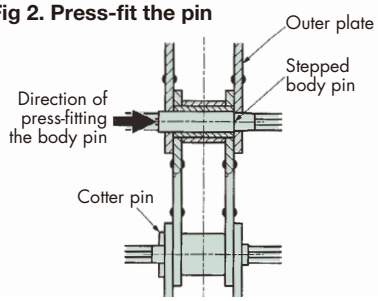
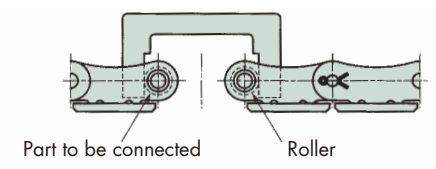


Fig 2. Press-fit the pin



How to Use the U-Shaped Tool Packaged with the TS-AST Tool

The tool holds both ends of the chains to be connected as shown on the right in order to facilitate the work mentioned above in ‘Procedure for Connecting Chain’ Step 1.



MEMO

Chain Selection

⚠ Important Selection Considerations

- Because of the risk of damage and/or breakage, plastic top chain is not recommended for use under conditions in which the chain may be subject to impact, or in which foreign materials or objects might become jammed in the conveyor. Please consider the use of a stainless steel top chain under these conditions. Also, be sure to start up and stop conveyor slowly using inverter or other control device.
- The presence of abrasives during operation will cause plastic top chain to wear prematurely. Please consider the use of stainless steel top chain in this case.
- When conveying food products, (DIA or DIY series) or (MPD or MPW series) is recommended in situations where a chance impact may damage the plastic top chain and there would be a possibility that broken chain pieces or fragments might become intermixed with the product or item being conveyed.
- Consult with a Tsubaki representative before using plastic top chain in cases where it will be in contact with special liquids (for example, solvents or chemicals such as acids or alkalis) or used under special environments (for example, exposure to ultraviolet radiation).
- Using plastic top chain in a wet condition will decrease the plastic's self-lubricating ability and thus shorten the life of the chain. Since this is apparent to the with stainless steel pins, we recommend using plastic pins.
- The operating temperature range for accessories, sprockets, and idler wheels made of UHMW-PE is –20°C to 60°C. Also, do not use in environments where such components will be exposed to steam.
- Toxic gases may be generated if Y series (including SY series) and DIY series are exposed directly to an open flame or to temperatures above 150°C. Do not expose to excessive heat or to an open flame.
- Plastic chain is flammable. Do not use at temperatures above the maximum allowable temperature or use near an open flame. Combustion may generate dangerous toxic gases.

⚠ Corrosion Resistance to Various Fluids

When selecting a chain, refer to below table to determine the suitability of the chain material for specific applications. In addition, below table can be used to check the corrosion resistance of the wearstrip material to be used together with the top chain. The overall usage environment, including humidity and other conditions, must also be thoroughly evaluated in the selection process. Below table lists materials separately for the top plate and for other chain components. These must be considered together for optimal selection. Chemicals for which no concentration is noted in the table were used at 100% concentration or as saturated solutions. Note that conditions will change if a mixture of solutions is used.
The below table shows the results of lab tests conducted at 20°C and is provided for reference only. No warranty conditions whatsoever are stated or implied by the data in this table.

Corrosion Resistance to Various Fluids

Material \ Liquid name	Acetic acid (10%)	Acetone	Alcohol	Aqueous ammonia	Beer	Benzene	Carbon tetrachloride	Chromic acid (5%)	Citric acid	Drinking water/Coffee	Formic acid (50%)	Formic acid aldehyde	Fruit juice	Gasoline	Hydrochloric acid (2%)	Hydrogen peroxide (3%)	Iodine	Lactic acid	Milk/Butter	Nitric acid (5%)	Oils (vegetable, mineral)	Ozone	Paraffin	Peracetic acid	Phosphoric acid (10%)	Potassium hydroxide	Seawater	Soapy water	Sodium chloride	Sodium hypochlorite	Sodium hydroxide [caustic soda (25%)]	Sulfuric acid (5%)	Vegetable juice	Vinegar	Water	Whisky	Wine	Xylene
Steel	×	×	○	△	○	○	△	×	×	○	×	○	×	○	×	×	×	×	○	×	○	×	○	×	×	△	×	△	×	×	×	×	△	×	×	○	○	○
Stainless steel 18-8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	○	×	○	○	○	○	○	○	○	△	○	△	○	○	×	○	×	○	△	○	○	○	○
Stainless steel 18Cr	○	○	○	○	○	○	○	△	○	○	○	○	△	○	×	△	×	△	○	△	○	△	○	○	△	○	×	○	○	×	○	×	○	×	○	○	○	○
Stainless steel 13Cr	×	○	○	○	○	○	△	○	△	○	×	○	△	○	×	△	×	×	○	△	○	△	○	○	×	○	×	○	○	×	○	×	○	×	○	○	○	○
Stainless steel AS series	○	○	○	○	○	○	○	△	○	○	○	–	△	○	×	△	–	△	○	△	○	–	○	–	△	○	×	○	○	×	○	×	○	×	○	○	○	○
Plastic pins (special engineering plastic)	×	○	○	△	○	○	○	×	×	○	△	–	○	○	×	×	–	△	○	○	○	×	○	○	△	×	△	○	○	△	×	×	○	○	○	○	○	–
Polypropylene (including HTW series)	–	○	○	○	○	△	△	×	○	○	○	○	○	○	○	○	–	○	○	○	○	×	○	○	○	–	○	○	○	○	○	○	○	○	○	○	○	△
Standard series/polyacetal Note: 2	×	○	○	○	○	○	○	×	×	○	×	○	○	○	×	×	×	○	○	×	○	×	○	△	×	○	△	○	○	×	○	×	○	△	○	○	○	△
LF series/polyacetal Note: 3	×	○	○	○	○	○	△	×	×	○	×	○	○	○	×	×	×	○	○	×	○	×	○	×	×	○	△	○	○	×	×	×	○	△	○	○	○	△
KV180 series Note: 4	○	○	○	○	○	○	○	△	○	○	–	–	○	○	×	○	×	○	○	○	○	△	○	○	△	○	△	○	○	×	○	×	○	△	○	○	○	–
KV250 seiries Note: 4	○	○	○	○	○	○	○	×	○	○	△	–	○	○	×	○	×	○	○	○	○	○	○	○	△	○	△	○	○	×	○	×	○	△	○	○	○	○
Polyamide/reinforced polyamide (including slit pin)	×	○	○	○	○	○	○	×	△	○	×	○	○	○	×	×	×	△	○	×	○	×	○	×	×	×	△	○	○	×	△	×	○	×	○	○	○	–
Y series (including DIY series) Note: 5	○	×	○	○	○	○	○	○	○	○	○	○	○	○	×	○	×	○	○	○	○	○	○	○	△	○	△	○	○	×	○	×	○	△	○	○	○	○
SY series	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
UHMW-PE (including LTW and UPE series)	○	○	○	○	○	△	△	○	○	○	○	○	○	△	○	○	△	○	○	△	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	△
PK150 series	○	○	○	○	○	○	○	○	○	○	△	–	○	○	○	○	△	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Note: 1. "○": Totally resistant, "△": Partially resistant (depending on operating conditions), "×": Not resistant, "–": No data
2. "Standard polyacetal" includes Standard, CB, ALF, WR, E, SE, UVR, PFS series
3. "LF polyacetal" includes LFW, LFG and LFB series. NLF, HG and MWS series.
4. KV series takes the corrosion resistance of stainless steel pins into account.
5. Y series takes the corrosion resistance of stainless steel pins into account.
6. Do not use plastic crescent chain, KV150, HS, DIA, MPD, or MF series chains in environments where the chain will be exposed to liquids such as liquid detergents or chemical solutions. Contact Tsubaki if you have any questions or requests.
7. Contact a Tsubaki representative regarding the corrosion resistance of MPW series.

Top Chain

Applicable products	Plastic top chain, plastic modular chain (mold to width), stainless steel top chain, plastic block chain

1. Selection Process for Top Chain

Follow the process below to select the top chain and the wearstrip that are most suitable for the application.

Step 1: Check Conveyance Conditions
Step 2: Select Top Plate Material and Chain Type
Step 3: Select Wearstrip Material
Step 4: Determine Coefficient
Step 5: Calculate Chain Tension and Power Required
Step 6: Determine Chain Type

Note: When selecting UPE series, please fill in the plastic block chain RSP80-UPE inquiry sheet on page 491 and contact a Tsubaki representative.

Step 1. Check Conveyance Conditions

Check the operating condition as follows.

■Conveyance Conditions Checklist

1. Conveyed products	①Materials	
	②Mass per unit	g/unit
	③Shape	
	④Dimension (length x width x height) (diameter x height)	mm
	⑤Direction of conveyance	↑ conveyed products →
2. Conveyor layout	①Conveyance type	Straight conveyance ・ Sideflex conveyance
	②Length of conveyor	m
	③Width of conveyor	mm
	④Layout of conveyance	Draw a layout of the conveyance in the blank space below.
	⑤Space	m
3. Conveying conditions	①Amount of conveyed products	BPM·Piece
	②Interval of conveyed products	mm
	③Conveying speed	m/min
	④Lubrication	Yes ・ No
	⑤Stock of conveyed products (Accumulation and percentage)	Yes ・ No (If "yes", accumulate length: m)
4. Operating environment	①Temperature	°C
	②Conditions which may cause corrosion such as, contact with chemicals, water, and humidity (Refer to "Corrosion resistance to various fluids" on page 402.)	With ・ Without (If "yes", name of liquid:)
	③Presence of abrasives which may accelerate wear such as glass fragments, paint scraps, metal powder, sand	Yes ・ No
	④Exposure to UV radiation	Yes ・ No

2-④Conveyance layout and others

Step 2. Select Top Plate Material and Chain Type

2-1. Select Top Plate Material

Refer to below table choose a suitable top plate material according to the type of products to be conveyed.

Note: 1. See the relevant product page to check chain types, operating temperature and conditions.
2. Refer to "Corrosion resistance to various fluids" on page 402.

Table 1. Top Plate Material Selection Guide

Conveyed products	Top plate material	Lubrication			
		No lube		With lube	
		Abrasives			
		No	Yes	No	Yes
• Tin cans, aluminum cans, steel cans, metallic foil containers Note: 3	Polyacetal	C	×	A	D
• Plastics and plastic-covered containers, paper containers Note: 4	Stainless steel	D	C	B	A
• Glass bottles, glass products, ceramics Note: 5	Polyacetal	D	×	B	×
• Industrial parts Note: 6	Stainless steel	C	C	A	A

Note: 1. A: Strongly recommended, B: Recommended, C: Very usable, D: Usable, ×: Not appropriate
2. Select MWS series chains when antibacterial and/or mold resistant properties are required for conveyor lines for foods and beverages. See page 42 for details on the antibacterial/mold resistant properties of MWS series products.
3. This includes beer cans, soft drink cans, cans having metal tops and bottoms and fiber sides, etc.
4. It also includes plastic, plastic coated containers and paper continers for dairy products such as milk, cheese and ice cream. Paper plate and bottom such as soap and cereal.
5. This includes glass bottles and glass containers used for liquor, food, pharmaceuticals, cosmetics, etc.
6. This includes machine parts, dies, castings, forgings, metals, bearings, bolts, nuts, etc.

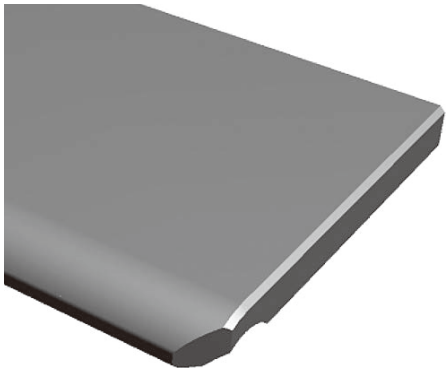
2-2. Select top plate width

Generally, the top plate must be slightly wider than the conveyed products. When conveyed products are very wide and none of the top plate widths are satisfactory, top plates of the same width may be used in a multi-strand arrangement. Top plates of different widths can be used together, but this is not desirable since the tension on the chains will be uneven. In addition, plastic modular chains can also be used.

■ Top Plate Edge Face Shape for Cut Chains

Cut edges of top plates are chamfered (approximately C0.5 to C0.8). Corners are also chamfered (approximately C2).

Shape of edge face



Note: 1. Processed by machining.
2. When manufacturing top plates to a width not noted, edges of top plates will be finished to the above specifications.
3. Special edge shapes are available upon request.
4. For a top plate with a small width, chamfer dimensions may be smaller accordingly.
5. Molded chain marks and actual chain width may not be identical because the width of the top plate is machine processed.

Step 3. Select Wearstrip Material

Select an appropriate wearstrip material based on the chain materials.

Table 2. Wearstrip Material Selection Guide

Chain type	Wearstrip material	Lubrication			
		No lube		With lube	
		Abrasives			
		No	Yes	No	Yes
Stainless steel top chain • Straight running • Sideflexing running	Stainless steel	D	D	B	B
	Steel	D	C	B	A
	Plastic rail (P rail) PMW rail PLF rail	A	×	A	×
	M rail SJ-CNO	A	×	×	×
Plastic top chain, plastic block chain, plastic modular chain (Mold to width) • Straight running • Sideflexing running	Stainless steel	B	D	A	A
	Steel	A	C	D	D
	Plastic rail (P rail)	D	×	A	×
	PMW rail PLF rail	B	×	A	×
	M rail SJ-CNO	A	×	×	×

Note: 1. A: Strongly recommended, B: Recommended, C: Very usable, D: Usable, ×: Not appropriate
2. No lubrication is needed for Lambda chains.
3. Select stainless steel or steel wearstrips for KV series chains for normal temperatures, and a stainless steel wearstrip for high-temperature (over 50°C) applications.
4. Recommended metal wearstrip material is cold-rolled metal.
5. Steel wearstrip assumes oil lubrication.

■ Material, Color and Features of Plastic Wearstrips

	Material, color	Features
Plastic rail (P rail)	UHMW-PE (color: white or green)	• Most commonly used rail • Machined or extruded • Recommended for plastic chains used under wet conditions • Low water absorption; chemical and impact resistance are also excellent
PMW rail PLF rail	Low friction, wear resistant UHMW-PE (color: white)	• Lower friction and more wear resistant than P rail • Machined or extruded
M rail SJ-CNO	Special polyamide [M rail (color: blue)], [SJ-CNO (color: purple)]	• Rail for only dry condition • Wear resistant • Machined

Note: Operating temperature range
Plastic rail (P rail), PLF rail and PMW rail: : –20°C to 60°C
M rail, SJ-CNO: : –20°C to 80°C

Top Chain

Step 4. Determine Coefficient

Coefficient shown in table 3 to 6 are based on in house test data. These values may differ depending on the operation conditions, atmosphere, shape of the conveyed products, chain grime, and other conditions. Use these factors to calculate chain tension shown in step 5.

Table 3: Coefficient of Dynamic Friction (μ_1, μ_2) between Top Plate and Wearstrip

Wearstrip and conveyed material		Lubrication	Top plate material										
			Stainless steel Note: 1	Steel	Polyacetal				KV Note: 2	DIA • MPD	HTW	MF	HS
					Standard Note: 3	LF Note: 4	CB	ALF					
Wearstrip material (μ_1)	Stainless steel	No lube (dry)	0.35	0.35	0.25	0.20	–	0.14	0.25	0.30	0.35	0.27	0.25
		Water	0.35	–	0.25	0.20	–	0.14	0.25	–	0.35	–	–
		Soapy water	0.20	–	0.15	0.15	–	0.11	0.16	–	0.20	–	–
		Oil	0.20	0.20	–	–	–	–	–	–	–	–	–
	Steel	No lube (dry)	0.35	0.35	0.25	0.17	–	0.14	0.25	0.30	0.35	0.27	0.25
		Water	–	–	–	–	–	–	–	–	–	–	–
		Soapy water	–	–	–	–	–	–	–	–	–	–	–
		Oil	0.20	0.20	–	–	–	–	–	–	–	–	–
	Plastic rail (P rail) M rail Note: 5	No lube (dry)	0.25	0.25	0.25	0.20	0.20	0.15	–	0.30	0.30	0.27	–
		Water	0.25	–	0.25	0.20	0.20	0.15	–	–	0.30	–	–
		Soapy water	0.15	–	0.15	0.13	–	0.11	–	–	0.20	–	–
		Oil	0.15	0.15	–	–	–	–	–	–	–	–	–
	PMW rail, SJ-NCO Note: 5	No lube (dry)	0.20	0.20	0.20	0.15	–	0.13	–	0.30	0.24	0.22	0.25
		Water	0.20	–	0.20	0.15	–	0.13	–	–	0.24	–	–
		Soapy water	0.15	–	0.12	0.12	–	0.11	–	–	0.20	–	–
		Oil	0.15	0.15	–	–	–	–	–	–	–	–	–
	PLF rail	No lube (dry)	–	–	0.18	0.14	–	0.12	–	–	–	–	–
		Water	–	–	0.18	0.14	–	0.12	–	–	–	–	–
		Soapy water	–	–	0.12	0.12	–	0.11	–	–	–	–	–
		Oil	–	–	–	–	–	–	–	–	–	–	–
Conveyed material (μ_2)	Metal can	No lube (dry)	0.35	–	0.25	0.20	0.19	0.14	0.23	0.30	0.35	0.28	0.22
		Water	0.35	–	0.25	0.20	0.19	0.14	0.23	–	0.35	–	–
		Soapy water	0.20	–	0.14	0.13	–	0.11	0.15	–	0.20	–	–
		Oil	–	–	–	–	–	–	–	–	–	–	–
	Glass bottle	No lube (dry)	0.25	–	0.22	0.14	0.12	0.10	0.18	0.25	0.22	0.25	–
		Water	0.25	–	0.22	0.14	0.12	0.10	0.18	–	0.22	–	–
		Soapy water	0.20	–	0.14	0.14	–	0.10	0.15	–	0.10	–	–
		Oil	–	–	–	–	–	–	–	–	–	–	–
	Plastic container	No lube (dry)	0.35	–	0.25	0.17	0.16	0.13	0.20	0.30	0.30	0.28	0.20
		Water	0.35	–	0.25	0.17	0.16	0.13	0.20	–	0.30	–	–
		Soapy water	0.20	–	0.15	0.13	–	0.11	0.15	–	0.20	–	–
		Oil	–	–	–	–	–	–	–	–	–	–	–
	Paper package	No lube (dry)	0.40	–	0.31	0.29	0.29	0.22	0.35	0.38	0.35	0.38	0.32
		Water	0.40	–	0.31	0.29	0.29	0.22	0.35	–	–	–	–
		Soapy water	0.20	–	0.20	0.20	–	0.12	0.20	–	–	–	–
		Oil	–	–	–	–	–	–	–	–	–	–	–

Note: 1. No lubrication is needed for Lambda chains.
2. For KV series, the coefficient of friction listed is for room temperature.
Under temperature conditions that exceed 50°C, use the dynamic friction coefficient 0.35. KV150 series is only for dry conditions.
3. Standard series, Y, E, DIY, MPW, UVR series and Plastic Crescent Chain.
4. LFW, LFG, LFB, NLF, WR, HG, MWS series.
5. M rail and SJ-CNO are only for dry use conditions.
6. With water lubrication, stainless steel pins will prematurely be worn and elongated earlier than plastic pins.
7. Depending on the type of conveyed product, the coefficient of dynamic friction coefficient can be greater than the values in (μ_2), which can result in adsorption.
To determine sliding performance, it is recommended that coefficient of friction be measured for each type of object conveyed.

Table 4: Coefficient of Rolling Friction (μ_3) between Conveyed Products and Plastic Rollers

Chain type	Coefficient of rolling friction
Accumulation chain (TTPDH-LBP) Curved accumulation chain (TPUS-LBP and TPUS-Y-LAP-LFB-MFR)	0.10
Curved accumulation chain (TPUS-Y-LAP, TP-30UTW-LAP, TP-36UTW-LAP)	0.07

Table 6: Angle Factor (α_C) when Using Corner Discs

Chain type	Angle factor (α_C)
TPUSR550, TPUSR826, TPUH-BO, TPUN555, TPUN550-LH, TPUN535-LH, TP-UB36, TP-50UNS (including D76)	Corner disc with integral bearing: 1.1 Corner disc without integral bearing: 1.15

Note: 1. The α_C factor is used for sideflexing movement of chains using corner discs, and is constant regardless of the sideflex angle.
2. TOS Plastic Crescent Chain uses sprockets in the corners. Use the values in the table above if the sprocket shaft hole includes an integral bearing.

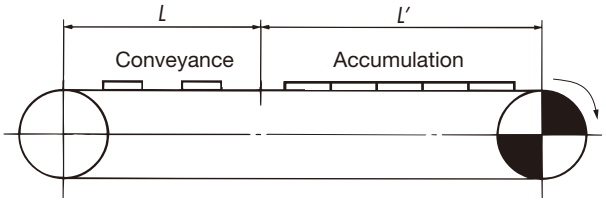
Table 5: Angle Factor (α_L) and Length Factor (α_S) when Using Curved Wearstrips

	Top plate material		Lubrication	Sideflex angle					
				30°	60°	90°	120°	150°	180°
Angle factor (α_L)	Stainless steel or steel		No lube or water	1.20	1.45	1.75	2.10	2.50	3.00
			Soapy water	1.10	1.25	1.35	1.50	1.70	1.85
			Oil	1.10	1.25	1.35	1.50	1.70	1.85
	Polyacetal	Standard Note: 3	No lube or water	1.15	1.30	1.50	1.70	1.90	2.20
			Soapy water	1.10	1.15	1.25	1.35	1.50	1.60
		LF Note: 4	No lube or water	1.10	1.25	1.35	1.50	1.70	1.85
			Soapy water	1.10	1.15	1.25	1.35	1.50	1.60
		CB	No lube or water	1.10	1.25	1.35	1.50	1.70	1.85
			Soapy water	–	–	–	–	–	–
		ALF	No lube or water	1.10	1.15	1.25	1.35	1.50	1.60
			Soapy water	1.05	1.10	1.20	1.25	1.35	1.40
	KV Note: 2		No lube or water	1.15	1.30	1.50	1.70	1.90	2.20
			Soapy water	1.10	1.20	1.30	1.40	1.50	1.65
	DIA, MPD		No lube (dry)	1.15	1.35	1.60	1.85	2.20	2.55
	HTW		No lube or water	1.20	1.45	1.75	2.10	2.50	3.00
			Soapy water	1.10	1.25	1.35	1.50	1.70	1.85
	MF		No lube (dry)	1.15	1.35	1.55	1.75	2.05	2.35
	HS		No lube (dry)	1.15	1.30	1.50	1.70	1.90	2.20
Length factor (α_S)				0.5	1	1.6	2.1	2.6	3.1

Note: 1. It is recommended that sideflexing conveyors be lubricated so that the chain slides smoothly on the wearstrip. In particular, when the sideflex radius spans an angle greater than 90°, the chain and the wearstrip will wear unevenly in a relatively short period of time, and chain float may occur. If lubrication is impossible, consider using a corner disc in the horizontal curved section.
2. Values for the KV series are for room temperature. For high temperature (over 50°), apply the value of "no lubrication" or "water lubrication" in "stainless steel" or "steel".
3. Standard, Y, E, DIY, MPW, UVR series and Plastic Crescent Chain.
4. LFW, LFG, LFB, NLF, WR, HG, MWS series.

Step 5. Calculate Chain Tension and Power Required

5-1. Calculating Tension (*F*) for Straight-Running Movement



Note: SI units and gravimetric units
The formulas are given for both SI units and gravimetric units.
When calculating tension *F* with gravimetric units, the weight (kgf) in gravimetric units is the same value as the mass (kg) in SI units.

Description of Symbols

F	= Chain tension	kN{kgf}
m_1	= Chain mass	(kg/m)
L	= Length of conveyance section	(m)
m_2	= Mass of conveyed products	(kg/m)
L'	= Length of accumulation section	(m)
m_3	= Mass of conveyed products in accumulation section	(kg/m)
μ_1	= Coefficient of dynamic friction between chain and wearstrip	(See table 3)
μ_2	= Coefficient of dynamic friction between conveyed products and chain in accumulated section	(See table 3)
μ_3	= Coefficient of rolling friction between conveyed products and plastic rollers	(See table 4)
α_L	= Angle factor when using curved wearstrips	(See table 5)
α_C	= Angle factor when using corner discs	(See table 6)
α_S	= Length factor	(See table 5)
θ	= Inclination angle	(degree)
r	= Sideflex radius	(m)
P	= Power required	(kW)
V	= Chain speed	(m/min)
η Note	= Mechanical transmission efficiency for drive unit	

Note: For the mechanical transmission efficiency, check the drive unit used.

SI Units (kN)

Chain Tension

$$F = 9.80665 \times 10^{-3}\{(2.1m_1 + m_2)L \cdot \mu_1 + (2.1m_1 + m_3)L' \cdot \mu_1 + m_3 \cdot L' \cdot \mu_2\}$$

Power Required

$$P = \frac{F \cdot V}{60\eta}$$

Gravimetric Units (kgf)

Chain Tension

$$F = (2.1m_1 + m_2)L \cdot \mu_1 + (2.1m_1 + m_3)L' \cdot \mu_1 + m_3 \cdot L' \cdot \mu_2$$

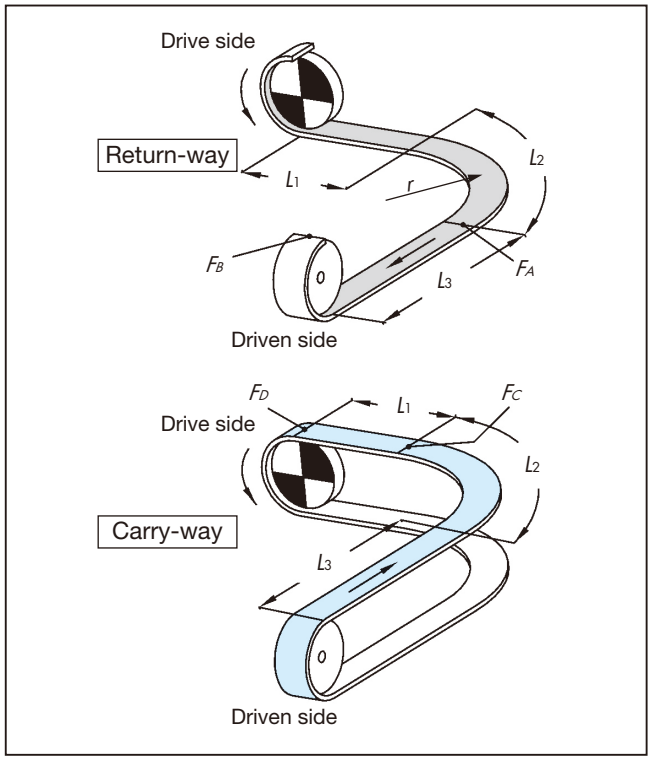
Power Required

$$P = \frac{F \cdot V}{6120\eta}$$

Note: When using accumulation chains (such as TTPDH-LBP), calculate by substituting μ_3 for μ_2 in the equations above.

5-2. Calculating Tension (*F*) for sideflexing conveyance (with one curved section)

The calculation is basically the same as for straight conveyance. The tension acting on the corner part is corrected using the angle coefficient. A calculation example is shown for the conveyor route below. Lubrication is recommended for curved conveyance where the chain and wearstrip slide against each other. Particularly in parts where the sideflex angle exceeds 90°, the chain or wearstrip can partially wear out in relatively short time, causing the chain to lift up. If lubrication is impossible, consider using a corner disc in the horizontal curved section.



$$F = 9.80665 \times 10^{-3} \cdot F_D \text{ (kN)}$$

Tension at return-way

〔Tension at section A: F_A〕

$$F_A = m_1(L_1+L_2)\,\mu_1 \cdot \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section B: F_B〕

$$F_B = 1.1 \times (F_A + m_1 \cdot L_3 \cdot \mu_1)$$

Tension at carry-way

〔Tension at section C: F_C〕

$$F_C = \{F_B+(m_1+m_2)(L_2+L_3)\,\mu_1+m_3(L_2+L_3)\,\mu_2\} \cdot \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section D: F_D〕

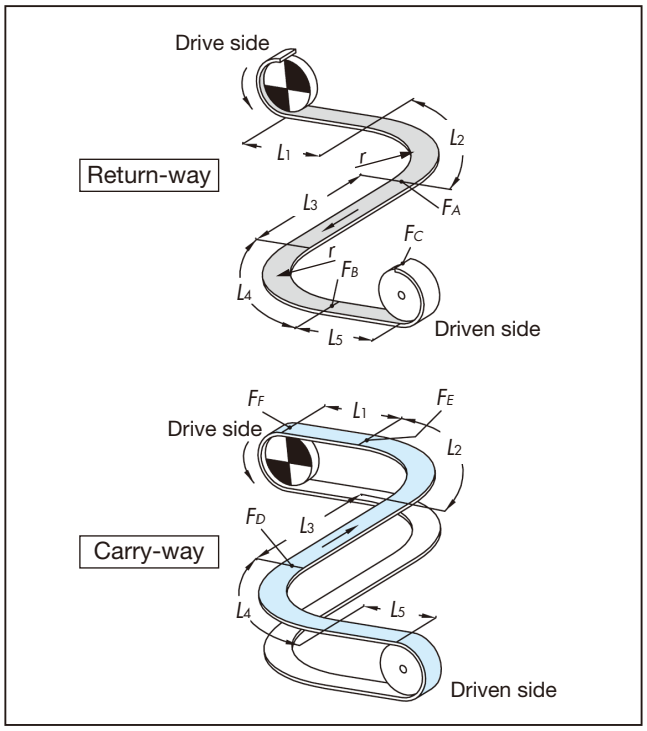
$$F_D = F_C+\{(m_1+m_2)L_1 \cdot \mu_1+m_3 \cdot L_1 \cdot \mu_2\}$$

Note: 1. When using curved accumulation chains (such as type TPUS-LBP), calculate by substituting μ_3 for μ_2 in the equations above.
2. When using corner discs in the curved section, replace the angle factor α_L with the corner disc angle factor α_C for calculation.

Top Chain

5-3. Calculating Tension (*F*) for Sideflexing Conveyance (with Two Curved Sections)

When sliding the chain against curved wearstrip, no more than two 90° curves should be allowed in one conveyor. Otherwise it may cause pulsation of the chain movement. To include additional curved sections, consider splitting the conveyor into sections or use the corner disc system.



$$F = 9.80665 \times 10^{-3} \cdot F_F \text{ (kN)}$$

Tension at return-way

〔Tension at section A: F_A〕

$$F_A = m_1(L_1+L_2)\ \mu_1 \cdot \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section B: F_B〕

$$F_B = \{F_A+m_1(L_3+L_4)\ \mu_1\}\ \alpha_L 90°$$

$$L_4 = r \times \alpha_S 90°$$

〔Tension at section C: F_C〕

$$F_C = 1.1 \times (F_B + m_1 \cdot L_5 \cdot \mu_1)$$

Tension at carry-way

〔Tension at section D: F_D〕

$$F_D = \{F_C+(m_1+m_2)(L_4+L_5)\ \mu_1+m_3(L_4+L_5)\ \mu_2\} \cdot \alpha_L 90°$$

$$L_4 = r \times \alpha_S 90°$$

〔Tension at section E: F_E〕

$$F_E = \{F_D+(m_1+m_2)(L_2+L_3)\ \mu_1+m_3(L_2+L_3)\ \mu_2\} \cdot \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section F: F_F〕

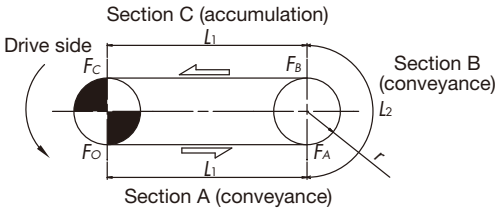
$$F_F = F_E+(m_1+m_2)L_1\ \mu_1+m_3 \cdot L_1 \cdot \mu_2$$

Note: 1. When using curved accumulation chains (such as TPUS-LBP), calculate by substituting μ_3 for μ_2 in the equations above.
2. When using corner discs in the curved section, replace the angle factor α_L with the corner disc angle factor α_C for calculation.

5-4. Calculating Tension (*F*) for Sideflexing Movement (Horizontal Drive)

Applicable chain	TPUH-BO (horizontal conveyance), Plastic Crescent Chain (TORP, TOSP), Stainless Steel Top Chain (TO, TU)

The calculation is basically the same as for straight conveyance. The tension acting on the corner part is corrected using the angle coefficient. A calculation example is shown for the conveyor route below.



$$F = 9.80665 \times 10^{-3} \cdot F_C \text{ (kN)}$$

〔Tension at section A: F_A〕

$$F_A = (m_1+m_2) \cdot L_1 \cdot \mu_1$$

〔Tension at section B: F_B〕

$$F_B = \{F_A+(m_1+m_2) \cdot L_2 \cdot \mu_1\} \cdot \alpha_C$$

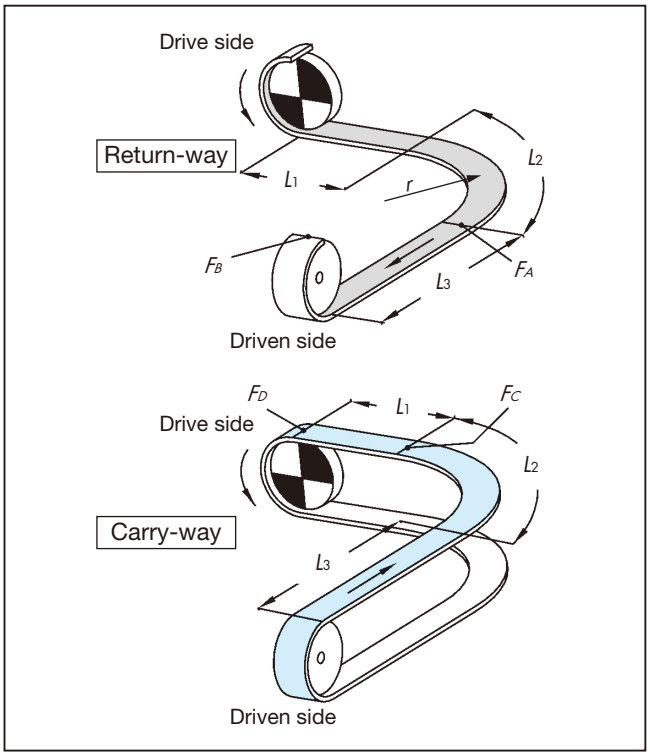
$$L_2 = r \cdot \alpha_S 180°$$

〔Tension at section C: F_C〕

$$F_C = F_B+(m_1+m_3) \cdot L_1 \cdot \mu_1+m_3 \cdot L_1 \cdot \mu_2$$

5-5. Calculating Tension (*F*) for Sideflexing Movement (with one Curved Section) of TTUP(T)-M and TTUPM838H

The coefficient values shown in Table 7 is obtained from our in-house experiment. The values are subject to different variables such as operating conditions, shape and material of conveyed products. The value will be used in the tension calculations.



$$F = 9.80665 \times 10^{-3} \cdot F_D \text{ (kN)}$$

Tension at return-way

〔Tension at section A: F_A〕

$$F_A = m_1(L_1+L_2)\,\mu_1 \cdot \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section B: F_B〕

$$F_B = 1.1 \times (F_A + m_1 \cdot L_3 \cdot \mu_1)$$

Tension at carry-way

〔Tension at section C: F_C〕

$$F_C = \{F_B+(m_1+m_2)L_2 \cdot (\mu_1+\mu_4)+(m_1+m_2) \cdot L_3 \cdot \mu_1 + m_3(L_2+L_3) \cdot \mu_2\} \times \alpha_L 90°$$

$$L_2 = r \times \alpha_S 90°$$

〔Tension at section D: F_D〕

$$F_D = F_C+\{(m_1+m_2)L_1 \cdot \mu_1+m_3 \cdot L_1 \cdot \mu_2\}$$

Table 7. Magnet Coefficients (μ_4)

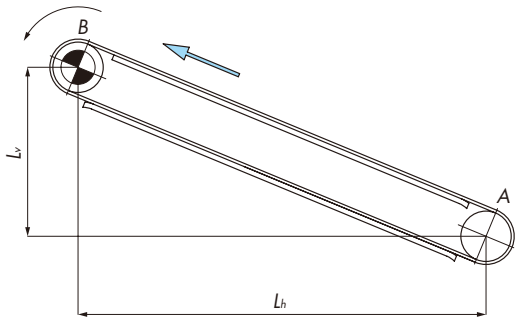
		Magnet coefficients
Lubrication state		No lubrication/water lubrication
Top plate material	CB	0.47
	ALF	
	HG	

5-6. Calculating Tension (*F*) for Inclined Movement

The effects of speed, conveyed products, center of gravity, mass, environment, and other parameters will make it difficult to determine precisely the maximum inclination angle. Although the values given in Table 8 can serve as guidelines, it will be necessary to perform tests.

Table 8: Calculating Tension for Inclined Movement

Chain material	Without lubrication (dry)	Soapy water lubrication	Oil lubrication
Steel-based	10°	–	6°
Standard (Polyacetal)	5°	3°	–



$$F = 9.80665 \times 10^{-3} \cdot F_B \text{ (kN)}$$

Tension at return-way

〔Tension at section A: F_A〕

$$F_A = 1.1 m_1(L_h \cdot \mu_1 - L_v)$$

$$F_A<0,\ F_A = 0$$

Tension at carry-way

〔Tension at section B: F_B〕

$$F_B = F_A + \{(m_1 + m_2)(L_h \cdot \mu_1 + L_v)\}$$

Tension of chain

$$F = F_B$$

Step 6. Determine Chain Type

Select a top chain having a maximum allowable load larger than the maximum tension (*F*) to be applied to the chain. Consult the maximum allowable load consider conveyor speed and ambient temperature.

To obtain maximum allowable load, refer to page on 421 to 435 for “allowable load graphs”.

$F \leq$ Maximum allowable load (coupled with speed and temperature)

When the maximum allowable load is insufficient, it can be corrected by using top plates with narrower width and increasing the number of chain strands, or by splitting it into many short conveyors. Also selecting a chain with a larger maximum allowable load. To determine an optimum chain type, remember to take environmental conditions into account.

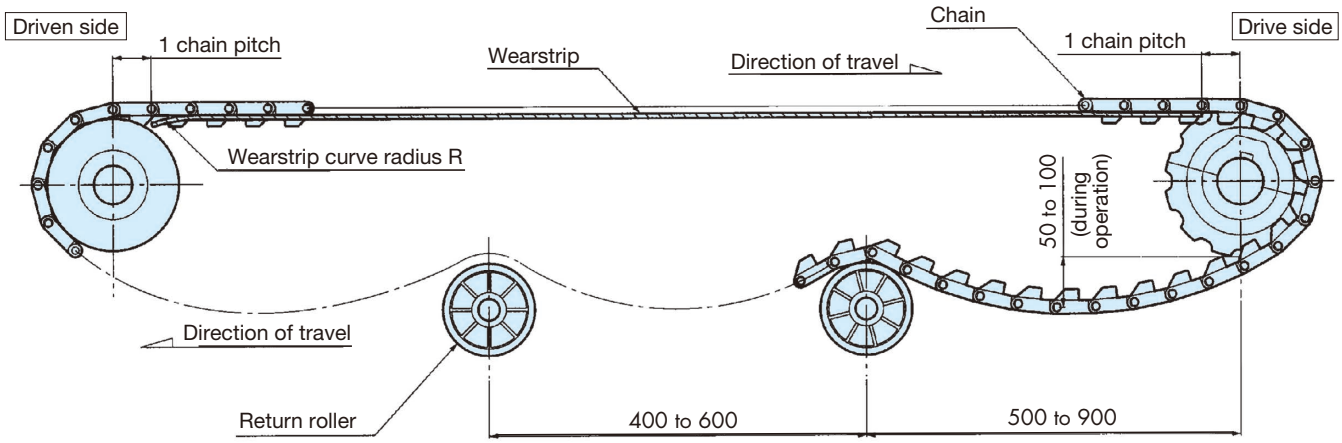
Top Chain

Applicable products	Plastic top chain, plastic modular chain (mold to width), stainless steel top chain, plastic block chain

2. Conveyor Design

Wearstrip arrangement depends on the installation space and other factors. An example is shown in the figure below. Refer to page on 412 for the layout of the return-way of the chain.

Note: Refer to page on 440 for "conveyor design" of plastic modular chains (mold to width).

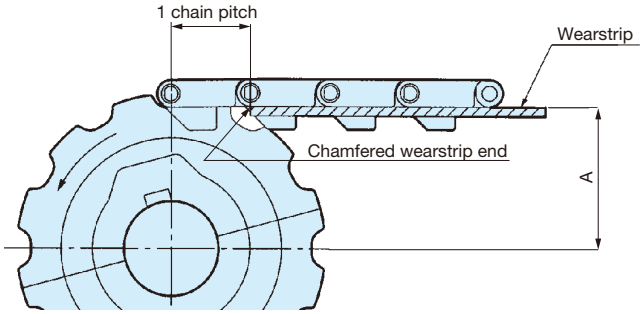


1) Chain slack
The distance between return rollers should be spaced at intervals of 500 to 900 mm. The amount of slack between rollers should be 50 to 100 mm. This slack prevents tooth jumping. Tooth jumping may occur when the amount of slack and/or intervals falls outside of this range.
2) Engagement angle
The engagement angle between drive sprocket and the chain must be greater than 150°.
3) Wearstrip ends
The space between the center of drive/driven shaft and the end of wearstrip should be set to one pitch of the chain used. In addition, the end of the wearstrip faced to driven side should be rounded or chamfered downward in order to prevent the chain from snagging or catching on the wearstrip.

2-1. Wearstrip Positioning on the Drive/Driven Side

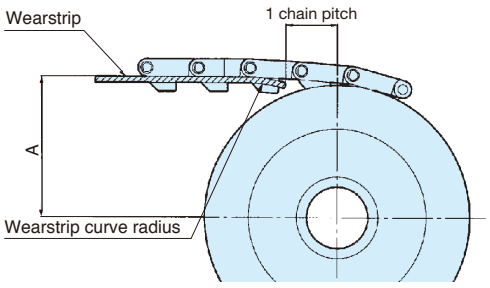
2-1-1. Positioning sprocket and wearstrip on carry-way

[Drive side]

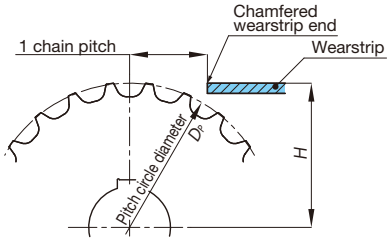


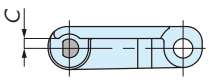
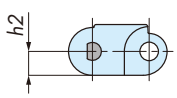
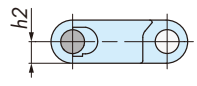
[Driven side]

When using an idler wheel (no teeth) for chains with top plates



For plastic modular chain (mold to width)



Plastic top chain / Stainless steel top chain		$A=\frac{D_P}{2}+C$
Plastic block chain / Plastic universal chain		$A=\frac{D_P}{2}-h2$
Plastic modular chain (Mold to width)		$H=\frac{D_P}{2}-h2$

Note: 1. D_P: Pitch circle diameter
2. Adopt the pitch circle diameter of sprocket having the equivalent number of teeth to the idler wheel.

2-2. Straight Wearstrips (Plastic Rails) on Carry-Way

2-2-1. Carry-Way Support

1. The guide width G*w* should be about 2 mm wider than the width of the base chain hinge. (Refer to fig. 1) (Refer to 2-2-4. for guide width G*w*.)
2. When multiple strands of chains are traveling in opposite directions, or in the same direction but at different speeds, use T rails so that the chain top plates do not make contact with each other (Refer to fig. 2).
3. When multiple strands of chains are traveling in the same direction at the same speed, the recommended gap between the chain top plates is 1.4 to 3 mm (Refer to fig. 3).
4. The use of wearstrips is recommended even though no wear will occur with the frame itself.
5. Considering wear, the wearstrip must be at least 3 mm thick.

Fig. 1: Chain carry-way support

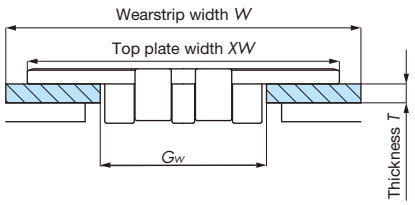


Fig. 2. When multiple strands of chains are traveling at different speeds

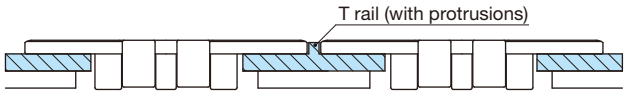
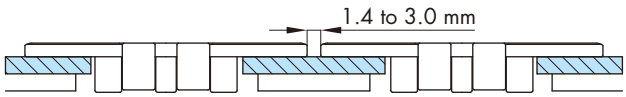
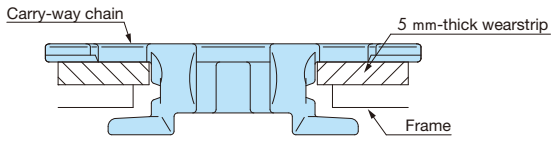


Fig. 3. Multiple strands having the same speed



2-2-2. Wearstrip When Using Chains with Float-Preventive Tabs

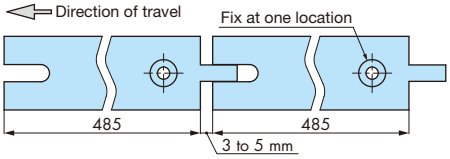


2-2-3. Mounting Straight Wearstrip

■ PR rails, PH rails and flat rails

Use a screw to attach only one end of the wearstrip to the frame and leave an appropriate clearance at the joint to allow for thermal expansion.

(Clearance for PH rails: 3 to 5 mm)



Note: 1. Coefficients of linear expansion

Plastic rail (P rail), PLF and PMW rail	:20×10^{-5}/°C
M rail	:9×10^{-5}/°C

2. Operating temperature of wearstrips

Plastic rail (P rail), PLF and PMW rail	:-20°C to 60°C
M rail	:-20°C to 80°C

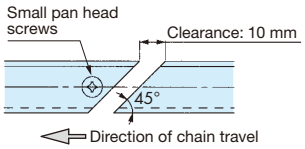
3. Do not use in environments where wearstrip components will be exposed to steam.
4. Refer to page on 417 for rails for KV series.

■ Mounting long straight wearstrip (extruded wearstrips such as Z, T, L, and flat)

【When the conveyor length is long】

Assuming that these wearstrips are installed in 1-meter units, a clearance should be left between wearstrips to prevent chain sag as shown in the illustration below.

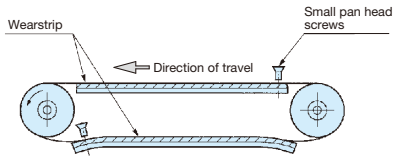
(Clearance between long straight wearstrips: 10 mm per meter)



Note: If more than 1 meter, apply the coefficient of linear expansion to calculate the clearance dimension.

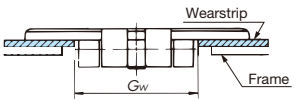
【When the conveyor length is short】

If both ends of the wearstrip are secured using small pan head screws, the wearstrip will warp (become rippled) due to the difference in coefficient of thermal expansion between the wearstrip and metal frame. Attach only one end of the wearstrip using a small pan head screws.



2-2-4. Guide Clearance for Chain and Wearstrip Inner Gap (Straight Sections)

【Plastic or stainless steel top chain】



【Plastic block chain】

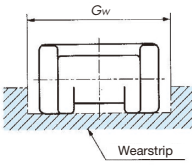


Table 9: Plastic Top Chain, Stainless Steel Top Chain

Chain type	Guide width Gw
TTP, TTPH, TPF, TPS, TP-OTD, TPH, TPM, TPM-SN, TT	44
TTPDH, TTPDH-LBP	140
TN	38
TPRF2040, TP-1843G	23
TPRF2060, TS, TTUPM-P, TTUPM-PC	32.5
TTPT, TSA	44.5
TTUP, TTUPH, TTU, TTUPS-H	43
TPU, TPUM	44
TPU-USR	46
TPUS	58
TPUS-LBP, TPUS-Y-LAP	60
TPUSR, TP-PTS	37
TNU	38
TRU, TTUP-LLPC	44.5
TTUP(T)-M, TPU(T)-LH, TPUH-BO, TTKU, TO, TU, TTUPM838H	45
TTPM	32
TPSS	62
TTUPS	61.5
TP-36AK	31
TP-PT, TP-1873T, TP-UB36	34
TP-1873G	35
TP-30UTW-LAP	50.5
TP-36UTW-LAP	62
TOSP	27
TORP	48

Table 10: Plastic Block Chain, Plastic Universal Chain

Chain type	Guide width Gw
TPUN, TPUN-LH, TP-50UNS, TP-50UNS-D76 Note: 1	58
TP-50UN-T95	53
RSP35	16
RSP40, RSP40-SL300	23
RSP50	25.5
RSP40-T-CU	34
RSP60, RSP60-CU	33
RSP60-2, RSP-PO12-2S	63
RSP60-CU-2	66
RSP80	43
RSP50-SL350 Note: 2	26

Note: 1. Recommended wearstrip height for TPUN and TPUN-LH chains is 15 to 22 mm.
2. If support with top plate surface, recommended guide width is 24.
3. If the chain type is the same, the guide width is the same whether plastic or stainless steel pins are used.

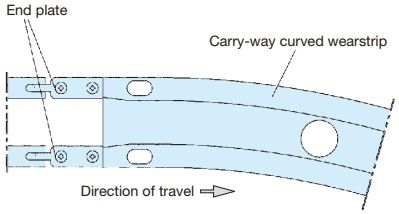
Top Chain

2-3. Mounting Curved Wearstrips on Carry-Way

2-3-1. Design for Curved Wearstrip

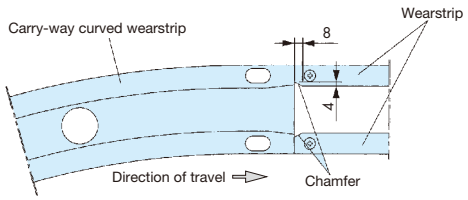
■ Design for Head End

Install end plates on the straight wearstrip closely in front of the head end of the curved wearstrip.



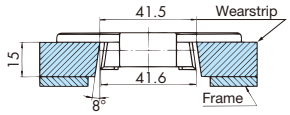
■ Design for Tail End

Install end plates on the straight wearstrip closely after the tail end of the curved wearstrip. The edge of the wearstrip should be chamfered to prevent interference with the chain.

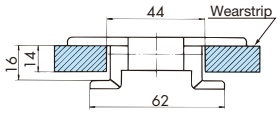


2-3-2. Chain and Wearstrip Cross-Sections

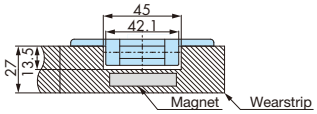
●TTUP, TTUPH



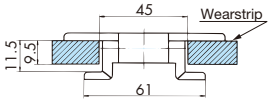
●TPU, TPUM



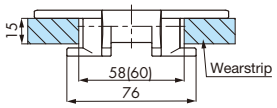
●TTUP(T)-M



●TPU(T)-LH, TPU-USR

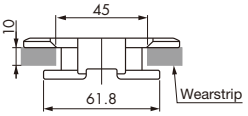


●TPUS, TPUS-LBP
TPUS-Y-LAP

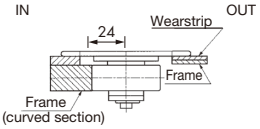


( ): TPUS-LBP, TPUS-Y-LAP

●TPUH-BO

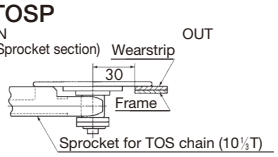


●TORP



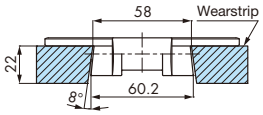
Sprocket section is identical to TOSP.
Note: Refer to page on 416.

●TOSP

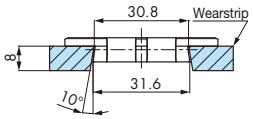


Note: Refer to page on 416.

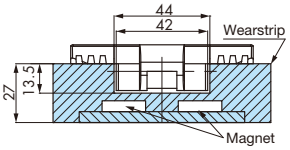
●TTUPS



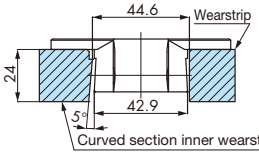
●TTUPM-P, -PC



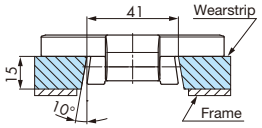
●TTUPM838H



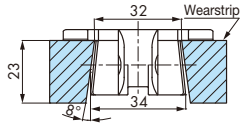
●TTUP-LLPC



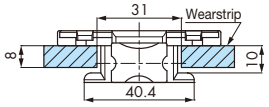
●TTUPS-H



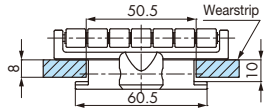
●TP-UB36



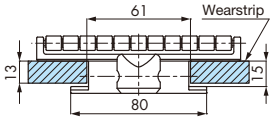
●TP-36AK



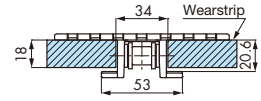
●TP-30UTW-LAP



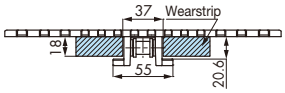
●TP-36UTW-LAP



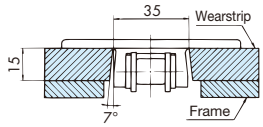
●TP-PT



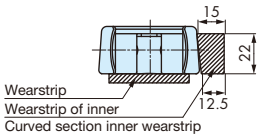
●TP-PTS



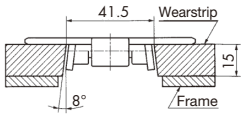
●TNU



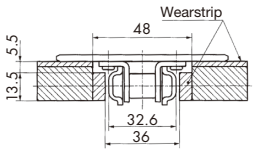
●TPUN, TP-50UNS
TP-50UNS-D76



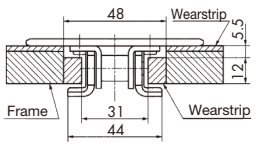
●TTU



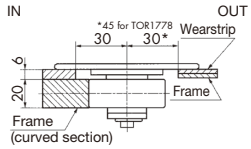
●TTKU



●TRU

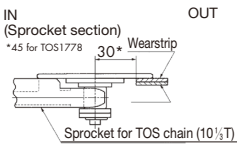


●TOR



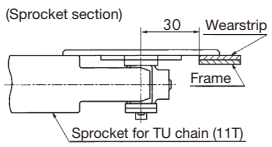
Sprocket section is identical to TOS.
Note: Refer to page on 416.

●TOS

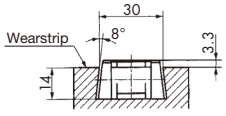


Note: Refer to page on 416.

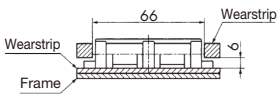
●TU



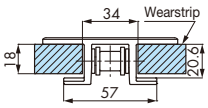
●RSP60-CU



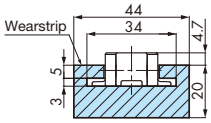
●RSP60-CU-2



●TP-1873-T



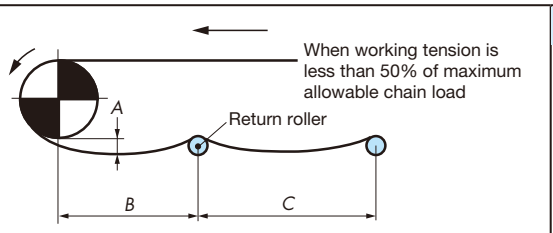
●RSP40-T-CU

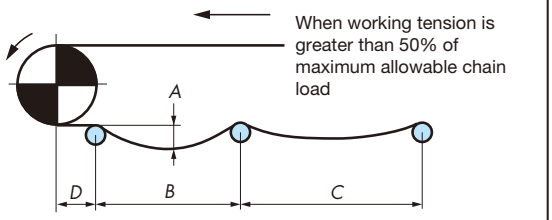


Note: 1. The use of corner discs is recommended with TPUSR, TPUN555, TPUN550-LH, TPUN535-LH, TP-UB36, TP-50UNS, and TP-50UNS-D76 chains.
2. Special magnetic curved plastic rails should be used with TTUP(T)-M and TTUPM838H. Contact a Tsubaki representative for product details.

2-4. Straight Section Return-Way Layout

The return-way layout will vary according to the type of chain, the type of products being conveyed and the layout of the conveyor, but in general, layouts will be similar to those illustrated below.





Supported by return rollers

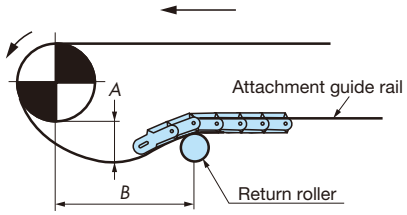
This is the most common and recommended layout.

- Angle of chain wrap on the drive sprocket must be at least 150˚.
- Make sure the return rollers rotate freely. If they do not rotate freely, localized sliding will occur, possibly generating wear dust or causing the top plate to wear unevenly.
- Highly rotational return roller or return rollers with integrated bearings are recommended for the return rollers (Refer to page on 363 to 364).
- For chain speeds greater than 50 m/min, dimension C must be less than 300 mm.
- As to the installation dimension of the return rollers, B should be greater than C. If span C is the largest value, conveyance may not run smoothly.

A: 50 to 100 mm (during operation)
B: 500 to 900 mm
C: 400 to 600 mm
D: Less than half the outer diameter of the sprocket

} May vary depending on chain type and conveying conditions. To be used only as a basic guide.

Note: See the following pages for details.



Supported by wearstrip fitted with tabs

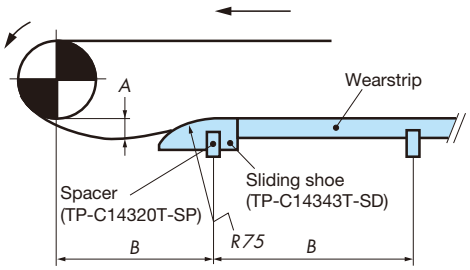
Using a wearstrip to support chains fitted with float-preventive tabs eliminates sliding on the top plate surface. This is particularly applicable in situations where damage (such as scratching) to the top plate's upper surface must be avoided during conveying.

- Angle of chain wrap on the drive sprocket must be at least 150˚.

A: 50 to 100 mm (during operation)
B: 500 to 900 mm

} May vary depending on chain type and conveying conditions. To be used only as a basic guide.

Note: See the following pages for details.



Supported by serpentine-style wearstrip

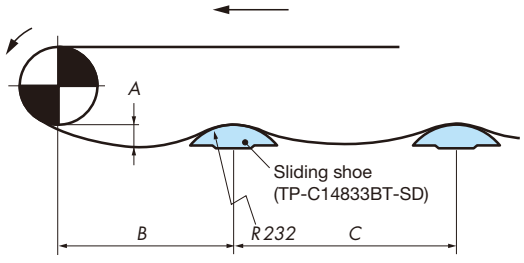
Supporting the top plates only in localized areas may result in uneven wear. Install the wearstrip in an "8"-shaped or wavelike layout so that the top chain plates are fully supported at all points. The construction should be such that extraneous matter, dirt, etc., falls through easily.

- Angle of chain wrap on the sprocket must be at least 150˚.

A: 50 to 100 mm (during operation)
B: 500 to 900 mm

} May vary depending on chain type and conveying conditions. To be used only as a basic guide.

Note: See the following pages for details.



Supported by sliding shoes

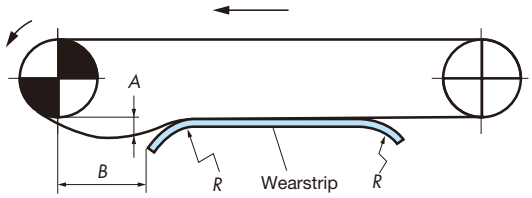
Suitable for relatively slow-speed conveying conditions (less than 50 m/min). Generally used for accumulation chain (TTPDH-LBP) or plastic roller tables (ST/RT).

- Angle of chain wrap on the drive sprocket must be at least 150˚.

A: 50 to 100 mm (during operation)
B: 500 to 900 mm
C: 400 to 600 mm

} May vary depending on chain type and conveying conditions. To be used only as a basic guide.

Note: See the following pages for details.



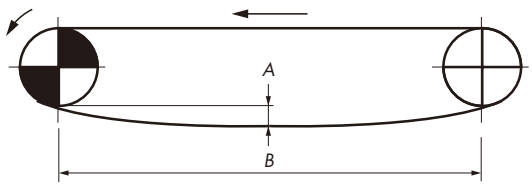
Using wearstrips only

Although this is an economical option for layouts, it has a disadvantage in that the upper surface of the top plates is susceptible to damage from sliding. Suitable for chains with relatively large back-flex radius.

- Angle of chain wrap on the drive sprocket must be at least 150˚.
- The radius of curvature (R) on both ends of the wearstrips must be greater than the backflex radius of the chain. (See table 11 on the next page.)

A: 50 to 100 mm (during operation)
B: 500 to 900 mm

} May vary depending on chain type and conveying conditions. To be used only as a basic guide.



No support

This conveyor layout is normally not recommended because the tension of the return-way from the weight of the chain causes chain vibration and prevents smooth operation. If this method is unavoidable in the case of short conveyor lengths (less than 1.5 m), provide a take-up mechanism on the driven side or splice the chain in case the chain elongates.
Angle of chain wrap on the drive sprocket must be at least 150˚.

- The amount of chain slack A should be approximately 10% of the conveyor length B.

Note: See the following pages for details.

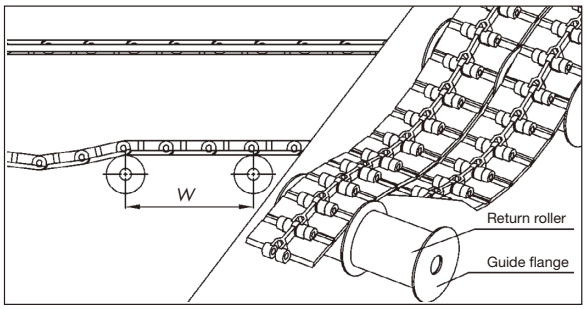
Top Chain

2-4-1. Return-Way Layout Details

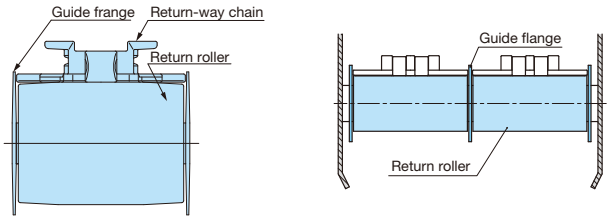
■ Support system using return rollers

- Return rollers support the top surface of the chain on the return-way.
- When using return rollers, check the backflex radius of chains in Table 11. The radius of the return roller must be greater than the backflex radius of the chain. However, as long as the backflex radius is less than around 300 mm, return rollers can be used by keeping the chain slack low. These conditions do not apply to roller tables or accumulation chains.
- When using plastic top chain, the ratio of the inner diameter to the outside diameter of the return rollers should be 1:4 to ensure smooth rotation of rollers. In addition, TP-IR18 and TP-IR60 Return Rollers which use a soft material on the outer surface of the roller (only for dry conditions); and TP-C121963RNT-RR, TP-C121966RNT-RR, TP-C121967RNFT-RR, TP-C121970RNFT-RR, TP-RR61544-RB, TP-RR62032-RB, TP-RR62044-RB, TP-RR30850, TP-RR41050 (for dry and wet conditions) Return Rollers are effective in improving rotational performance.

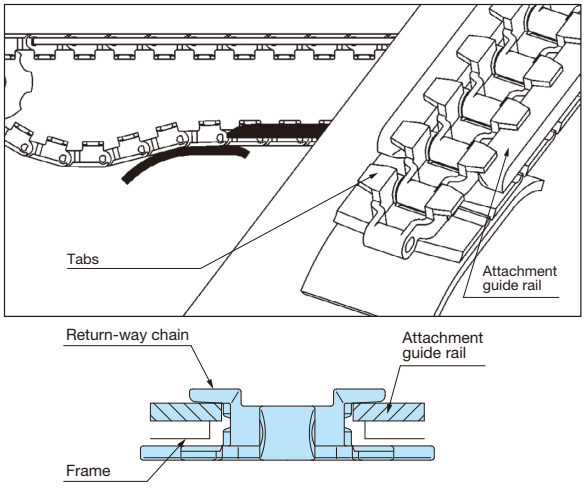
Note: Use highly rotational return roller when the chain speed is less than 50 m/min.



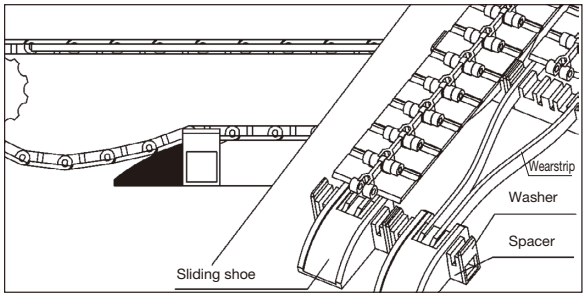
Single-strand **Multi-strand**



■ Support system using wearstrip fitted with float-preventive tabs
(when damage to the top plate's upper surface must be avoided)



■ Support system using wearstrips
Wearstrips should be positioned to make contact evenly across the chain width, taking into account wear on the chain-conveying surface. The construction should be such that extraneous matter, dirt, etc., falls through easily.



■ Support system using sliding shoes
Secure a 20mm-dia. polished (cold-finished) steel bar to the frame and attach the sliding shoe(s) by snapping them onto the steel bar. Use a collar or other hardware to prevent the sliding shoes from shifting laterally. With the steel bar serving as a pivot, the sliding shoes will rock up and down with the movement of the chain.
The ★ mark in the illustration above indicates the location of a hole used to connect multiple sliding shoes horizontally in tandem to span a multi-strand conveyor.

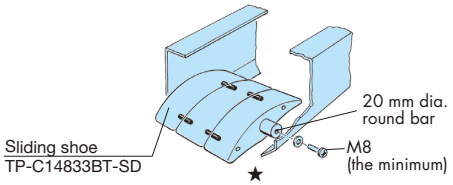


Table 11: Backflex Radius of Chains

Type	Chain	Backflex radius mm
Plastic top chain, straight running	TTP	40
	TTPT, TTPDH	50
	TTPM	25
	TPF, TPS	40
	TP-OTD	50
	TPH, TTPH	35
	TPSS	50
	TPM(-SN)	15
	TPRF2040	350
	TPRF2060	50
	TN	100
	TTPDH-LBP	400
Plastic block chain, straight running/ sideflexing running	RSP35	110
	RSP35-KV180	150
	RSP40	125
	RSP40-SL300	50
	RSP40-T-CU	25
	RSP50	200
	RSP50-SL350	140
	RSP60, RSP80	180
	RSP-PO8PF	125
	RSP-PO8PFT	125
	RSP60-2	450
	RSP-PO12-2S	400
	RSP60-CU	250
	RSP60-CU-2	150
Stainless steel top chain, straight running	TT	180
	TS, TSA	330

Type	Chain	Backflex radius mm
Plastic top chain, sideflexing running	TTUP, TPU TPU-USR, TTUPS	40
	TTUPS-H	170
	TTUPH	35
	TTUP(T)-M, TPU(T)-LH, TPUH-BO, TPUS	50
	TTUPM-P	20
	TTUP-LLPC	70
	TTUPM838H	100
	TP-UB36, TTUPM-PC	30
	TPUM	15
	TPUSR826	25
	TPUSR550	50
	TP-36AK	75
	TNU	100
	TP-PT,PTS	150
	TP-1873T	305
	TP-1843G, 1873G	–
	TPUS-LBP	400
	TPUS-Y-LAP	250
	TP-30UTW-LAP	180
	TP-36UTW-LAP	160
	TPUN555, TPUN-LH	25
	TP-50UNS	25
	TP-50UNS-D76	–
	TP-50UN-T95	500
	TPCC	35
	TORP, TOSP	–
Stainless steel top chain, sideflexing running	TTU	100
	TTKU, TRU	300
	TO, TU	–

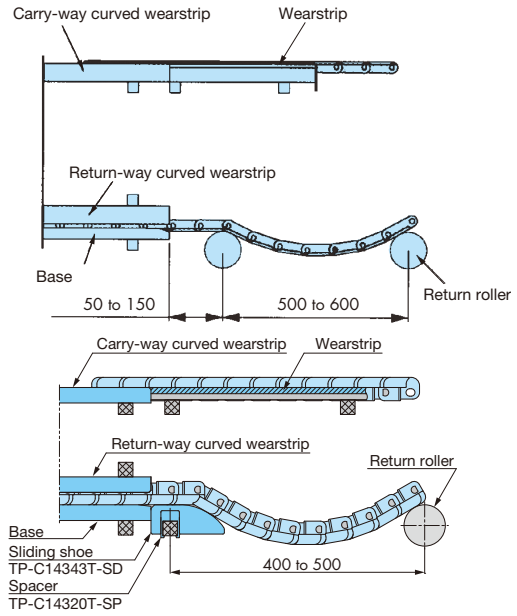
Note: 1. The "–" symbol indicates chains that have (almost) no backflex radius.
2. Backflex radius for RSP60 chains before design upgrade was 450 mm.
3. If the chain types are identical, the backflex radius will be the same whether stainless steel or plastic pins are used.

2-5. Curved Section Return-Way Layout

2-5-1. Design for Return-Way Curved Wearstrip

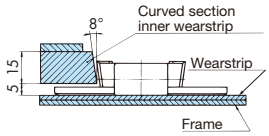
Position return rollers or sliding shoes (TP-C14343T-SD) at both ends of the curved wearstrip to guide the chain. Location of the return rollers or sliding shoes should be 50 to 150 mm away from the base.

Cross-section of conveyor

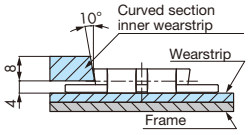


2-5-2. Chain and Wearstrip Cross-Sections

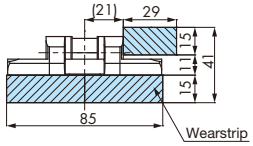
●TTUP, TTUPH



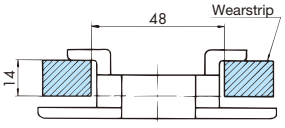
●TTUPM-P, -PC



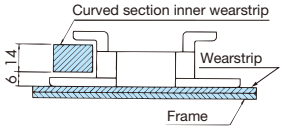
●TTUPM838H



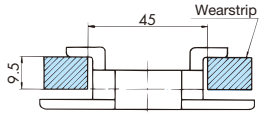
●TPU, TPUM
(Attachment sliding)



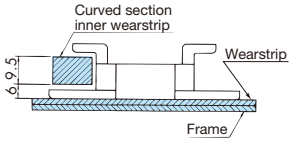
(Top plate sliding)



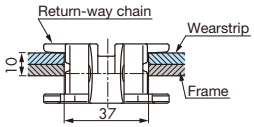
●TPU(T)-LH, TPU-USR, TPUH-BO
(Attachment sliding)



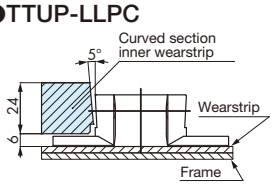
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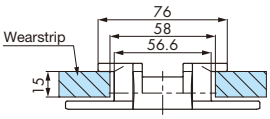
●TPUSR
(Attachment sliding)



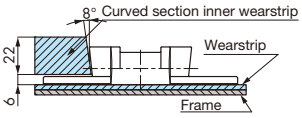
●TTUP-LLPC



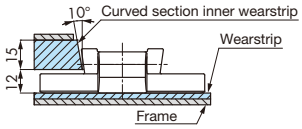
●TPUS, TPUS-LBP
TPUS-Y-LAP



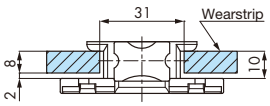
●TTUPS



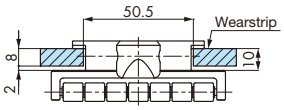
●TTUPS-H



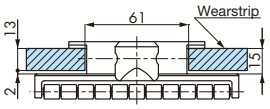
●TP-36AK



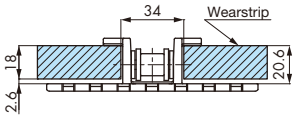
●TP-30UTW-LAP



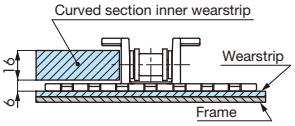
●TP-36UTW-LAP



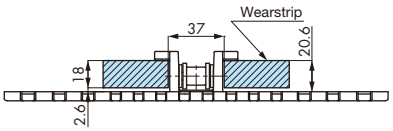
●TP-PT
(Attachment sliding)



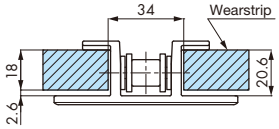
(Top plate sliding)



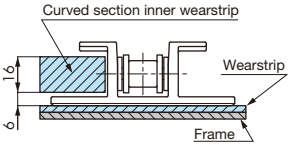
●TP-PTS



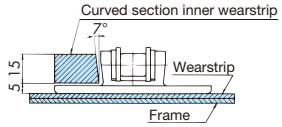
●TP-1873-T
(Attachment sliding)



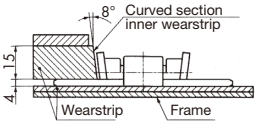
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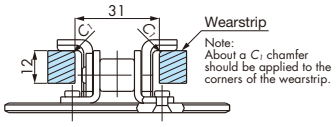
●TNU



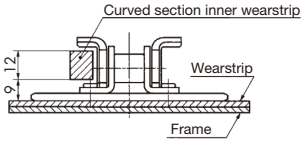
●TTU



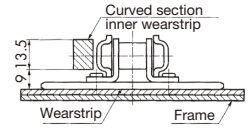
●TRU
(Attachment sliding)



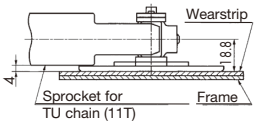
(Top plate sliding)



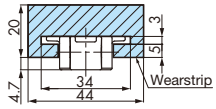
●TTKU



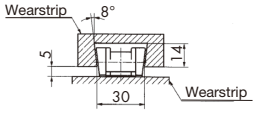
●TU



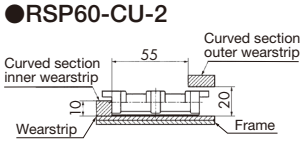
●RSP40-T-CU



●RSP60-CU



●RSP60-CU-2

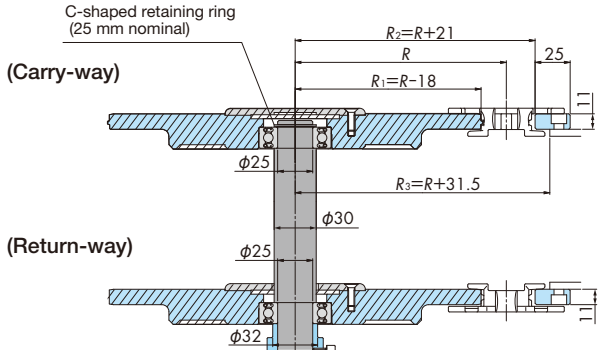


Note: Corner discs should be used with TPUSR, TPUN550-LH, TPUN535-LH, TP-UB36, TP-50UNS, TP-50UNS-D76 chains.

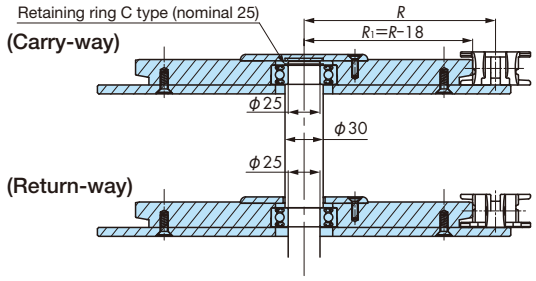
Top Chain

2-6. Curved Section Using Corner Disc on TPUSR Chain

■ TPUSR826



■ TPUSR550



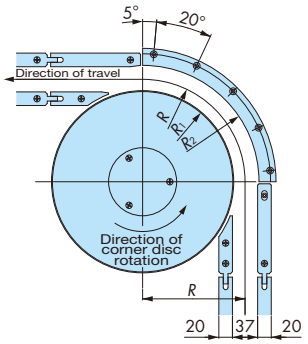
(Discription of symbols)

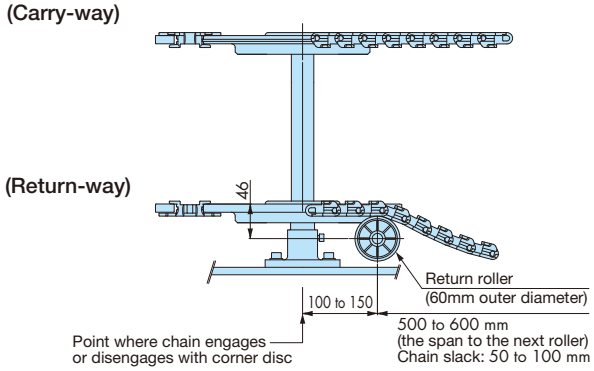
- *R*: Sideflex radius of chain (mm)
- *R*1: Outer radius of corner disc (mm)
- *R*2: Inside radius of wearstrip for outside of chain (mm)
- *R*3: Outside wearstrip inner circumference of conveyor frame used to secure (mm)

As shown in the figure below, for chains supported by return rollers, rollers must be installed to guide the straight portion of the return-way chain at the point where the chain enters and exits the corner.

Note: Recommended to use under dry conditions.

Drawing

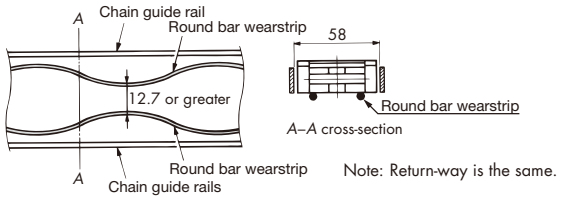




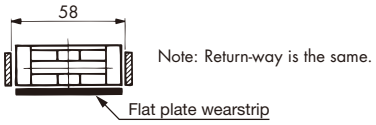
2-7. Conveyor Design for TPUN-LH Chain

2-7-1. Using Wearstrips

■ Round bar wearstrip



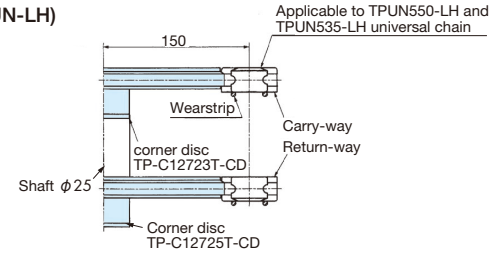
■ Flat plate wearstrip



2-7-2. Using Corner Discs

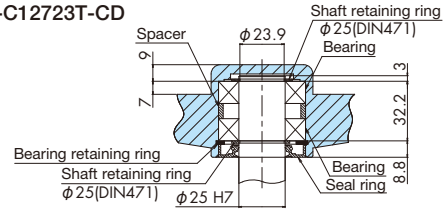
■ Curved section

(for TPUN-LH)

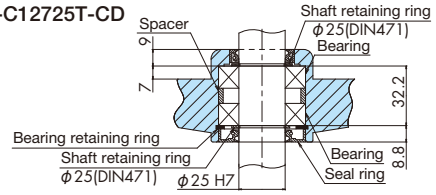


■ Corner disc mounting (closed shaft hole)

TP-C12723T-CD



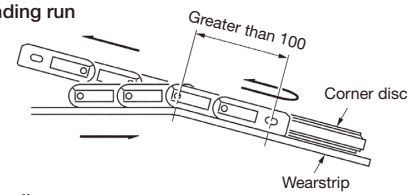
TP-C12725T-CD



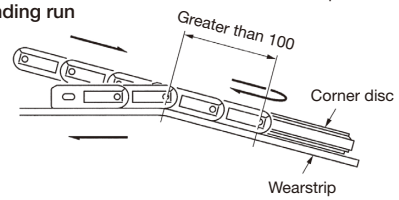
■ Elevator conveyance curved sections

The corner disc and the section of chain where it engages or disengages with the corner disc must be in the same plane so that the chain does not derail from the corner disc.

Ascending run



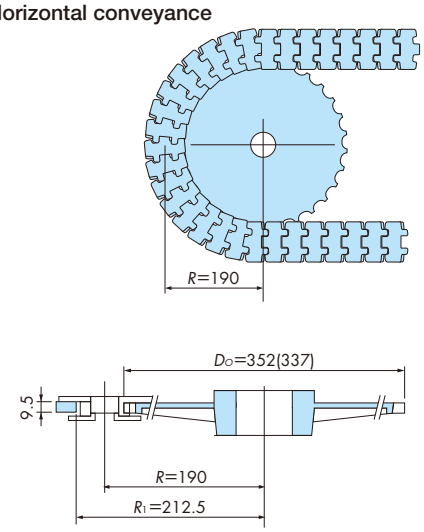
Descending run



2-8. Horizontal Conveyor Design for TPUH-BO

2-8-1. Sprockets and Corner Disc for Horizontal Conveyance

Horizontal conveyance



(Discription of symbols)

- D_O: Outer diameter of horizontal conveyance sprocket (corner disc) (mm)
- R: Sideflex radius of chain (mm)
- R_1: Radius of inner circumference of chain outer wearstrip (mm)

Note: 1. For horizontal conveyance, a mechanism must be set up to absorb chain elongation.
2. In horizontal conveyance, chain may move up and down slightly as the chain wraps around the sprocket and corner disc.

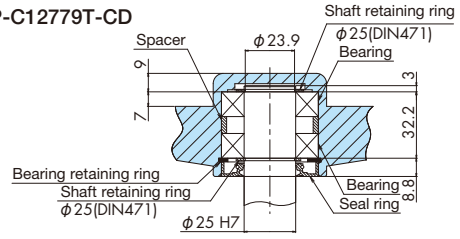
2-8-2. Shaft-Mounted Sprocket and Corner Disc

■ Sprocket mounting for horizontal conveyance

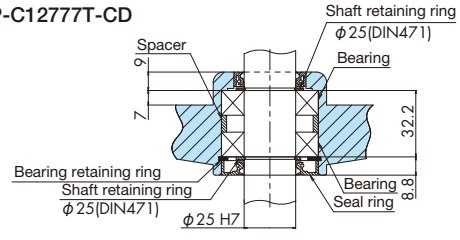
1. Press fit TP-C12773T-HB hub with keyway onto TP-C12781LT-SPR sprocket for horizontal conveyance.
2. Secure sprocket to 25-mm-dia. shaft (with key), and finally, install M8 set screw.

■ Corner disc mounting (closed shaft hole)

TP-C12779T-CD



TP-C12777T-CD

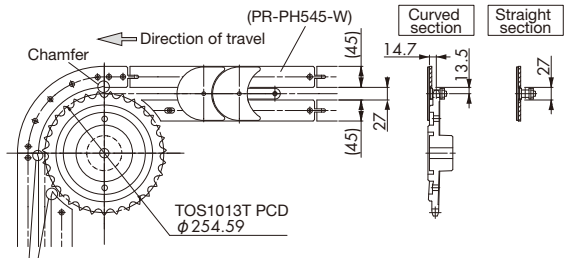


2-9. Conveyor Design for Plastic Crescent Chain

■ Wearstrip layout

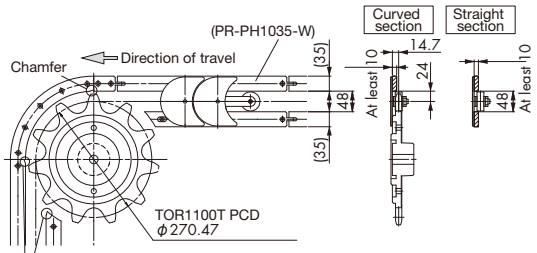
Layout will vary depending on the installation space, but the following examples can be used for reference.

- **Wearstrip layout example**
  Case 1. Using TOSP1143 and corner sprocket



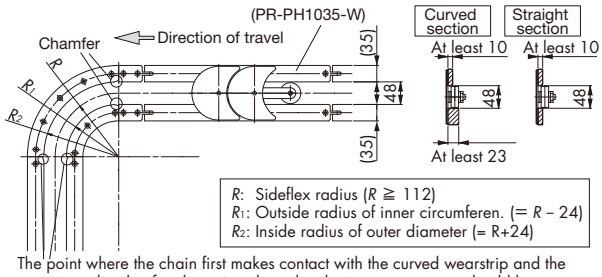
The point where the chain first makes contact with the curved wearstrip and the area immediately after the point where the chain ceases contact should be chamfered to prevent the chain from snagging or catching.

- **Wearstrip layout example**
  Case 2. Using TORP1143 and corner sprocket



The point where the chain first makes contact with the curved wearstrip and the area immediately after the point where the chain ceases contact should be chamfered to prevent the chain from snagging or catching.

- **Wearstrip layout example**
  Case 3. Using TORP1143 and curved wearstrip

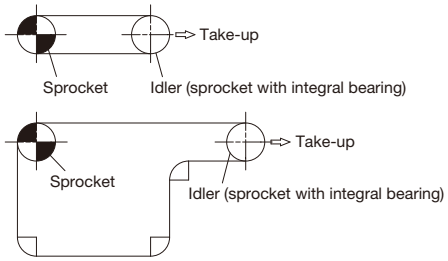


R: Sideflex radius (*R* ≧ 112)
R_1: Outside radius of inner circumferen. (= *R* – 24)
R_2: Inside radius of outer diameter (= R+24)

The point where the chain first makes contact with the curved wearstrip and the area immediately after the point where the chain ceases contact should be chamfered to prevent the chain from snagging or catching.

■ Precautions on conveyor layout

A take-up mechanism must be installed to absorb elongation resulting from temperature changes or wear elongation of the conveyor. See example below for reference:



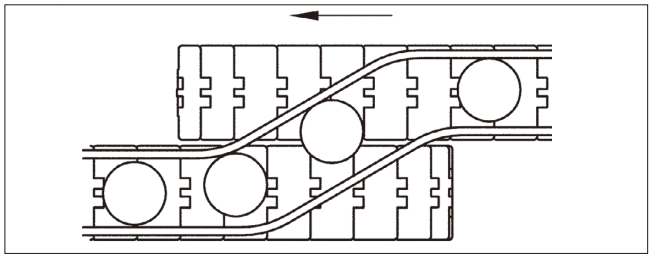
Top Chain

2-10. Connection of Additional Conveyors

As the length of a conveyor grows, the chain tension increases and eventually the strength of the chain will prove to be inadequate to handle the load. In this case, additional conveyors should be used. As shown below, there are three basic methods of adding conveyors. The relationship between the heights of the two conveyors is critical to ensure a smooth transfer of products from one conveyor to another.

2-10-1. Side Transfers

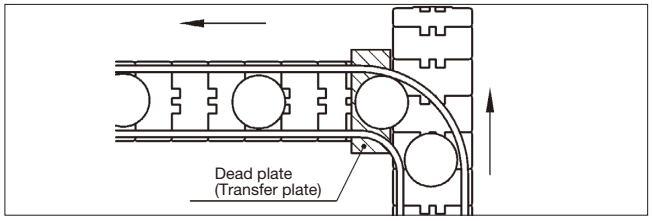
This is the easiest and the preferred method of product transfer. Two parallel chains are positioned side-by-side and guide rails are used to transfer the products.



1. The two chains must be positioned at the same height, or the infeed chain must be positioned slightly lower than the outfeed chain.
2. The angle and shape of the guide rails should be adjusted to provide a smooth product flow.

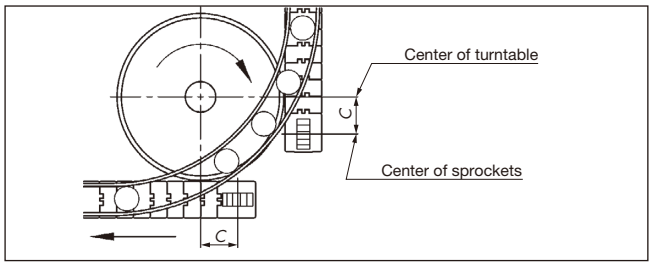
2-10-2. Dead-Plate Transfers

The dead-plate transfer method is used when the layout of the flow system demands that two chains be placed at right angles to each other.



1. To ensure smooth transfer, the dead-plate should be positioned slight lower than the outfeed chain and slightly higher than the infeed chain.
2. The edges of the dead-plate should also be slightly chamfered.
3. The outfeed chain will be moving up and down as a result of chordal action of the driven side. Sufficient care should be taken to install the dead-plate properly to avoid contact or interference.

2-10-3. Turntable Transfers



This method uses a turntable for product transfer.
Height of the turn table

- Turntables should be placed slightly lower than the infeed chain and slightly higher than the outfeed chain.
- The outside edges of the turntable should be chamfered.

The outer circumference of the turn table should be chamfered.

The center of the turntable is, in general, aligned near the centers of the drive and driven sprockets. To avoid the effects of chordal action, move the turntable forward by the amount of center position (*C*), so it will not be affected by up-and-down movement and will be more stable.

2-11. Cautions When Using KV Series Top Chains

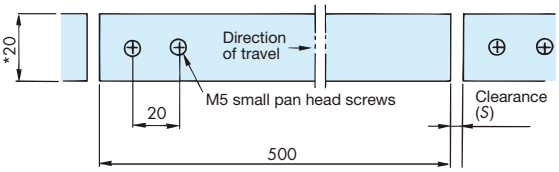
2-11-1. Use at Ambient Temperature

1. The recommended wearstrip materials are steel or steel with hard chrome finished plating with buff or cold rolled stainless steel.
2. Black wear dust will be generated. Be sure to clean on a regular basis.
3. Start up slowly and stop slowly.

2-11-2. Use at High Temperature

1. Recommended wearstrip material is cold-rolled stainless steel.
2. Secure only one end of the wearstrips to allow for thermal expansion. Also, remember to leave a clearance between wearstrips to allow for thermal expansion. (Reference: Coefficient of linear expansion for SUS304 is 1.8×10^{-5}/°C)

Example: Securing stainless steel wearstrips, and leaving space between wearstrips



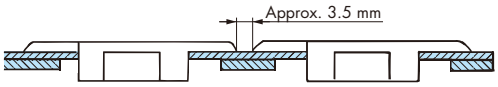
* Figure is for types TTP-KV,TPS-KV, TTUP-KV and TPU-KV.
For RSP35(40•60)-KV, see page 410.

Clearance (*S*) for wearstrip 500 mm in length

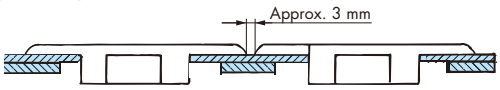
Operating temperature °C	50 to 100	100 to 150	150 to 200	200 to 250
Clearance (*S*)	1.5	2.0	2.5	3.0

3. Standard steel sprockets can be used for ambient temperatures below 150°C. Special sprockets must be used at temperatures higher than 150°C. Contact a Tsubaki representative for details.
4. Spacing between chains when multiple strands are used is shown below.

(For temperatures from 150°C to 250°C)



(For temperatures less than 150°C)



5. Take-up must be done to compensate for slack in the chain caused by thermal expansion. Take-up adjustments should be performed after reaching operating temperature. Lower temperatures only after loosening take-up.
6. Black wear dust will be generated. Be sure to clean on a regular basis.
7. Start up slowly (using inverter control) and stop slowly.

MEMO

Top Chain

Applicable products Plastic top chain, plastic block chain, stainless steel top chain

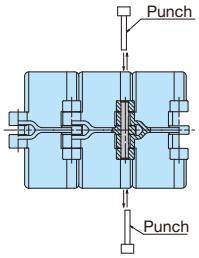
3. Handling Top Chains

3-1. Disconnecting and Connecting Chain

Note: 1. Refer to page on 469 for disconnecting and connecting of plastic modular chain.
2. Refer to page on 399 and 400 for disconnecting and connecting for TTP, TT, TPS-KV, TPU-KV, TRU, TTKU and TS.

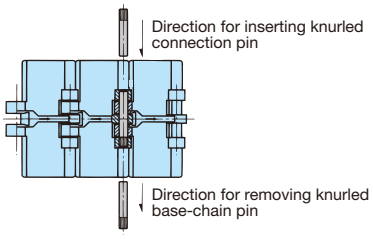
3-1-1. When D-pins are used (except TPUN555)

The chain can be disconnected at any link and the pin can be removed from either the left or the right.



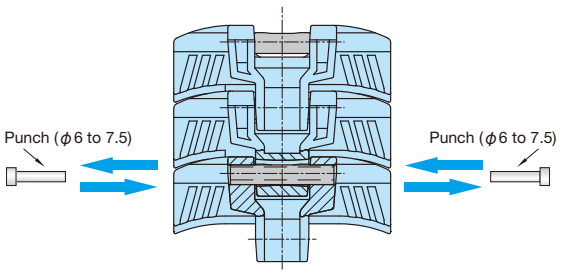
3-1-2. When knurled pins are used

To disconnect, place a punch on the end of the connecting pin on the side that is not knurled and lightly tap it with a hammer to remove it. To reconnect, place a punch on the end of the connecting pin on the knurled side and lightly tap it with a hammer to insert it.
(For TTPDH and TTPDH-LBP only, the knurled side is inserted from the same side even for reconnecting.)



3-1-3. TTUPM838H

Since this is a D-pin type, it can be inserted and removed from either the left or the right. Use a punch with a 6 to 7.5 mm outer diameter. The insert depth should not be excessive or insufficient.



If the outer diameter of the punch is less than 6 mm or more than 7.5 mm, the chain and pin will be damaged.

3-1-4. TN/TNU/TRU/TP-PT/TP-PTS/TP-1873G/TP-1873T/ TP-1843G

The pin for the connecting link is loosely fitted on the appropriate side of the outer plate. When disconnecting the chain at links other than the connecting link, remove a pair of pins parallel to one another by means of a chain vice. Once a chain is disconnected at links other than the connecting link, the link cannot be reused.

3-1-5. ST and RT

All the pins are loosely fitted in the outer plates. The chain can be disconnected at any link and the pin can be removed from either the left or the right.

3-1-6. TO and TU

Remove the pin from the side opposite to the top plate.

3-1-7. TS

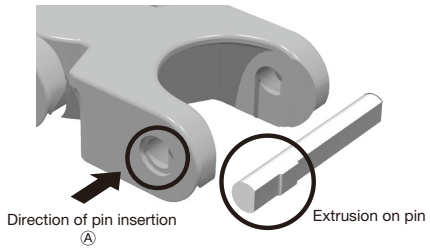
The chain can be disconnected at any link. Remove the pin from the side where the cotter pin is installed.

3-1-8. TTKU

The pin for the connecting link is loosely fitted on the appropriate side of the outer plate. When disconnecting a chain at links other than the connecting link, grind the end of the pin since the pin is riveted and remove the pair of pins parallel to one another. Once a chain is disconnected at links other than the connecting link, the link cannot be reused.

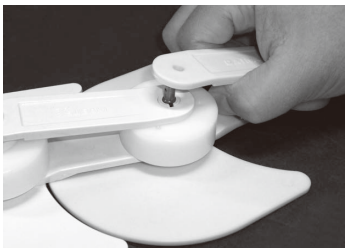
3-1-9. TPUN555

Pin insertion direction is from one direction only. Place a punch on the opposite end of the pin from the insertion direction, and tap it lightly with a hammer to remove it.

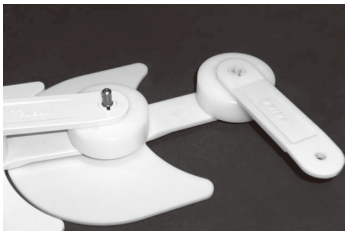


3-1-10. Plastic Crescent Chain

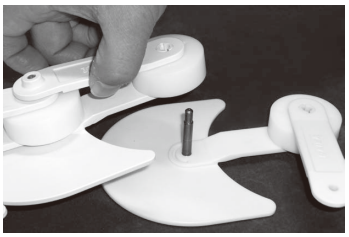
1. Remove the snap cotter pin from the connecting pin, and carefully pull the offset link up and off.



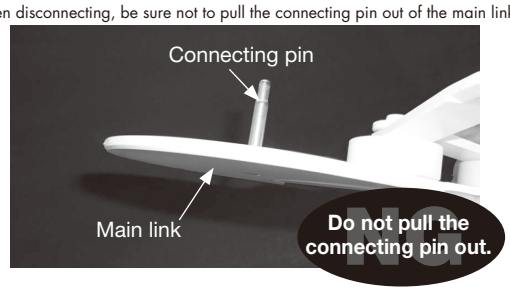
2. Turn the offset link 90˚.



3. Remove the main link and the connecting pin from the previous link.



Note: When disconnecting, be sure not to pull the connecting pin out of the main link.



3-2. Points of Note When Disconnecting/Connecting, and Precautions for Use of Plastic Pin Chain

Applicable products	TTP-P, TTPH-P, TPUSR-P, TPS-P, TPH-P, TPM-P-SN, TTUP-P, TPU-P, TTUPM-P, TTUPM838H, TTUPM-PC, TPUSR-P, TP-UB36P, RSP40P, RSP60P and RSP60P-CU

1. Start and stop the chain gradually.
2. Do not apply initial tension to the chain.
3. When disconnecting chains that have engineering plastic pins, do not reuse a pin once removed since it may not engage properly or it may even come loose. Follow the proper procedures below.
4. Precautions for Plastic Modular Chain are described in its own section.
5. When using chains with engineering plastic pins under wet conditions, make sure that the temperature does not exceed 60°C.

■ Connecting D-pin

1. Use the exclusively prepared connecting D-pin (base pin: white, connecting pin: orange) to connect the links.
2. The connecting D-pin is colored orange so as to distinguish it from base-chain pins (color: white).
3. One connecting D-pin is provided per chain as a spare.

■ Procedure

① Disconnecting

1. Place a punch which is a little thinner than the pin hole, on the edge of the D-pin and lightly knock it with a hammer to remove it. The pin may be removed from either the left or the right.
2. Never reuse D-pin once removed.

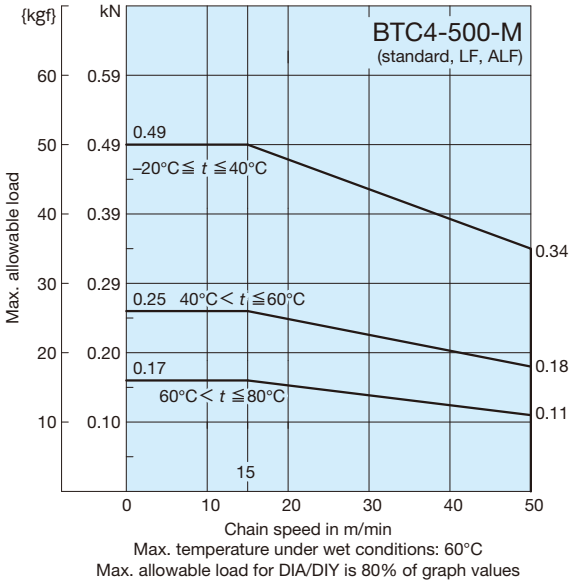
② Connecting

1. Use the exclusively prepared connecting D-pin (color: orange).
2. Place a punch on the edge of the D-pin and lightly knock it with a hammer to insert it into the hole in the link. The pin may be inserted from either side, left or the right. Do not cut the chain where a connecting D-pin (color: orange) is already inserted.
3. Make sure that the connecting D-pin is inserted so that it is recessed an equal amount on both sides from the edges of the hinge.
4. Check whether the connected chain flexes smoothly.

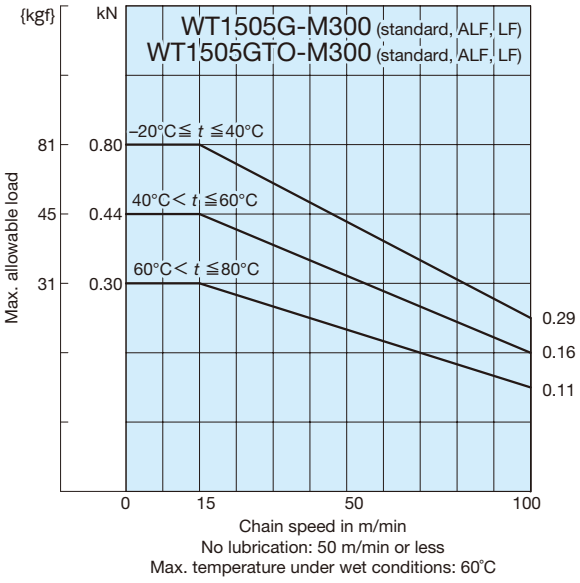
Top Chain

Allowable Load Graphs

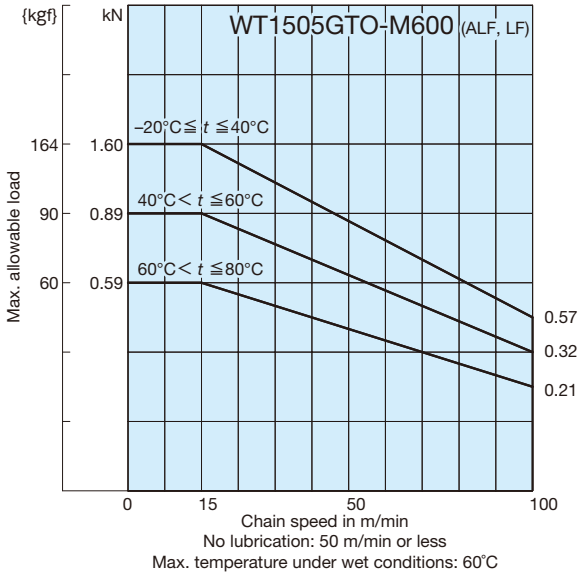
Plastic modular chain (Mold to width)



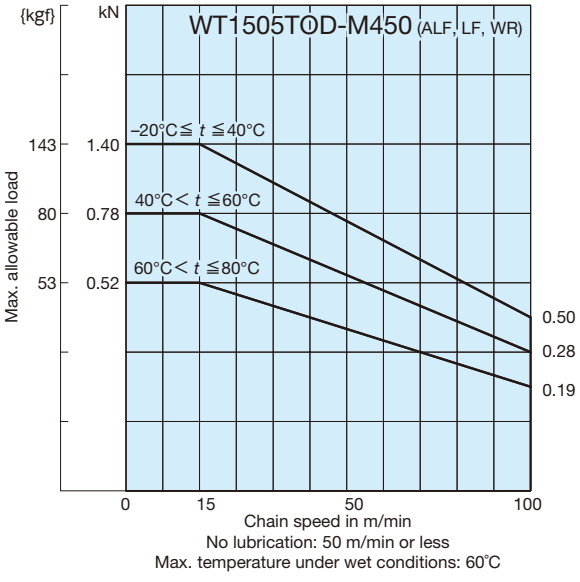
Max. temperature under wet conditions: 60°C
Max. allowable load for DIA/DIY is 80% of graph values



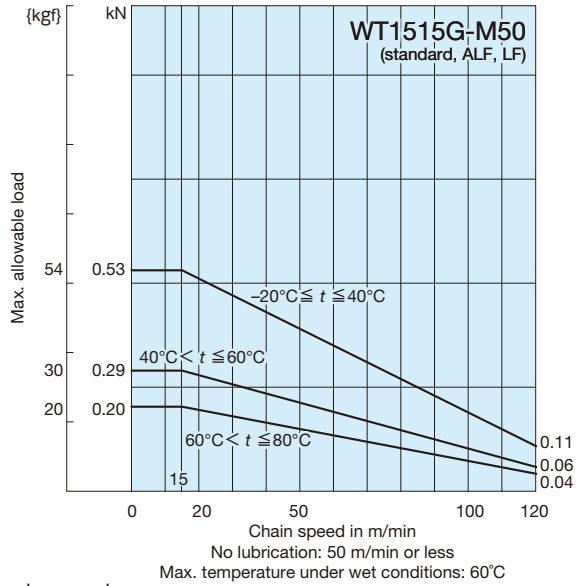
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C



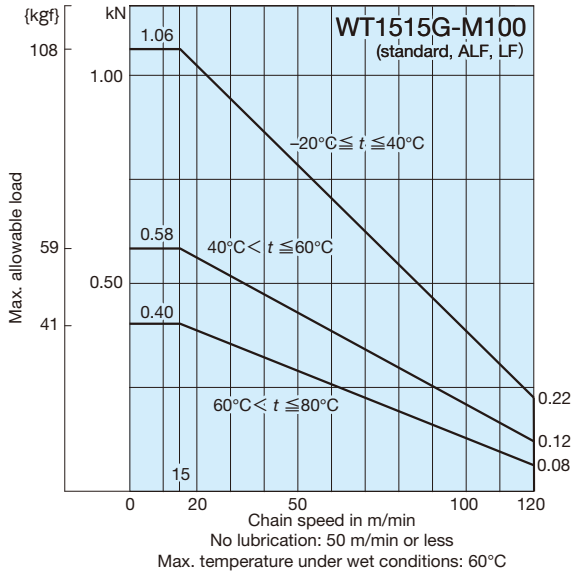
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C



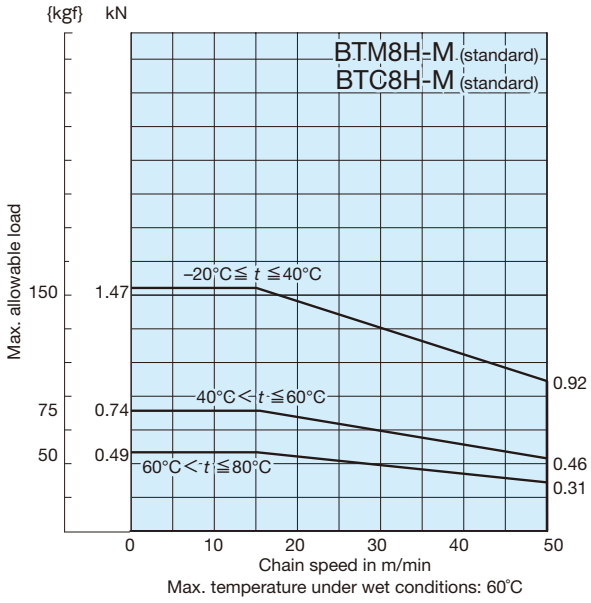
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C



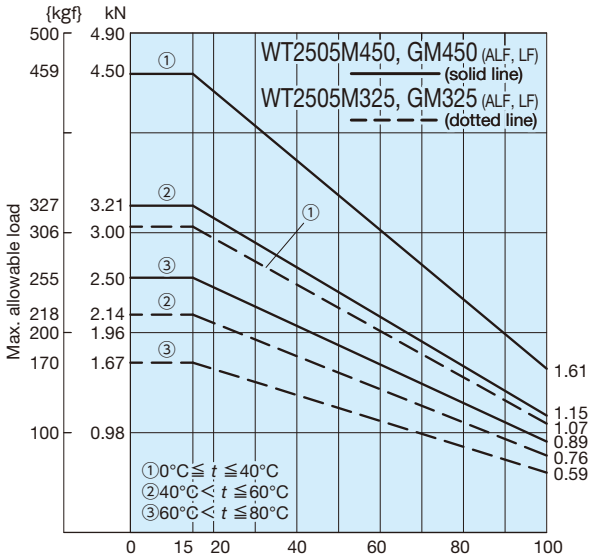
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C

※ t = temperature

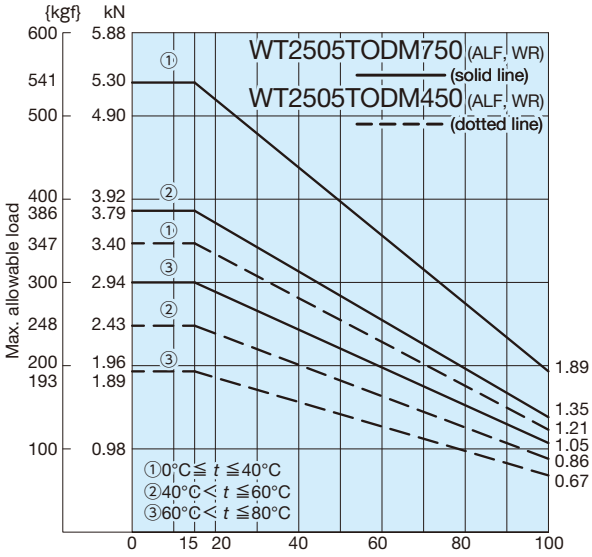
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.



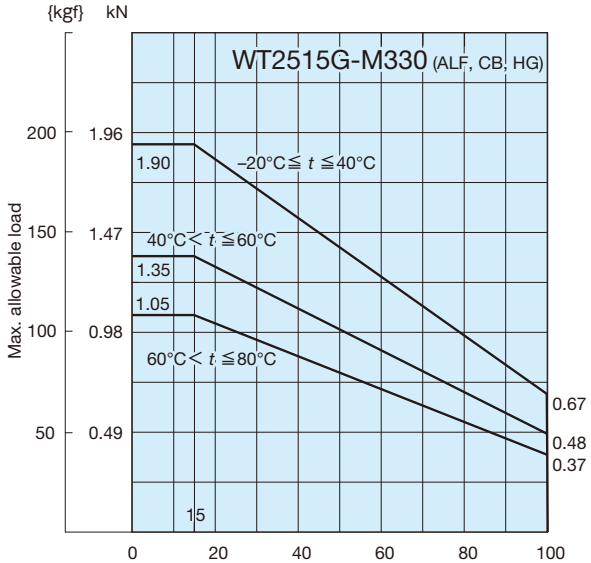
Max. temperature under wet conditions: 60°C



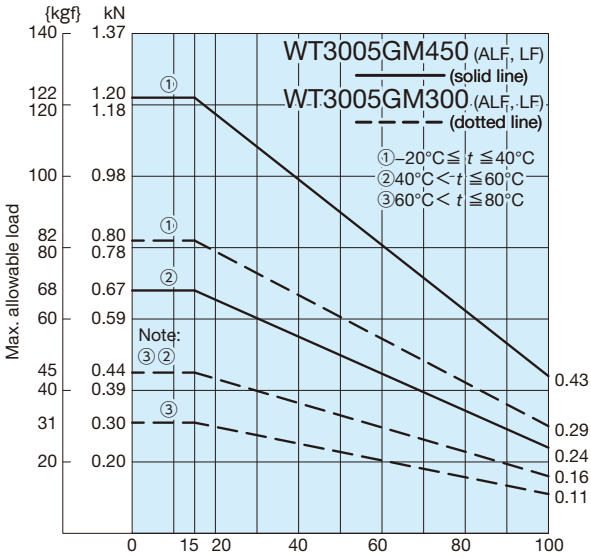
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



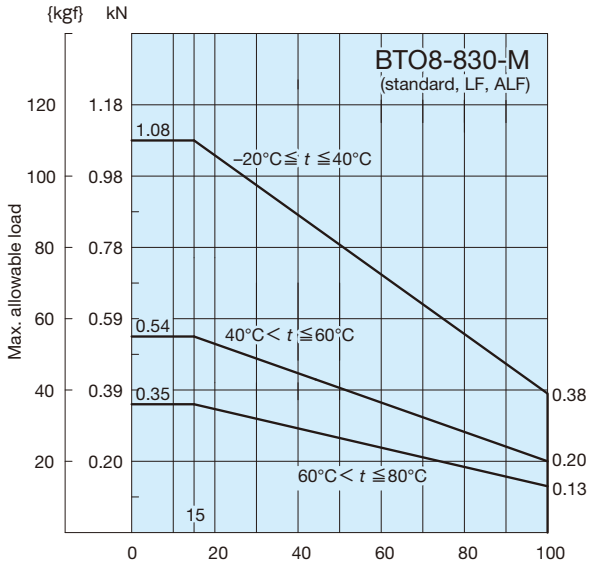
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Note: The values of ③ of M450 and ② of M300 are the same.

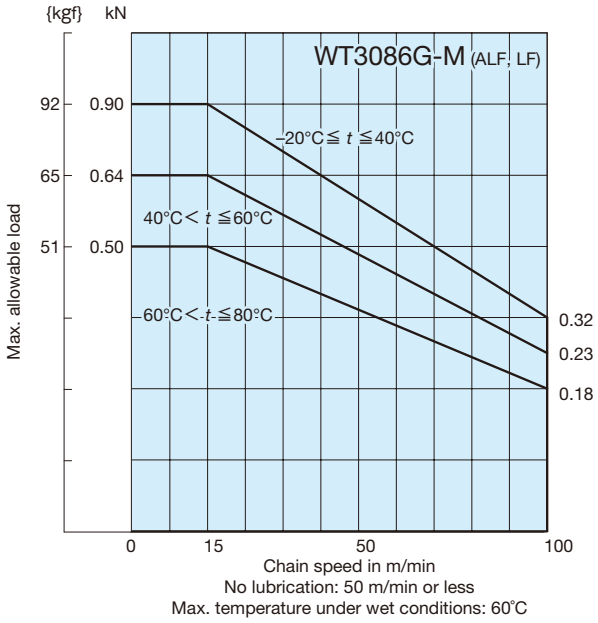


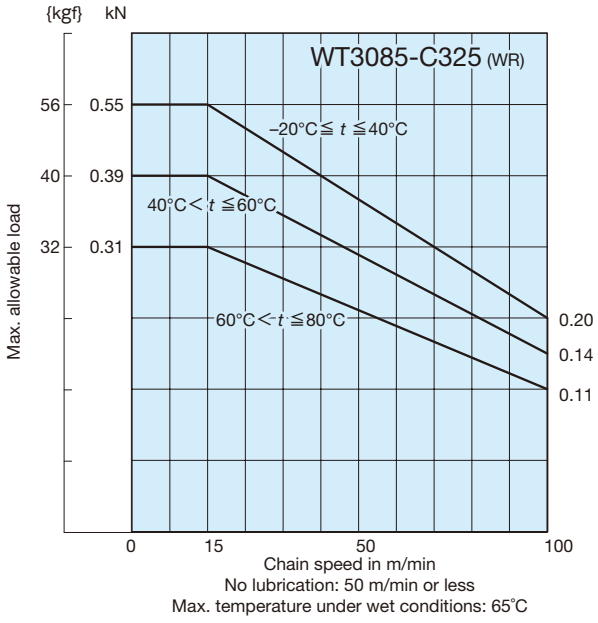
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Max. allowable load for DIA/DIY is 70% of graph values

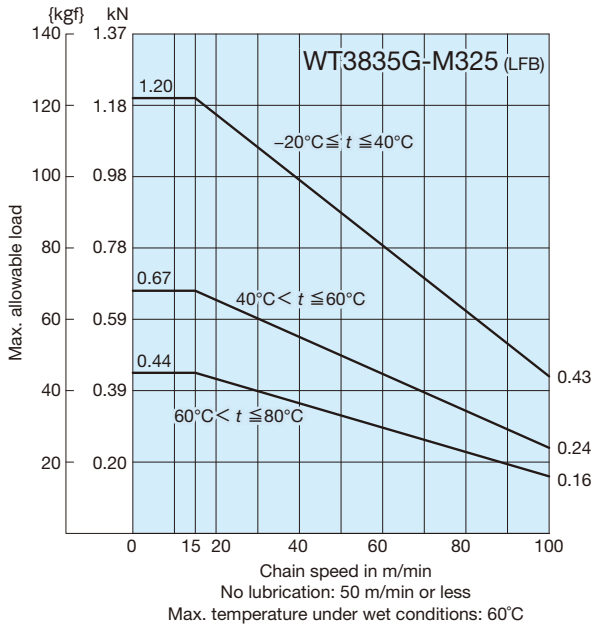
※ t = temperature

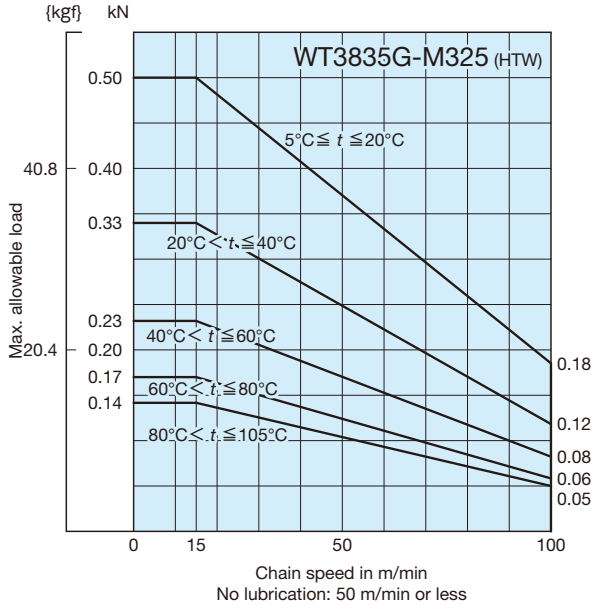
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

Top Chain





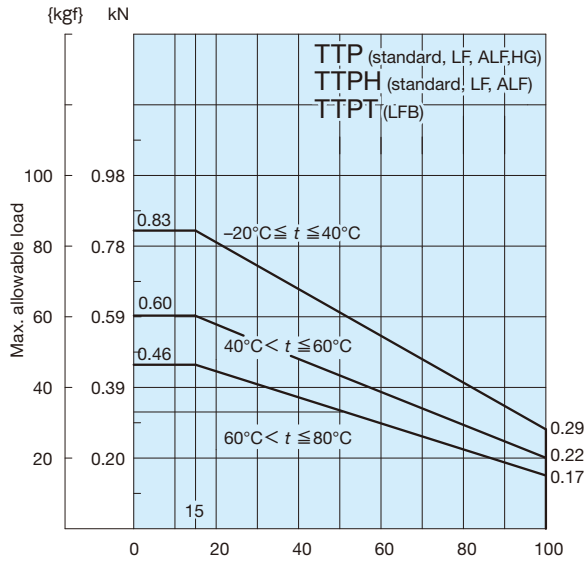




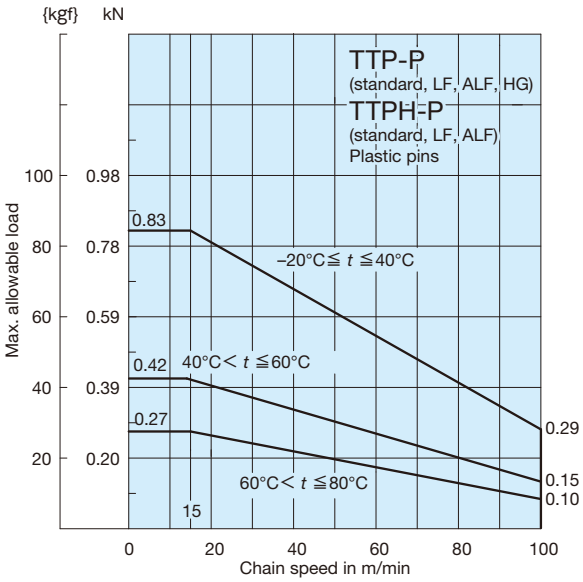
※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

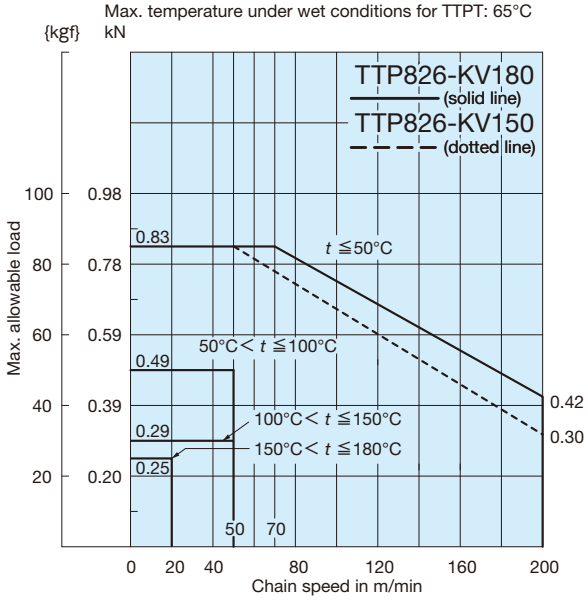
Plastic top chain



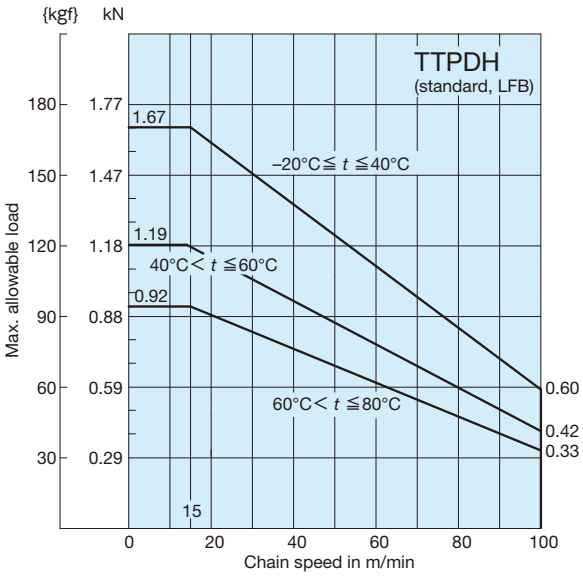
No lubrication: 50 m/min or less
Max. allowable load for DIA/DIY is 80% of graph values
Max. temperature under wet conditions for TTPT: 65°C



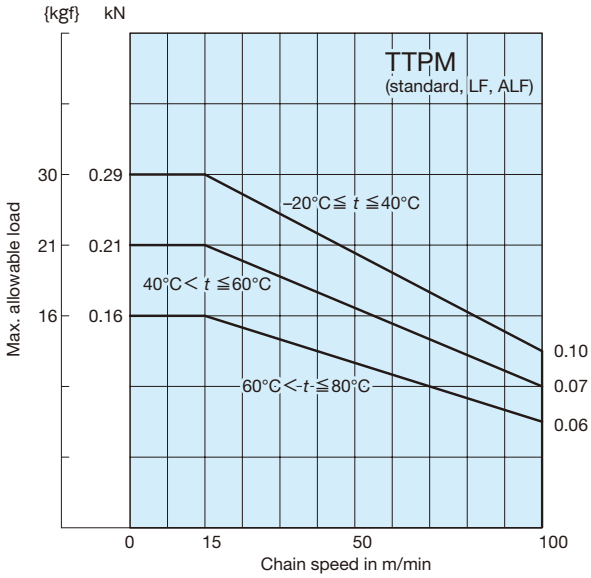
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Max. allowable load for DIA/DIY is 80% of graph values



Max. allowable loads for KV150 and KV180 in the 50°C to 150°C range are identical

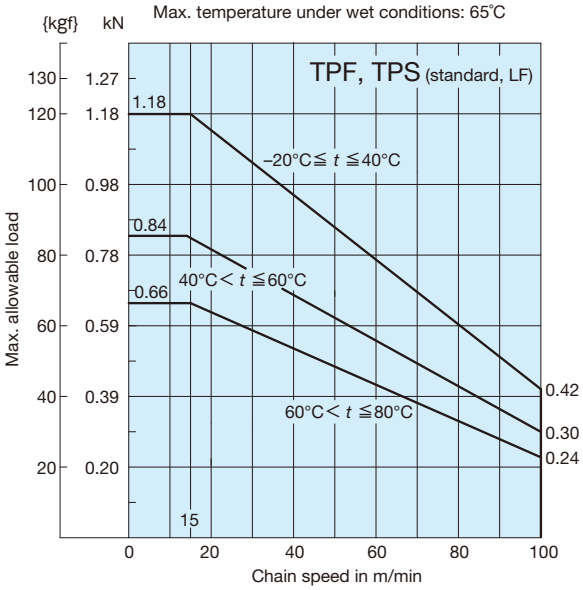


No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C

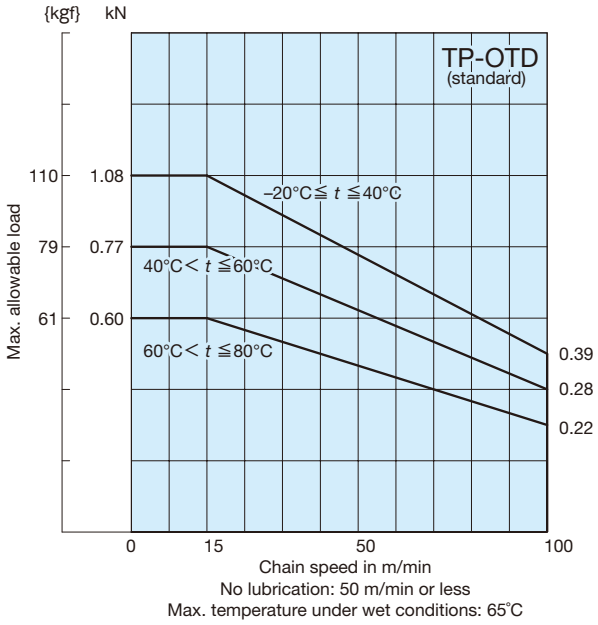
※ t = temperature



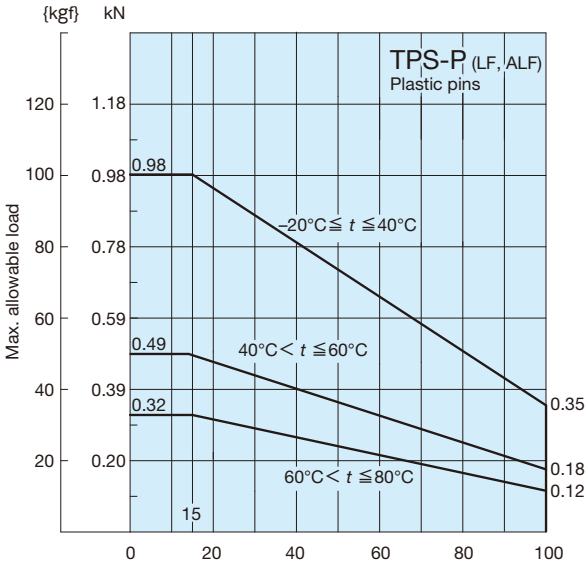
No lubrication: 50 m/min or less
Max. allowable load for DIA/DIY is 80% of graph values

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

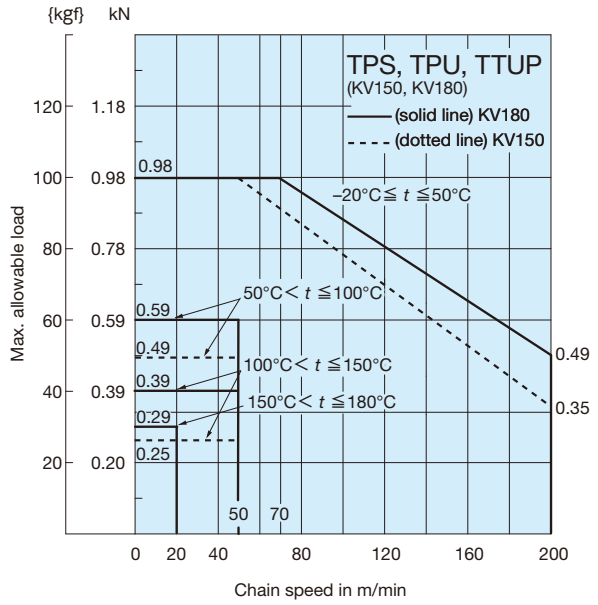
Top Chain

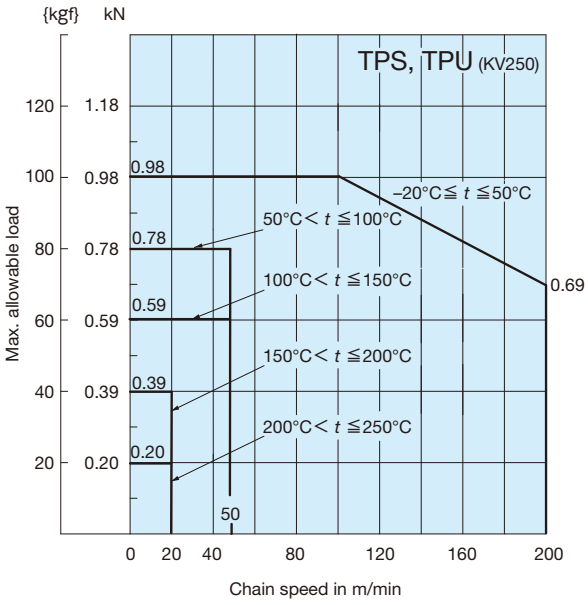


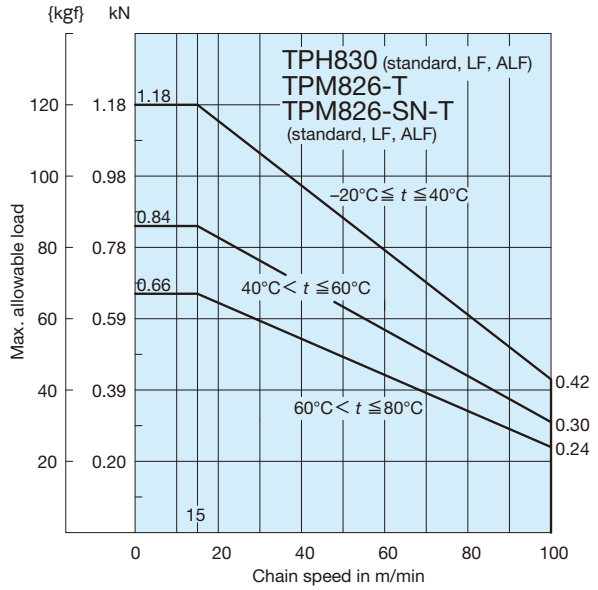
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



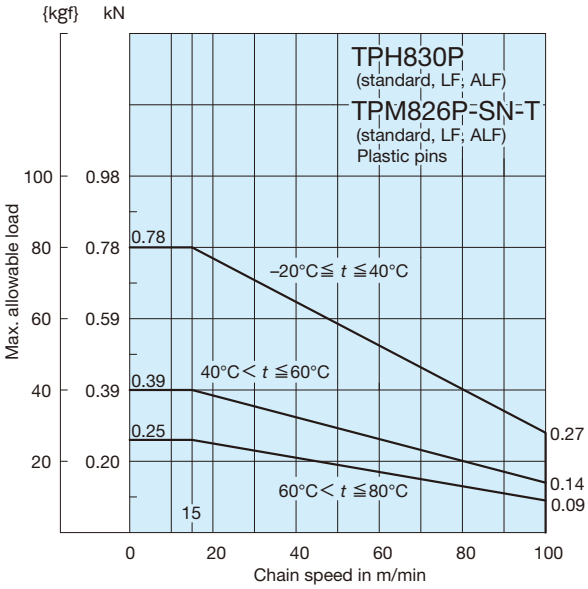
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Max. allowable load for DIY is 80% of graph values







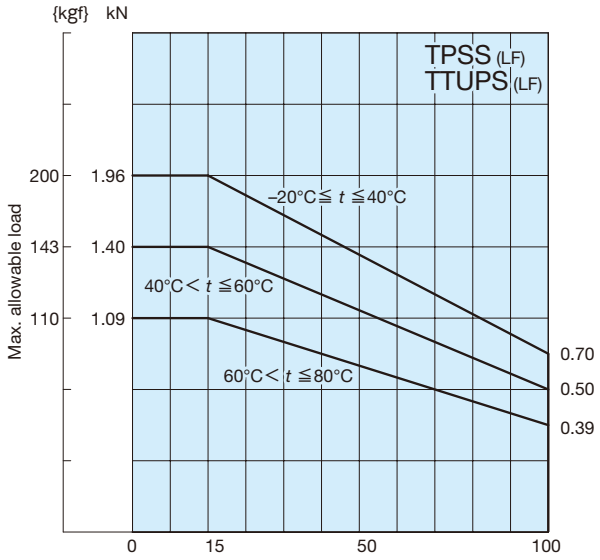
No lubrication: 50 m/min or less
Max. allowable load for DIA/DIY is 80% of graph values



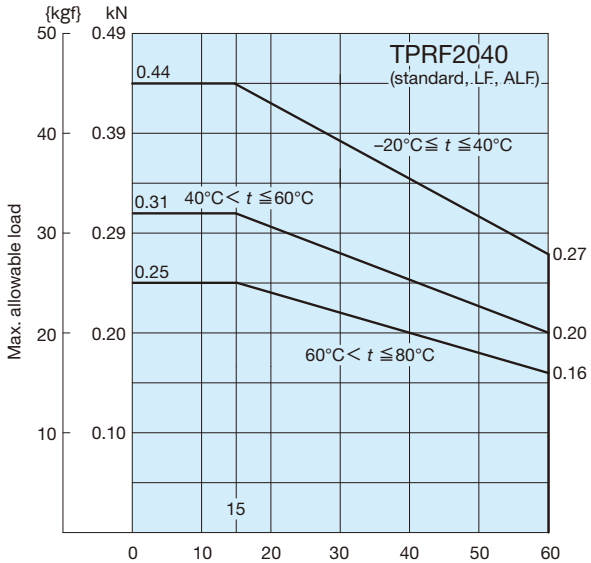
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Max. allowable load for DIY is 80% of graph values

※ t = temperature

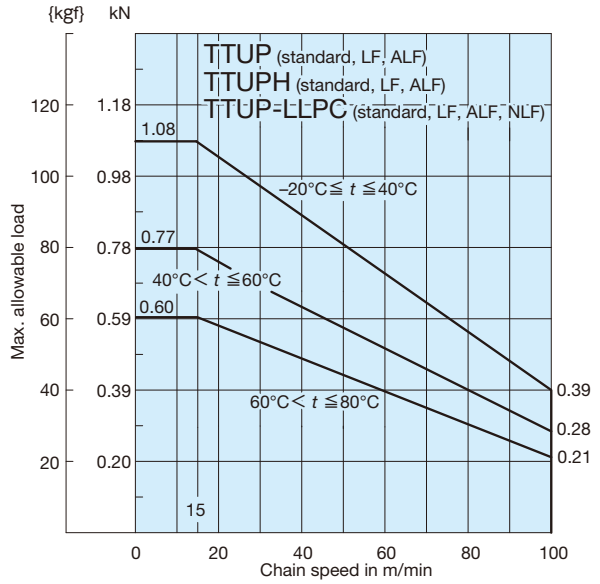
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.



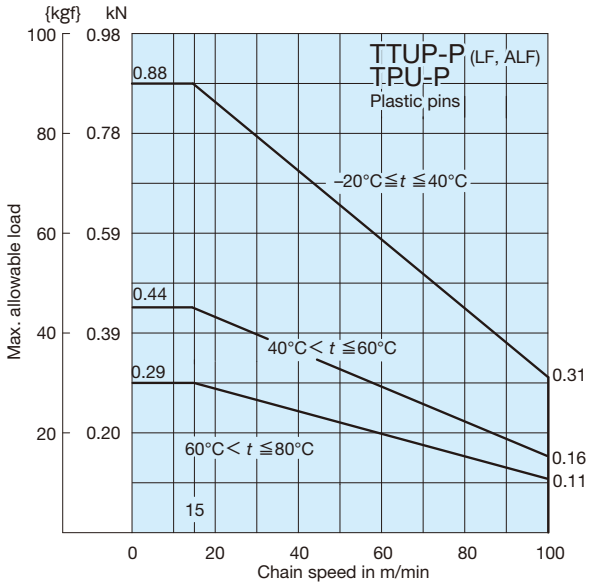
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



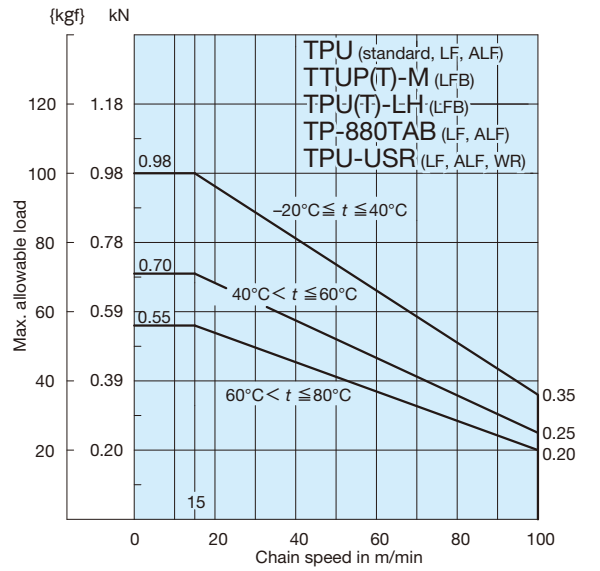
Max. allowable load for DIA/DIY is 80% of graph values



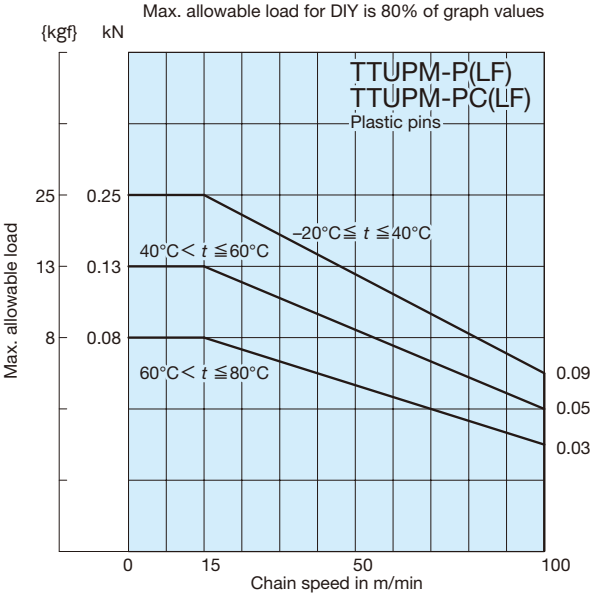
No lubrication: 50 m/min or less
Max. allowable load for DIA/DIY is 75% of graph values



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C
Max. allowable load for DIY is 80% of graph values



No lubrication: 50 m/min or less
Max. allowable load for DIA/DIY is 80% of graph values
Max. temperature under wet conditions for TTUP(T)-M and TPU(T)-M: 65°C

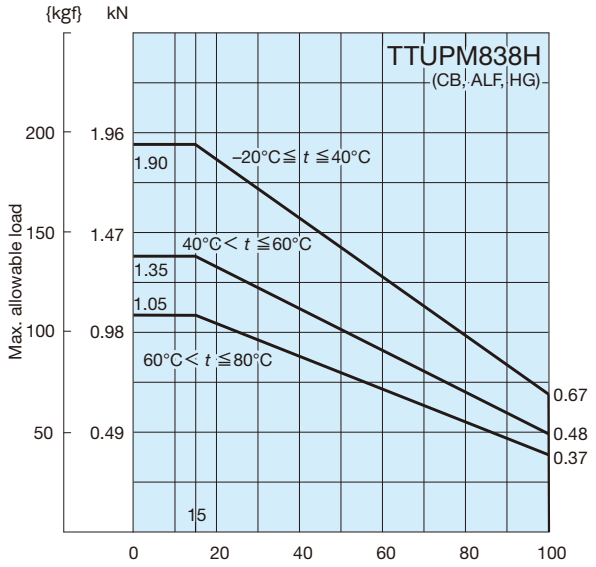


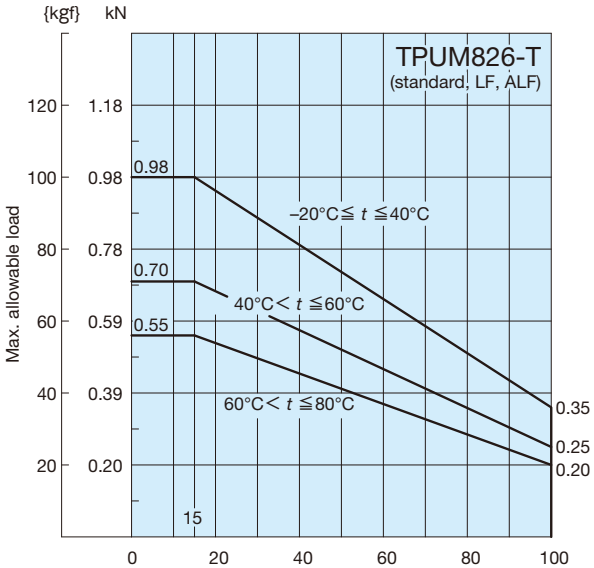
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 60°C

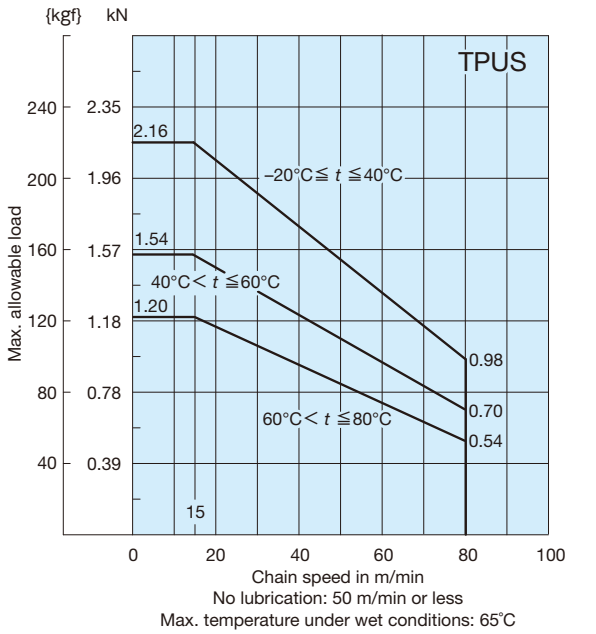
※ t = temperature

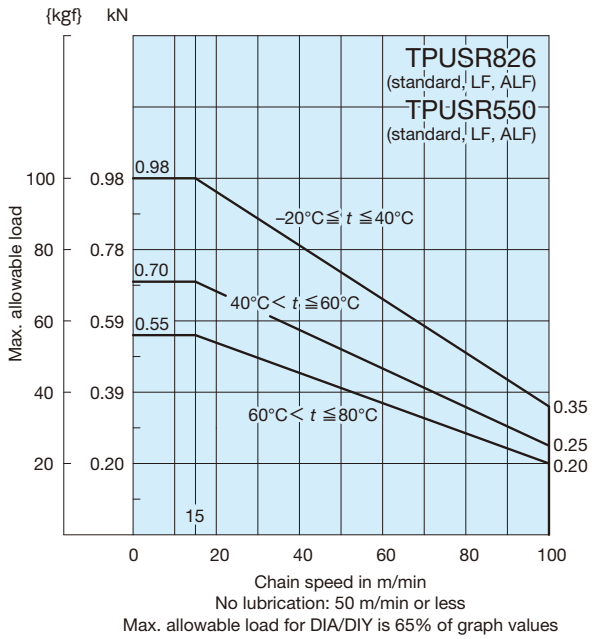
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

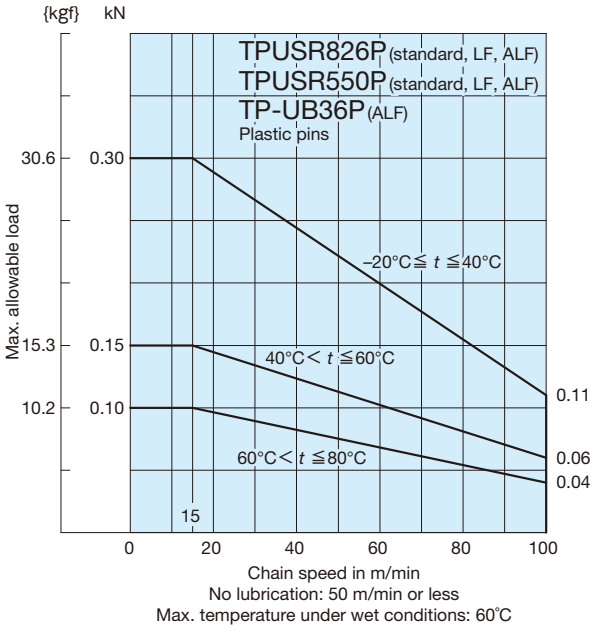
Top Chain

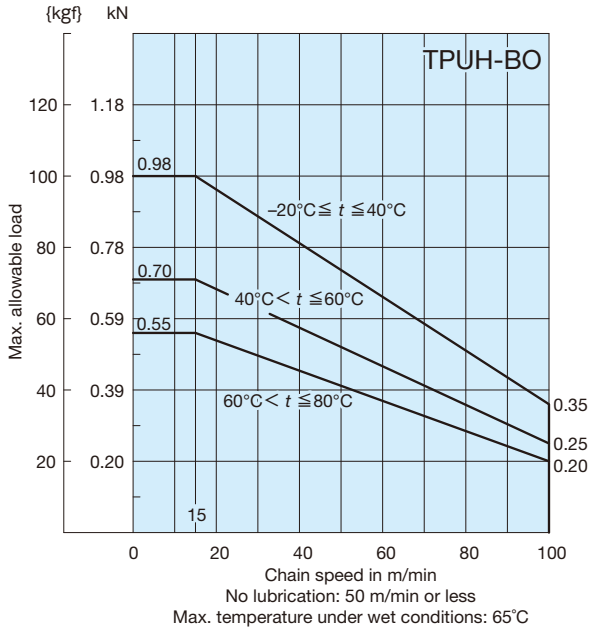






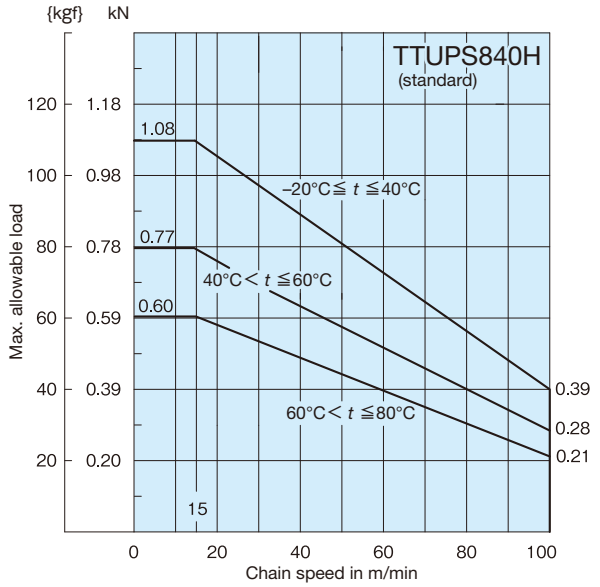




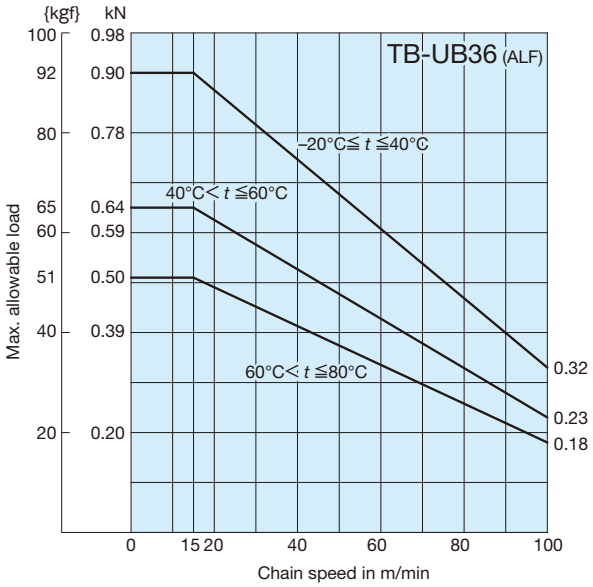


※ t = temperature

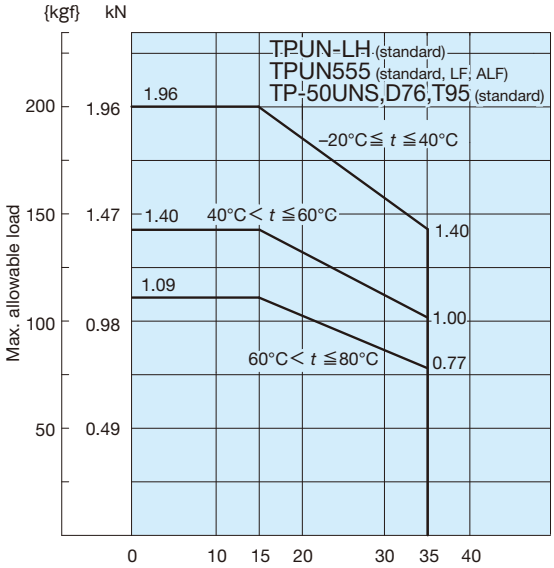
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.



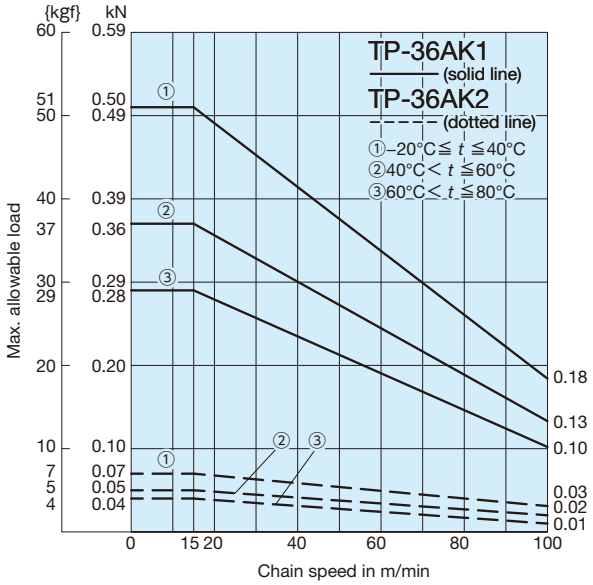
No lubrication: 50 m/min or less



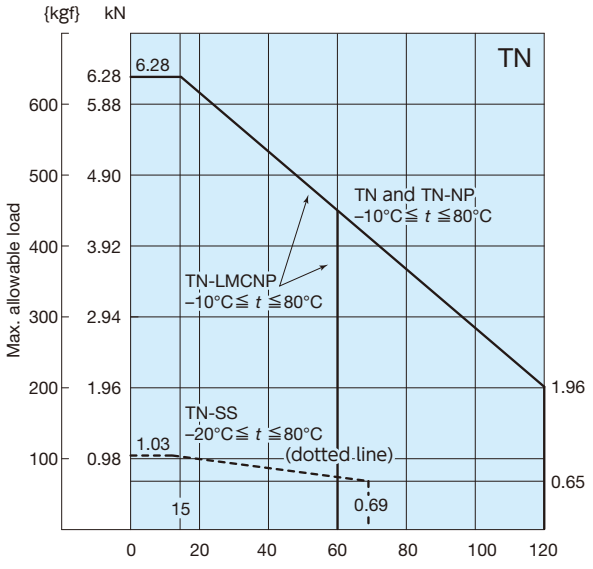
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



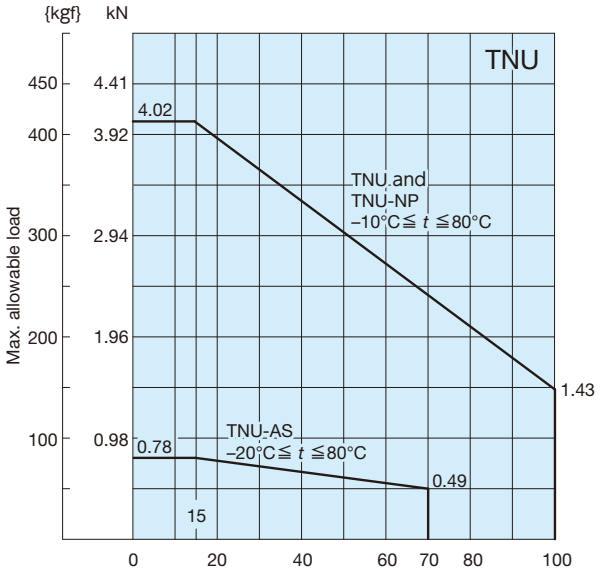
Max. temperature under wet conditions for TPUN-LH: 65°C



No lubrication: 50 m/min or less



No lubrication: 60 m/min or less (TN), 45 m/min or less (TN-SS)

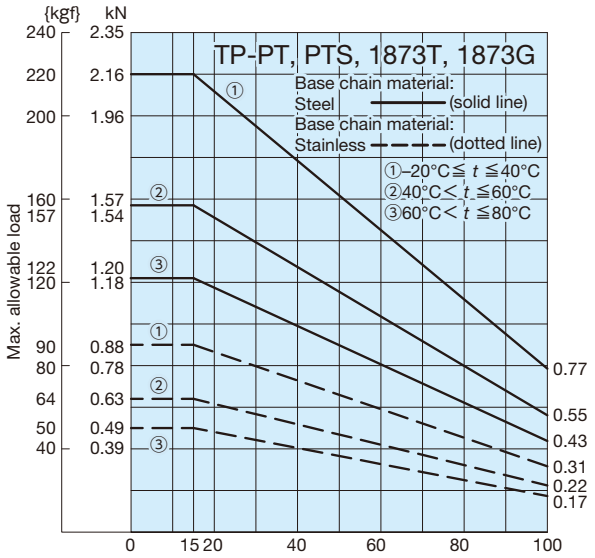


No lubrication: 60 m/min or less (TNU/TNU-NP), 45 m/min or less (TNU-AS)

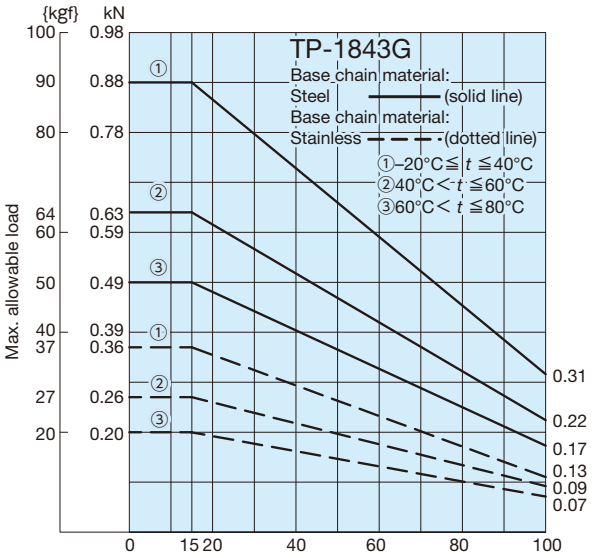
※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

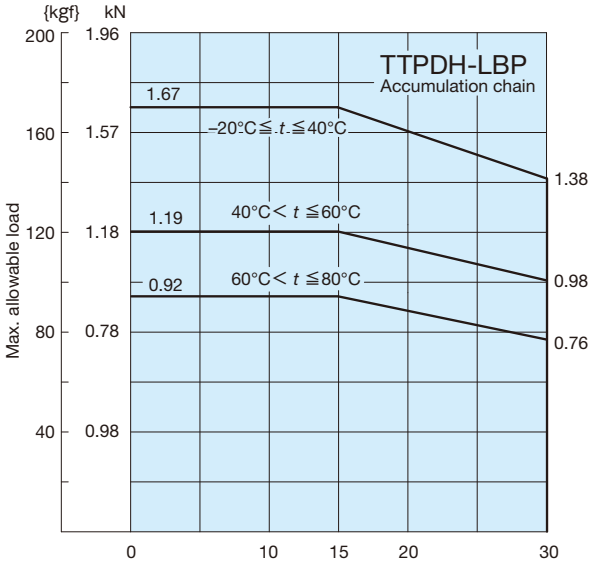
Top Chain



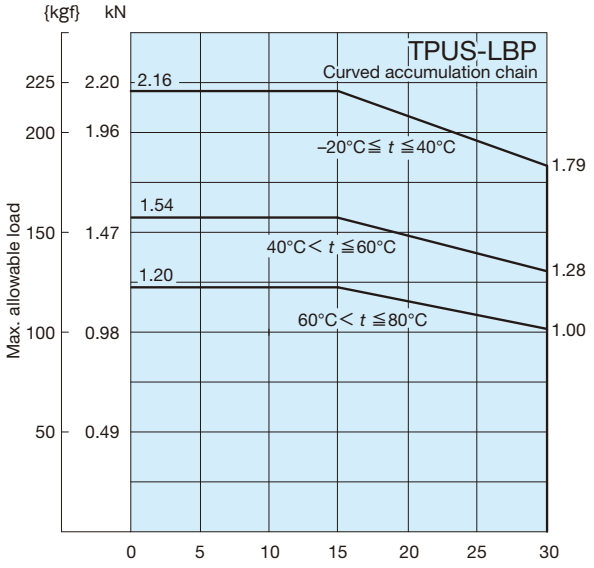
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



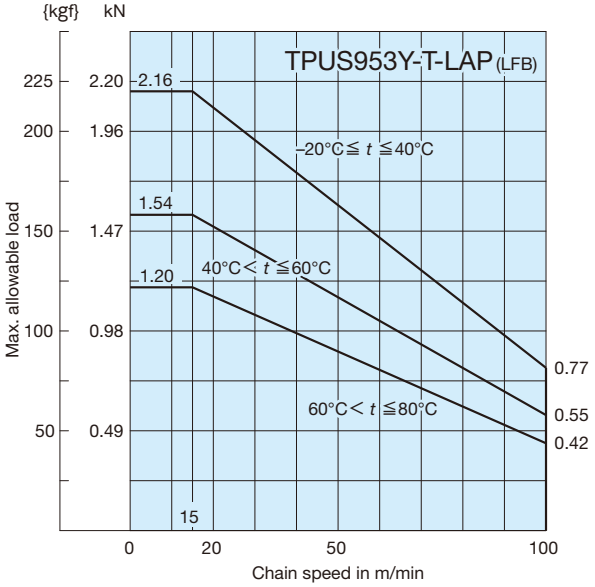
Max. temperature under wet conditions: 60°C



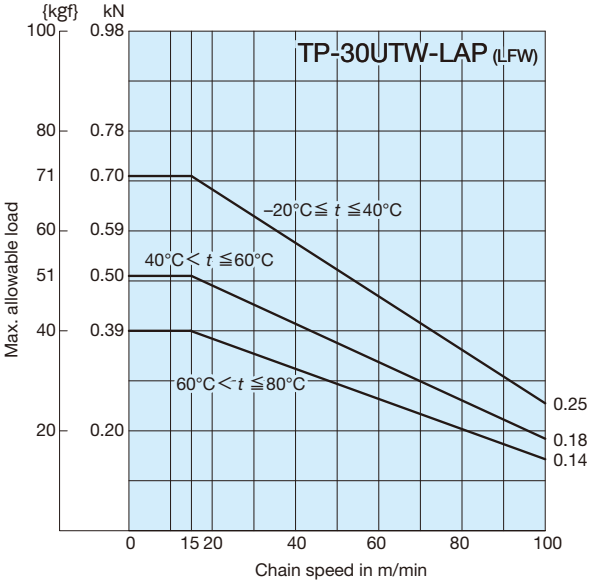
Max. temperature under wet conditions: 65°C



Max. temperature under wet conditions: 65°C



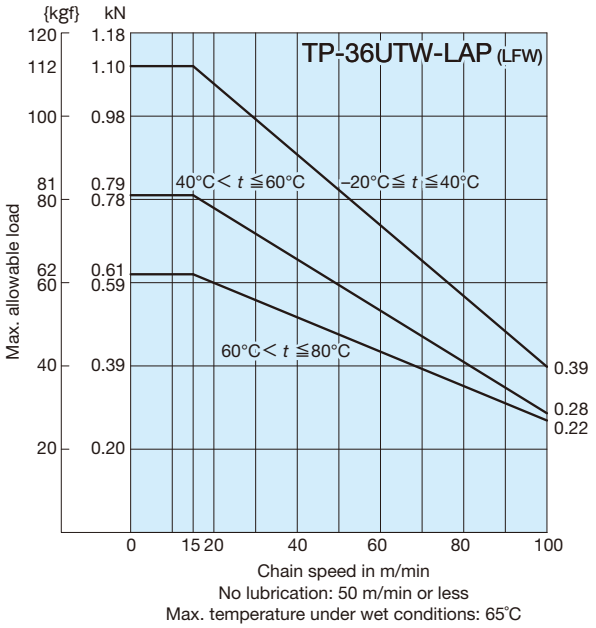
No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C



No lubrication: 50 m/min or less
Max. temperature under wet conditions: 65°C

※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

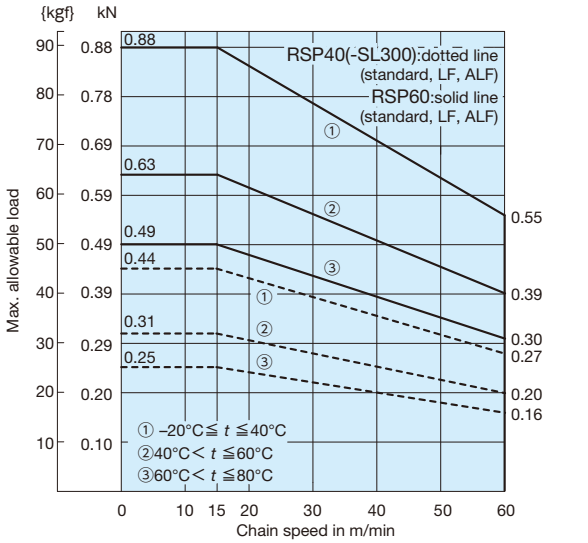


※ t = temperature

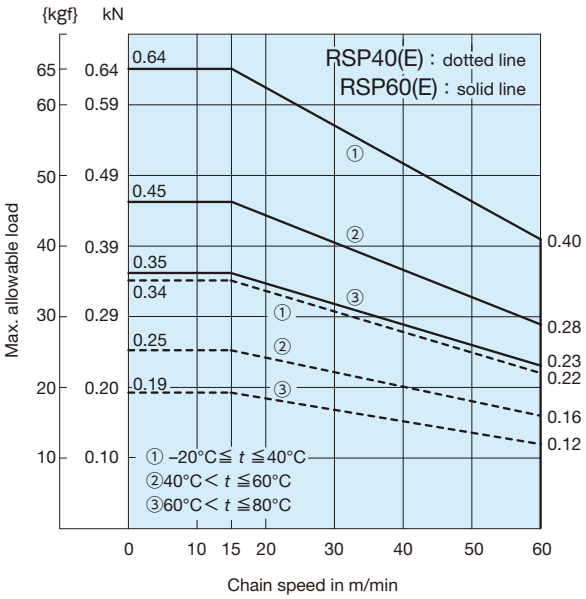
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

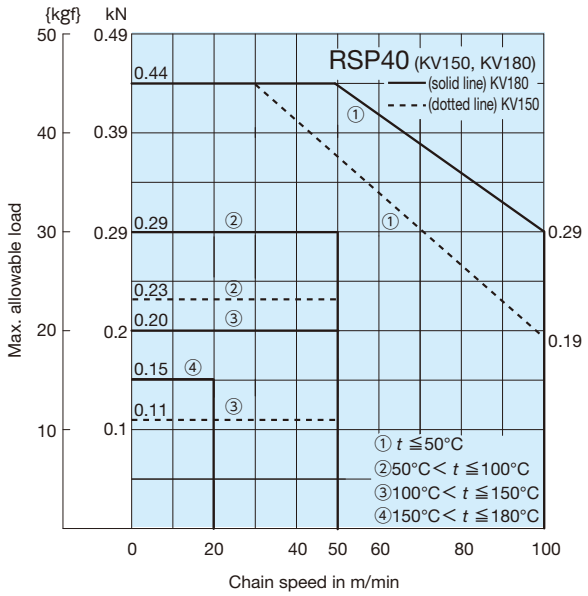
Top Chain

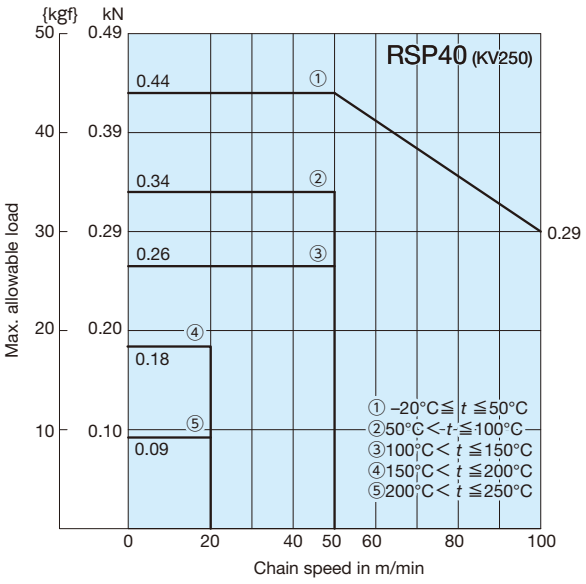
Plastic block chain

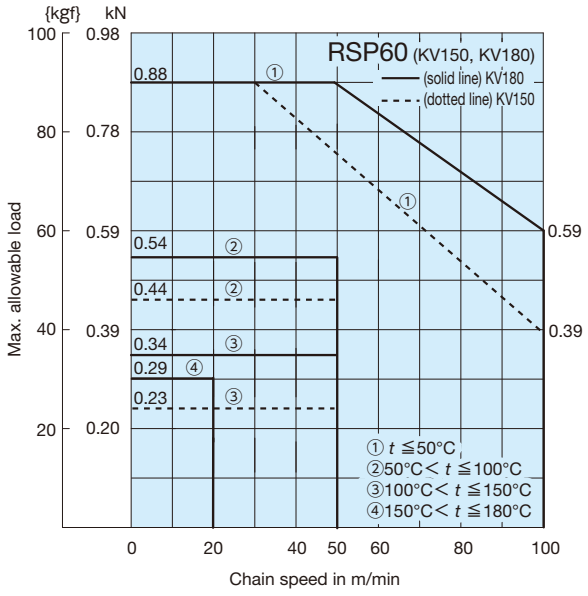


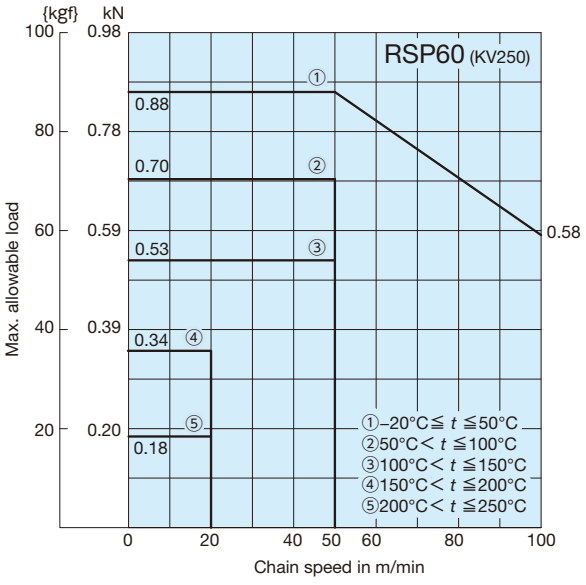
Max. allowable load for DIA/DIY is 80% of graph values
Values for TPRF2060 are identical to RSP60, and RSP40-SL300 to RSP40





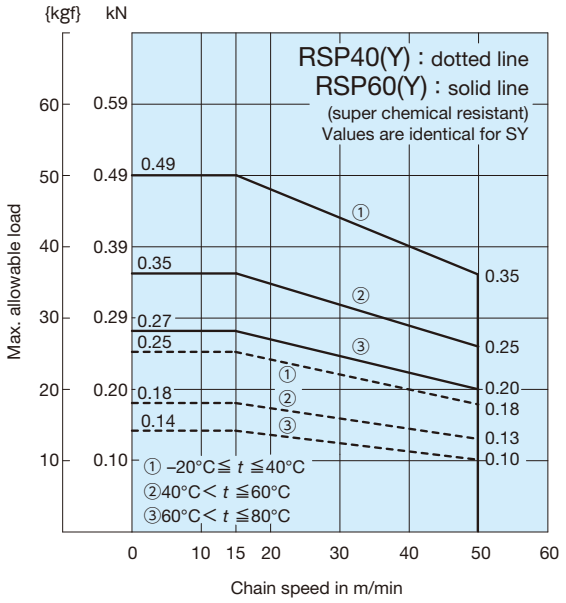


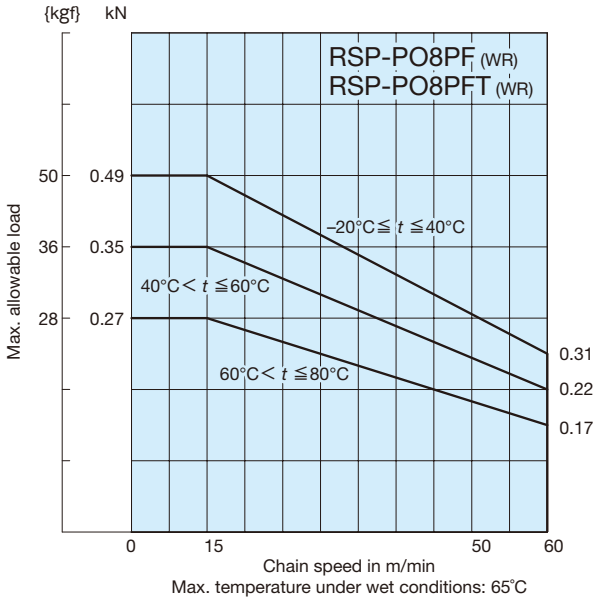


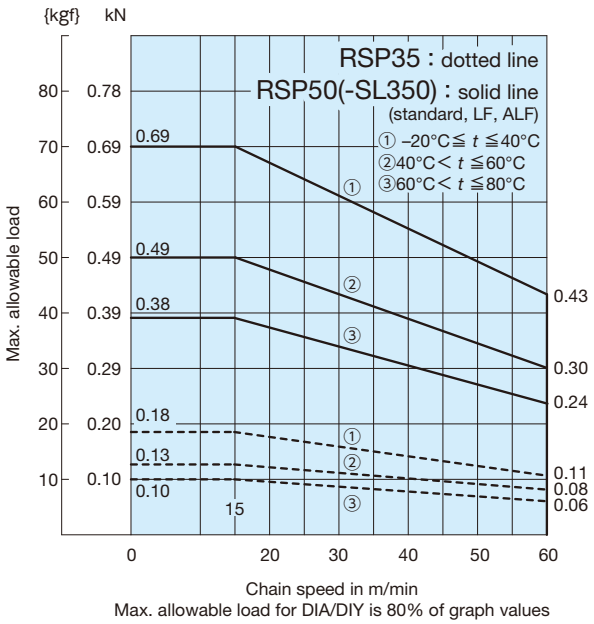


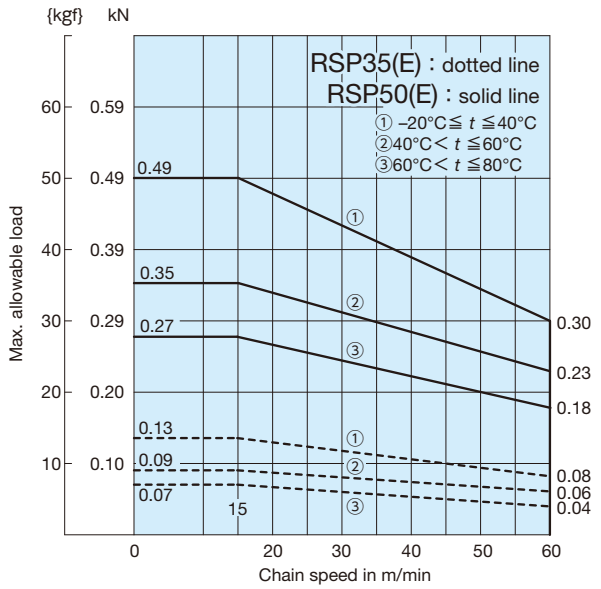
※ t = temperature

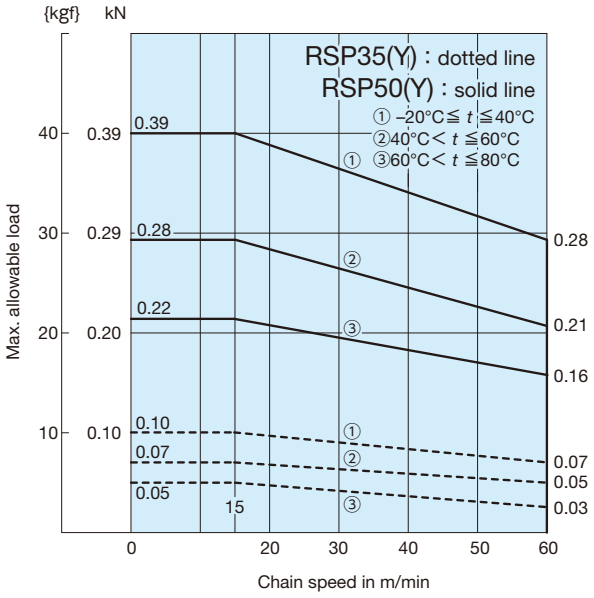
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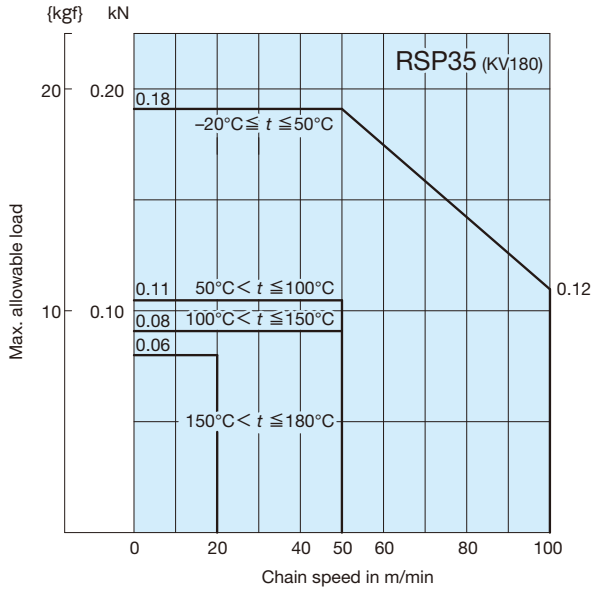








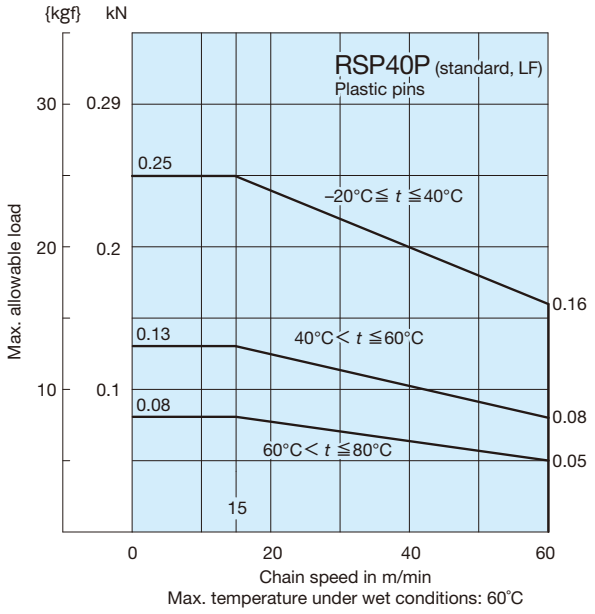




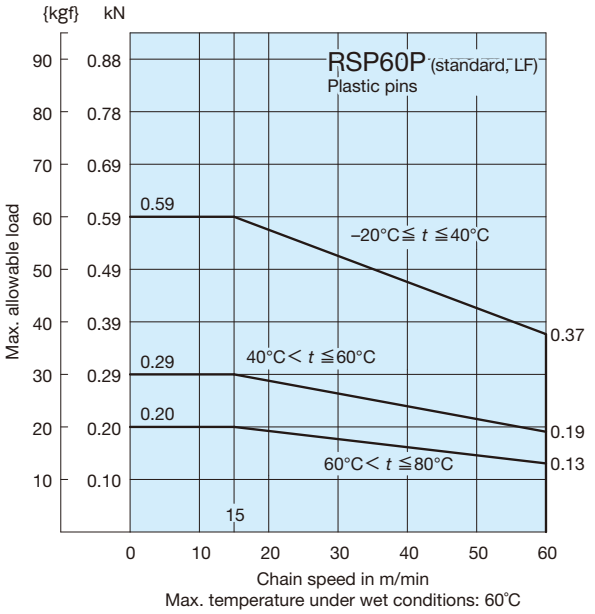
※ t = temperature

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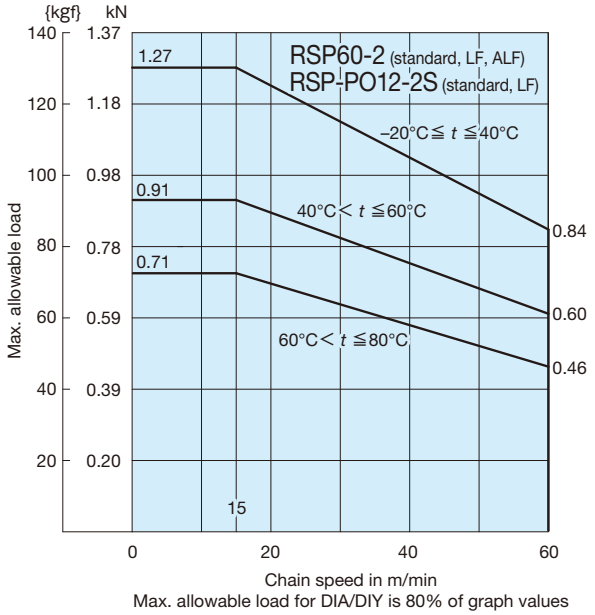
Top Chain



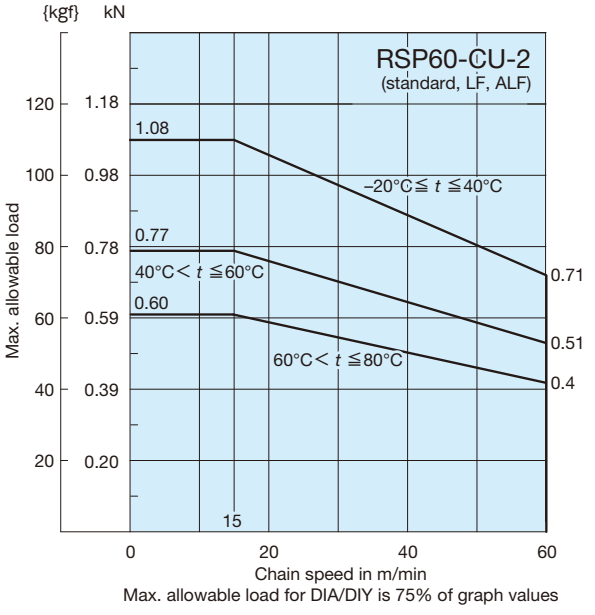
Max. temperature under wet conditions: 60℃



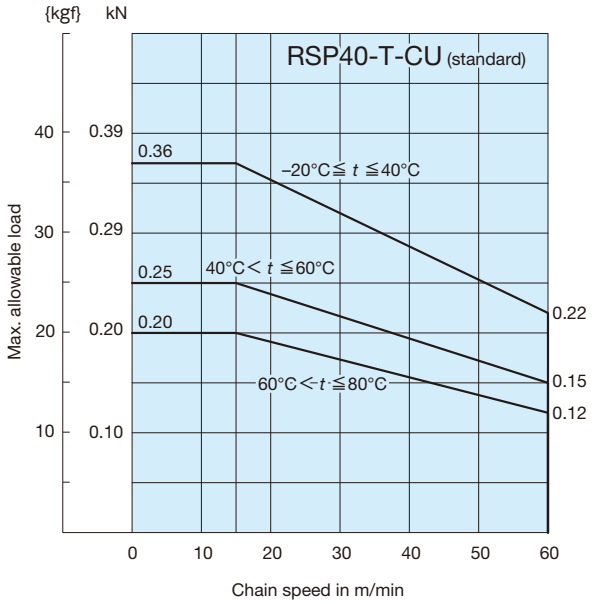
Max. temperature under wet conditions: 60℃

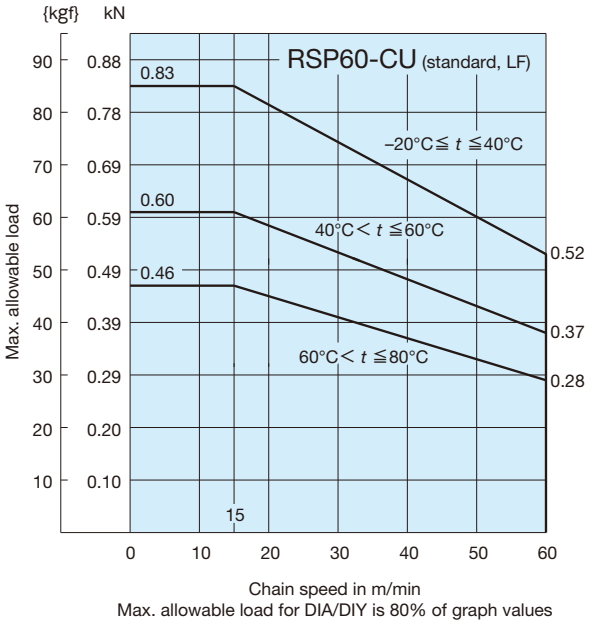


Max. allowable load for DIA/DIY is 80% of graph values



Max. allowable load for DIA/DIY is 75% of graph values

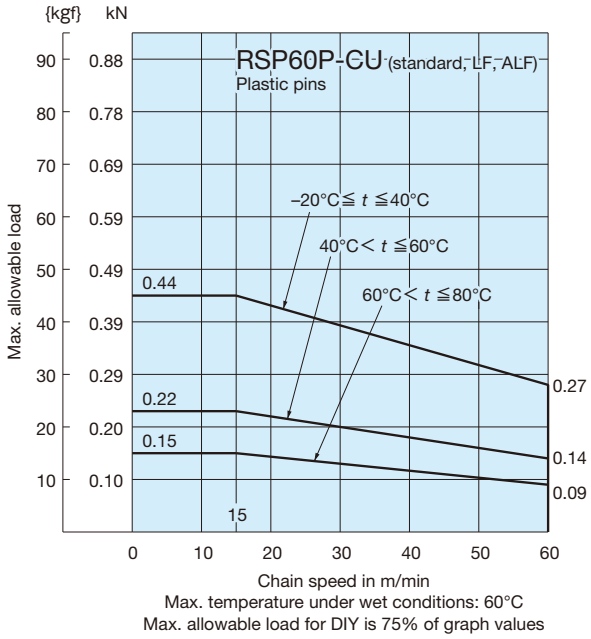




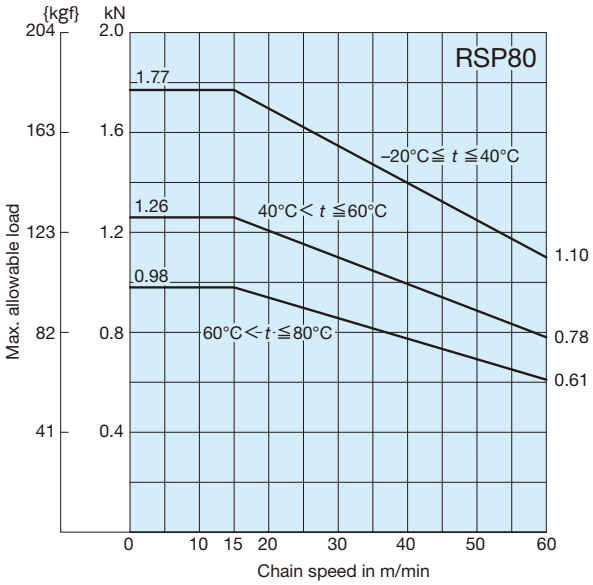
Max. allowable load for DIA/DIY is 80% of graph values

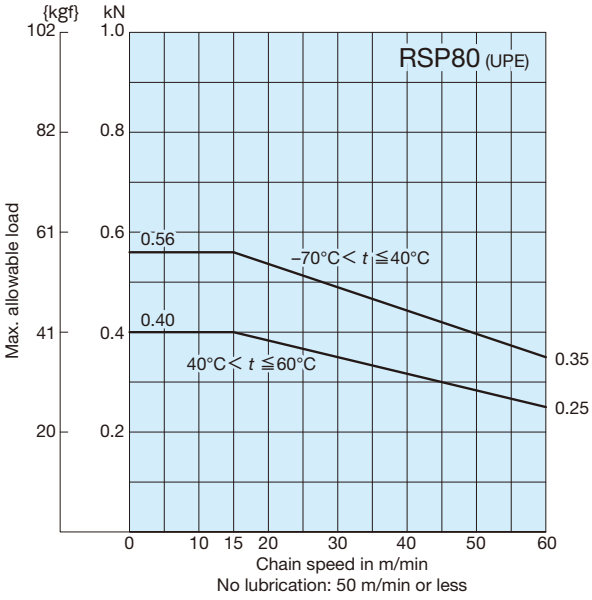
※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.



Max. temperature under wet conditions: 60°C
Max. allowable load for DIY is 75% of graph values





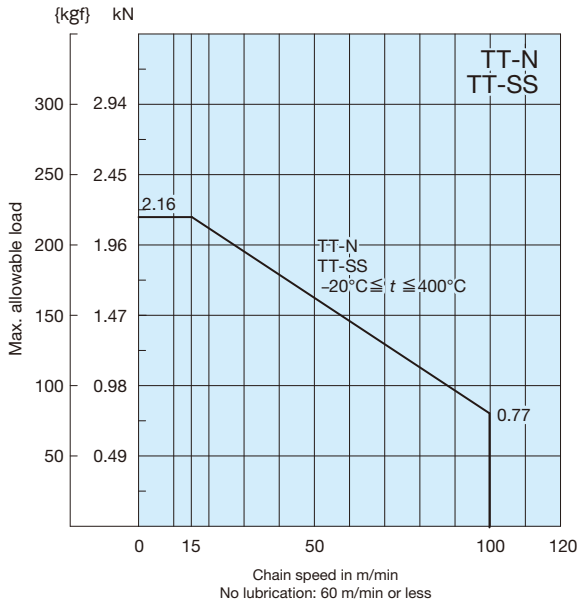
No lubrication: 50 m/min or less

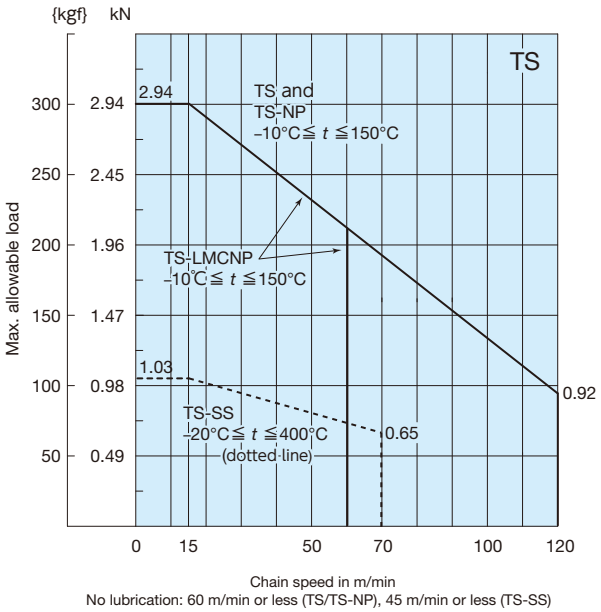
※ t = temperature

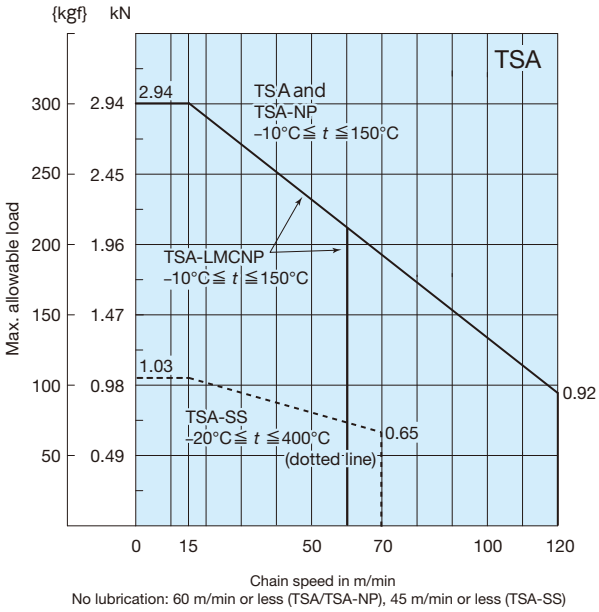
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

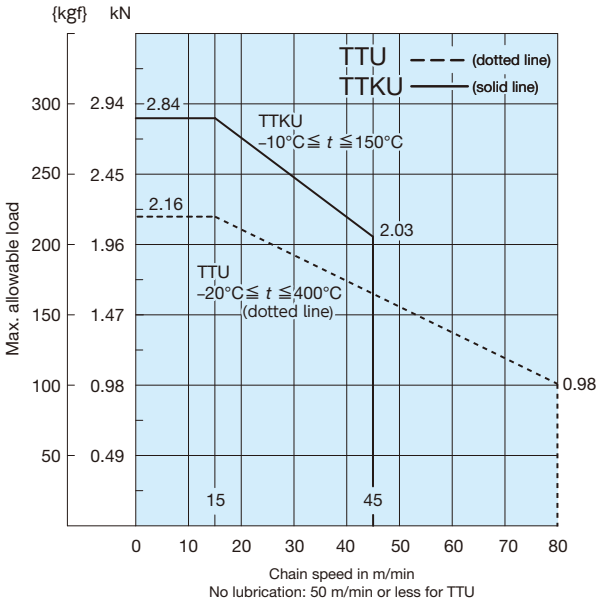
Top Chain

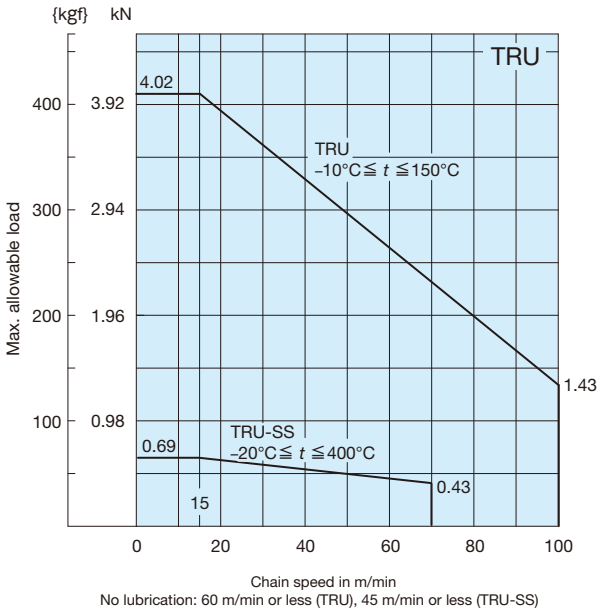
Stainless steel top chain

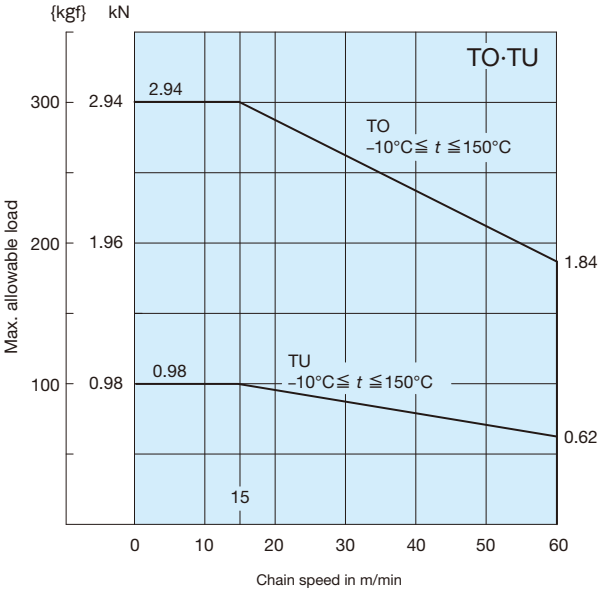












※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

MEMO

Plastic Modular Chain (Wide Type)

Please refer to “Selection Process for Top Chain” on page 403 for plastic modular chain (mold-to-width type).

1. Selection Process for Plastic Modular Chain (Wide Width)

Follow the process below to select the plastic modular chain (wide type) and the wearstrip that are most suitable for the application.

Step 1: Check Conveyance Conditions

Step 2: Select Chain Material

Step 3: Select Wearstrip Material

Step 4: Determine Coefficient

Step 5: Calculate Chain Tension and Power Required

Step 6: Determine Chain Type and Chain Width

Note: 1. When selecting BTM8H, WT2515F-W, WT3109-W, BTH16 and LTW series, please fill in the inquiry sheet on page 486, and contact a Tsubaki representative.
2. When selecting WT2250VG or WT2250 flight type, contact a Tsubaki representative.

Step 1. Check Conveyance Conditions

Check the operating condition as follows.

■ Conveyance conditions checklist

1. Conveyed products	①Materials	
	②Mass per unit	g/unit
	③Shape	
	④Dimension (length x width x height) (diameter x height)	mm
	⑤Direction of conveyance	↑ conveyed products →
2. Conveyor layout	①Length of conveyor	m
	②Width of conveyor	mm
	③Layout of conveyance	Draw a layout of the conveyance in the blank space below.
	④Space	BPM·Piece
3. Conveying conditions	①Amount of conveyed products	BPM/Pieces per minute
	②Interval of conveyed products	mm
	③Conveying speed	m/min
	④Lubrication	Yes ・ No
	⑤Stock of conveyed products (Accumulation and percentage)	Yes ・ No (If “yes,” accumulation distance: m)
4. Operating environment	①Temperature	°C
	②Conditions which may cause corrosion such as, contact with chemicals, water, and humidity (Refer to “Corrosion resistance to various fluids” on page 402.)	Yes ・ No (If “yes,” name of liquid:)
	③Presence of abrasives which may accelerate wear such as glass fragments, paint scraps, metal powder, sand	Yes ・ No
	④Exposure to UV radiation	Yes ・ No

2-③Conveyance layout and others

Step 2. Select Chain Material

Determine the chain material to be used based on operating environment and application.

Note: 1. Refer to the relevant product page for chain pitch of chain type, applicable chain material, and operating temperature range.
2. Refer to "Corrosion resistance to various fluids" on page 402.

Step 3. Select Wearstrip Material

Select an appropriate wearstrip material based on the chain materials.

Table 1. Wearstrip Material Selection Chart

Chain type	Wearstrip material	Lubrication			
		No lube		With lube	
		Abrasive material			
		No	Yes	No	Yes
Plastic modular chain (wide type) • Straight running	Stainless steel	B	D	A	A
	Steel	A	C	B	B
	Plastic rail (P rail)	D	×	A	×
	PMW rail PLF rail	B	×	A	×
	M rail SJ-CNO	A	×	×	×

Note: 1. A: Strongly recommended, B: Recommended, C: Very usable, D: Usable, ×: Not appropriate
2. Select stainless steel or steel wearstrips for KV series chains for normal temperatures, and a stainless steel wearstrip for high-temperature applications.
3. Recommended metal wearstrip material is cold-rolled metal.
4. Steel wearstrip assumes oil lubrication.

■ Wearstrip Material, Color, and Features

	Material, color	Features
Plastic rail (P rail)	UHMW-PE (color: white or green)	• Most commonly used rail • Machined or extruded • Recommended for plastic chains used under wet conditions • Low water absorption; chemical and impact resistance are also excellent
PMW rail PLF rail	Low friction, wear resistant UHMW-PE (color: white)	• Lower friction and more wear resistant than P rail • Machined or extruded
M rail SJ-CNO	Special polyamide [M rail (color: blue)] [SJ-CNO (color: purple)]	• Specifically designed for dry use • Wear resistant • Machined

Note: Operating temperature range
Plastic rail (P rail), PLF rail and PMW rail : –20°C to 60°C
M rail, SJ-CNO : –20°C to 80°C

Step 4. Determine Coefficient

Coefficient factors shown in table 2 are based on in house test data. These values may differ depending on the operation conditions, atmosphere, shape of the conveyed products, chain grime, and other conditions. Use these factors to calculate chain tension shown in step 5.

Table 2. Coefficient of Dynamic Friction (μ_1, μ_2) between Plastic Modular Chain and Wearstrip or Conveyed Product

Wearstrip and conveyed material		Lubrication	Top plate material										
			Closed type/Open type							Net type		DIA	DIY
			Standard Note: 5	LFB, NLF, MWS, CB, WR, HG	ALF	KV150	KV250	HTW	MF	LFB, MWS	ALF		
Wearstrip material (μ_1)	Plastic rail (P rail) M rail	No lube or water	0.25	0.20	0.15	—	—	0.30	0.27	0.20	0.15	0.30	0.25
		Soapy water or oil	0.15	0.13	0.11	—	—	0.20	—	0.13	0.11	—	0.12
	PMW rail SJ-CNO	No lube or water	0.20	0.15	0.13	—	—	—	—	0.15	0.13	0.30	0.20
		Soapy water or oil	0.12	0.12	0.11	—	—	—	—	0.12	0.11	—	0.12
	PLF rail	No lube or water	0.18	0.14	0.12	—	—	—	—	0.14	0.12	—	—
		Soapy water	0.12	0.12	0.11	—	—	—	—	0.12	0.11	—	—
	Steel stainless steel	No lube or water	0.25	0.20	0.14	0.25	0.35	0.32	0.27	0.20	0.14	0.30	0.25
		Soapy water or oil	0.15	0.15	0.11	—	—	0.20	—	0.15	0.11	—	0.12
Conveyed material (μ_2)	Metallic can	No lube or water	0.25	0.20	0.14	0.23	0.35	0.35	0.28	0.13	0.10	0.30	0.25
		Soapy water or oil	0.14	0.13	0.11	—	—	0.20	—	0.12	0.10	—	0.12
	Glass bottle	No lube or water	0.22	0.14	0.10	0.18	0.35	0.22	0.25	0.11	0.10	0.25	0.22
		Soapy water or oil	0.14	0.14	0.10	—	—	0.10	—	0.11	0.10	—	0.12
	Plastic container	No lube or water	0.25	0.17	0.13	0.20	—	0.30	0.28	0.11	0.10	0.30	0.25
		Soapy water or oil	0.15	0.13	0.11	—	—	0.20	—	0.11	0.10	—	0.15
	Paper package	No lube or water	0.31	0.29	0.22	0.35	—	0.35	0.38	0.20	0.15	0.38	0.30
		Soapy water or oil	0.20	0.21	0.12	—	—	—	—	0.19	0.11	—	0.20

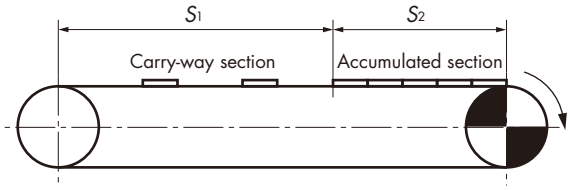
Note: 1. The dynamic friction coefficients listed are for room temperature (50°C or below). Under temperature conditions that exceed 50°C, use the dynamic friction coefficient 0.35.
2. The dynamic friction coefficient data here is based on in-house test data above. The dynamic friction coefficient values can slightly vary due to residue on the chains, the shape of the contact surface of the objects being conveyed, and other conditions. In particular, paper package can have significant differences in dynamic friction coefficients based on the contact surface shape and the material used. For this reason, dynamic friction coefficient measurement is recommended for each object type.
3. M rails and SJ-CNO are only for dry use conditions.
4. In the case of water lubrication, depending on the type of object being conveyed, the dynamic friction coefficient can be greater than the values in table 2, which can result in adsorption.
5. Standard series, Y, E, and UVR series.

Plastic Modular Chain (Wide Type/Mold-to-Width Type)

Step 5. Calculate Chain Tension and Power Required

Based on the formula below, calculate the tension acting on the chain and the required power (general-purpose conveyor).

Note: Refer to page on 449 to 453 for special conveyors (pasteurizers, warmers, coolers) and conveyors with nose bars (on the driven side, front side, or both ends).



Note: SI units and gravimetric units
The formulas are given for both SI units and gravimetric units.
When calculating tension F with gravimetric units, the weight (kgf) in gravimetric units is the same value as the mass (kg) in SI units.

F = Chain tension kN{kgf}
m_1 = Chain mass (kg/m)
Chain mass calculation method:
Calculate the chain mass for a length of 1 m.
If the preferred chain width is A mm:
m_1 = Chain mass (Catalog value (kg/m^2)) × A/1000
S_1 = Length of carry-way section (m)
m_2 = Weight of conveyed products in carry-way section (kg/m)
S_2 = Length of accumulation section (m)
m_3 = Weight of conveyed products in accumulation section (kg/m)
μ_1 = Coefficient of dynamic friction between chain and wearstrip (see table 2)
μ_2 = Coefficient of dynamic friction between conveyed product and chain in accumulation section (see table 2)
P = Power required (kW)
V = Chain speed (m/min)
η Note: 1 = Mechanical transmission efficiency for drive unit

SI Units (kN)

Chain Tension

$$F = 9.80665 \times 10^{-3}\{(2.1m_1 + m_2)\,S_1 \cdot \mu_1 + (2.1m_1 + m_3)S_2 \cdot \mu_1 + m_3 \cdot S_2 \cdot \mu_2\} \quad \cdots\cdots(1)$$

Power Required

$$P = \frac{F \cdot V}{60\,\eta \text{ Note: 1}}$$

Gravimetric Units (kgf)

Chain Tension

$$F = (2.1m_1 + m_2)S_1 \cdot \mu_1 + (2.1m_1 + m_3)\,S_2 \cdot \mu_1 + m_3 \cdot S_2 \cdot \mu_2\} \quad \cdots\cdots(1)$$

Power Required

$$P = \frac{F \cdot V}{6120\,\eta \text{ Note: 1}}$$

Note: 1. For the mechanical transmission efficiency, check the drive unit used.
2. Select a plastic modular chain (mold to width) according to "Selection Process for Top Chain" on page 403.

Step 6. Determine Chain Type and Chain Width

The tension F (kN) applied to the chain derived using formula (1) is converted into chain tension F' (kN/m) per 1 meter of chain width by the following formula.

$$F' = \frac{1000F}{\text{chain width (mm)}} \quad \cdots\cdots(2)$$

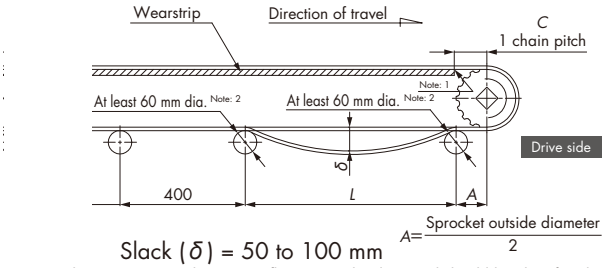
Select a chain type and the width of plastic modular chain whose maximum allowable load is greater than F', the tension on chain width per meter obtained by formula (2).

Note: 1. The operating temperature under wet conditions is 60°C at maximum, except for the following: HTW series: Max. 105°C and KV250 series: Max. 250°C. KV150 series is not allowed to be used under wet conditions.
2. To obtain the maximum allowable load, refer to the allowable load graphon page 471 to 474, and specify the chain speed and operating temperature on the diagram.
3. If the maximum allowable load is not adequate, select larger chains. To determine a chain type, the conveyance environment should be taken into account.

2. Conveyor Design

2-1. Wearstrip arrangement

Wearstrip arrangement depends on the installation space and other factors. An example is shown in the figure below. (High load application)



Slack (δ) = 50 to 100 mm

$$A = \frac{\text{Sprocket outside diameter}}{2}$$

Note: 1. The wearstrips and conveyor flame near the drive end should be chamfered to prevent chain from interference.
2. Return rollers having an 80 mm diameter or more should be used for WT1907, WT3827 and WT5707.

2-1-1. Amount of chain slack

Table 3 shows the spacing *L* between return rollers supporting the chain on the return-way near the drive sprocket. The amount of the slack of the chain between these rollers should be 50 to 100 mm, or the chain may result in skipping. The slack prevents the chain skipping.

Table 3: Return Roller Spacing *L*

(Units: mm)

Chain type	Return roller spacing *L* chain tension rate (*F1*)	
	50% or less	More than 50%
WT0405,WT0705	400 to 600	
BT6, BT8	500 to 700	800 to 1000
WT2250, BTC8S, WT2515, WT2525	600 to 900	
WT1500, 2500, 3000, 3800	450 to 500	
WT3109, BTH16	750 to 1000	

WT1907, WT3827, WT3835, WT5707

(Units: mm)

Conveyance conditions	Return roller spacing *L*
Length of conveyor: Less than 12 m/conveyed mass: 75 kg/m^2 or less	600 to 900
Length of conveyor: Less than 20 m/conveyed mass: 100 kg/m^2 or less	750 to 900
Length of conveyor: Less than 20 m/conveyed mass: exceeds 100 kg/m^2	1200 to 1500

Note: 1. Design with mold to width is same as plastic top chain (refer page 409).
2. For pasteurizers and other special conveyors, contact a Tsubaki representative.
3. Refer to page on 442 to 443 for when nose bars are mounted on both ends.

2-1-2. Engagement angle

The engagement angle of the chain on the drive sprocket should be at least 180° Note. If the engagement angle is too small, chain skipping may occur.

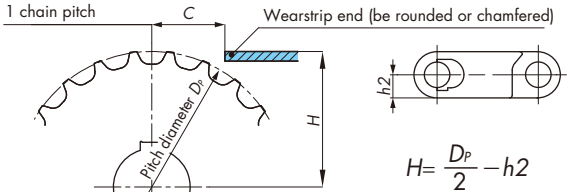
Note: The engagement angle of bottom power drive should be 200° or more.

2-1-3. Wearstrip ends

A distance *C*, between the center of the sprocket and the end of the wearstrip, basically should be one pitch of the chain. Also the wearstrip end of the driven unit must be rounded or chamfered to prevent the wearstrip from catching or snagging the chain.

2-1-4. Location of sprockets and wearstrips

Refer to drawing below.



$$H = \frac{D_P}{2} - h2$$

Note: For WT3109-W and BTH16, contact a Tsubaki representative.

Table 4: Backflex Radius

	Chain type	Backflex radius *R* mm
Wide type	WT0405-W	5
	WT0705-W	10
	BTN5, WT1505-K, WT1505G-K, WT1505GTO-K, WT1506-K, WT1515-W, WT1515G-W, WT1516-W, WT1515G-M, BTC6, BTO6, BTN6	15
	WT1907-K	90
	BTC8, BTM8H, WT2250-W, WT2525-K, BTC8S, WT2515-W, WT2515G-W	25
	WT2505-K, WT2506-K, WT2706-K	20
	WT2705-K, WT3005-K, WT3005G-K, WT3086-K, WT3086G-K	30
	WT3109-W	35
	WT3816-K, WT3835-K	40
	WT3827-K	50
	BTH16	60
	WT5707-K	70
Mold-to-width type	BTC4-M	10
	WT1505G-M, WT1505GTO-M, WT1505TOD-M, WT1515G-M	15
	BTO8-M, WT2505-M, WT2505G-M, WT2505TOD-M	20
	BTC8H-M, BTM8H-M, WT2515G-M	25
	WT3005G-M, WT3086G-M, WT3085C325	30
	WT3835G-M	40

2-2. Guide Clearance

Leave a clearance between the chain and the wearstrip (guide clearance) as indicated below to allow for thermal expansion.

Conveyor guide width (*G*) = chain width (*X*) + guide clearance (*Gc*)

Table 5: Guide Clearance *Gc*

(Units: mm)

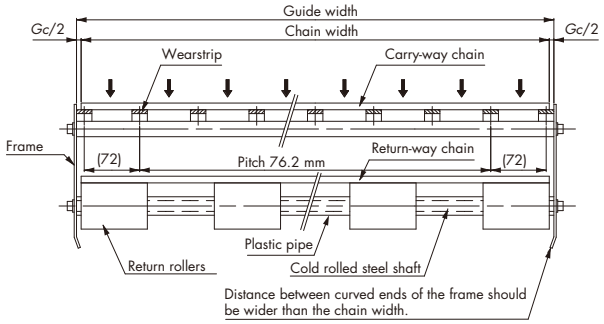
Chain width mm \ Temperature °C	Guide clearance *Gc* -20 to 40	40 to 60	60 to 80
300 or less	5.0	6.0	7.0
300 to 500	6.0	7.0	9.0
500 to 1,000	8.0	11.0	15.0
1,000 to 1,500	11.0	15.0	21.0
1,500 to 2,000	14.0	20.0	28.0
2,000 to 2,500	17.0	24.0	34.0
2,500 to 3,000	19.0	27.0	40.0

Note: Coefficient of linear expansion of polyacetal chain: 12 × 10^{-5}/°C

2-3. Example of wearstrip installation (at ambient temperature)

2-3-1. Wide types (without tab guide attachments)

Wearstrips should be located at equal intervals alternating with sprockets. Wearstrip spacing are as follows;
WT0400 series: 45 mm/WT0700 series and WT1510 series: 50 mm/BTN5: 76 mm
BT6, BT8/WT1500 series, WT1907, WT3005, WT3835, WT2525 and BTC8S: 76.2 mm/WT2500 series: 76.2 mm (wearstrip width: 25 mm)/WT3086, WT2515 and WT2250: 85 mm/WT3816: 100 mm (wearstrip width: 30 mm)/WT3827 and WT5707: 152.4 mm



Plastic Modular Chain (Wide Type/Mold-to-Width Type)

2-3-2. Wide types (with tab guide attachments)

(Chains with tab guide attachments: BTN5-A, WT1505GK, WT1515G-W, WT1505GTO-K, WT2515G-W, WT3005G-K, WT3086G-K and BTC8-A)
Tab guide attachments (to prevent meandering) should be installed so as not to interfere with the wearstrip.

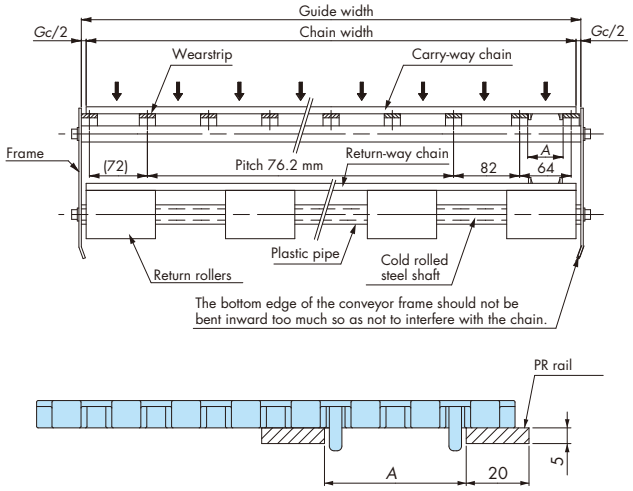
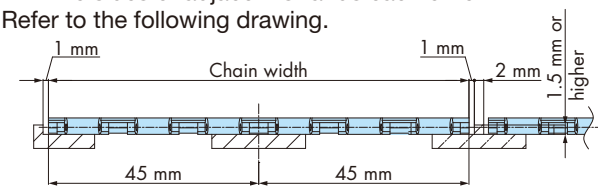


Table 6: A Dimensions [Wide Types (with Tab Guide Attachments)]

Chain type	A	Chain type	A
WT1505G-K	44	BTC8-A	44
WT1505GTO-K	47	WT3005G-K	44
BTN5-A	44	WT3086G-K	44
WT2515G-W	45	WT1515G-W	31

2-3-3. Wide type (WT0405-W)

In case of a multi strand application, do not make contact with the sides of adjacent strands each other.
Refer to the following drawing.

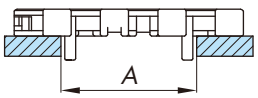


Note: Do not interfere sprocket with wearstrip.

2-3-4. Mold-to-width type (with tab guide attachments)

Refer to the table below for guide clearance for chains with tab guide attachments. Leave a clearance of around 1 mm between chains when used in multi-strand conveyors.

For single strand



For multi strands

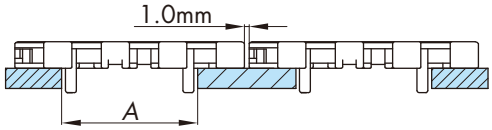


Table 7: A Dimensions (Mold-to-Width Type with Tab Guide Attachments)

Chain type	A	Chain type	A
WT1505G-M	44	WT2515G-M	45
WT1505GTO-M	47	WT3005G-M	44
WT1505TOD	53	WT3086G-M	44
WT1515G-M50	31	WT3835G-M	45
WT1515G-M100	61	BTO8-M	44
WT2505G-M	45	BTC8H-M	44
WT2505TOD	45	BTM8H-M	44

2-3-5. Wearstrip installation for KV series

- Recommended wearstrip material is stainless steel.
- Secure only one end of the wearstrip to allow for thermal expansion. Also, remember to leave a clearance between wearstrips to allow for thermal expansion.
- Take-up must be done to compensate for slack in the chain caused by thermal expansion. Take-up adjustments should be performed after reaching operating temperature. Lower temperatures only after loosening take-up.
- Black wear dust will be generated. Be sure to clean on a regular basis.

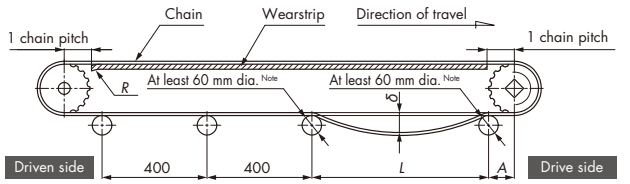
2-4. Conveyor layout

There are two methods of supporting the return-way: “support system using return rollers”, and the “support system using wearstrips”. Examples are shown below.
Precautions:
1. Pay particular attention to the ends when connecting conveyors using TOD chain on the ends.
2. The infeed section of the return wearstrip should be made with a large radius of at least *R*40.
3. Cut the chain so that the catenary section will have an appropriate amount of slack to compensate for expansion and contraction caused by temperature changes. A tensioner or similar device should be used to adjust the chain take-up.

2-4-1. Support system using return rollers

The distance of the rollers (in the direction of the conveyor width) should be adjusted according to the width of the chain to be used.

(Conveyor side view) (High loading layout)

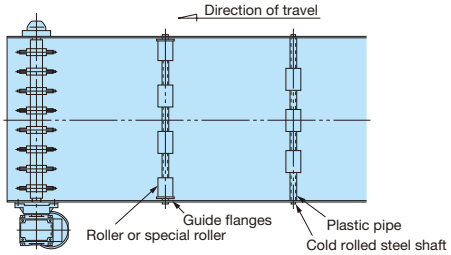


Slack(δ)=50 to 100 mm $A=\frac{\text{Sprocket outer diameter}}{2}$

Note: 80 mm dia. or more for WT1907, WT3827 and WT5707

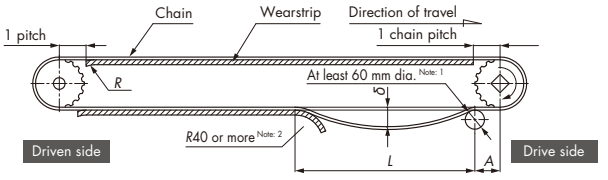
Refer to page on 440 for *L* dimensions.

Plan view of return-way conveyor



2-4-2. Support system using wearstrips

(Conveyor plan view) (High loading layout)



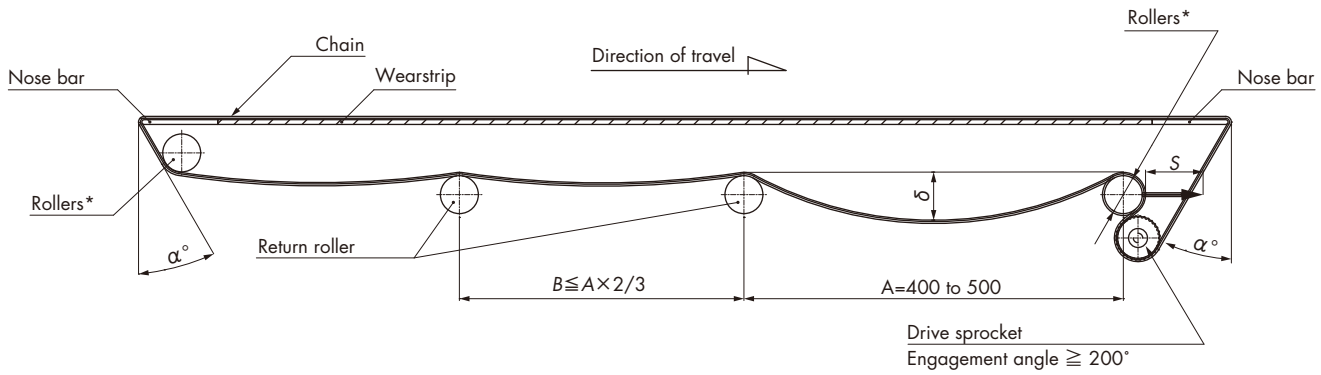
Slack(δ)=50 to 100 mm $A=\frac{\text{Sprocket outside diameter}}{2}$

Note: 1. 80 mm dia. or more for WT1907, WT3827 and WT5707.
2. Equal to its backflex radius or more for WT1907, WT3827, WT5707.

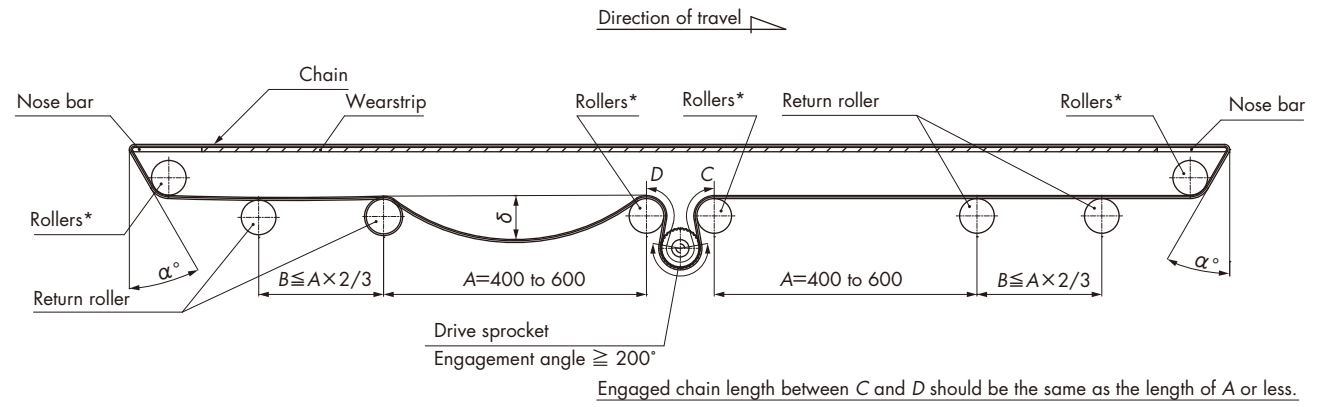
Refer to page on 440 for *L* dimensions.

2-5. WT0700 series with nose bars at both ends

One-way (unidirectional) drive



Forward/reverse bottom drive



Engaged chain length between *C* and *D* should be the same as the length of *A* or less.

Important points regarding conveyor design

1. Use rollers* in the take-up system
   - It becomes easy to take up chain stretch, cut the chain, and adjust the slack (δ).
   - A rough guide for the take-up stroke (*S*) is *S* = conveyor length × 1%.
2. With regard to rollers*
   - Select rollers that has the largest possible outside diameter (at least 50 mm).
   - The shaft used for rollers must have adequate stiffness.
   - The rollers should be freely rotated.
3. Because the chain will expand and contract due to changes in temperature, cut the chain so that an appropriate amount of slack is formed in the catenary section, or adjust using tensioners.
   Reference: Coefficient of linear expansion of polyacetal chain: 12×10^{-5}/°C
4. In case of forward/reverse bottom drive, idler rollers receive 1.5 times higher tension load than operation tension, consider choosing more rigid shaft or supporting shaft at more than three places.
   Note: High loading conditions have been taken into account for the design material.

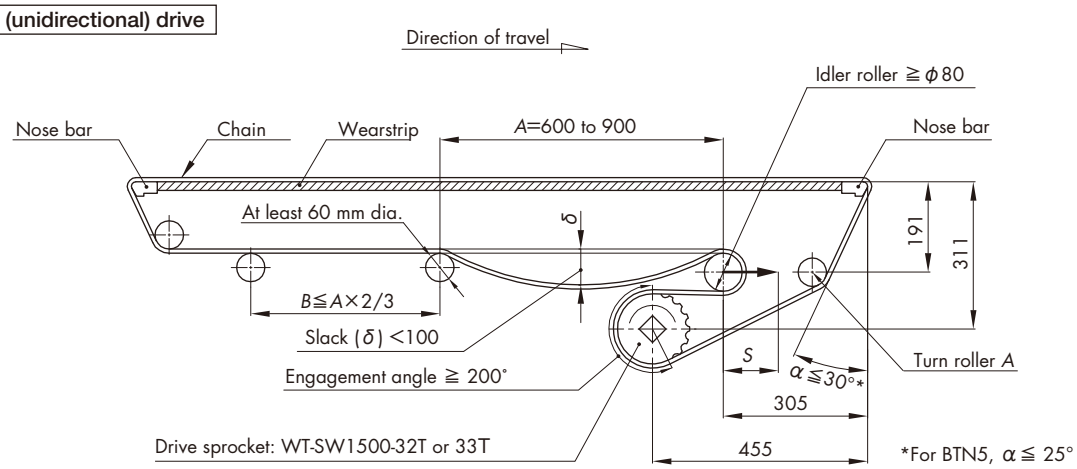
Important points when using nose bars

1. Nose bars must be mounted using rigid bracing. Slack must be kept within 0.5 mm.
2. Dimensional tolerance for bending, twisting, etc., of the frame in the direction of the conveyor width must be less than 0.3 mm.
3. The position and dimensions of the nose bars, rollers*, and sprockets must be set so that they form an angle $\alpha \leqq 30°$.
4. The chain slides over the nose bar under load levels approaching the maximum working tension. Consequently, SJ-CNO (special polyamide) is recommended when running at high speeds and conveying high loading under dry conditions (no lubrication).

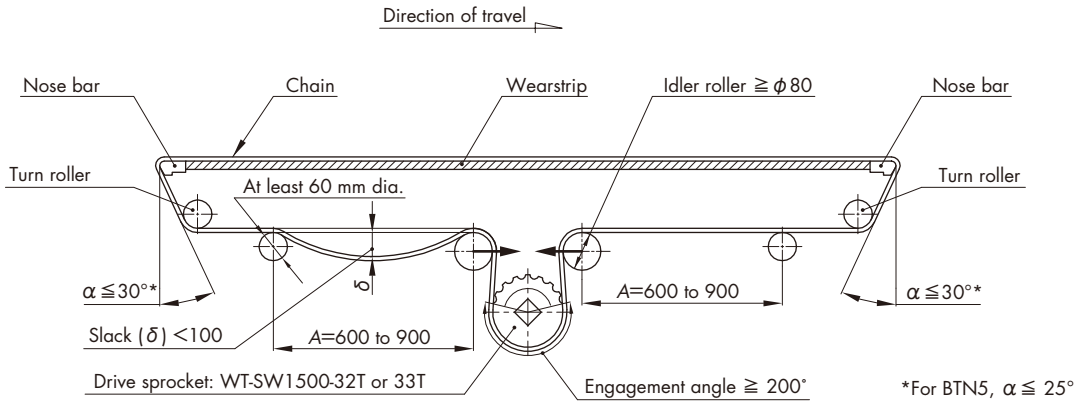
Plastic Modular Chain (Wide Type)

2-6. WT1500 series and BTN5 with nose bars at both ends

One-way (unidirectional) drive



Forward/reverse bottom drive



Important points regarding conveyor design

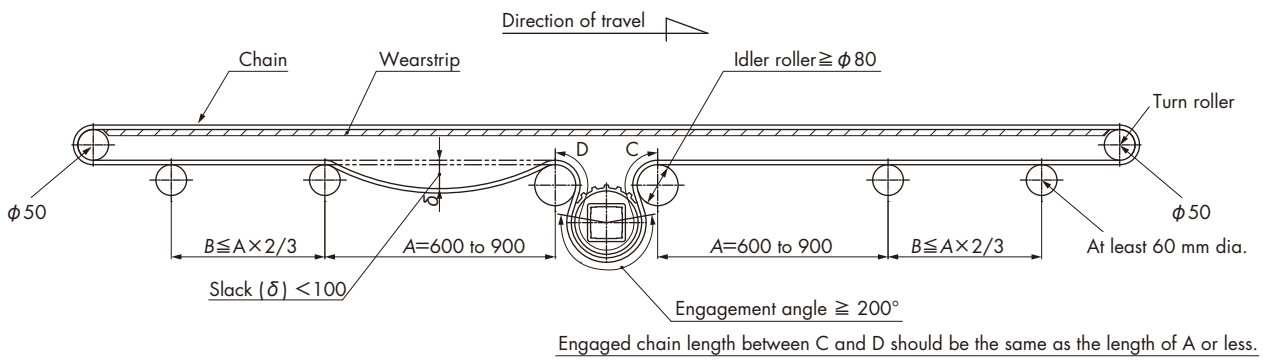
1. Use idler rollers in the take-up system.
   - It becomes easy to take up chain stretch, cut the chain, and adjust the slack (δ).
   - A rough guide for the take-up stroke (*S*) is *S* = conveyor length × 1%.
2. Select the idler roller that has the largest possible outside diameter (at least 80 mm diameter).
3. The idler roller should be freely rotated.
4. The shaft used for turn roller *A* and turn rollers must have sufficient stiffness. (Do not use high-rotation return rollers for these turn rollers.)
5. Because the chain will expand and contract due to changes in temperature, cut the chain so that an appropriate amount of slack is formed in the catenary section, or adjust using tensioners.
   Reference: Coefficient of linear expansion of polyacetal chain: 12×10^{-5}/°C
6. In case of forward/reverse bottom drive, idler rollers receive 1.5 times higher tension load than operation tension, consider choosing more rigid shaft or supporting shaft at more than three places.

Important points when using nose bars

1. Nose bars must be mounted using rigid bracing. Slack must be kept within 0.5 mm.
2. Dimensional tolerance for bending, twisting, etc., of the frame in the direction of the conveyor width must be less than 0.3 mm.
3. The position and dimensions of the nose bars and turn rollers must be set so that they form an angle α ≦ 30°.
4. The chain slides over the nose bar under load levels approaching the maximum working tension. Consequently, PLF, PMW, or SJ-CNO (special polyamide), are recommended when running at high speeds and conveying high loading under dry conditions (no lubrication).

Note: High loading conditions have been taken into account for the design material.

2-7. Layout of forward/reverse bottom drive for WT2520 series



Important points regarding conveyor design

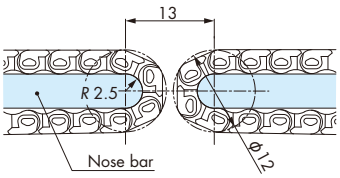
1. Select the idler roller that has the largest possible outside diameter (at least 80 mm diameter).
2. The idler roller should be freely rotated.
3. The shaft used for turn rollers must have sufficient stiffness. (Do not use high-rotation return rollers for these turn rollers.)
4. Because the chain will expand and contract due to changes in temperature, cut the chain so that appropriate slack is formed in the catenary section, or adjust using tensioners.
   Reference: Coefficient of linear expansion of polyacetal chain: 12×10^{-5}/°C
5. In case of forward/reverse bottom drive, idler rollers receive 1.5 times higher tension load than operation tension, consider choosing more rigid shaft or supporting shaft at more than three places.

Plastic Modular Chain (WideType/Mold-to-Width Type)

2-8. In-line layout with nose bars

2-8-1. In-line layout of WT0405-W

With a nose bar with a 2.5 mm radius, in-line transfer layout will be possible. The gap in between can be reduced to 13 mm without mounting a dead plate, which was previously required.

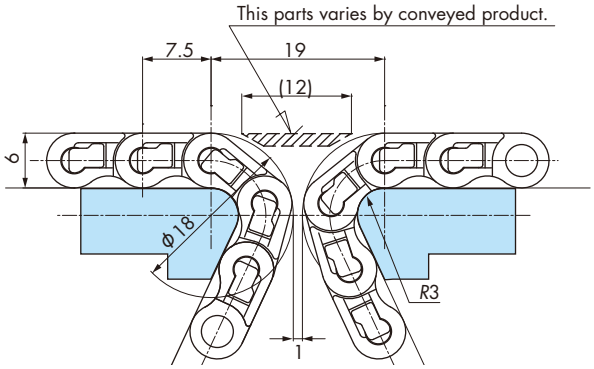


Note: Please contact a Tsubaki representa-tive for details.

2-8-2. In-line layout of WT0705-W

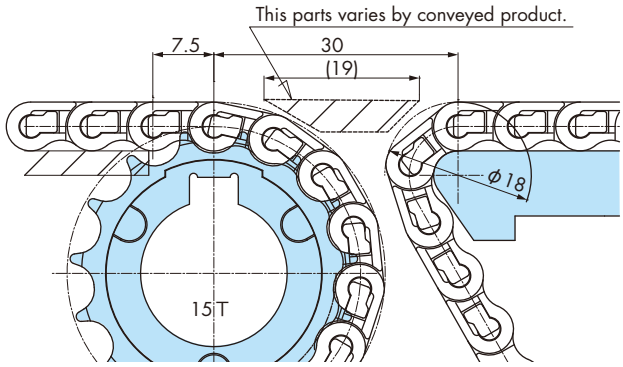
■ In-line layout of WT0705-W nose bar

Both conveyor ends can be adjoined in a straight line. The use of a dead plate helps minimize space in between.



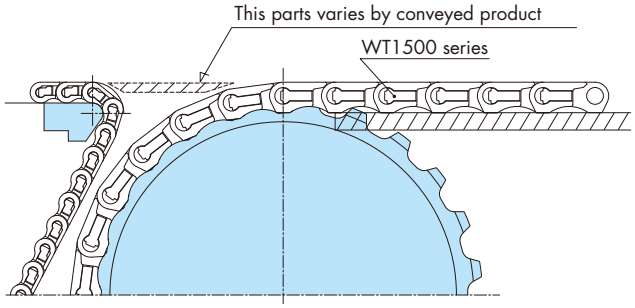
■ In-line layout of WT0705-W with nose bar and sprocket

Conveyor ends and sprockets can be adjoined in a straight line. The use of a dead plate helps minimize space in between.



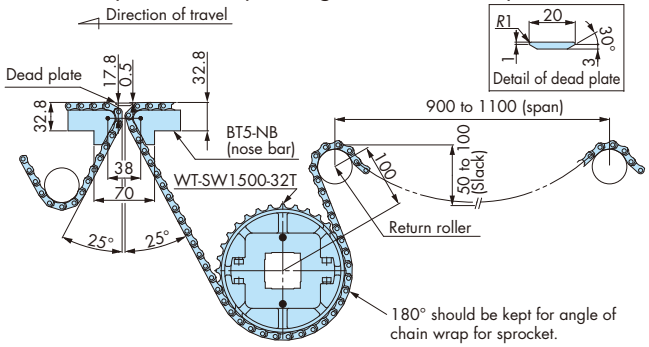
■ In-line layout of WT0705-W with nose bar and WT1500 series sprocket

Conveyor ends and sprockets can be adjoined in a straight line. The use of a dead plate helps minimize space in between.



2-8-3. In-line layout of WT1500 series and BTN5

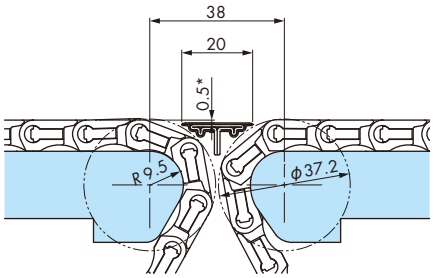
The figure below is an example layout. Mounting positions of wearstrips varies depending on installation space, etc.



Note: 1. Indicated dimensions are just for information, so finely adjust them depending on transfer conditions of the conveyed products.
2. Even slight jerking due to the unstable shape of conveyed products may cause trouble. Contact a Tsubaki representative when such products have to be conveyed or chain jerking must be avoided.

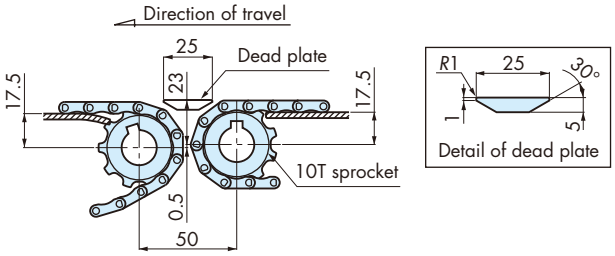
The use of WT1500 and WT1510 series or BTN5 allows layouts in which two conveyors connect head-to-tail. The width of the dead plate used in the space where the two conveyors abut can be as small as 20 mm.

Note: 1. Dimensions marked with * will need to be adjusted depending on the conveyed products.
2. Applicable chains are the WT1500, WT1510 series and BTN5 only. It should be noted that WT1505G cannot be adapted to this kind of layout.

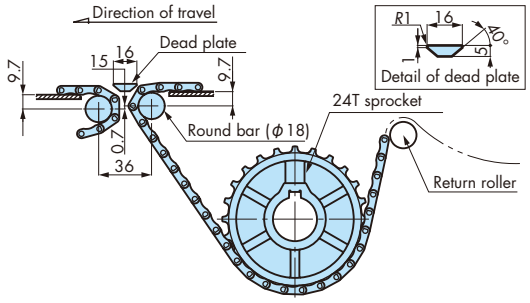


2-9. In-line layout of BTC4-M

• For straight transfer with 10T sprockets



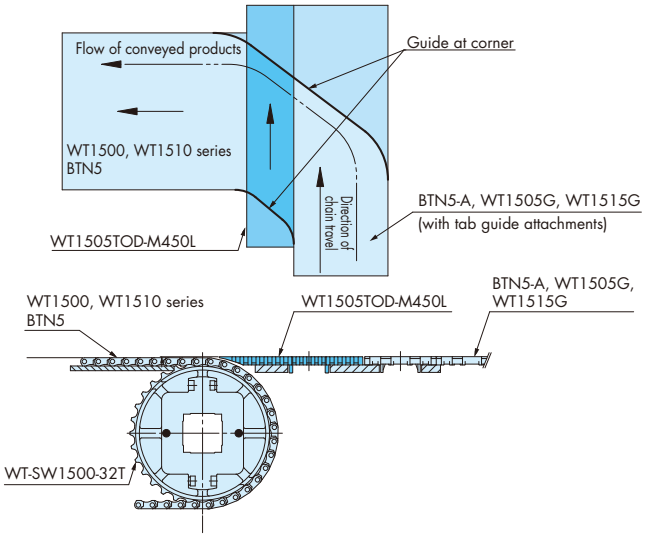
• For straight transfer with round bar (ϕ18)



Note: The position level of the dead plate should be finely adjusted according to transfer conditions of the conveyed products.

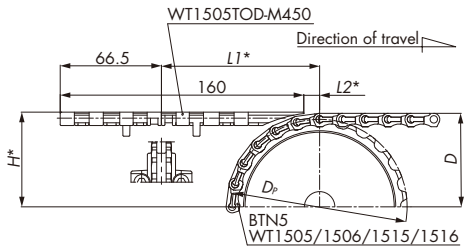
2-10. Layout of right-angle transfers

By using GTO and TOD or nose bar, right angled corners can smoothly be transferred without the use of dead plates.



• Dimensions for mounting the chains are given below.

Insertion Conveyor (WT1505TOD/WT1500)

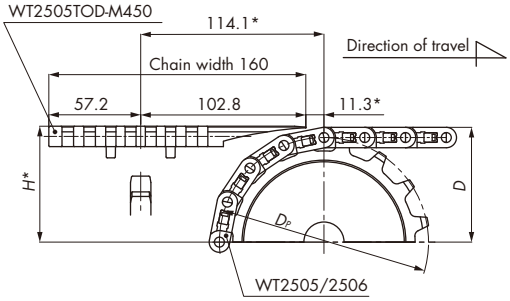


Teeth	Dimensions (mm)				
	D_P	D	H*	L1*	L2*
24	114.9	61.4	62.2	103.9	10.4
32	153.0	80.5	81.3	104.9	11.4
33	157.8	82.9	83.7	105.0	11.5

Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

Insertion Conveyor (WT2505TOD/WT2500)

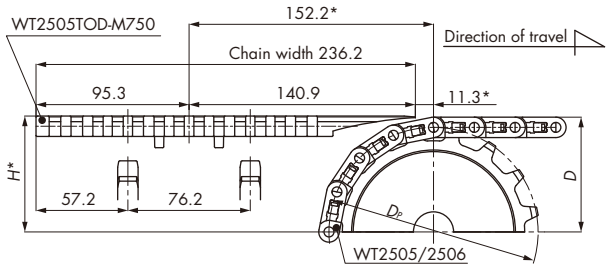
• Case of WT2505TOD-M450



Teeth	Dimensions (mm)		
	D_P	D	H*
16	130.2	71.4	72.1
18	146.3	79.5	80.3
21	170.4	91.6	92.5
31	251.1	131.8	132.6

Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

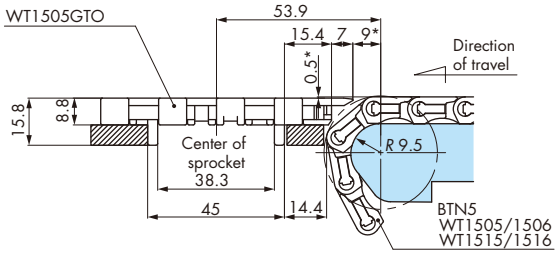
• Case of WT2505TOD-M750



Teeth	Dimensions (mm)		
	D_P	D	H*
16	130.2	71.4	72.1
18	146.3	79.5	80.3
21	170.4	91.6	92.5
31	251.1	131.8	132.6

Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

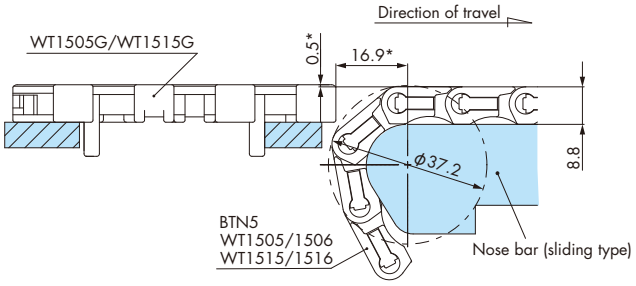
Discharge Conveyor (WT1500/WT1505G/WT1515G)



Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

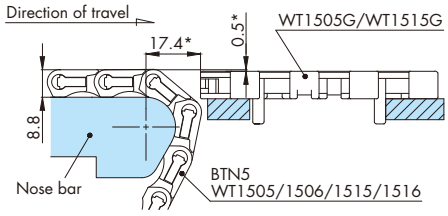
2-11. Right-angle transfer of WT1500 and WT1505G

Insertion Conveyor (WT1500/WT1505G/WT1515G)



Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

Discharge Conveyor (WT1500/WT1505G/WT1515G)

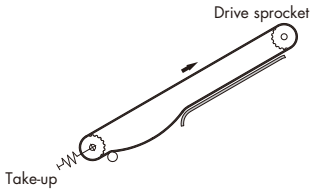


Note: Dimensions marked with * will need to be adjusted depending on the conveyed products.

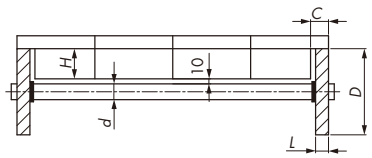
Plastic Modular Chain (Wide Type/Mold-to-Width Type)

2-12. Take-up for inclined conveyors

With inclined conveyors, the chain's own weight can cause it to come off the driven sprocket. Therefore, installing a take-up device is recommended.



2-13. Return-way in flight type chain

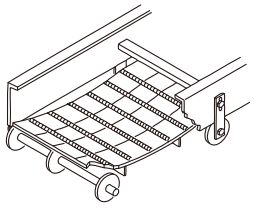


$$D = 2 \cdot (H + 10 + \frac{d}{2})$$

$$L = C - 5$$

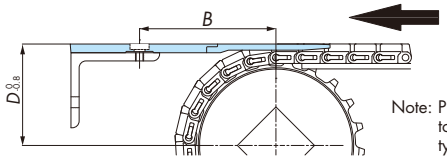
D: Roller diameter
L: Roller width
d: Shaft diameter
H: Height of flight

Note: For wide chain, rollers should be positioned at 765-mm intervals.



2-14. Installation of transfer plate

The figure below is a preferable layout for transfer plate installation.

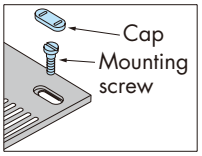


Note: Please use the transfer plate together with a raised rib type chain.

Chain type	Transfer plate Tsubaki model no.	*B* mm	*D* mm
WT1907-K	WT-TP1907-L114	70	$\frac{D_P}{2}$ + 9.9
	WT-TP1907-L190	100	
WT3827-K	WT-TP3827-L152	82	$\frac{D_P}{2}$ + 12.7
WT5707-K	WT-TP5707-L220	82	$\frac{D_P}{2}$ + 15.5

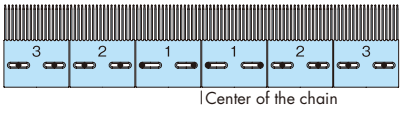
D_P: Pitch diameter

The figure on the right shows how to secure transfer plates with a dedicated cap and a screw. Having taken thermal expansion into account, secure the screw on the plate in accordance with the guidelines below, which are separated by operating temperature.



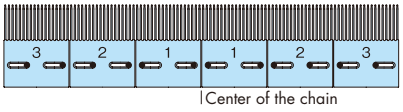
1) Stable room temperature (20°C)

The screws of transfer plates with number 2 and 3 are to be secured in the center of the slot in accordance with the figure on the right.



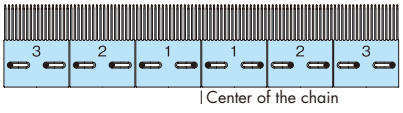
2) Low temperature

The screws of transfer plates with number 2 and 3 are to be secured nearing the center of the chain in accordance with the figure on the right.



3) High temperature

The screws of transfer plates with number 2 and 3 are to be secured nearing the edge of the chain in accordance with the figure on the right.



Plastic Modular Chain (Wide Type)

3. Examples of selection procedure

Step 1. Establish Operating Conditions

- Conveyor width: Approximately 600 mm
- Conveyor length: 10 m
- Conveying speed: 20 m/min
- Conveyed products: 350 ml can filled with contents (98 kg/m^2)
- Accumulation: Fully accumulated on conveyor
- Temperature: Room temperature
- Lubrication: Soapy water

Step 2. Select Chain Material and Chain Type

BTO6-6096-LFB (open type, LFB series) is selected.

Step 3. Select Wearstrip Material

UHMW-PE is selected.

Step 4. Calculate Chain Tension

m_1 = Chain mass……4 kg/m
For a chain width of 609.6 mm:
6.56 (value from catalog in kg/m^2) × 609.6/1000
≒ 4 (kg/m)

S_1 = Length of carry-way section……0 m

m_2 = Weight of conveyed products in carry-way section ……0 kg/m

S_2 = Length of accumulation section……10 m

m_3 = Weight of conveyed products in accumulation section ……60 kg/m
For a chain width of 609.6 mm:
98 (conditions as above in kg/m^2) × 609.6/1000
≒ 60 (kg/m)

μ_1 = Coefficient of dynamic friction between chain and wearstrip……0.13 (see table 2)

μ_2 = Coefficient of dynamic friction between conveyed products and chain in accumulation section……0.13 (see table 2)

V = Chain speed……20 m/min

η = Mechanical transmission efficiency for drive unit……0.8

SI units (kN)

$$F = 9.80665 \times 10^{-3} \times \{(2.1 \times 4 + 0) \times 0 \times 0.13 + (2.1 \times 4 + 60) \times 10 \times 0.13 + 60 \times 10 \times 0.13\} = 1.64 \text{ kN}$$

$$P = \frac{1.64 \times 20}{60 \times 0.8} = 0.683 \text{ kW}$$

Gravimetric units

$$F = (2.1 \times 4 + 0) \times 0 \times 0.13 + (2.1 \times 4 + 60) \times 10 \times 0.13 + 60 \times 10 \times 0.13 = 166.9 \text{ kgf}$$

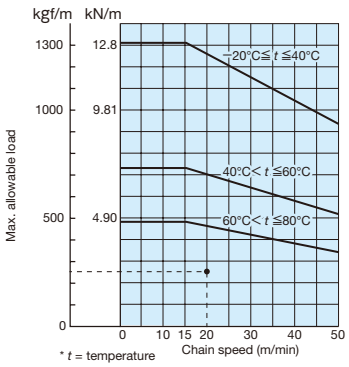
$$P = \frac{166.9 \times 20}{6120 \times 0.8} = 0.682 \text{ kW}$$

Step 5. Determine Chain Type and Width

Tension applied per 1 meter of chain width

$$F' = \frac{1000 \times 1.64}{609.6} = 2.69\text{kN/m} \{274\text{kgf/m}\}$$

Since the above value exists below the appropriate line in the allowable load graphs can be used.
(Refer to the allowable load graphs for page on 471.)



Step 6: Select Sprocket, Shaft, and Bearing Unit

Sprocket, shaft, and bearing selection
Bearing support span = chain width (610) + 150 = 760 mm
In accordance with "the tension applied per 1 meter of chain width (F')", "the bearing support span graph", and tables 10, 33, and 34 (Type of Shafts and Corresponding Bearing Units), one of the following combinations of shaft and bearing unit should be used.

10T 38 hexagonal shaft
Bearing unit ϕ25 to ϕ35

or

24T 40 square shaft
Bearing unit ϕ30 to ϕ35

is to be used.

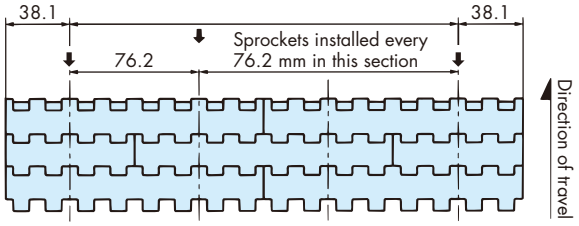
Step 7. Determine Sprocket Locations

1) Chain tension rate $F1$ (%) verification

$$F1 = \frac{100 \times 2.69}{12.8} = 21.0\%$$

2) Determine sprocket locations
Since $F1$ is 50% or less, the sprockets should be installed with a center distance as shown below.
(Refer to the illustration ⑧ for page on 457).

Mounting pitch of sprocket (⬇ Sprocket location)

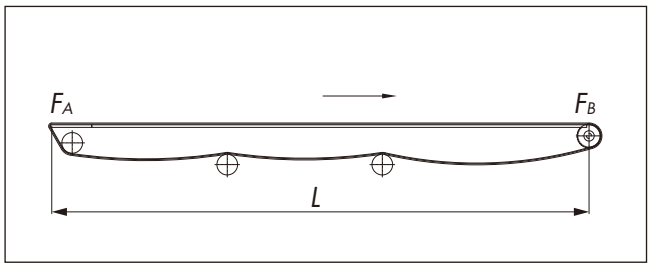


Sprocket locations when chain tension rate ($F1$) is 50% or less

Plastic Modular Chain (Wide Type/Mold-to-Width Type)

Selection example: WT0705-W

■ Nose bar on driven side



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = m_1 \cdot L \cdot \mu_1 \cdot fn \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot Ls \cdot \mu_2\} \times 9.80665 \times 10^{-3}$
- Tention at chain
  $F = F_B$

Note: Ls = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT0705-W300-LFG (m_1 = 5.9 × 0.3 = 1.77 kg/m)
Chain width	300 mm
Layout	L = 2 m
Chain speed	V = 15 m/min
Conveyed products	500-ml aluminum can (filled)
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.3 m = 41.7 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	Ls = 2 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.2
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.2
Nose bar coefficient	fn = 1.8

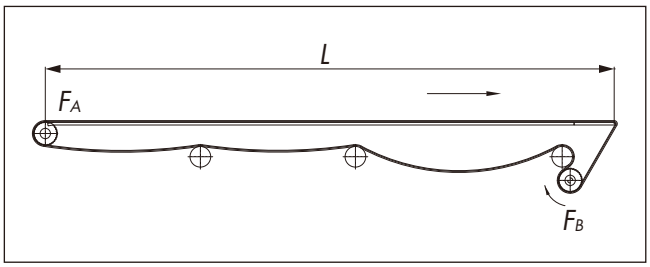
- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.77 \times 2 \times 0.2 \times 1.8 \times 9.80665 \times 10^{-3} = 0.0125$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = 0.0125 + \{(1.77 + 41.7) \times 2 \times 0.2 + 41.7 \times 2 \times 0.2\} \times 9.80665 \times 10^{-3}$
  $= 0.35$kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:

$$F_B' = \frac{1000 \times F_B}{300} = 1.17 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension is 2.5 (kN/m).
2.5 (kN/m)≧1.17 (kN/m)

Selected chain is acceptable.

■ Nose bar on front end



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.1 m_1 \cdot L \cdot \mu_1 \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot Ls \cdot \mu_2\} \times 9.80665 \times 10^{-3}] \times fn$
- Tention at chain
  $F = F_B$

Note: Ls = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT0705-W300-LFG (m_1 = 5.9 × 0.3 = 1.77 kg/m)
Chain width	300 mm
Layout	L = 2m
Chain speed	V = 15m/min
Conveyed products	500-ml aluminum can (filled)
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.3 m = 41.7 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	Ls = 2 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.2
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.2
Nose bar coefficient	fn = 1.8

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.1 \times 1.77 \times 2 \times 0.2 \times 9.80665 \times 10^{-3} = 0.0077$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [0.0077 + \{(1.77 + 41.7) \times 2 \times 0.2 + 41.7 \times 2 \times 0.2\} \times 9.80665 \times 10^{-3}] \times 1.8$
  $= 0.62$kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:

$$F_B' = \frac{1000 \times F_B}{300} = 2.07 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension is 2.5 (kN/m).
2.5 (kN/m)≧2.07 (kN/m)

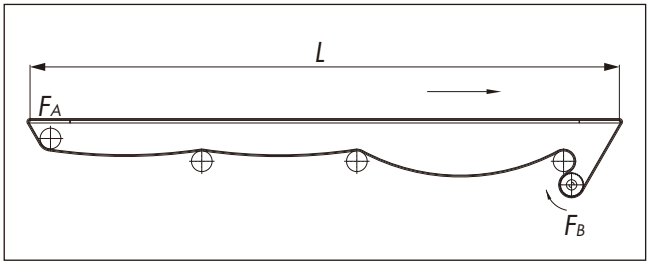
Selected chain is acceptable.

■ *fn* (nose bar coefficient)

Lubrication	Nose bar coefficient: fn
	Sliding type
Dry	1.8
Soapy water	1.35

Selection example: WT0705-W

■ Nose bar on both ends



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = m_1 \cdot L \cdot \mu_1 \cdot fn \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot Ls \cdot \mu_2\} \times 9.80665 \times 10^{-3}] \times fn$
- Tention at chain
  $F = F_B$

Note: Ls = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT0705-W300-LFG (m_1 = 5.9 × 0.3 = 1.77 kg/m)
Chain width	300mm
Layout	L = 2m
Chain speed	V = 15m/min
Conveyed products	500-ml aluminum can (filled)
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.3 m = 41.7 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	Ls = 2 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.2
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.2
Nose bar coefficient	fn = 1.8

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.77 \times 2 \times 0.2 \times 1.8 \times 9.80665 \times 10^{-3} = 0.0125$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [0.0125 + \{(1.77 + 41.7) \times 2 \times 0.2 + 41.7 \times 2 \times 0.2\} \times 9.80665 \times 10^{-3}] \times 1.8$
  $= 0.63$kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:

$$F_B' = \frac{1000 \times F_B}{300} = 2.1 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension is 2.5 (kN/m).
2.5 (kN/m)≧2.1 (kN/m)

Selected chain is acceptable.

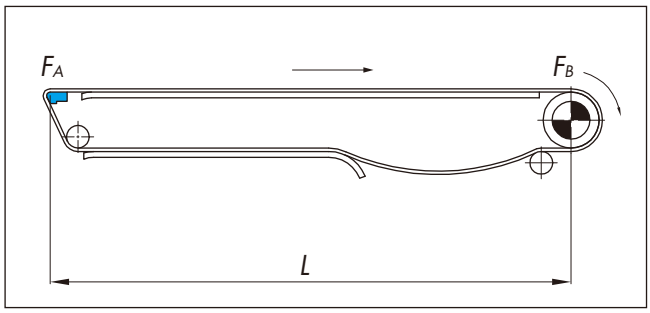
■ *fn* (nose bar coefficient)

Lubrication	Nose bar coefficient: *fn*
	Sliding type
Dry	1.8
Soapy water	1.35

Plastic Modular Chain (Wide Type/Mold-to-Width Type)

Selection example: WT1500 series, WT1510 series and BTN5

■ Nose bar on driven end



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = m_1 \cdot L \cdot \mu_1 \cdot fn \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot Ls \cdot \mu_2\} \times 9.80665 \times 10^{-3}$
- Tention at chain
  $F = F_B$

Note: Ls = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT1506-K30-ALF (m_1 = 6.7 × 0.762 = 5.1 kg/m)
Chain width	762 mm
Layout	L = 4 m
Chain speed	V = 15 m/min
Conveyed products	500-ml aluminum can (filled)
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.762 m = 106 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	Ls = 4 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.15
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.14
Nose bar coefficient	fn = 1.35 (bearing/roller type)

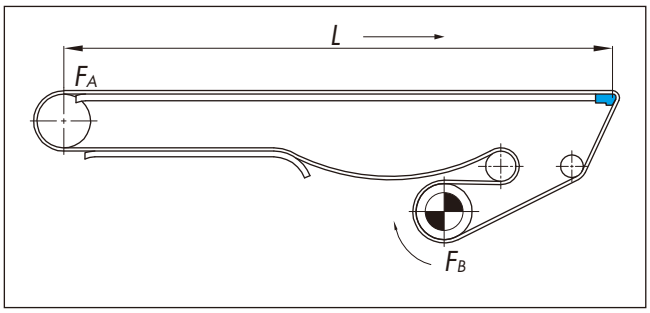
- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 5.1 \times 4 \times 0.15 \times 1.35 \times 9.80665 \times 10^{-3} = 0.04$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = 0.04 + \{(5.1 + 106) \times 4 \times 0.15 + 106 \times 4 \times 0.14\} \times 9.80665 \times 10^{-3}$
  $= 1.28$kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:

$$F_B' = \frac{1000 \times F_B}{762} = 1.68 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension is 10.5 (kN/m).
10.5 (kN/m)≧1.68 (kN/m)

Selected chain is acceptable.

■ Nose bar on front end



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.1m_1 \cdot L \cdot \mu_1 \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot Ls \cdot \mu_2\} \times 9.80665 \times 10^{-3}] \times fn$
- Tention at chain
  $F = F_B$

Note: Ls = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT1506-K30-ALF (m_1 = 6.7 × 0.762 = 5.1 kg/m)
Chain width	762 mm
Layout	L = 4 m
Chain speed	V = 15 m/min
Conveyed products	500-ml aluminum can (filled)
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.762 m = 106 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	Ls = 4 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.15
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.14
Nose bar coefficient	fn = 1.35 (bearing/roller type)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 1.1 \times 5.1 \times 4 \times 0.15 \times 9.80665 \times 10^{-3} = 0.03$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [0.03 + \{(5.1 + 106) \times 4 \times 0.15 + 106 \times 4 \times 0.14\} \times 9.80665 \times 10^{-3}] \times 1.35$
  $= 1.71$kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:

$$F_B' = \frac{1000 \times F_B}{762} = 2.24 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension is 2.5 (kN/m).
10.5 (kN/m)≧2.24 (kN/m)

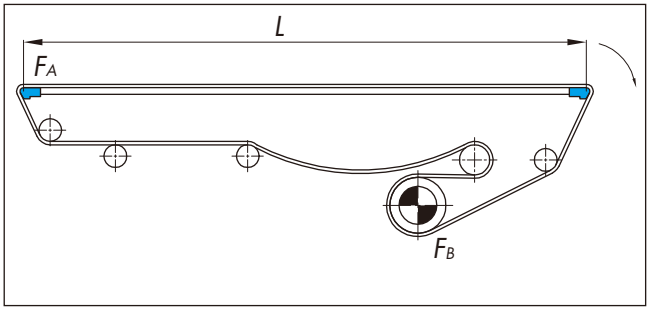
Selected chain is acceptable.

■ *fn* (Nose bar coefficient)

Lubrication	Nose bar coefficient: *fn*	
	Sliding type	Roller/bearing type
Dry	1.8	1.35
Soapy water	1.35	

Selection example: WT1500 series, WT1510 series and BTN5

■ Nose bar on both ends



●Calculation formula (SI units: kN)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = m_1 \cdot L \cdot \mu_1 \cdot f_n \times 9.80665 \times 10^{-3}$
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [F_A + \{(m_1 + m_2)L \cdot \mu_1 + m_2 \cdot L_S \cdot \mu_2\} \times 9.80665 \times 10^{-3}] \times f_n$
- Tention at chain
  $F = F_B$

Note: L_S = 0 when there is no accumulation of conveyed products.

●Calculation example (SI units)

Operating Conditions	
Chain type	WT1506-K30-ALF (m_1 = 6.7 × 0.762 = 5.1kg/m)
Chain width	762 mm
Layout	L = 4 m
Chain speed	V = 15 m/min
Conveyed products	500-ml aluminum can
Conveyed product mass (per 1-meter unit of length)	m_2 = 139 kg/m^2 (523 g/piece) × 0.762 m = 106 kg/m
Wearstrip	UHMW-PE (Plastic rail)
Accumulation distance	L_S = 4 m
Lubrication	Dry
Operating temperature	20°C
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.15
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.14
Nose bar coefficient	f_n = 1.35 (bearing/roller type)

- Tention at return-way
  [Tension at section A: F_A]
  $F_A = 5.1 \times 4 \times 0.15 \times 1.35 \times 9.80665 \times 10^{-3} = 0.04$kN
- Tention at carry-way
  [Tension at section B: F_B]
  $F_B = [0.04 + \{(5.1 + 106) \times 4 \times 0.15 + 106 \times 4 \times 0.14\} \times 9.80665 \times 10^{-3}] \times 1.35$
  = 1.72kN
- Determine acceptability
  Maximum allowable tension ≧ F_B'
  Converted to per meter of chain width:
  $F_B' = \dfrac{1000 \times F_B}{762} = 2.26$ (kN/m)
  From the allowable load graph, maximum allowable tension is 10.5 (kN/m).
  10.5 (kN/m)≧2.26 (kN/m)

Selected chain is acceptable.

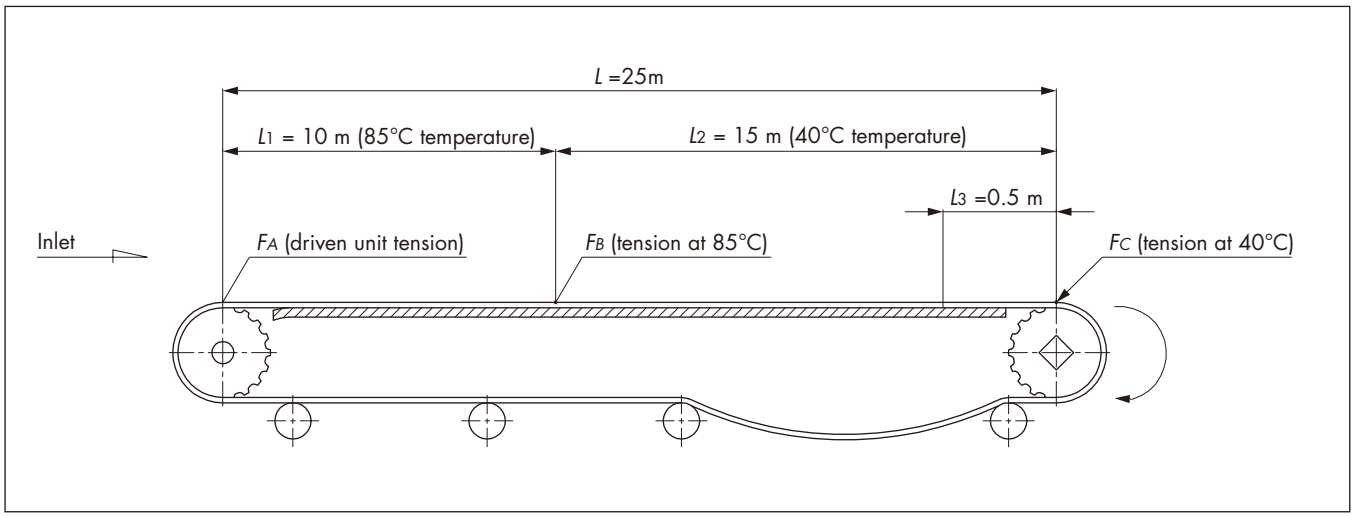
■ *fn* (Nose bar coefficient)

Lubrication	Nose bar coefficient: *fn*	
	Sliding type	Roller/bearing type
Dry	1.8	1.35
Soapy water	1.35	

Plastic Modular Chain (Wide Type)

Selection example: WT3816-K

■ Special conveyors (pasteurizers, warmers, coolers)



● Calculation formula (SI units: kN)

• Tention at return-way
[Tension at section A: F_A]
$F_A = 1.1 m_1 \cdot L \cdot \mu_1 \times 9.80665 \times 10^{-3}$

• Tention at carry-way
[Tension at section B: F_B]
$F_B = F_A + (m_1 + m_2) L_1 \cdot \mu_1 \times 9.80665 \times 10^{-3}$
[Tension at C: F_C]
$F_C = F_B + \{(m_1 + m_2) L_2 \cdot \mu_1 + m_2 \cdot L_3 \cdot \mu_2\} \times 9.80665 \times 10^{-3}$

• Tention at chain
$F = F_C$
Note: $L_3 = 0$ when there is no accumulation of conveyed products.

● Calculation example (SI units)

Operating Conditions	
Chain type	WT3816-K2000-HTW (m_1 = 9.8 × 2=19.6 kg/m)
Chain width	2000 mm
Layout	L = 25m, L_1 = 10m, L_2 = 15 m
Chain speed	V = 1 m/min
Conveyed products	1,500-ml PET bottle
Conveyed product mass	m_2 = 200 kg/m^2 (1530 g/piece) × 2 m = 400 kg/m
Wearstrip	Stainless steel (polished)
Accumulation distance	L_3 = 0.5 m
Lubrication	Water (hot water)
Ambient operating temperature	Hot water (85°C max.)
Dynamic coefficient of friction between chain and wearstrip	μ_1 = 0.35
Dynamic coefficient of friction between chain and conveyed product	μ_2 = 0.35

• Tention at return-way
[Tension at section A: F_A]
$F_A = 1.1 \times 19.6 \times 25 \times 0.35 \times 9.80665 \times 10^{-3} = 1.85$kN

• Tention at carry-way
[Tension at section B: F_B]
$F_B = 1.85 + (19.6 + 400) \times 10 \times 0.35 \times 9.80665 \times 10^{-3} = 16.3$kN
[Tension at section C: F_C]
$F_C = 16.3 + \{(19.6 + 400) \times 15 \times 0.35 + 400 \times 0.5 \times 0.35\} \times 9.80665 \times 10^{-3}$
$= 38.6$kN

• Determine acceptability
A determination is made for each temperature range:
Maximum allowable tension ≧ F

• At 85°C
Working tension: $F = F_B'$
Converting into per a meter width

$$F_B' = \frac{1000 \times F_B}{2000} = 8.15 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable tension at 85°C is 8.3 (kN/m).
8.3 (kN/m)≧8.15 (kN/m)
Selected chain is acceptable.

• At 40°C
Working tension: F = F_C'
Converting into per a meter width

$$F_C' = \frac{1000 \times F_C}{2000} = 19.3 \text{ (kN/m)}$$

From the allowable load graph, maximum allowable load at 40°C is 20 (kN/m).
20 (kN/m)≧19.3 (kN/m)
Selected chain is acceptable.

Selected chain can be used in each temperature range.

4. Handling Plastic Modular Chain (Wide Type) Sprockets

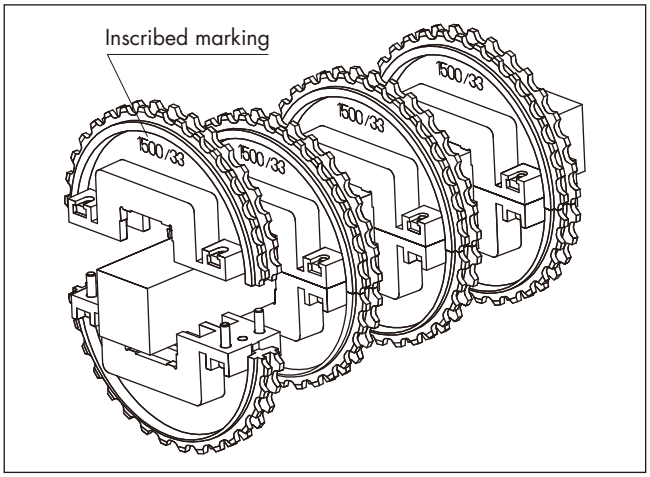
4-1. Handling sprockets

In general, square shafts are recommended for the drive and driven shafts used with plastic modular chains, except for special cases (such as mold-to-width type chains and right-angle transfers using TOD). Because changes in temperature will cause the chain to expand and contract, sprockets must be mounted so that they are free to move laterally in the across-the-width direction. However, to prevent meandering (snaking) of the chain, one (or two) sprocket(s) should be locked in position in the center of both the drive and driven shafts using setscrews or set-collars and hexagonal socket head cap screws. When installing the sprockets on the square shaft, the inscribed markings or identification marks should be used to orient the sprockets so that they all face the same direction and to keep the position of the teeth aligned.

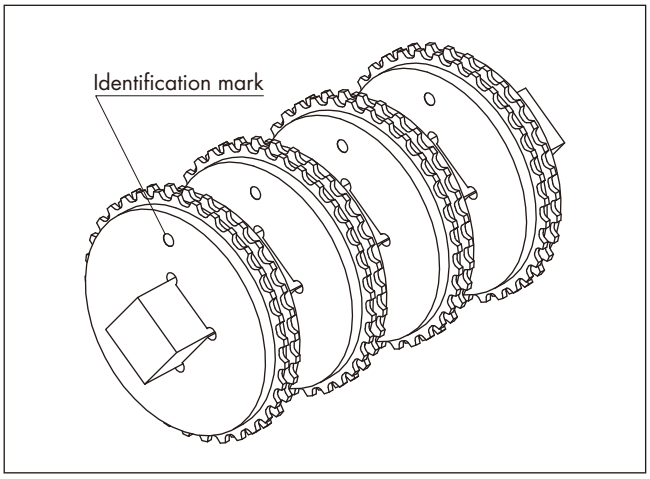
4-1-1. Phase matching of sprockets

Install the sprockets on the shaft in such a manner that the direction and the position of all the inscribed markings or identification marks on the sprockets are aligned.

Split sprocket



Solid sprocket



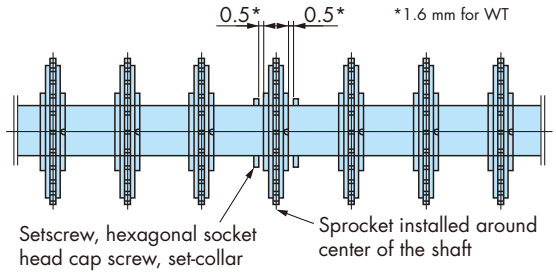
4-1-2. Chain expansion/contraction

Plastic modular chain is made of polymer resin, and will expand and contract with changes in temperature. A rough estimate for linear chain expansion is 12×10^{-5} (/°C) using 20°C as the reference temperature. The expansion per nominal width (ΔW) is found using the following formula:
ΔW = chain nominal width × (operating ambient temperature –20°C) $\times12\times10^{-5}$

(Example)
For K60 chain (1,524 mm wide) used in an environment where the temperature rises from 20°C to 60°C:
$\Delta W = 1524\times(60-20)\times12\times10^{-5} = 7.3$ mm

4-1-3. Locking sprockets

The sprockets and the shaft are loosely fitted in order to absorb differences in thermal expansion between the chain and the conveyor and also installation errors of the chain and the sprockets. However, a setscrew, a hexagonal socket head cap screw, or a set-collar should be mounted on each side of a sprocket installed around the center with about 0.5 mm (1.6 mm for WT) clearance with the sprocket in order to prevent winding motion in the chain.



* Fix the sprocket to be installed between the tab guide attachments when using a chain equipped between tab guide attachments.

4-1-4. Chain installation

Wind the chain onto the sprockets installed at the given intervals.

If the sprockets are installed at the wrong interval, the chain may run over the sprocket and break. Make certain of the center distance between the sprockets.

Plastic Modular Chain (Wide Type)

4-2. Select sprockets, shafts, and bearing units

Select a shaft, bearing, and sprocket that satisfy requirements based on the shaft capacity graphs, tables 8 to 21, and tables 22 to 115 (type of shafts and corresponding bearing units) on pages 460 to 467.

Note: *F'* tension on the chain width per meter has a limit in some types of bearings (according to the internal diameter of the bearing).

■ Relation between chain tension (*F'*) per 1 m of chain width and bearing unit support span

1) Relation between bearing support span *Y* and chain width *X*
For 40, 50 and 60 square shafts: Approximately $Y = X + 150$ (mm)

Note: Operating temperature range: –20°C to 80°C

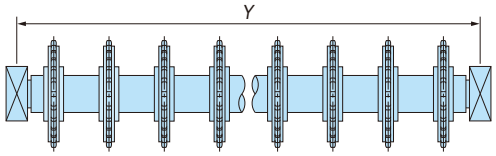


Table 8. Shaft capacity graph: WT0405-W

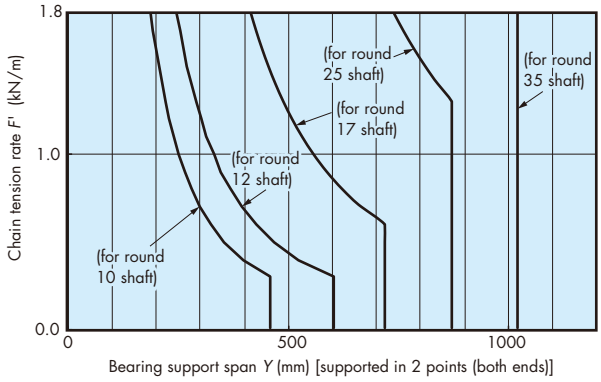


Table 9. Shaft capacity graph: WT0705-W

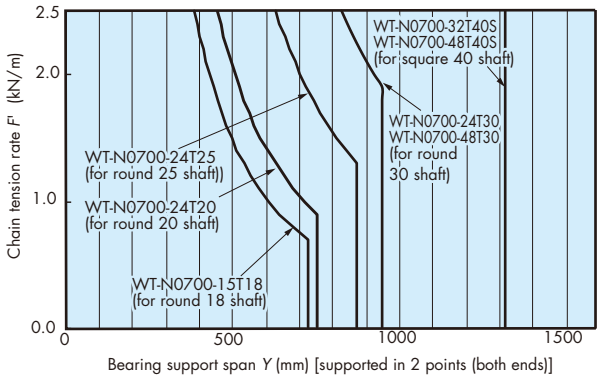


Table 10. Shaft capacity graph: BT6 and BT8

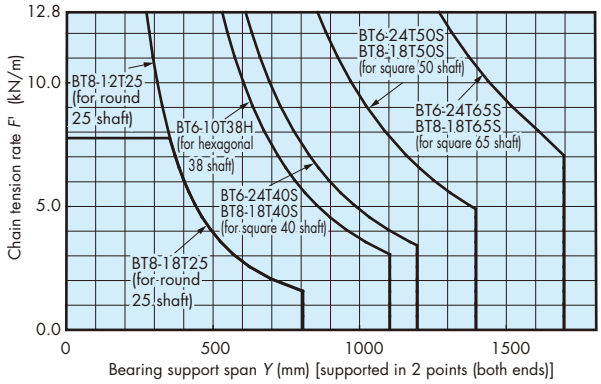


Table 11. Shaft capacity graph: BT5, WT1500, WT1510 and 3000 series

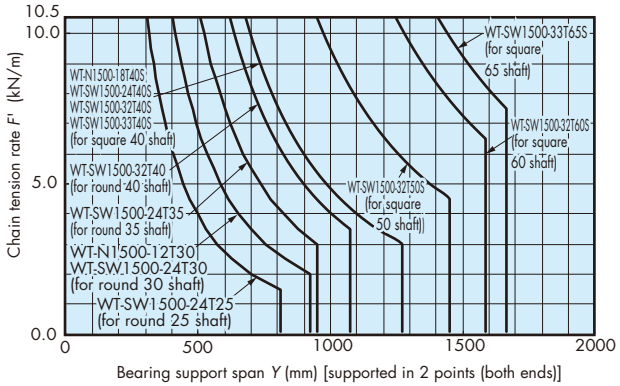


Table 12. Shaft capacity graph: WT2500 series

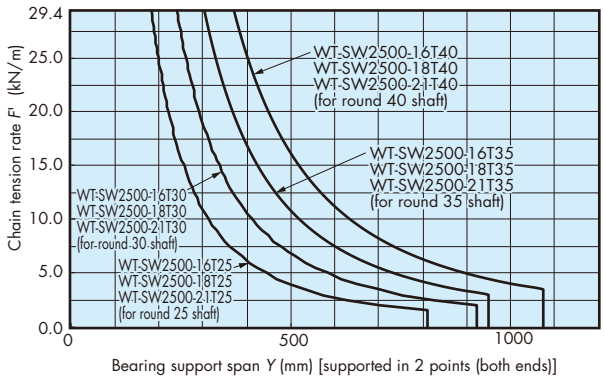


Table 13. Shaft capacity graph: WT2250, WT2515-W, WT2525-K and BTC8S

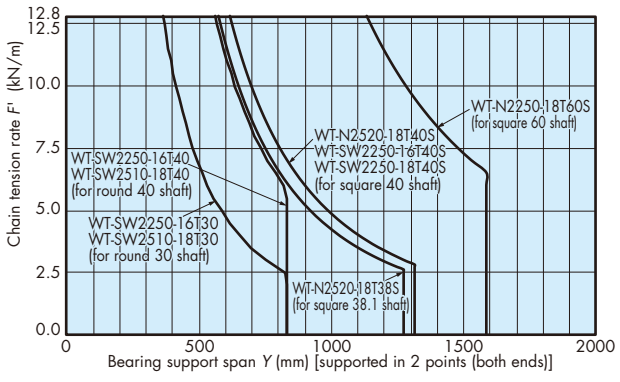


Table 14. Shaft capacity graph: WT1907-K

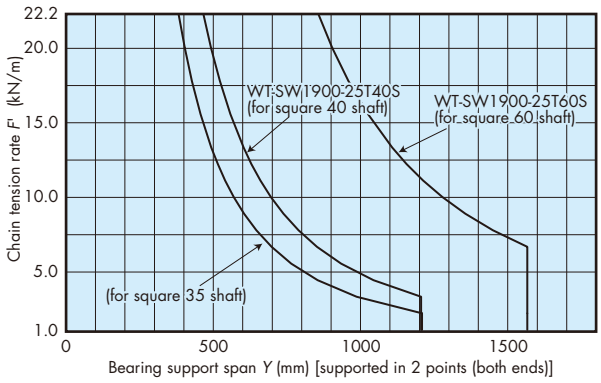


Table 15. Shaft capacity graph: WT2700 series

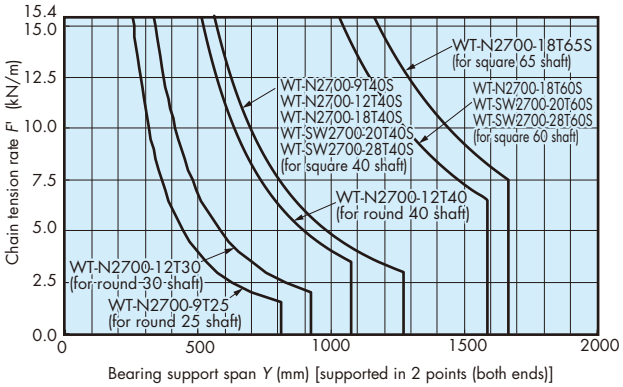


Table 16. Shaft capacity graph: WT3827-K

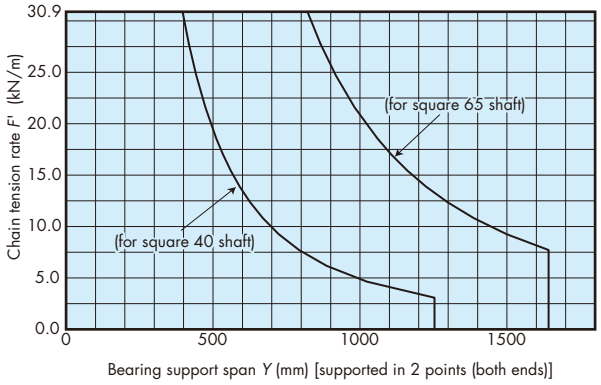


Table 17. Shaft capacity graph: WT3100 series

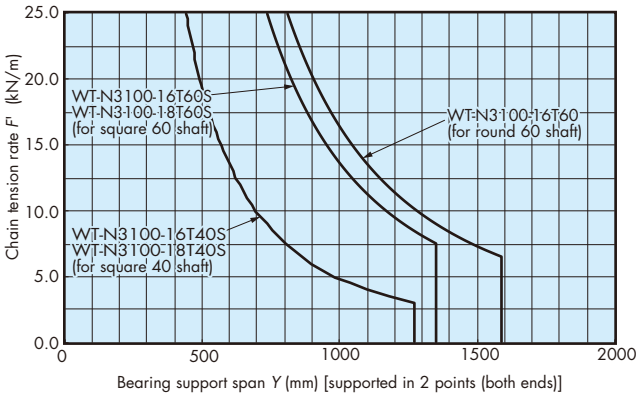


Table 18. Shaft capacity graph: BTH16

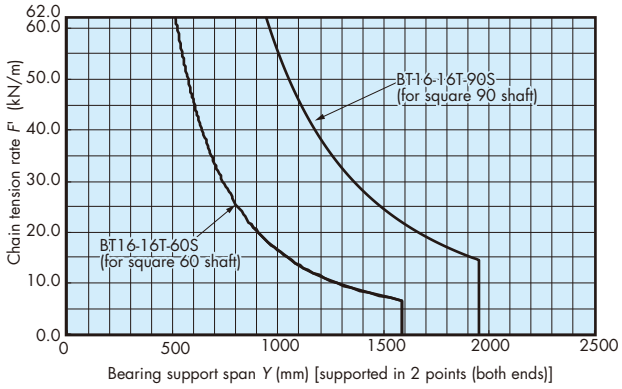


Table 19. Shaft capacity graph: WT3816-K

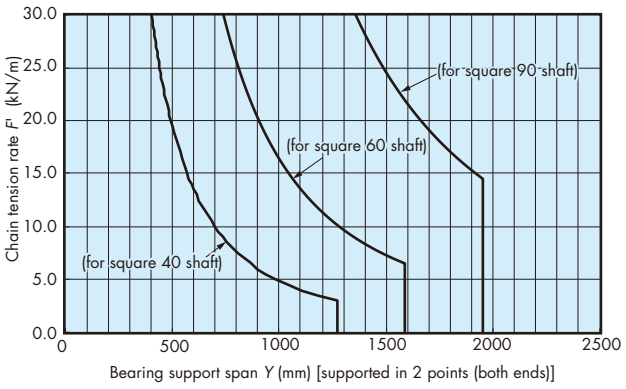


Table 20. Shaft capacity graph: WT3835-K

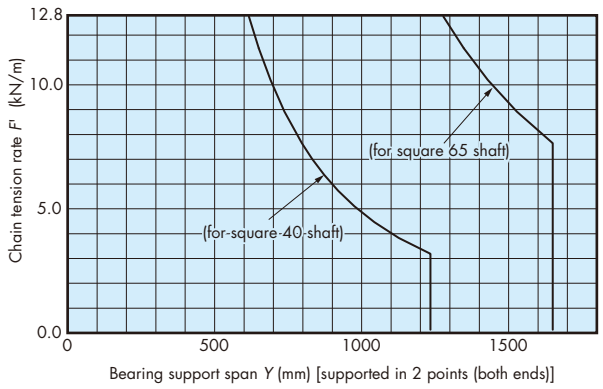
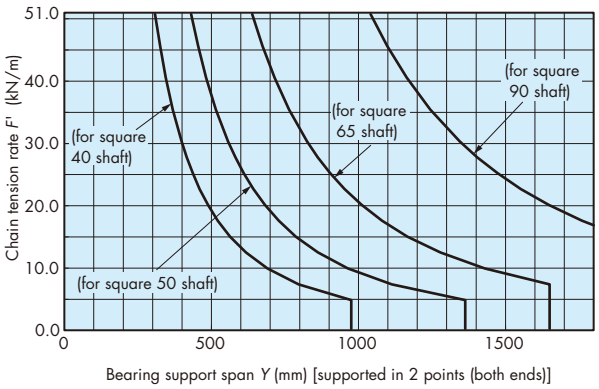


Table 21. Shaft capacity graph: WT5707-K



Plastic Modular Chain (Wide Type)

4-3. Determine sprocket locations

The diagrams below show the location and distance between sprockets (pitch) for each type of chain. Find the percentage of maximum allowable load (maximum allowable load per 1 meter of chain width) that the tension per 1 meter of chain width F' derived by means of step 6 [formula (2)] represents. Note that the locations and pitch may change depending on chain tension rate $F1$.

Formula of chain tension rate $F1$ (%)

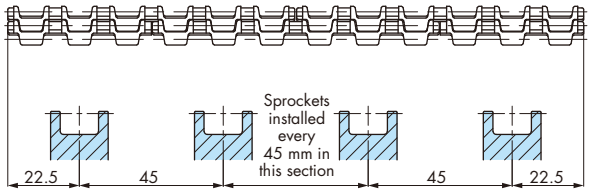
$$F1 = \frac{100F'}{A} \quad \cdots(3)$$

F': Tension applied per 1 meter of chain width derived by step 6 [kN (kgf)]

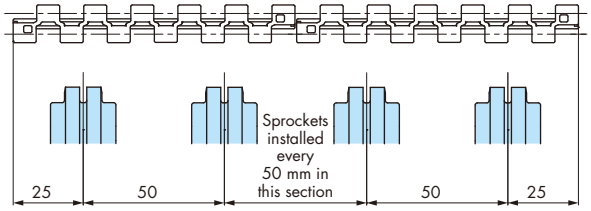
A: Maximum allowable load per 1 meter of chain width with given temperature [kN (kgf)].
Refer to the allowable load graphs.

Wide Type

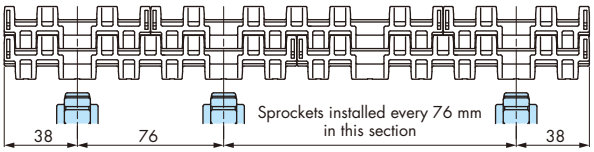
① **WT0405-W**



② **WT0705-W**

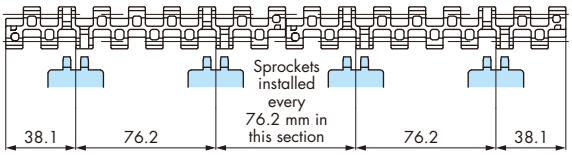


③ **BTN5, BTN5-A**

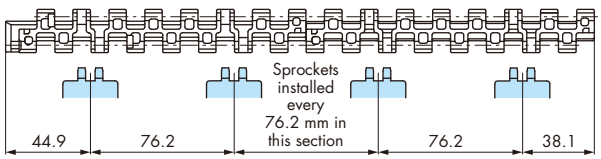


Note: BT5-24T sprocket cannot be used with BTN5-A (with tab guide attachment). Please consider using BT5-32T. WT-SW1500-24T can also be used.

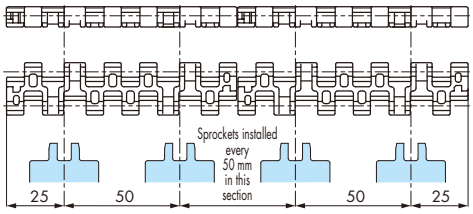
④ **WT1505-K, WT1505G-K, WT1506-K**



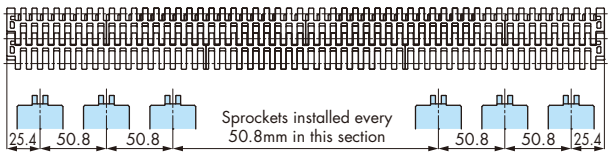
⑤ **WT1505GTO-K**



⑥ **WT1515-W, WT1516-W, WT1515G-W**



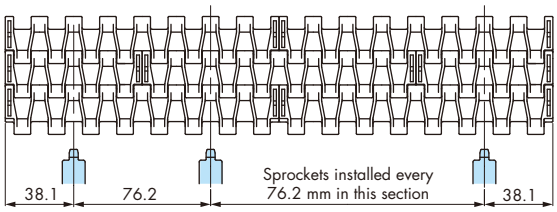
⑦ **WT1907-K**



Note: If the chain width is an odd numbered inch, the mounting pitch will be 76.2 mm for each. Arrange the around the center portion for adjustment.

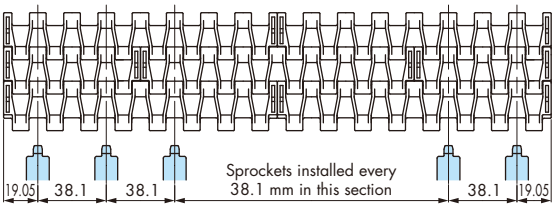
⑧ **BT6 series, BTC8, and BTC8-A**

● **Sprocket locations when chain tension rate ($F1$) is 50% or less**



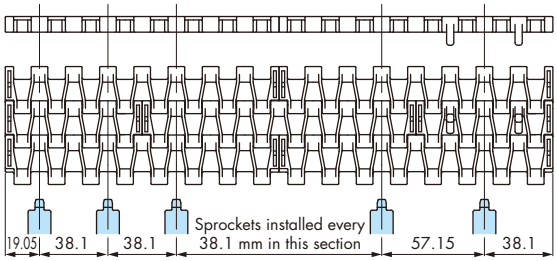
⑨ **BT6 series and BTC8**

● **Sprocket locations when chain tension rate ($F1$) is greater than 50%.**

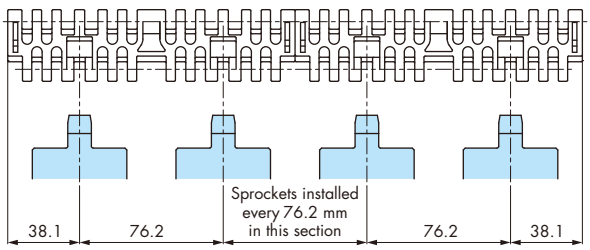


⑩ **BTC8-A**

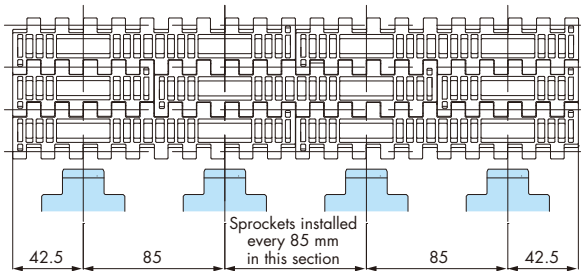
● **Sprocket locations when chain tension rate ($F1$) is greater than 50%.**



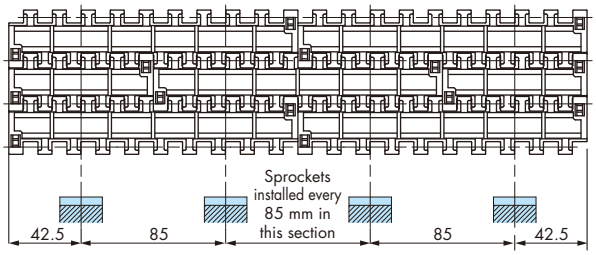
⑪ **WT2505-K, WT2506-K, BTM8H**



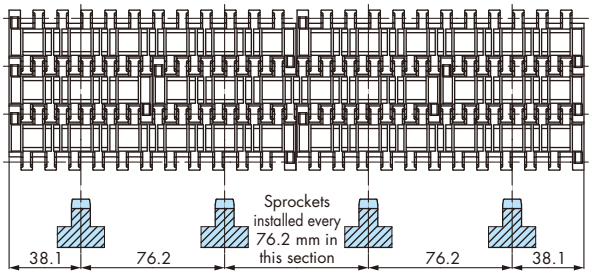
⑫ WT2515-W, WT2515G-W, WT2515F-W



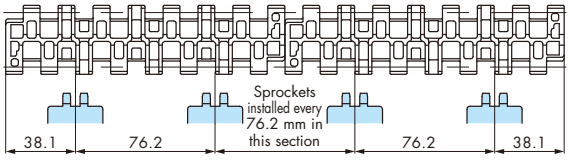
⑬ WT2250FT, FG, VG



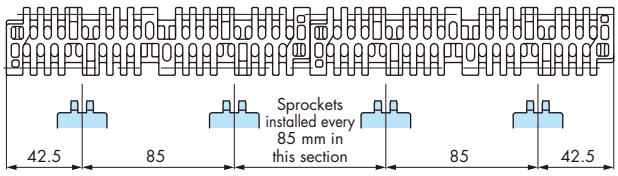
⑭ BTC8S, WT2525-K



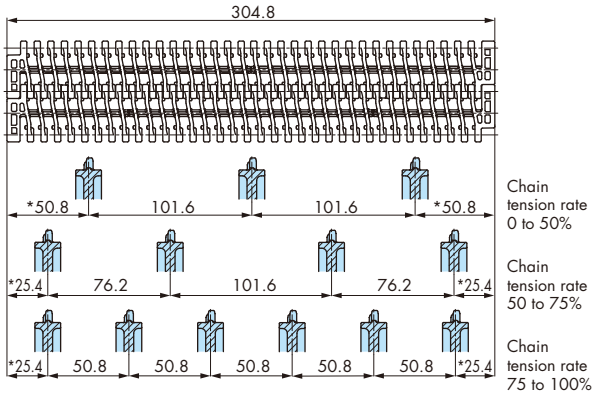
⑮ WT3005-K/WT3005G-K



⑯ WT3086-K/WT3086G-K

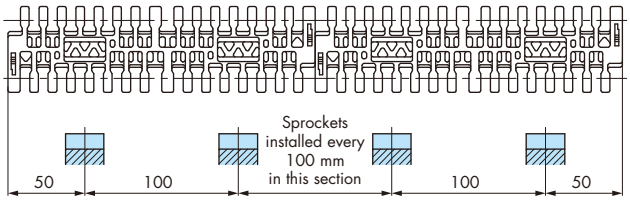


⑰ WT2705-K/WT2706-K

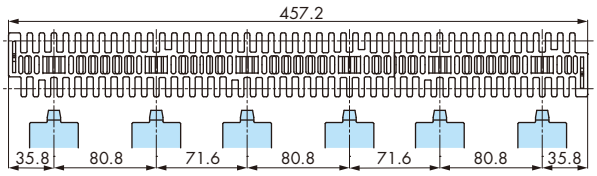


Note: 1. Be sure to place sprockets at the * positions.
2. If the width is an odd numbered inch, the mounting pitch will have one irregular pitch. Arrange the around the center portion for adjustment.

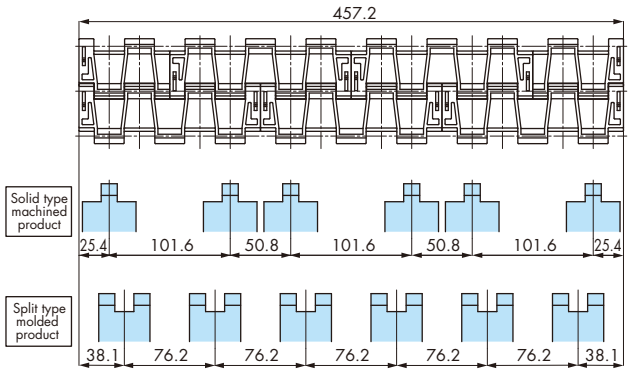
⑱ WT3816-K



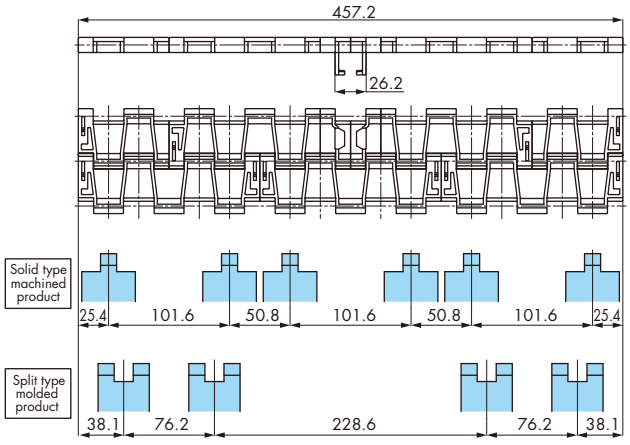
⑲ WT3827-K



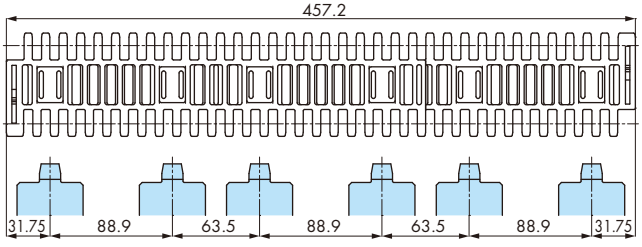
⑳ WT3835-K



㉑ WT3835-T (with float-preventive tab)



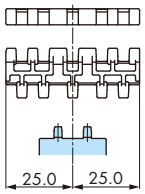
㉒ WT5707-K



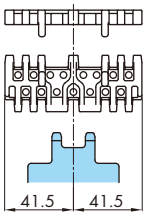
Plastic Modular Chain (Mold-to-Width Type)

Mold-to-width type

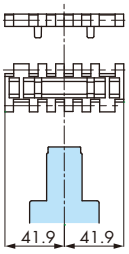
❶ BTC4-500-M



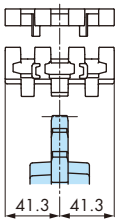
❷ BTO8-830-M



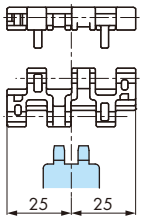
❸ WT2515G-M



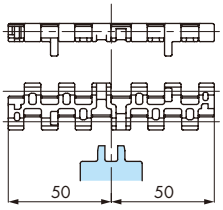
❹ BTC8H-M/BTM8H-M



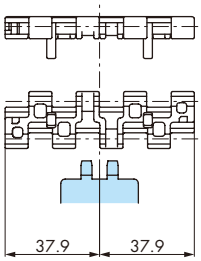
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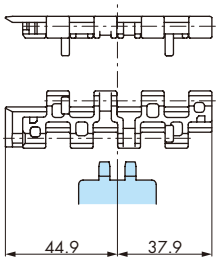
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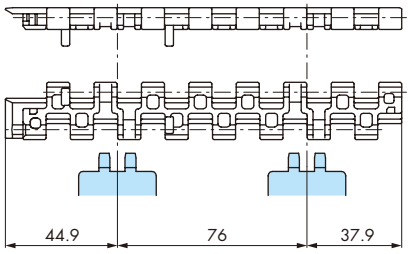
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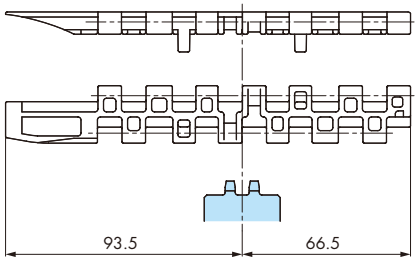
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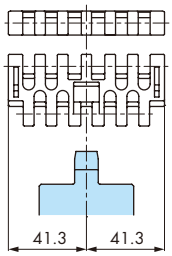
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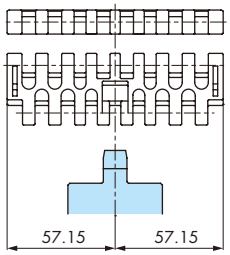
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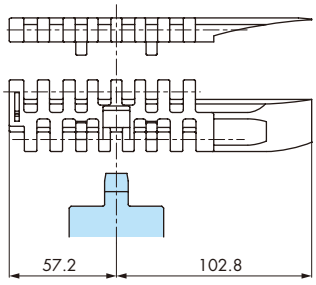
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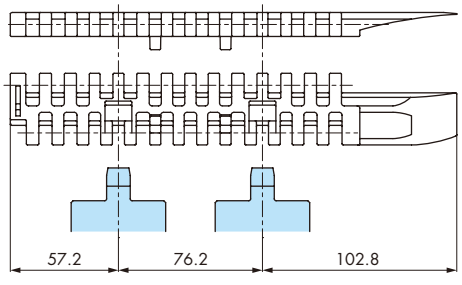
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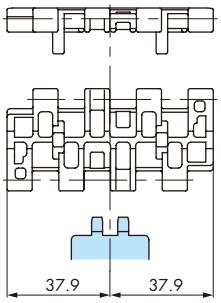
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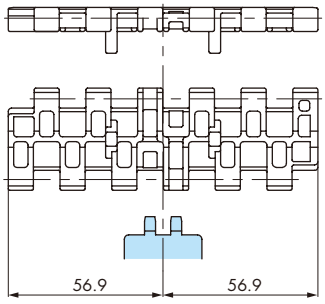
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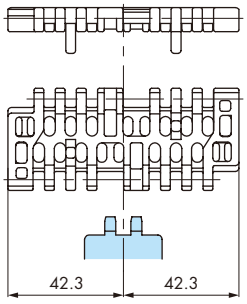
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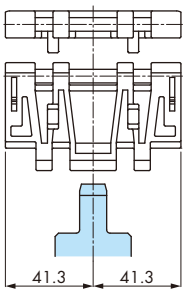
⓰ WT3005G-M450



⓱ WT3086G-M85



⓲ WT3835G-M325



Plastic Modular Chain (Wide Type)

4-4. Type of shafts and corresponding bearing units

1. The upper face of a bearing unit with a * mark protrudes above the chain conveyor surface.
2. For diamond and square flanges, the numbers following "TP-C" indicate the code for Tsubaki top chain components. (refer to page on 395).

Note: Operating temperature range: -20°C to 80°C

Table 22. WT-S0400-20T (round bore 12)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 12 Cold rolled steel shaft	ϕ 12	* UCP201	* UCFL201	* UCF201	Applies only when 1.8 kN/m or less

Table 23. WT-S0400-24T (round bore 17)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 17 Cold rolled steel shaft	ϕ 12	* UCP201	* UCFL201	* UCF201	Applies only when 1.8 kN/m or less
	ϕ 15	* UCP202	* UCFL202	* UCF202	
	ϕ 17	* UCP203	* UCFL203	* UCF203	

Table 24. WT-S0400-32T (round bore 25)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 15	* UCP202	* UCFL202	* UCF202	Applies only when 1.8 kN/m or less
	ϕ 17	* UCP203	* UCFL203	* UCF203	
	ϕ 20	* UCP204	* TP-C54204,59204 * UCFL204	* UCF204	
	ϕ 25	* UCP206	* UCFL206	* TP-C50206,55206 * UCF206	

Table 25. WT-S0400-40T (round bore 35)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 35 Cold rolled steel shaft	ϕ 20	* UCP204	TP-C54204,59204 UCFL204	* UCF204	Applies only when 1.8 kN/m or less
	ϕ 25	* UCP205	* TP-C54205,59205 * UCFL205	* TP-C50205,55205 * UCF205	
	ϕ 30	* UCP206	* UCFL206	* TP-C50206,55206 * UCF206	
	ϕ 35	* UCP207	* UCFL207	* TP-C50207,55207 * UCF207	

Table 26. WT-N0700-15T18

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 18 Cold rolled steel shaft	ϕ 12	* UCP201	* UCFL201	* UCF201	Applies only when 2.4 kN/m or less
	ϕ 15	* UCP202	* UCFL202	* UCF202	Applies only when 2.5 kN/m or less
	ϕ 17	* UCP203	* UCFL203	* UCF203	

Table 27. WT-N0700-24T20

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 12	UCP201	UCFL201	* UCF201	Applies only when 0.8 kN/m or less
	ϕ 15	UCP202	UCFL202	* UCF202	Applies only when 2.5 kN/m or less
	ϕ 17	UCP203	UCFL203	* UCF203	
	ϕ 20	UCP204	TP-C54204,59204 UCFL204	* UCF204	

Table 28. WT-N0700-24T25

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	* UCF204	Applies only when 2.5 kN/m or less
	ϕ 25	* UCP205	* TP-C54205,59205 * UCFL205	* TP-C50205,55205 * UCF205	

Table 29. WT-N0700-24T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	* UCF204	Applies only when 2.5 kN/m or less
	ϕ 25	* UCP205	* TP-C54205,59205 * UCFL205	* TP-C50205,55205 * UCF205	
	ϕ 30	* UCP206	* UCFL206	* TP-C50206,55206 * UCF206	

Table 30. WT-N0700-32T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	* TP-C50205,55205 * UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	* TP-C50206,55206 * UCF206	
	ϕ 35	* UCP207	* UCFL207	* TP-C50207,55207 * UCF207	

Table 31. WT-N0700-48T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.4 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less

Table 32. WT-N0700-48T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less

Table 33. BT6-10T38H

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Hexagonal 38 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	* UCF204	Applies only when 2.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	* TP-C50205,55205 * UCF205	Applies only when 7.0 kN/m or less
	ϕ 30	* UCP206	* UCFL206	* TP-C50206,55206 * UCF206	12.8 kN/m or less
	ϕ 35	* UCP207	* UCFL207	* TP-C50207,55207 * UCF207	12.8 kN/m or less

Table 34. BT6-24T40S and BT8-18T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 7.0 kN/m or less

Plastic Modular Chain (Wide Type)

Table 35. BT6-24T50S and BT8-18T50S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 50 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 4.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 8.0 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	12.8 kN/m or less

Table 36. BT6-24T65S and BT8-18T65S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 Square 65 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 1.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 3.5 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 5.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 8.0 kN/m or less
	ϕ 55	UCP211	UCFL211	* UCF211	12.8 kN/m or less
	ϕ 60	UCP212	UCFL212	* UCF212	

Table 37. BT8-12T25

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 2.5 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 10.0 kN/m or less

Table 38. BT8-18T25

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 4.5 kN/m or less

Table 39. WT-N1500-12T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	* TP-C54204,59204 * UCFL204	* UCF204	Applies only when 4.0 kN/m or less
	ϕ 25	* UCP205	* TP-C54205,59205 * UCFL205	* TP-C50205,55205 * UCF205	Applies only when 10.5 kN/m or less
	ϕ 30	* UCP206	* UCFL206	* TP-C50206,55206 * UCF206	

Table 40. WT-N1500-18T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	* UCP205	TP-C54205,59205 UCFL205	* TP-C50205,55205 * UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	* UCP206	UCFL206	* TP-C50206,55206 * UCF206	Applies only when 8.0 kN/m or less
	ϕ 35	* UCP207	UCFL207	* TP-C50207,55207 * UCF207	Applies only when 10.5 kN/m or less

Table 41. WT-SW1500-24T25

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.5 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 7.5 kN/m or less

Table 42. WT-SW1500-24T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.5 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 4.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	10.5 kN/m or less

Table 43. WT-SW1500-24T35

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 35 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 8.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	10.5 kN/m or less

Table 44. WT-SW1500-24T40

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 5.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	10.5 kN/m or less
	ϕ 40	UCP208	UCFL208	* TP-C50208,55208 * UCF208	10.5 kN/m or less

Table 45. WT-SW1500-24T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 4.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	10.5 kN/m or less
	ϕ 40	UCP208	UCFL208	* TP-C50208,55208 * UCF208	10.5 kN/m or less

Table 46. WT-SW1500-32T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	10.5 kN/m or less

Table 47. WT-SW1500-32T50S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 50 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 3.5 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 7.0 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 10.5 kN/m or less

Table 48. WT-SW1500-32T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 60 Cold rolled steel shaft	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 4.5 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 8.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	10.5 kN/m or less
	ϕ 55	UCP211	UCFL211	* UCF211	

Table 49. WT-SW1500-33T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	10.5 kN/m or less

Table 50. WT-SW1500-33T65S

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 65 Cold rolled steel shaft	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 1.5 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 2.5 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 4.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 7.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	10.5 kN/m or less
	ϕ 60	UCP212	UCFL212	* UCF212	

Table 51. WT-SW2500-16T25

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 5.0 kN/m or less

Table 52. WT-SW2500-16T30

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 3.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	10.0 kN/m or less

Table 53. WT-SW2500-16T35

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 35 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 6.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 16.0 kN/m or less

Table 54. WT-SW2500-16T40

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 4.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 10.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 23.0 kN/m or less

Table 55. WT-SW2500-18T25

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 4.0 kN/m or less

Table 56. WT-SW2500-18T30

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 8.0 kN/m or less

Table 57. WT-SW2500-18T35

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 35 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 5.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 12.0 kN/m or less

Table 58. WT-SW2500-18T40

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 18.0 kN/m or less

Table 59. WT-SW2500-21T25

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 4.0 kN/m or less

Table 60. WT-SW2500-21T30

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 8.0 kN/m or less

Table 61. WT-SW2500-21T35

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 35 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 5.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 12.0 kN/m or less

Table 62. WT-SW2500-21T40

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 18.0 kN/m or less

Table 63. WT-SW2250-16T30

Shaft type	Bearing unit				Limitation on chain tension rate (F)
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 3.0 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 10.0 kN/m or less

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Table 64. WT-SW2250-16T40

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 40 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 5.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 10.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	12.8 kN/m or less

Table 65. WT-SW2250-16T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	12.8 kN/m or less

Table 66. WT-SW2250-18T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 30 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 8.0 kN/m or less

Table 67. WT-SW2250-18T40

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Round 40 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 1.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 4.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	12.8 kN/m or less

Table 68. WT-SW2250-18T40S, WT-N2520-18T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 7.0 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	12.8 kN/m or less

Table 69. WT-N2520-18T38S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ 30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.0 kN/m or less

Table 70. WT-N2520-18T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 60 Cold rolled steel shaft	ϕ 35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 3.5 kN/m or less
	ϕ 40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 5.5 kN/m or less
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 9.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	12.8 kN/m or less
	ϕ 55	UCP211	UCFL211	* UCF211	

Table 71. WT-S1900-17T (square bore 35)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 35 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 7.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 20.0 kN/m or less

Table 72. WT-S1900-21T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 8.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 20.0 kN/m or less

Table 73. WT-S1900-21T (square bore 60)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 60 Cold rolled steel shaft	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 3.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 5.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 11.0 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 22.3 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	

Table 74. WT-S1900-24T (square bore 35)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 35 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 3.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 10.0 kN/m or less

Table 75. WT-SW1900-25T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 13.5 kN/m or less

Table 76. WT-SW1900-25T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 60 Cold rolled steel shaft	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 1.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 3.0 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 5.0 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 9.0 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 15.5 kN/m or less

Table 77. WT-S3830-1200T, WT-S3830-1212T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 12.7kN/m or less

Table 78. WT-S3830-1200T, WT-S3830-1212T (square bore 65)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 Square 65 Cold rolled steel shaft	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 3.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 5.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 7.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 12.7 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	

Table 79. WT-S3820-8T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 4.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 13.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 30.9 kN/m or less

Table 80. WT-S3820-12T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 1.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 15.0 kN/m or less

Table 81. WT-S3820-12T (square bore 65)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 Square 65 Cold rolled steel shaft	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 1.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 3.0 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 4.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 7.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 13.5 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 21.5 kN/m or less

Table 82. WT-S5707-9T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 5.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 10.0 kN/m or less

Table 83. WT-S5707-9T (square bore 50)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 Square 50 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 5.0 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 10.0 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 22.0 kN/m or less

Table 84. WT-S5707-9T (square bore 65)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 Square 65 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 0.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 2.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 2.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 5.0 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 10.0 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 17.5 kN/m or less

Table 85. WT-S5707-12T (square bore 90)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 Square 90 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 0.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 0.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 2.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 2.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 5.0 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 7.5 kN/m or less

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Table 86. WT-S5707-14T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 5.0 kN/m or less

Table 87. WT-S5707-14T (square bore 50)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 50 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 0.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 2.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 5.0 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 7.5 kN/m or less

Table 88. WT-S5707-14T (square bore 65)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 square 65 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 0.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 0.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 2.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 2.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 10.0 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 17.5 kN/m or less

Table 89. WT-S5707-14T (square bore 90)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 square 90 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 0.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 0.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 0.5 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 0.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 2.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 2.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 5.0 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 7.5 kN/m or less

Table 90. WT-N2700-9T25

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 round 25 Cold rolled steel shaft	ϕ 20	UCP204	TP-C54204,59204 UCFL204	UCF204	Applies only when 4.0 kN/m or less
	ϕ 25	UCP205	TP-C54205,59205 UCFL205	* TP-C50205,55205 * UCF205	Applies only when 15.4 kN/m or less

Table 91. WT-N2700-9T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	* TP-C50206,55206 * UCF206	Applies only when 9.5 kN/m or less
	ϕ 35	* UCP207	* UCFL207	* TP-C50207,55207 * UCF207	Applies only when 15.4 kN/m or less

Table 92. WT-N2700-18T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 1.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 2.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 6.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 12.0 kN/m or less

Table 93. WT-N2700-18T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 1.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 2.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 3.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 5.0 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 8.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 15.4 kN/m or less

Table 94. WT-N2700-18T65S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 S45C SS400 square 65 Cold rolled steel shaft	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 1.5 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 3.0 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 4.5 kN/m or less
	ϕ45	UCP209	UCFL209	UCF209	Applies only when 6.5 kN/m or less
	ϕ50	UCP210	UCFL210	UCF210	Applies only when 10.5 kN/m or less
	ϕ55	UCP211	UCFL211	UCF211	Applies only when 15.4 kN/m or less
	ϕ60	UCP212	UCFL212	UCF212	Applies only when 15.4 kN/m or less

Table 95. WT-N2700-12T30

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 round 30 Cold rolled steel shaft	ϕ20	UCP204	TP-C54204,59204 UCFL204	TP-C50204,55204 UCF204	Applies only when 1.0 kN/m or less
	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 5.0 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 15.4 kN/m or less

Table 96. WT-N2700-12T40

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 round 40 Cold rolled steel shaft	ϕ20	UCP204	TP-C54204,59204 UCFL204	TP-C50204,55204 UCF204	Applies only when 1.0 kN/m or less
	ϕ25	UCP205	TP-C54205,59205 UCFL205	TP-C50205,55205 UCF205	Applies only when 2.5 kN/m or less
	ϕ30	UCP206	UCFL206	TP-C50206,55206 UCF206	Applies only when 6.0 kN/m or less
	ϕ35	UCP207	UCFL207	TP-C50207,55207 UCF207	Applies only when 15.4 kN/m or less
	ϕ40	UCP208	UCFL208	TP-C50208,55208 UCF208	Applies only when 15.4 kN/m or less

Table 97. WT-N2700-12T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 25	UCP205	TP-C54205,59205	TP-C50205,55205	Applies only when 2.0 kN/m or less
			UCFL205	UCF205	
	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 5.0 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 13.5 kN/m or less
				UCF207	
	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 15.4 kN/m or less
				UCF208	

Table 98. WT-SW2700-20T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 2.0 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 5.0 kN/m or less
				UCF207	

Table 99. WT-SW2700-20T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 3.0 kN/m or less
				UCF207	
	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 4.5 kN/m or less
				UCF208	
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 6.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 12.5 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 15.4 kN/m or less

Table 100. WT-SW2700-28T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 1.5 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 2.5 kN/m or less
				UCF207	

Table 101. WT-SW2700-28T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 2.0 kN/m or less
				UCF207	
	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 3.0 kN/m or less
				UCF208	
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 4.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 6.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 11.0 kN/m or less

Table 102. WT-N3100-16T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 29.5 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 5.5 kN/m or less
				UCF207	

Table 103. WT-N3100-16T60

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 round 60 Cold rolled steel shaft	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 5.5 kN/m or less
				UCF208	
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 9.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 17.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 25.0 kN/m or less
	ϕ 60	UCP212	UCFL212	UCF212	Applies only when 25.0 kN/m or less

Table 104. WT-N3100-16T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 4.5 kN/m or less
				UCF208	
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 7.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 14.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 25.0 kN/m or less

Table 105. WT-N3100-18T40S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 2.0 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 4.5 kN/m or less
				UCF207	

Table 106. WT-N3100-18T60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 40	UCP208	UCFL208	TP-C50208,55208	Applies only when 4.0 kN/m or less
				UCF208	
	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 6.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 11.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 20.0 kN/m or less

Table 107. WT-S3816-18T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 1.5 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 3.0 kN/m or less
				UCF207	

Table 108. WT-S3816-18T (square bore 60)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 5.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 7.5 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 14.0 kN/m or less

Table 109. WT-S3816-20T (square bore 40)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 40 Cold rolled steel shaft	ϕ 30	UCP206	UCFL206	TP-C50206,55206	Applies only when 1.5 kN/m or less
				UCF206	
	ϕ 35	UCP207	UCFL207	TP-C50207,55207	Applies only when 2.5 kN/m or less
				UCF207	

Table 110. WT-S3816-20T (square bore 60)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flang	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 4.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 6.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 11.0 kN/m or less

Plastic Modular Chain (Wide Type)

Table 111. WT-S3816-20T (square bore 90)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 90 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 3.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 5.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 7.0 kN/m or less
	ϕ 60	UCP212	UCFL212	UCF212	Applies only when 9.0 kN/m or less

Table 112. WT-S3816-24T (square bore 60)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 3.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 5.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 7.5 kN/m or less

Table 113. WT-S3816-24T (square bore 90)

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 90 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 3.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 4.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 5.5 kN/m or less
	ϕ 60	UCP212	UCFL212	UCF212	Applies only when 7.5 kN/m or less

Table 114. BT16-16T-60S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square 60 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 4.0 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 6.0 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 9.5 kN/m or less

Table 115. BT16-16T-90S

Shaft type	Bearing unit				Limitation on chain tension rate (F')
	Bearing ID	Pillow	Diamond flange	Square flange	
SUS304 square90 Cold rolled steel shaft	ϕ 45	UCP209	UCFL209	UCF209	Applies only when 3.5 kN/m or less
	ϕ 50	UCP210	UCFL210	UCF210	Applies only when 4.5 kN/m or less
	ϕ 55	UCP211	UCFL211	UCF211	Applies only when 6.5 kN/m or less
	ϕ 60	UCP212	UCFL212	UCF212	Applies only when 8.5 kN/m or less

4-5. Handling plastic modular chain

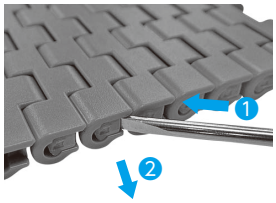
4-5-1. Disconnecting and connecting chain with slit pins WT0705-W and WT1510 series

● Disconnecting and connecting chain of slit pins

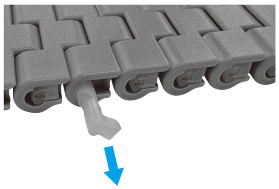
(WT0705-W50-SP, WT0705-W100-SP, WT1515-W50-SP, WT1515-W100-SP, WT1516-W50-SP, WT1516-W100-SP, WT1515G-M50-SP, W1515G-M100-SP)

• Disconnecting

①Place a narrow flathead screwdriver (less than with 1.5 mm width or similar tool) on the back side of the slit pin's stopper on the side of the chain, then lever it forward as you pull out the stopper.

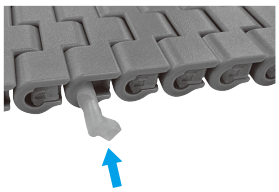


②Grip the stopper as it comes out and pull out the slit pin, then disconnect the chain.



• Connecting

①Connect sections of chain by pulling them towards each other and inserting a slit pin from one of the ends.



②Noting the direction of the stopper, insert the pin until it makes a clicking sound.

③Double check that the slit pin is placed correctly.

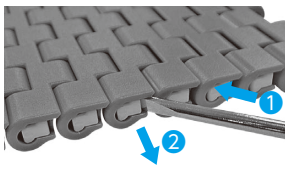


● Disconnecting and connecting chain with plug retention system

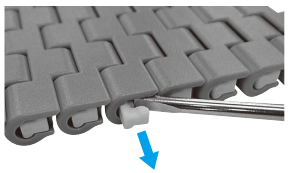
(WT0705-W: chains wider than 100 mm)

• Disconnecting

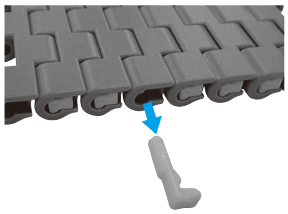
①Insert a small flathead screwdriver (less than with 1.5 mm width or similar tool) between the chain and the plug-clip on the side of the chain.



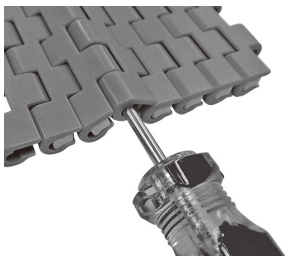
②Remove the plug by levering it out. Be careful not to let the plug jump at this time.



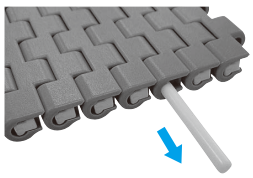
③Remove the plug on the opposite side as in ① and ②.



④Insert the bar inside the pin hole on the side of the chain, then push out the pin.

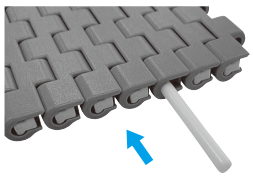


⑤Grip the pin coming out from the other end, then disconnect the sections of chain.

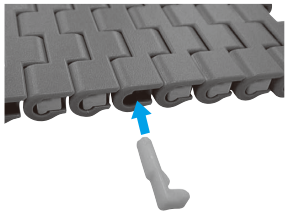


• Connecting

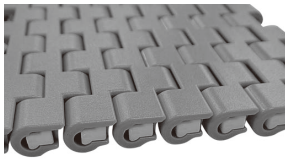
①Connect sections of chain by pulling them towards each other and inserting the pin from one of the ends.



②Then use a plug to block the pin insertion section.



③At this point, while noting the direction of the plug, insert the pin until it makes a clicking sound.



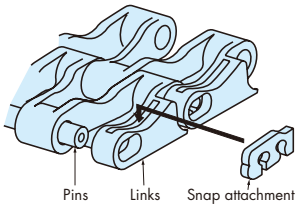
④Double check that the plug is placed correctly.

Note: Use only the attached or dedicated pin or slit pin for connecting chain.

4-5-2. Structure and disconnecting/reconnecting of the BTN5, BT6, and BT8 series

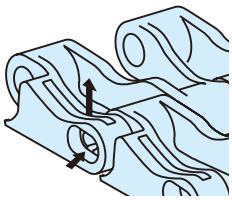
• Structure of both ends of chain

A snap attachment is inserted in the link from the underside of the link at each end of the chain to prevent the pin from coming out (snap fit).

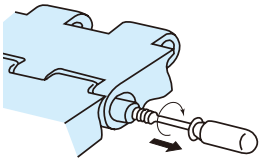


• Procedure for disconnecting and reconnecting

①Insert a flathead screwdriver into the gap (about 1 mm) between the link hole and the snap attachment to detach the snap attachment.



②Use a threaded head screwdriver and screw it into the center hole (1.0 mm dia.) of the pin and pull out the pin to disconnect the chain.



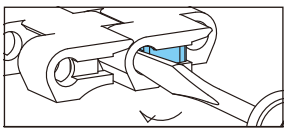
③When connecting the links of a chain, bring both ends of the chain together and insert the pin in the hole from one side. Finally, insert the snap attachment from the underside of the chain. Make certain that the snap attachment does not protrude from the bottom of the link.

Note: Use only the attached or dedicated pin for connecting pins.

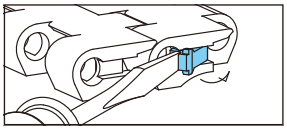
4-5-3. Disconnecting/connecting of the WT1500/1510/1900/2510/2520 (old type of plug)/2700/3000 series

• Disconnecting

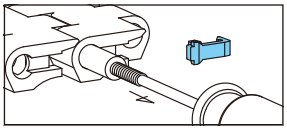
①Insert a flathead screwdriver or similar tool with a tip of 2 mm or less in between a chain and a plug on the side of the chain.



②By using the screwdriver as a lever, pull the plug off the base chain. Work carefully so that the plug does not pop out and is flung away.

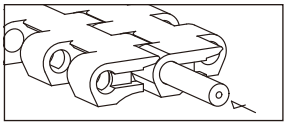


③Using a threaded head screwdriver, screw it into the center hole (1 mm diameter) of the pin, and pull out the pin to disassemble the chain.

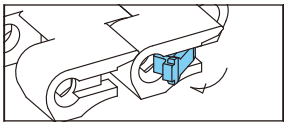


• Connecting

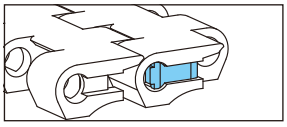
①To start connecting chains, assemble the chains and then insert a pin from another side.



②Next, insert a plug to close the pin hole. At this point, confirm the orientation of the plug (check if the shape fits in the pin hole), and push it in until it makes a clicking sound.



③Make sure that the plug has been properly installed.



Note: 1. Use only the attached or dedicated pin for connecting chain.
2. Refer to the instruction for WT0705-W and WT1510 series on page 467 for disconnecting/connecting of WT2520 series.

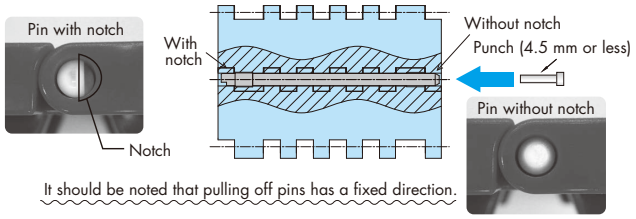
Plastic Modular Chain (Wide Type/Mold-to-Width Type)

4-5-4. Disconnecting/connecting of the WT2515G-M330, BTC8H-M and BTM8H-M

Note: Punch length requires 50 mm or more as an effective length.

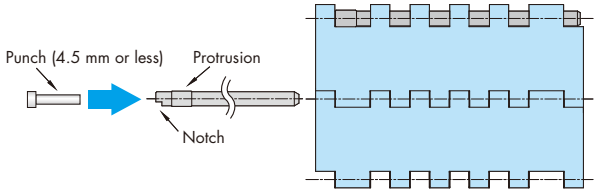
• **Disconnecting**

Place a punch (4.5 mm or less) on the side without a notch and strike a hammer on it to thrust off the pin.



• **Connecting**

Use dedicated connecting pins (special stepped plastic connecting pin color: orange) only.
Pin should be inserted from the end without notch forward. Pushing pin using punch and hammer to connect the chain. Pin can be inserted either side of the chain.

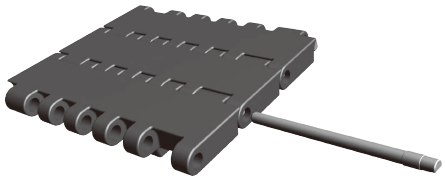


• **Reconnecting**

Do not connect at a location where connecting pins (special stepped plastic connecting pin) have been inserted.

• **Special stepped plastic connecting pin**

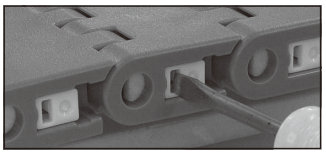
Use only dedicated connecting pins (special stepped plastic connecting pin).
The orange color is designed to distinguish it from pins used for base chain color (white).
Each chain has only one connecting pin (special stepped plastic connecting pin) provided.



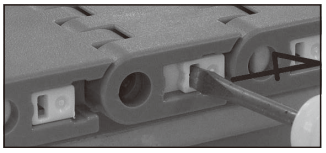
4-5-5. Disconnecting/connecting of the WT2500, WT3100, WT3820, WT3830 series and BTM8H

• **Disconnecting**

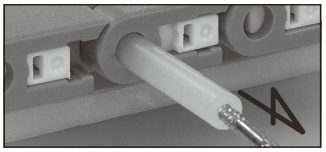
①Insert a small flathead screwdriver or similar tool between the chain and the plug on the side of the chain.



②Push the screwdriver in the direction of the arrow to slide the plug to the side.

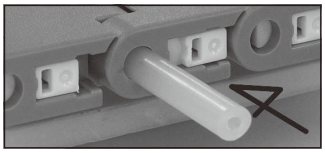


③Use a threaded head screwdriver and screw it into the center hole (1.0 mm dia.) of the pin and pull out the pin to disconnect the chain.

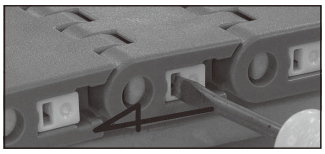


• **Connecting**

①When reconnecting the links of a chain, bring the ends of the two chains together, interlace the links, and insert the connecting pin from one side.



②Slide the plug to the side to cover the insertion area.

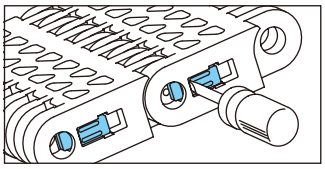


Note: Use only the attached or dedicated pin for connecting chain.

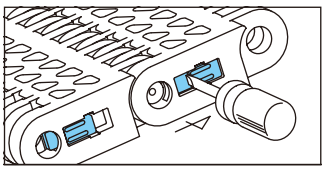
4-5-6. Disconnectiong/connecting of the WT3810, WT5700, BT16 series

• **Disconnecting**

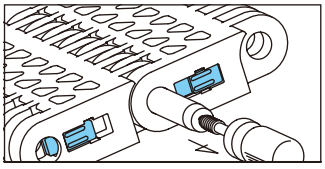
①Insert a small flathead screwdriver or similar tool between the chain and the plug-clip on the side of the chain.



②Push the screwdriver in the direction of the arrow to slide the plug to the side.

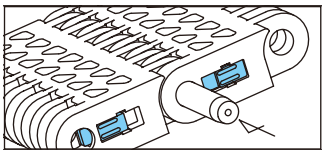


③Use a threaded head screwdriver, screw it into the center hole (1.0 mm diameter) of the pin, and pull out the pin to disconnect the chain.

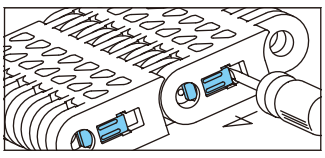


• **Connecting**

①When reconnecting the links of a chain, bring the ends of the two chains together, interlace the links, and insert the connecting pin from one side.



②Slide the plug to the side to cover the insertion area.

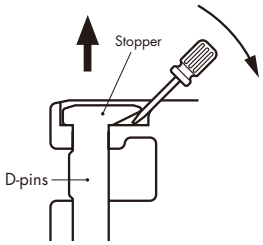


Note: Use only the attached or dedicated pin for connecting chain.

4-5-7. Disconnecting/connecting of the BTC-4M and BTO8-M

• **Disconnecting**

Place a punch (2.5 mm dia. or smaller) on the outer edge of the D-pin on the D-hole side of the link and lightly knock the punch with a hammer to remove the pin.



Or, the pin can be removed using a small flathead screwdriver from the stopper side.

• **Connecting**

①Use the exclusively prepared D-pin (colored orange).
②Make certain that the D-pin is facing the correct direction and insert it into the chain link.
③Push by a finger or lightly knock by a hammer the stopper of the D-pin.

• **Reconnecting**

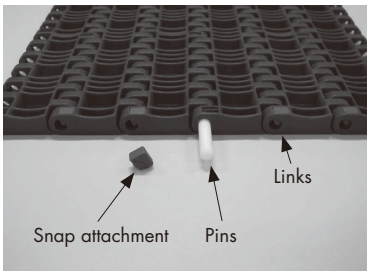
①Do not cut the chain where a connecting D-pin (color: orange) is already inserted.

• **Connecting D-pin**

①Use the exclusively prepared D-pin to connect the chain links.
②The connecting D-pin is colored orange so as to distinguish it from base chain pins (color: white).
③One connecting D-pin is provided per chain.

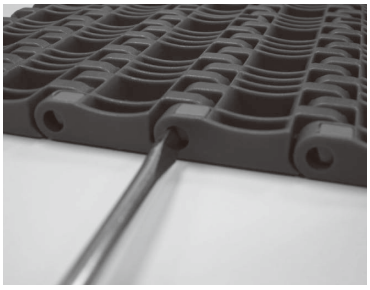
4-5-8. Disconnectiong/connecting of the WT2250 and BTC8S

• Chain construction of both ends
A snap attachment is inserted in the link from the underside of the link at each end of the chain to prevent the pin from coming out (snap fit).

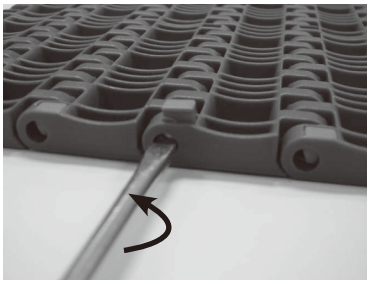


• **Procedure for disconnecting and reconnecting**

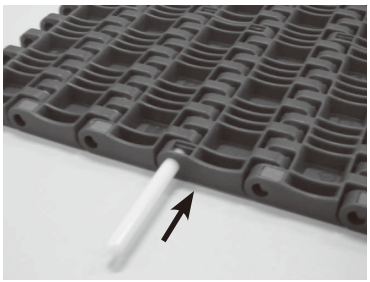
①Insert a small flathead screwdriver into the gap (about 1 mm) between the link hole and the snap attachment to detach the snap attachment.

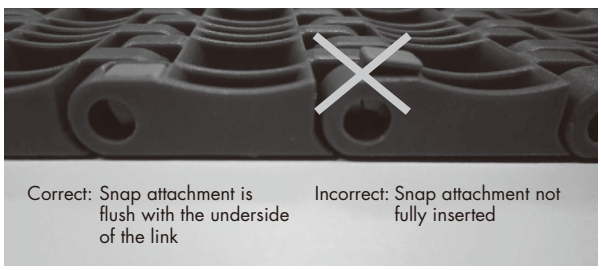


②Use a threaded head screwdriver and screw it into the center hole (1.0 mm dia.) of the pin and pull out the pin to disconnect the chain.



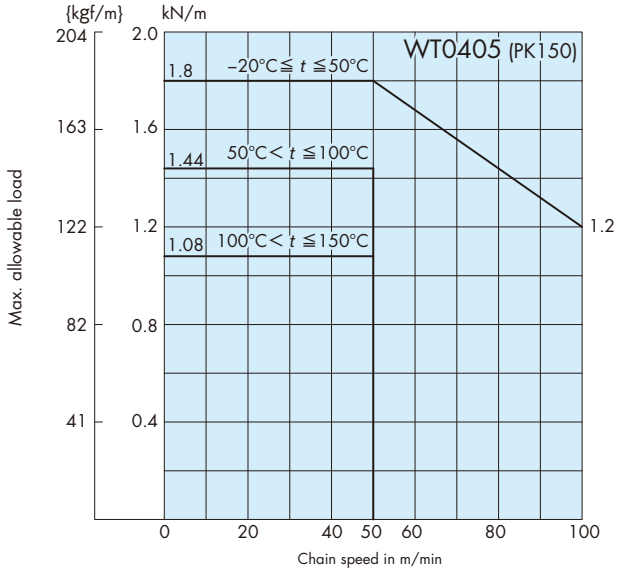
③When connecting the links of a chain, bring both ends of the chain together and insert the pin in the hole from one side. Finally, insert the snap attachment from the underside of the chain. Make certain that the snap attachment does not protrude from the bottom of the link.

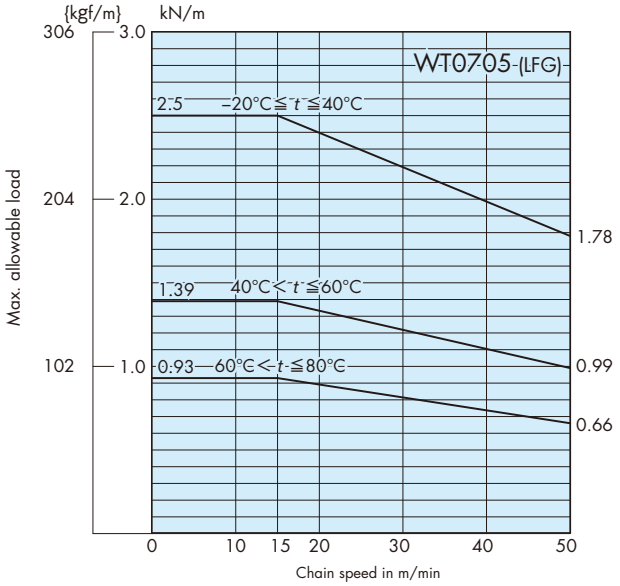


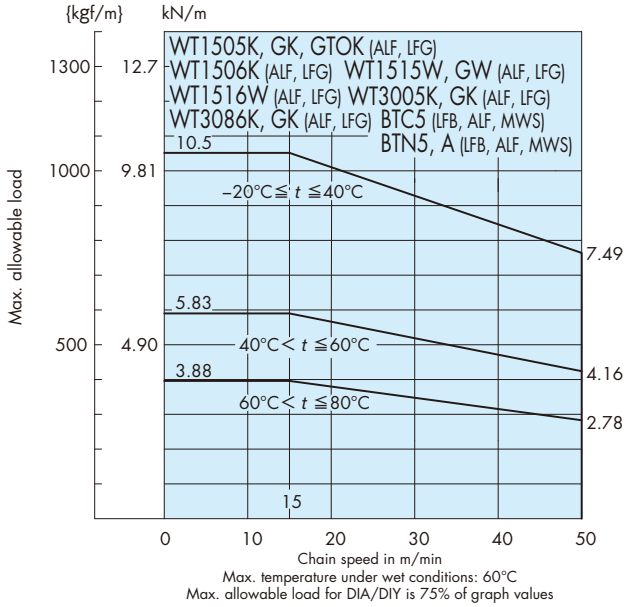


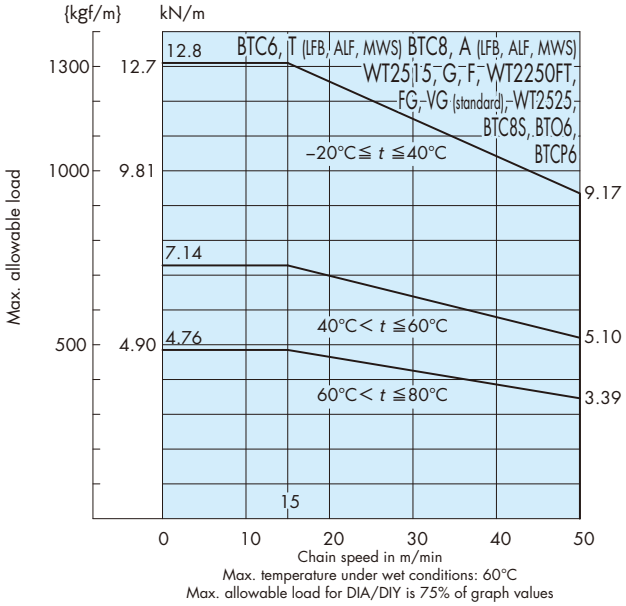
Plastic Modular Chain (Wide Type)

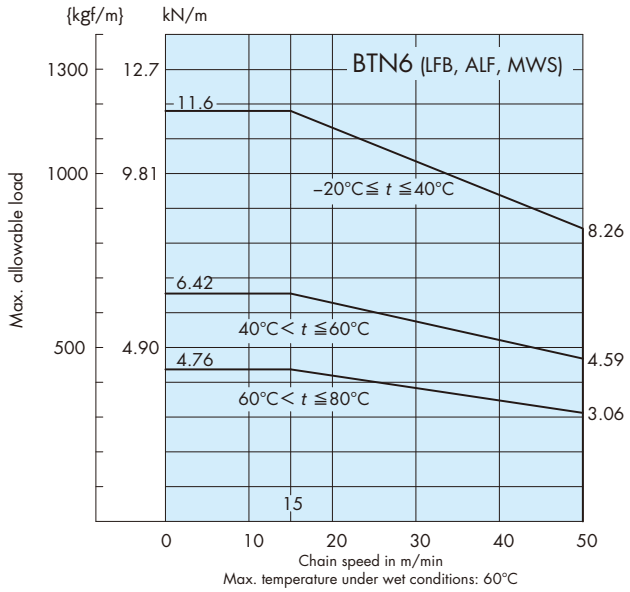
Allowable Load Graphs

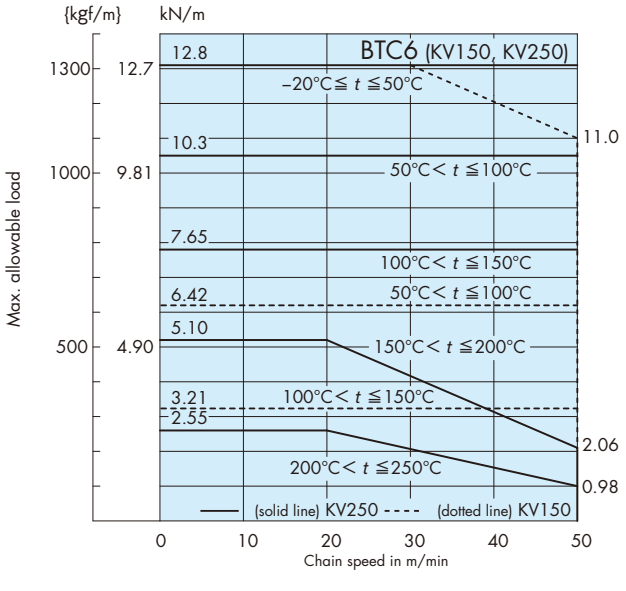






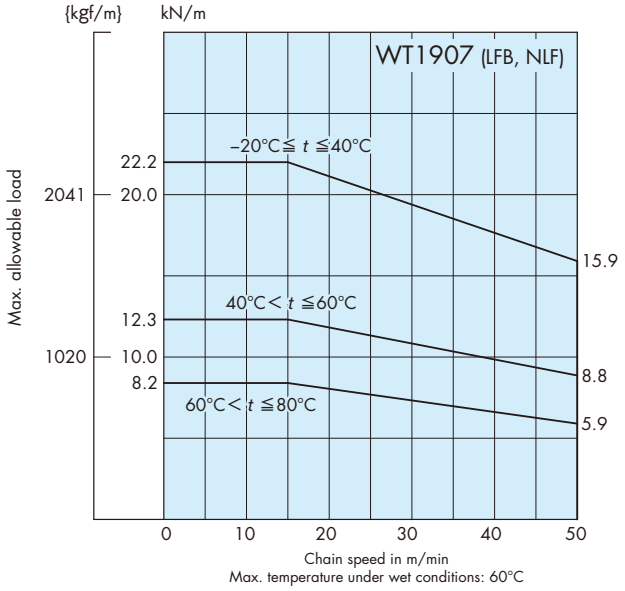


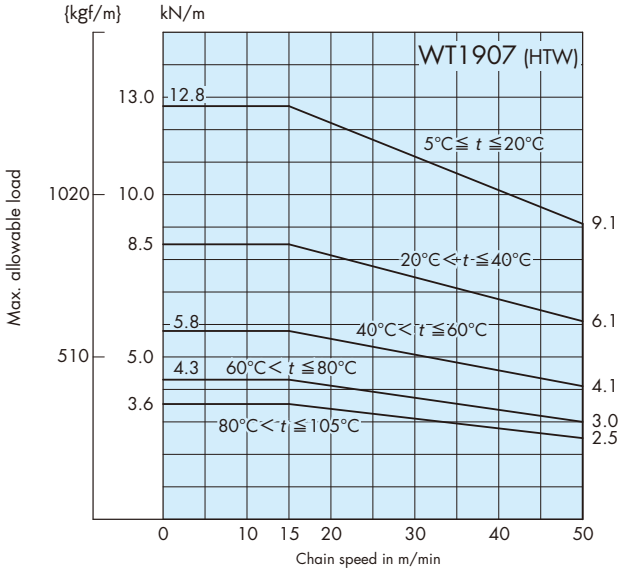


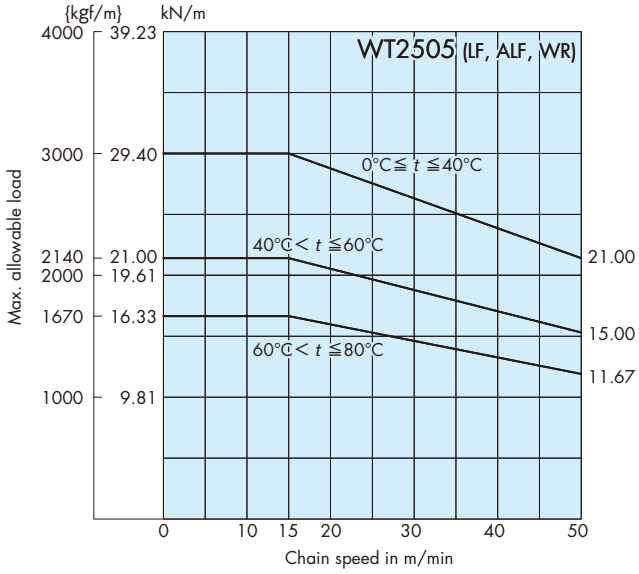


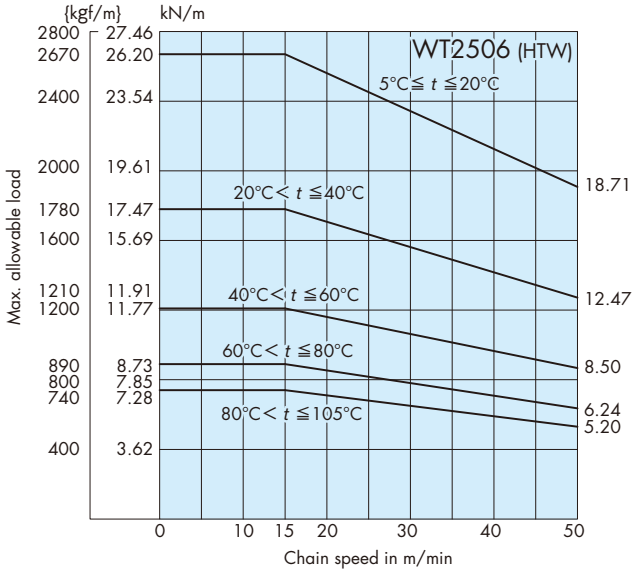
※ t = temperature

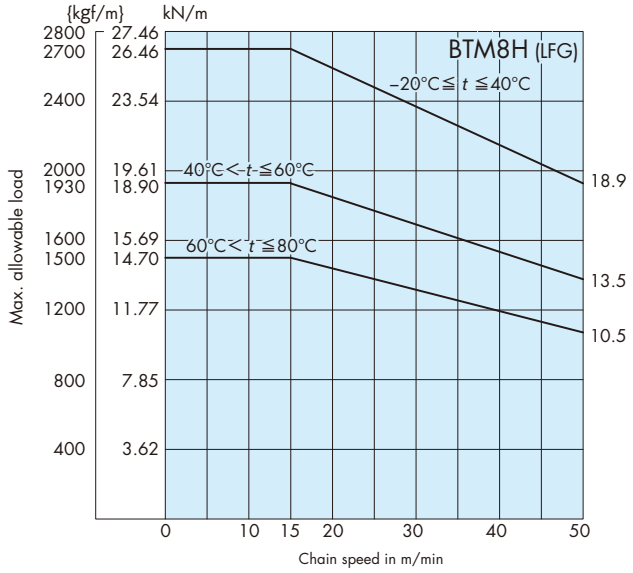
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

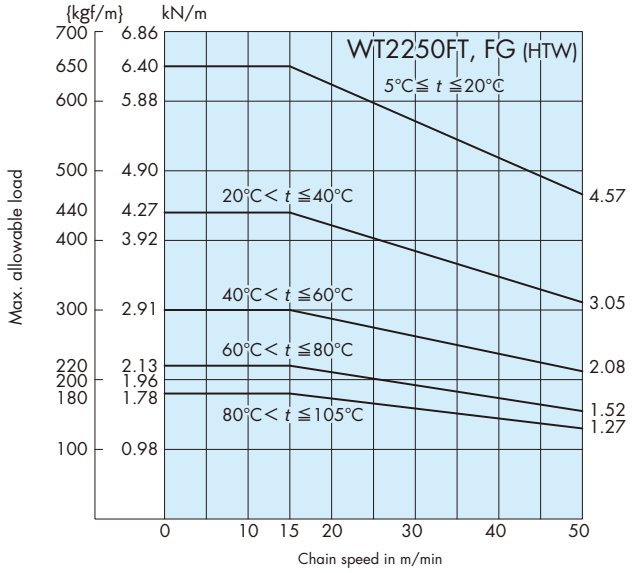








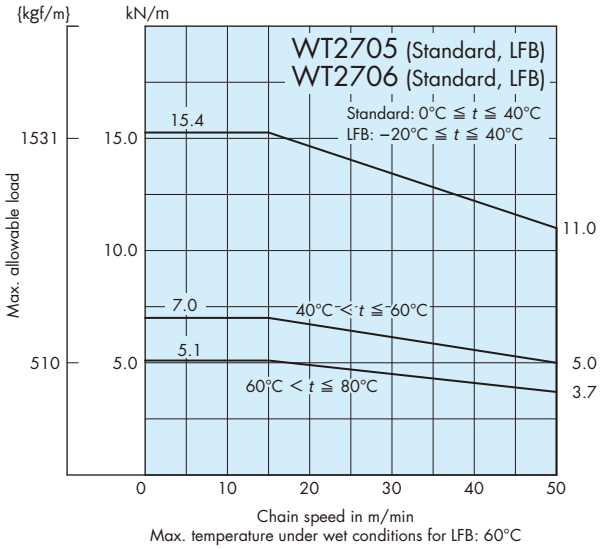


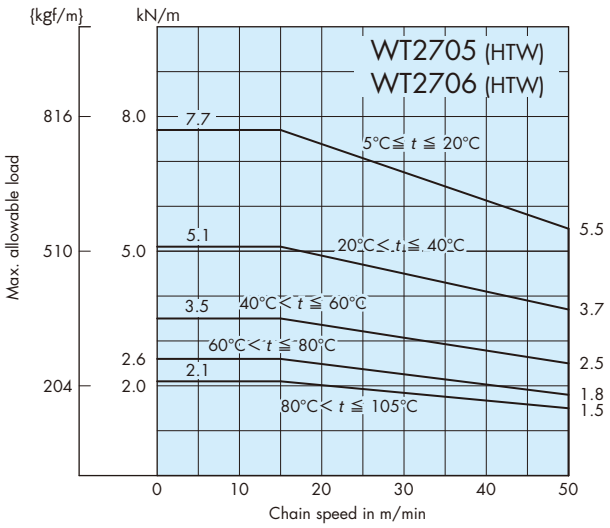


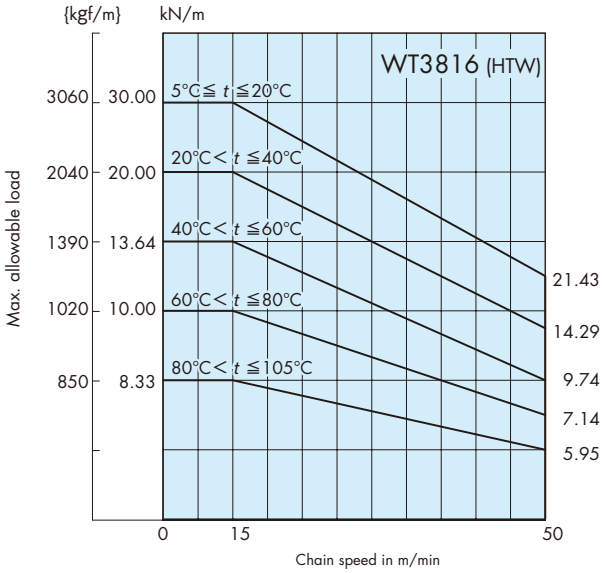
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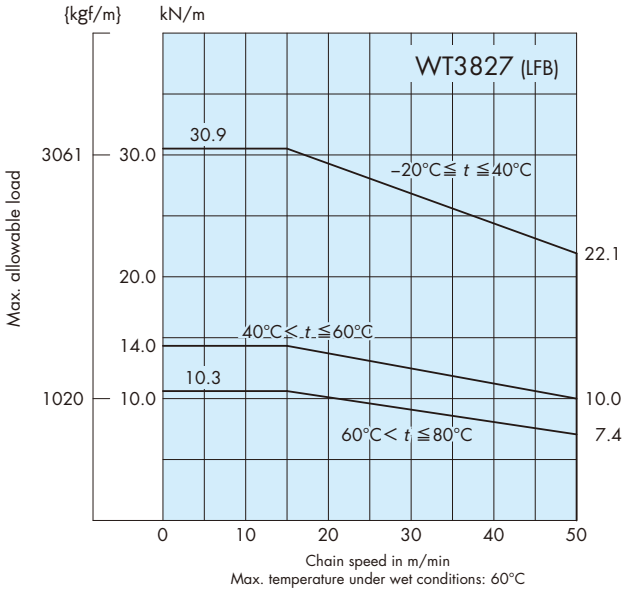
Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

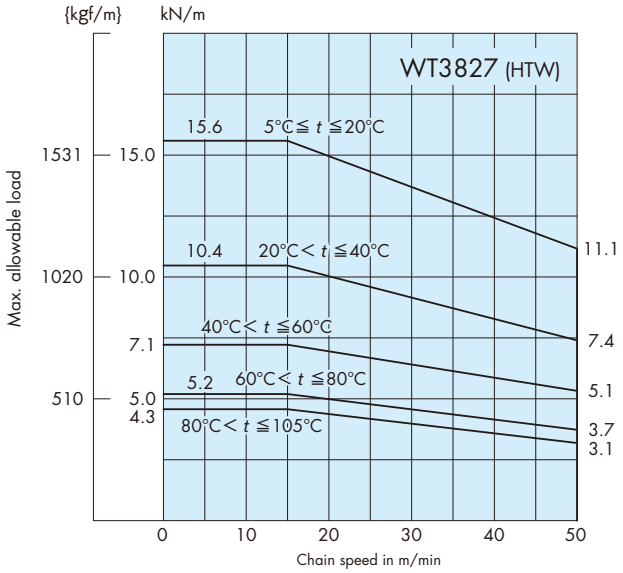
Plastic Modular Chain (Wide Type)

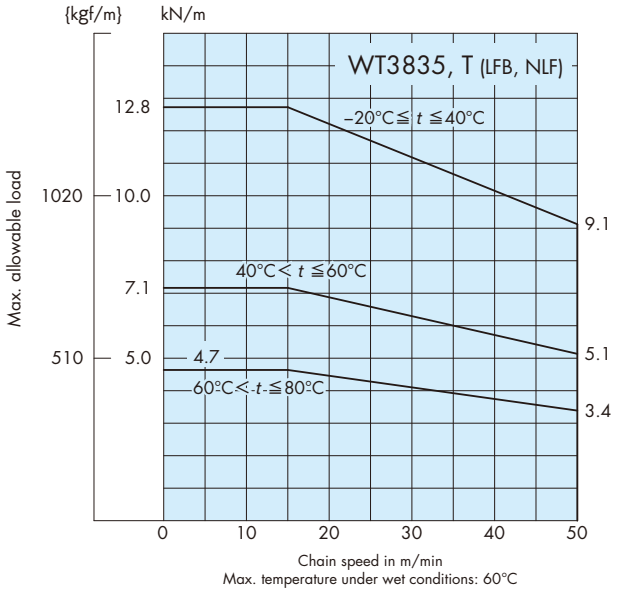






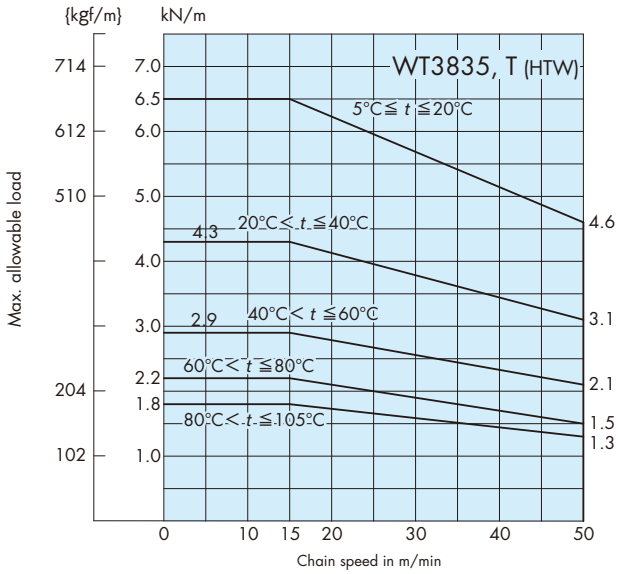


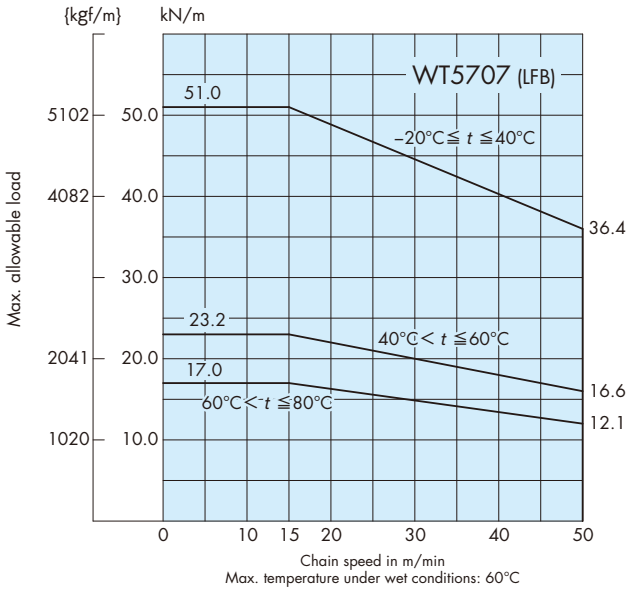


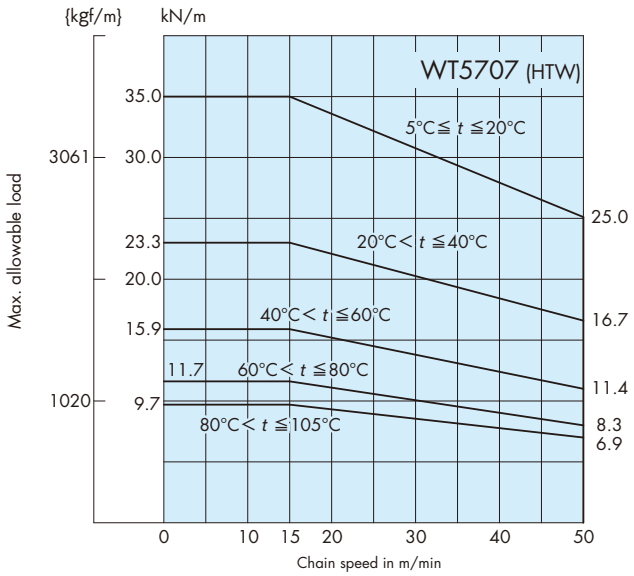


※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.







※ t = temperature

Note: For allowable load graphs of the chains and materials not found on these pages, contact a Tsubaki representative.

Plastic Roller Table

Follow the procedure below to select the most appropriate plastic roller table and the wearstrip according to specific operating conditions.

1. Selection Process for Plastic Roller Table

1. Check Conveyance Conditions
2. Select Chain Type
3. Select Chain Size
4. Calculate Power Required

Step 1. Check Conveyance Conditions

Check the operating condition as follows.

■Check items of operating conditions

1. Conveyed products	①Materials	
	②Mass per unit	g/unit
	③Dimension (length × width)	mm
2. Conveyor layout	①Layout of conveyance	Draw a layout of the conveyance in the blank space below.
	②Length of conveyor	m
	③Space	m
3. Conveying conditions	①Conveying capacity	/min
	②Interval/spacing between products to be conveyed	mm
	③Conveying speed	m/min
4. Operating environment	①Temperature	°C
	②Conditions which may cause corrosion such as, contact with chemicals, water, and humidity (See “Corrosion resistance to various fluids” on page 402)	Yes ・ No

2-④Conveyance layout and others

Step 2. Select Chain Type

ST: Used when the products are transversely loaded or unloaded.
RT: Used when the products are not transversely loaded or unloaded (straight loading/unloading). However, large-size products such as pallets may be transversely loaded or unloaded.

Step 3. Select Chain Size

The size of the chain should be decided using table 1: Selection of Chain Size in Relation to Size of Products and table 2: Conveyor Capacity of ST Roller Tables and RT Roller Tables.

Note: Refer to page on 334 for the wearstrip.

Table 1: Selection of Chain Size in Relation to Size of Products

Chain size	Dimension of products (mm)
300 series	30 or longer
400 series	44 or longer
500 series	55 or longer
600 series	66 or longer

Note: The “Dimension of products” is the bottom dimension. Since the dimension of products depends on a balance between the dimension of the bottom and the dimension of the height, the above values are for reference only.

Table 2: Conveyor Capacity of ST Roller Tables and RT Roller Tables

< ST type >

m_2 = 300 kg/m^2

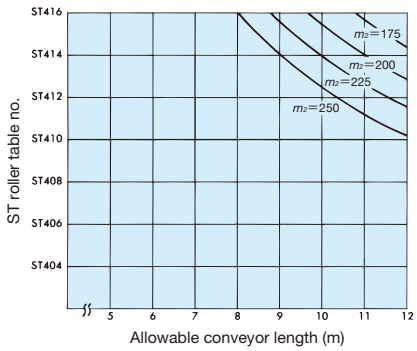
If overall length is 10 meter, plastic roller tables ST504 to ST512 can be used.

m_2 = Conveying load (kg/m^2) = $\frac{\text{Mass of conveyed products (kg)}}{\text{Area of bottom (m}^2\text{)}}$

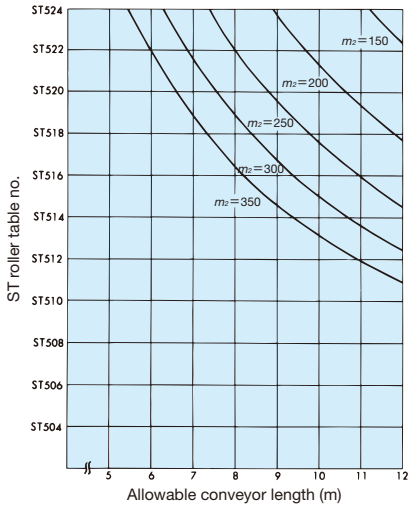
ST300

Max. allowable conveying load	50 kg/m^2
Max. allowable conveyor length	10 m

ST400



ST500



< RT type >

m_2=300 kg/m^2

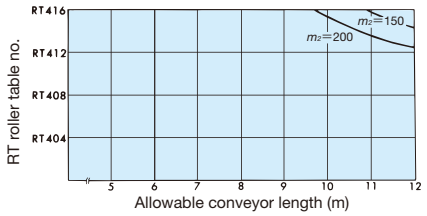
If overall length is 10 meter, plastic roller tables RT504 to RT512 can be used.

m_2 = Conveying load (kg/m^2) = $\frac{\text{Mass of conveyed products (kg)}}{\text{Area of bottom (m}^2\text{)}}$

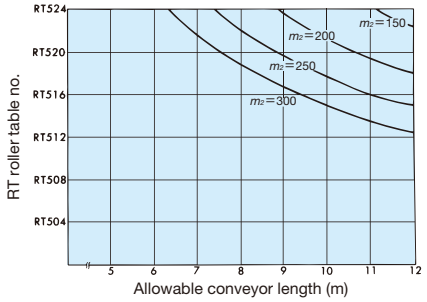
RT300

Max. allowable conveying load	50 kg/m^2
Max. allowable conveyor length	10 m

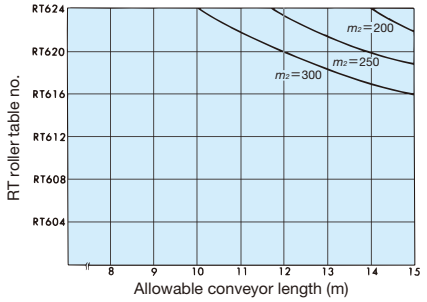
RT400



RT500



RT600



・How to calculate conveying load m_2 (kg/m^2) of round objects

m_2 = Conveying load (kg/m^2) = $\frac{\text{Mass of conveyed products (kg)}}{\text{Area of bottom (m}^2\text{)}}$

$m_2 = \frac{\omega \times 10^6}{D^2 \sin 60°}$ (kg/m^2)

m_2 : Conveying load (kg/m^2)
ω : Unit mass of single conveyed products (kg)
D : Outside diameter (OD) of conveyed products (mm)

Example: For 350 ml can of 66 mm OD and unit mass of 0.37 kg/can

$m_2 = \frac{0.37 \times 106}{66^2 \times \sin 60°} = 98 \text{kg/m}^2$

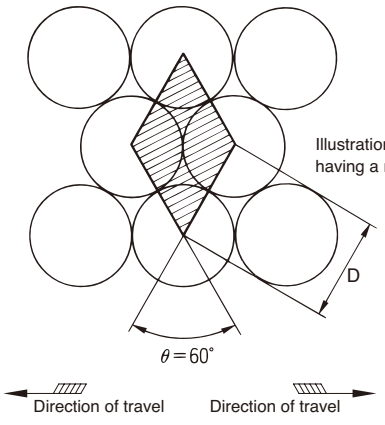


Illustration of accumulated products having a round shape

Step 4. Calculate Power Required

The power required is calculated using the following formula.

kW = $\frac{X \cdot (m_1 + m_2 \cdot H) \cdot S \cdot \upsilon}{5565 \cdot \eta}$

kW = Power required
m_1 = Chain mass (kg/m)
m_2 = Conveying load (kg/m^2)
H = Conveyor width (effective width) (m)
S = Center distance of shafts (m)
υ = Chain speed (m/min)

η Note = Mechanical transmission efficiency for drive unit
X = Coefficient of lubrication (different from coefficient of friction)
・When base chain is lubricated: X = 0.3
・When base chain is not lubricated: X = 0.4

Note: See the drive unit used to check the mechanical transmission efficiency.

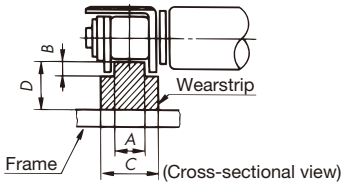
Plastic Roller Table

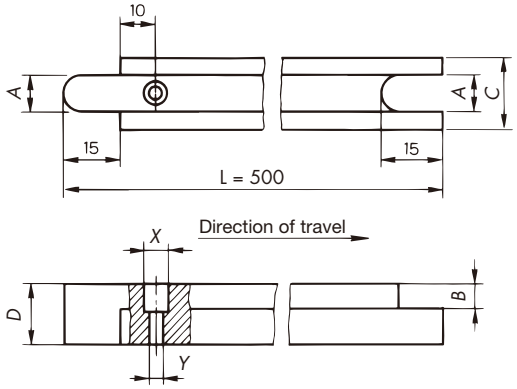
2. Conveyor Design

Note: Refer to page on 334 for the wearstrip.

2-1. Wearstrip on carry-way (ST and RT)

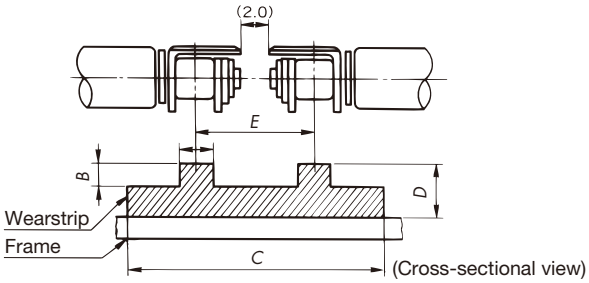
2-1-1. Single-strand roller tables

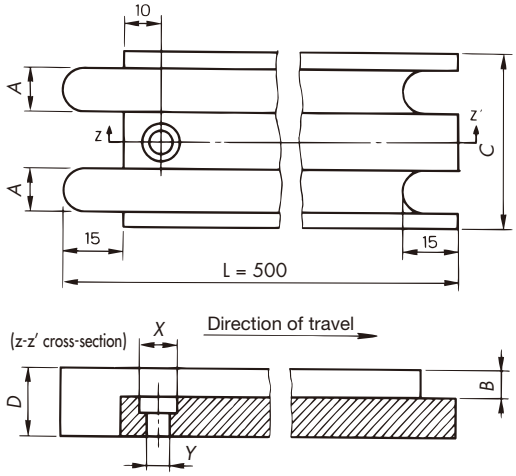




Size	Dimensions						Locking screws	Material
	A	B	C	D	X: Depth	Y		
ST300	4.0	2.7	9.5	10	φ3.2 : 3	φ1.8	M1.6 pan-head screw	P rail UHMW-PE
RT300		1.6						
ST400	7.0	3.1	12	10	φ4.0 : 4	φ2.2	M2 pan-head screw	
RT400		1.7						
ST500	8.5	3.5	15	10	φ6.0 : 4	φ3.2	M3 pan-head screw	
RT500		2.0						
RT600	11.7	2.6	19	10	φ6.0 : 4	φ3.2	M3 pan-head screw	

2-1-2. Multi-strand ST roller tables

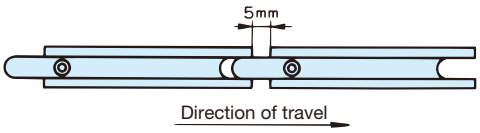


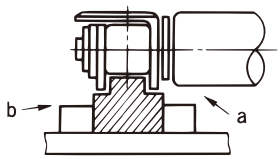


Size	Dimensions							Locking screws	Material
	A	B	C	D	E	X: Depth	Y		
ST300	4.0	2.7	26	10	16.5	φ8 : 5	φ4.2	M4 pan-head screw	P rail UHMW-PE
ST400	7.0	3.1	36.5	10	24.5				
ST500	8.5	3.5	43.5	10	28.5				

2-1-3. Wearstrip mounting

- The wearstrip should be supported by the frame with zero clearance.
- Since the wearstrips are made of ultra-high molecular weight polyethylene (UHMW-PE), they elongate greatly with temperature and/or humidity, requiring that each be mounted with just one screw at the end. Leave a clearance of around 5 mm at the joint part between the two wearstrips.
- Square steel or stainless steel parts should be provided on both sides of the wearstrip to prevent the roller table from being dislocated.





Note: Part a: Prevents interference with the plastic roller of the roller table.
Part b: Prevents interference with the neighboring top chain and other parts.

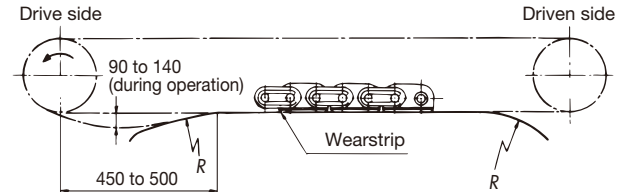
*Coefficients of linear expansion

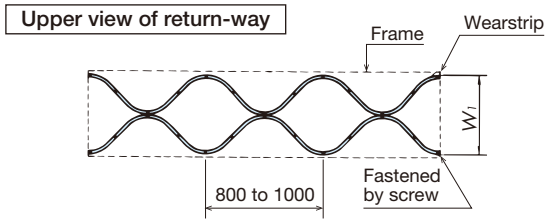
Plastic rail (P rail) PLF rail/PMW rail	20×10^{-5}/°C
M rail	9×10^{-5}/°C

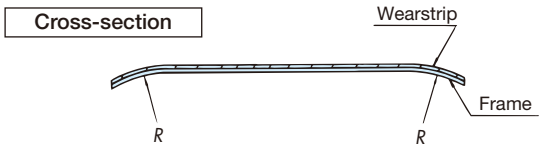
Note: 1. Operating temperature of wearstrips
Plastic rail (P rail), PLF rail/PMW rail: −20°C to 60°C
M rail: −20°C to 80°C
2. Do not use in environments where wearstrip components will be exposed to steam.

2-2. Wearstrip on return-way

2-2-1. Common configuration for both ST and RT roller







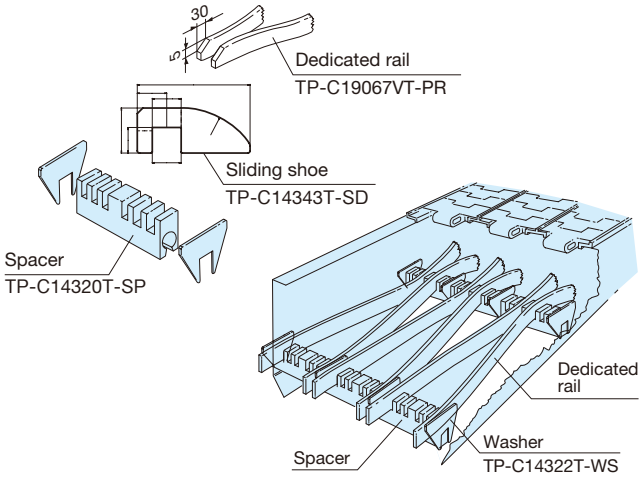
- The curve radius *R* at both ends should be as shown in the table below.

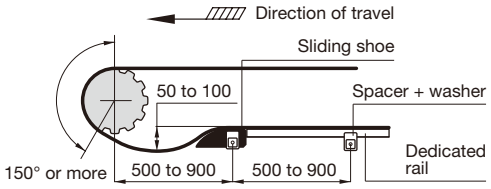
Size	Curve radius *R*
ST300, RT300, RT400, RT500, RT600	200 or more
ST400	250 or more
ST500	300 or more

- Slack as shown in the above figure should be provided beneath the drive sprocket during conveyor operation.
- Select a configuration for the wearstrip that prevents the plastic rollers of a given row from wearing down.
- The width of the wearstrip (*W1*) should be shorter than *C1* (effective width) by 10 mm.
- Select UHMW-PE (ultra-high molecular weight polyethylene) for the material of the wearstrip.

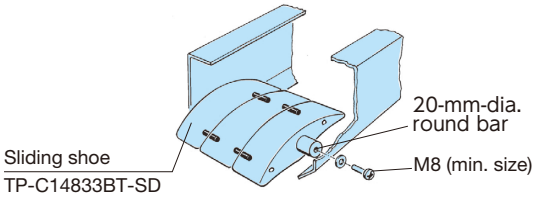
2-2-2. Use Top Chain Accessories

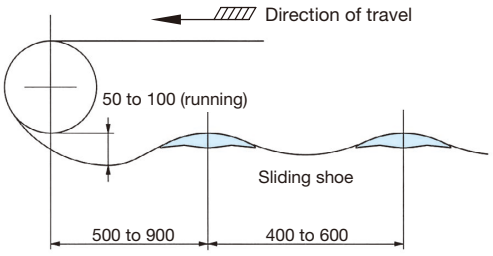
①Use TP-C14343T-SD sliding shoe and TP-C14320T-SP spacer.
Applicable chain: RT roller table





②Use TP-C14833BT-SD sliding shoe.
Applicable chain: ST300, ST400 and RT roller tables





Snap Cover Chain

1. Selection Process for Snap Cover Chain

1-1. Select chain size

1-1-1. Check maximum allowable load

Make certain that the load applied per link is within the maximum allowable load indicated in Table 1.

Table 1. Maximum Allowable Load of Snap Cover

	Allowable Load kN{kgf}/1 link					
	RF06B-SC	RS40-SC	RS50-SC	RS60-SC	RS80-SC	RS100-SC
Standard NP Lambda	0.03 {3}	0.05 {5}	0.07 {7}	0.10 {10}	0.15 {15}	0.25 {25}
SS	0.03 {3}	0.05 {5}	0.06 {6}	0.09 {9}	0.15 {15}	0.25 {25}

1-1-2. Calculate chain tension

F = Maximum chain tension kN{kgf}
m_1 = Mass of conveyed products (kg/m)
m_2 = Chain mass (kg/m)
S = Length of conveyance (sprocket center distance) (m)
S' = Length of accumulation section (m)
μ_1 = Coefficient of friction between chain and wearstrip (carry-way) (see table 2)
μ_2 = Coefficient of friction between chain and wearstrip (return-way) (see table 3)
μ_3 = Coefficient of dynamic friction between conveyed products and chain (see table 4)
P = Power required (kW)
V = Chain speed (m/min)
K = Coefficient of speed (see table 5)
η Note = Mechanical transmission efficiency for drive unit
G = Gravitational acceleration 9.80665m/s^2

Note: See the drive unit used to check the mechanical transmission efficiency.

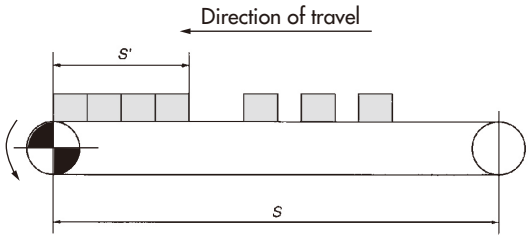


Table 2. Coefficient of Rolling Friction (μ_1) between Chain and Wearstrip

Without lubrication	With lubrication
0.21	0.14

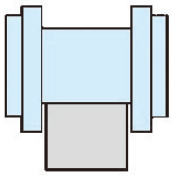


Table 3. Coefficient of Sliding Friction (μ_2) between Chain (Plastic Cover) and Wearstrip

Wearstrip material	Stainless steel	UHMW-PE
Standard Electroconductive	0.25	0.25

Note: Without lubrication

Table 4. Coefficient of Dynamic Friction (μ_3) between Conveyed Products and Chain (Plastic Cover)

Plastic cover material / Conveyed products	Standard Electroconductive
Steel cans, aluminum cans	0.25
Paper packages	0.30
Glass bottles	0.22
Plastic containers	0.25
Industrial parts (metal)	0.25

Note: Without lubrication

Table 5. Coefficient of Speed (*K*)

Chain speed (m/min)	Coefficient of speed (K)
Less than 15	1.0
15 to 30	1.2
30 to 50	1.4
50 to 60	1.6

[Calculation formula]

• SI units (kN)

$$F = \{(m_1 + m_2)\, S \cdot \mu_1 + 1.1 m_2 \cdot S \cdot \mu_2 + m_1 \cdot S' \cdot \mu_3\} \cdot \frac{G}{1000}$$

• Gravimetric units (kgf)

$$F = (m_1 + m_2)\, S \cdot \mu_1 + 1.1 m_2 \cdot S \cdot \mu_2 + m_1 \cdot S' \cdot \mu_3$$

[Determine chain size]

Using the maximum tension (F) and the speed coefficient (K) shown in Table 5, check whether or not the following formulas are satisfied.

One strand of chains $F \times K \leqq$ Maximum allowable load Two strands of chains in a pair $0.6F \times K \leqq$ Maximum allowable load

1-2. Calculate Power Required

• SI units (kN)

$$P = \frac{F \cdot V}{60 \times \eta}$$

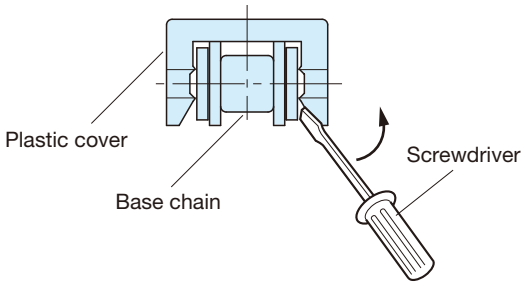
• Gravimetric units (kgf)

$$P = \frac{F \cdot V}{6120 \times \eta}$$

2. Disconnecting

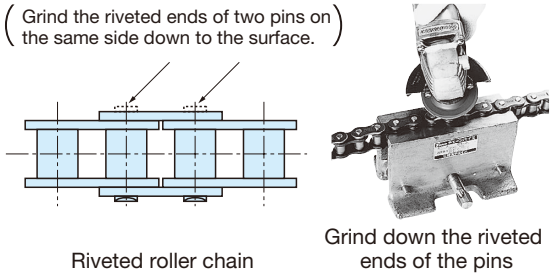
2-1. Detaching plastic covers

Use a screwdriver to detach the plastic cover. When attaching the plastic cover, attach the cover in the base chain firmly.



2-2. Disassembling base chain

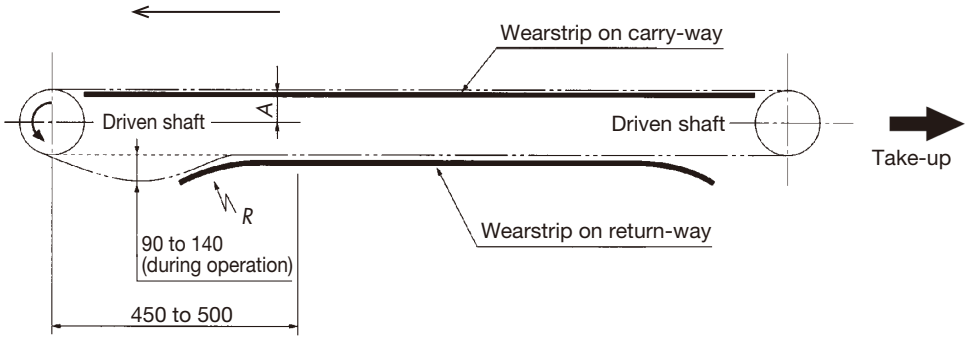
For riveted roller chain, use a hand grinder to remove the riveted ends of the two pins (on the same side) of the outer link to be cut. Be careful not to overheat the chain when performing the grinding operation. For Lambda chains, work especially slowly so as not to heat the oil-impregnated bushes.



3. Conveyor Design

■ Basics of wearstrip

Conveyance should be provided only on the carry-way and the return-way should be supported by the wearstrip of which both ends should be curved slightly to prevent vibrations and pulsations of the chain.



■ Chain slack

The necessary slack in the chain during conveyor operation is 90 to 140 mm below the drive sprocket as shown in the above figure.

■ Wearstrip height

$$A = \frac{\text{Sprocket pitch circular diameter} - \text{roller diameter}}{2}$$

■ Curve at end of wearstrip

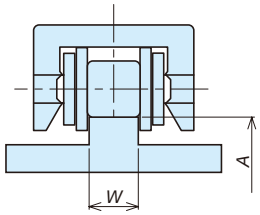
The curve radius of the wearstrip should be larger than the backflex radius of the chain (see table below).

	RF06B-SC	RS40-SC	RS50-SC	RS60-SC	RS80-SC	RS100-SC
Backflex radius *R* mm	280	380	480	560	740	880

■ Ways to support chain

- Carry-way …Make sure the chain is supported by the rollers. If supported by the plastic cover, the cover will quickly wear down.
- Return-way…The whole surface of the plastic cover should be supported.

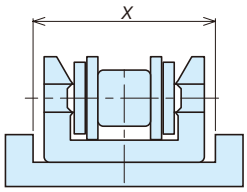
[Carry-way]



Rail width (*W*): In general, it should be the thickness of sprocket teeth.

(Distance from the center of sprocket)

[Return-way]



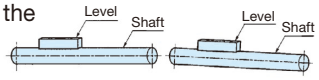
Groove width on return-way (*X*): Chain width (*L*) + 2 to 3 mm

Installation and Inspection

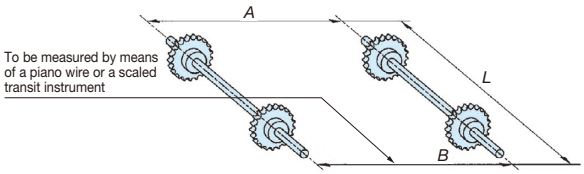
1. Sprocket installation

Installation of the sprockets is critical for smooth operation of the conveyor, and the chain life depends on the properness of the installation. The installation should be properly carried out in accordance with the procedure described below.

1) Check the horizontal positioning of the shafts with a level. Adjust the level within the tolerance of $\pm \frac{1}{300}$



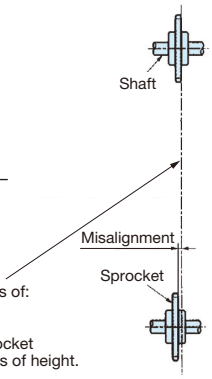
2) Adjust the shafts so that the parallelism as calculated with a formula $\frac{A-B}{L}$ is within $\pm \frac{1}{100}$



3) Align the sprocket faces in a pair.
Tolerance relative to center distance
Up to 1 m : ±1 mm
Tolerance relative to center distance
1 to 10 m :

$$\pm \frac{\text{Distance between shafts (mm)}}{1000}$$

Distance between shafts
10 m or longer: ±10 mm



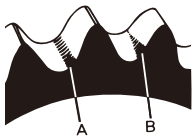
The misalignment is to be measured by means of:
A straight edge when the distance is short.
A piano wire when the distance is long.
A leveling string or a piano wire when the sprocket positions are different from each other in terms of height.

4) After the processes 1) to 3) have been completed, lock each of the sprockets to each shaft by means of keys or Tsubaki POWER-LOCK. Lock the sprockets that are installed and used on the same shaft so that the teeth of both sprockets align in terms of phase.

2. Inspection

Frequently inspect the chain during the initial operating period in order to carry out necessary adjustment. Inspect the following items.

1. Unusual wear of chain
2. Slack in chain
3. Flatness of chain surface
4. Difference in height of top plates between appropriate plate and neighboring plate
5. Foreign matter between top plates and clearance between top plates
6. Vibration and jerking of chain
7. Unusual wear of sprocket, unusual contact of sprocket with other components due to eccentricity, dust accumulated on root of teeth. When the sprocket properly engages with the chain, even contact is represented by the trace of contact shown as A in the illustration, while uneven trace of contact as B in the illustration represents improper installation of the sprocket or a twisted chain. Rechecking is needed. Proper contact should be traced a little above the root. However, when initial tension remains in the slacked side of the chain, the chain slightly contacts the root. However, even in this case, strong contact should be traced around A. In the case of idlers and tighteners, contact happens at the middle of the root.



8. Too much wear of the wearstrip
9. Any abnormality in the lubricating system

■ Causes of vibration, jerking and unusual wear

1. Overload, glass fragments or bottle caps caught between components
2. Warping of the chain on the return-way
3. Insufficient lubrication or no lubrication
4. Interference between top plates
5. Wear of the sprocket
6. Unusual wear or breakage of the chain

3. Lubrication

Lubrication may drastically decrease elongation of the chain due to wear, wear of the sprockets and wear of the top plates and the wearstrips. Utilization of a lubricant also reduces noise and power loss in operation. Though plastic chains have self lubricating characteristics, lubrication exerts the same effect.
The most desirable lubricant is high-quality lubricating oil, however a lubricant prepared exclusively for this purpose or soap are often used when lubricating oil is not available. Enough attention should be paid so that such a lubricant may be sufficiently applied to parts liable to wear such as those described above.

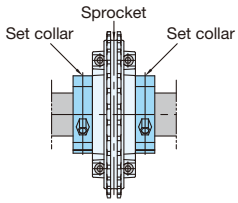
4. Cleaning

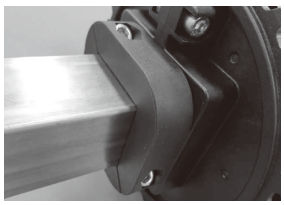
Chain wear dust, grease, general dust, spilled beverage syrup, etc., tend to accumulate during ordinary use, and may result in the following undesirable conditions that will require cleaning of the chain and the conveyor.

1. Contamination, damage, tip-over, or slippage of conveyed products
2. Increased load on the chain and/or the motor
3. Accelerated wear of sprocket teeth
4. Vibration and/or jerking of the conveyor
5. Accelerated wear in the curves and the top plates of the chain
6. Accelerated wear of the wearstrip
7. Growth of bacteria or other microorganisms

Note: When the top chain is in operation, wear debris is normally generated. Cleaning especially during initial operational periods should be performed because wear debris is prone to be generated more.

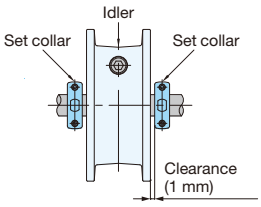
■ Method of fixing sprockets for plastic top chains

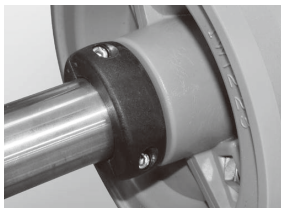




Place set collars tightly on both sides of a sprocket without leaving any clearances between them and use bolts to fix each set collar using the specified bolt tightening torque.

■ Method of fixing idlers



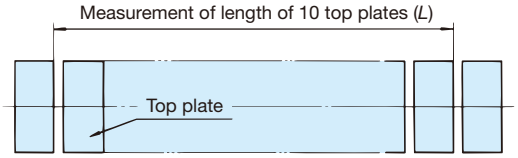


Place set collars on both sides of an idler and fix each set collars using the specified bolt tightening torque. Ensure that there is clearance between the idler and set collar and that the idler rotates.

Note: Refer to page on 357 for details.

Replacement of the chains, sprockets and wearstrips

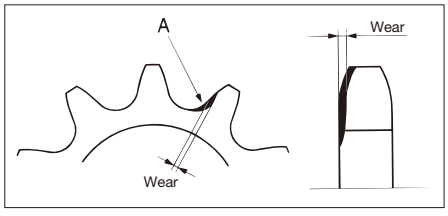
5-1. Chain

<table>
<tr><th>Item</th><th>Method of Inspection</th><th>Judgment Criteria</th></tr>
<tr><td>Chain elongation due to wear</td><td>Measure the length of 10 top plates by means of a measure with the chain slightly stretched to eliminate backlash through the chain links.

</td><td>
<table>
<tr><th>Grade</th><th>Percentage of chain elongation X</th></tr>
<tr><td>A</td><td>0≦X<+1.2%</td></tr>
<tr><td>B</td><td>+1.2≦X<+2.6%</td></tr>
<tr><td>C</td><td>+2.6%≦ X</td></tr>
</table>
Percentage of elongation X
= (Measured length – Reference length) ÷ Reference length × 100
Reference length = chain pitch ×10
Example: TTP chain: Result of measuring 10 links (reference length: 381 mm)
Percentage of elongation and judgment when measured length was 387 mm:
Percentage of elongation X= (387–381) ÷381×100 ≒ 1.6%
From table above, judgment is B.
</td></tr>
<tr><td>Wear of top plate (Plastic Top Chain and Stainless Steel Top Chain only)</td><td>Use a vernier caliper to measure the thickness of the part of the top plate that slides on the wearstrip. Also, verify that there are no bumps, depressions, or other irregularities measuring more than 1 mm in height or depth on the conveyor surface.</td><td>
<table>
<tr><th>Grade</th><th>Engineering plastic (plate thickness 4 mm)</th><th>Steel (plate thickness 3.2 mm)</th></tr>
<tr><td>A</td><td>3.4 to 4.0 mm</td><td>2.7 to 3.2 mm</td></tr>
<tr><td>B</td><td>2.5 to 3.3 mm</td><td>2.0 to 2.6 mm</td></tr>
<tr><td>C</td><td>2.4 mm or thinner</td><td>1.9 mm or thinner</td></tr>
</table>
</td></tr>
<tr><td>Link height wear (Plastic Modular Chain and Plastic Block Chain)</td><td>Use a vernier caliper to measure the height of a link sliding on a wearstrip or with conveyed products.</td><td>
<table>
<tr><th rowspan="2">Grade</th><th colspan="3">Amount lost to wear Y</th></tr>
<tr><th>Plastic modular chain</th><th>RSP35, BTC4-M</th><th>RSP40, 50, 60</th></tr>
<tr><td>A</td><td>0 to 0.6 mm</td><td>0 to 0.3 mm</td><td>0 to 1.2 mm</td></tr>
<tr><td>B</td><td>0.7 to 0.9 mm</td><td>0.4 to 0.6 mm</td><td>1.3 to 1.9 mm</td></tr>
<tr><td>C</td><td>1.0 mm or more</td><td>0.7 mm or more</td><td>2.0 mm or more</td></tr>
</table>
Amount lost to wear Y = reference link height (value from catalog) – measured height
</td></tr>
<tr><td>Corrosion</td><td>Check whether or not there is any place where the chain articulation is not proper due to corrosion. If corrosion should worsen, remove rust and measure the thickness of the link plate by means of a vernier caliper.</td><td>
<table>
<tr><th>Grade</th><th>Criteria</th></tr>
<tr><td>A</td><td>Corrosion penetration is shallow and dispersed.</td></tr>
<tr><td>B</td><td>The entire surface is affected by corrosion.</td></tr>
<tr><td>C</td><td>Corrosion has worsened to such an extent that the thickness of the plate has been reduced.</td></tr>
</table>
</td></tr>
<tr><td>Deformation of top plate</td><td>Inspect whether or not any of the following problems have happened: deformation of the top plate caused by things such as a broken bottle or bottle cap caught in the components; lifting of curled sections; looseness of a rivet in the top plate; or scratches on the upper surface of the top plate due to abnormal contact.</td><td>Replace the part if deemed that it may affect operation. For scratches on the upper surface of the top plate due to abnormal contact, investigate the wearstrip on the return-way to find the causes and repair it as necessary.</td></tr>
<tr><td>Chipping or unsmooth rotation of the roller</td><td>Check whether or not there is any chipping of the roller and rotation is smooth.</td><td>Replace the chain and the rollers as appropriate when there is any roller that is chipped, does not rotate smoothly or is partially worn.</td></tr>
</table>

A: Can be still used B: Still has margin of chain life but necessary to consider replacement
C: Chain life already expired, needs to be replaced
Note: Contact a Tsubaki representative regarding standards for link height wear for TPUN chain.

5-2. Sprockets

When the sprocket is worn as illustrated right (to the left), the chain is prone to being caught by the tips of the teeth (A), making the departure of the chain from the sprocket difficult, hence resulting in vibration of the chain. Though wear allowance depends on the type of conveyor and the size of the chain to a certain extent, if the sprocket is replaced when the wear reaches 1.5 to 2 mm, damage to the chain can be avoided. When the sprocket is worn in the direction of the facewidth as illustrated right (to the right), the shaft may not be properly aligned, therefore correct it.



5-3.Wearstrips

Replace the wearstrip when the thickness has been reduced to half of the original thickness.

Installation and Inspection

6. Troubleshooting Guide to Chain/Sprocket/Rail Problems

Type of Problem	Possible Cause	Corrective Action
Abnormal noise Squeaking Rattling	Chain may be hitting safety cover, frame, etc.	Locate the source of the noise and make corrections so that the chain is not making contact.
	Chain is running in a place where guide clearance with the wearstrip is tight.	Locate where guide clearance with the wearstrip is tight, check for temperature-related expansion and/or deformation of the wearstrip, and make corrections.
	Wearstrip surface finish is rough or dimensions and/or materials are inappropriate.	Replace with wearstrip that has a smooth surface finish, that is dimensionally accurate, or made from appropriate material.
	Travel direction of chain is backward.	Re-install the chain.
	Lubrication is inadequate or operating conditions are too extreme.	Change the lubricant and/or lubrication method.
Pulsating/surging	The location and/or spacing of return rollers and/or size and/or position of the catenary curve are inappropriate.	Refer to this Engineering Manual and make modifications to areas that need correction so that a smooth return is achieved.
	Idler sprocket and/or return roller not spinning smoothly.	Take corrective measures such as using bearings so that they spin more smoothly or increase the outer diameter of the return rollers.
	Chain is running in a place where guide clearance with the wearstrip is tight.	Locate where guide clearance with the wearstrip is tight, check for temperature-related expansion and/or deformation of the wearstrip, and make corrections.
	Foreign matter adhering to the wearstrip is impeding smooth sliding.	Clean wearstrip to remove foreign matter.
	Chain is catching or snagging on obstructions and/or on sharp edges at the ends of wearstrips.	Smooth out sharp edges and remove obstructions.
	Lubrication is inadequate or operating conditions are too extreme.	Change the lubricant and/or lubrication method.
Abnormal wear of the conveying surface of the chain	Return rollers not rotating.	Increase the outer diameter of the return rollers or change their specifications.
	Small return intake radius R, or diameter of return rollers is too small.	Refer to the Engineering Manual and make corrections.
	Return wearstrip surface finish is rough or layout and/or materials are inappropriate.	Correct the layout so that return-way rail made of appropriate material with smooth surface finish makes uniform contact across the chain width.
	Rough or gritty spots that promote friction are adhering to the return rollers or rail.	Clean the conveyor. Take measures to identify the cause.
	Guide rails and/or obstructions are causing damage.	Identify the obstruction and make corrections.
Abnormal wear and scratches on the back surface of the chain	Foreign matter is adhering to or embedded in the carry-way wearstrip, and damaging the chain.	Remove foreign matter and clean.
	Surface finish of carry-way wearstrip is rough.	Make changes to the surface finish or replace with appropriate wearstrip.
	Idler wheel contact marks.	Replace with sprocket if necessary.
Abnormal wear on the side of the chain	Position of sprockets or wearstrips inappropriate.	Correct the position.
	Surface finish of curved plastic rail is rough or material is inappropriate.	Replace with curved plastic rail with a smooth surface finish.
	Insufficient lubrication or operating conditions too extreme for curved conveyor.	Change the lubrication method.
Teeth jumping and/or failure to mesh with sprocket teeth	Excessive chain elongation.	Replace chain and/or sprockets.
	Foreign matter has accumulated on the roots of the sprocket teeth.	Remove foreign matter and clean.
	Sprocket has shifted out of position or is misaligned.	Re-install.
	Defective sprocket (damaged, deformed, swollen, corroded).	Investigate the cause and re-check specifications. Replace as needed.
Chain breaks or is damaged	Chain caught or snagged on foreign matter or obstruction.	Remove foreign matter and obstructions.
	Deterioration caused by chemicals or high temperatures, brittle fracture due to corrosion.	Identify cause and modify operating conditions or change the chain material.
	Chain climbs sprocket teeth.	Caused by elongation caused by excessive wear of chain. Replace the chain.
	Operating conditions too extreme and chain subjected to catastrophic excess tension.	Determine the cause and take corrective action.
Discoloration of chain	Adhesion of dirt or other contaminants.	Clean chain.
	Deterioration due to exposure to chemicals, high temperatures, ultraviolet light, etc.	Check operating conditions and replace with chain made of appropriate material.
Wear dust or debris accumulates along wearstrips and below drive sprocket	Surface finish of curved plastic rail or other component is rough.	Replace the curved plastic rail made of an appropriate material grade.
	Sharp edges at ends of wearstrips or obstructions are abrading or gouging the chain.	Smooth the edges.
	Inadequate lubrication.	Ensure adequate lubrication.
	Presence of rough or gritty spots.	Identify the cause and take corrective action.
Conveyed products tip over at conveyor transfer points	Sliding is poor, or there are problems with the location or shape of guide rails, chain level, or speed ratio.	Make the guide angle gentler. Change the position of the guides. Make corrections to speed and lubrication. Check level. Make changes if necessary.
Chain flexing is stiff	Pins and links have become bent as a result of overload, etc., and scoring (galling) has occurred.	Remove and replace the stiff sections or replace with a new chain.

MEMO

Inquiry Form

Plastic Top Chain Inquiry Sheet

For inquiries about plastic top chain or to request a quote, please fill out the inquiry sheet below.

Plastic Top Chain Inquiry Sheet				
Company			Your name	
Contact number (fax)			E-mail address	
1. Equipment				
2. Conveyed products	① Conveyed products			
	② Material	☐ Steel ☐ Aluminum ☐ Paper ☐ Glass ☐ Plastic		
	③ Mass	kg/unit		
	④ Dimensions	Square object (mm) (L) × (W) × (H)		
		Round object (mm) (Diameter) X (Height)		
	⑤ Shape of bottom	☐ Flat ☐ Raised ☐ Other Travel direction : ↑ conveyed products →		
	⑥ Static electricity	Does static electricity damage the conveyed products? ☐ Yes ☐ No		
3. Conveyor layout	① Straight or sideflexing running	☐ Straight running ☐ Sideflexing running (Sideflex radius: ____sideflex angle: ____)		
	② Conveyor length	m		
	③ Layout	Sketch the layout in the space provided in “8. Description of the equipment and chains”.		
4. Conveying conditions	① Conveying speed	m/min.		
	② Interval/spacing in b/w conveyed products, and amount of object	Interval_____mm, amount_____unit/meter		
	③ Operating time	_____hours/day_____days/year		
	④ Lubrication	☐ None ☐ Yes (☐ soapy water ☐ water ☐ other)		
	⑤ Accumulation	☐ No ☐ Yes		
	⑥ Wearstrip material	☐Steel ☐ Stainless steel ☐PLF rail ☐ PMW rail ☐ M rail ☐ Plastic rail (P rail)		
	⑦ Support on return-way	☐ Rollers ☐ Wearstrip		
	⑧ Impact	☐ No ☐ Yes (Description:)		
5. Operating environment	① Temperature	☐ Room temperature (-10˚C to 40˚C) ☐ Other (˚C to ˚C)		
	② Corrosive conditions (Chemicals, disinfectants, detergents, etc.)	Type of chemicals, disinfectants, detergents, etc.: Concentration: % Usage frequency: _____times per _____ Water/Humidity: %		
	③ Abrasive conditions	☐ None ☐ Yes (☐ glass fragments ☐ paint chips ☐ metal powder ☐ sand ☐ other)		
	④ Other	Volatile gases: ☐ None ☐ Yes ( )		
6. Part number: Chain				
7. Part number: Sprocket	Number of teeth:			

8. Description of the equipment and chains: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)

Plastic Modular Chain BTM8H Inquiry Sheet

For conveyor design of inclined conveyors with plastic modular chain magnet type, information about the operating conditions such as conveyed product, and inclination angle is required. Please fill out the inquiry sheet below and contact us for further consultation.

Plastic Modular Chain BTM8H Inquiry Sheet			
Company		Your name	
Contact number (fax)		E-mail address	
1. Equipment	① Description	☐ New installation ☐ Redesign (Existing equipment:)	
	② Conveyor length	m	
	③ Conveyor width	mm	
	④ Inclination angle	degree(s)	
	⑤ Direction of travel	☐ Ascending ☐ Descending	
2. Conveyed products	① Conveyed products		
	② Mass	kg/unit	
	③ Magnetic property	☐ Magnetic material ☐ Non-magnetic material	
	④ Magnetization to conveyed products	☐ Allowed ☐ Not allowed	
	⑤ Shape	☐ Flat ☐ Square ☐ Cylinder ☐ Other	
	⑥ Bottom shape	☐ Flat ☐ Raised ☐ Irregular	
3. Conveying conditions	① Conveying speed	m/min.	
	② Amount of object	Unit/minute	
	③ Impact	☐ No ☐ Yes (Description:)	
	④ Accumulation	☐ No ☐ Yes	
4. Operating environment	① Temperature	from °C up to °C	
	② Temperature of conveyed products	from °C up to °C	
5. Description of the equipment and chains: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)			

Inquiry Form

Plastic Modular Chain WT2515F-W Flight Type Inquiry Sheet

For inquiries or quotes about plastic modular chain WT2515F-W flight type, please fill in the inquiry sheet below.

Plastic Modular Chain WT2515F-W Flight Type Inquiry Sheet				
Company			Your name	
Contact number (fax)			E-mail address	
1. Chain material	☐ Low friction/wear resistant (CB) series (link color: blue) ☐ High temperature (HTW) series (link color: white)			
2. Chain width (*W*)	*Chain width begins at 170 mm in 85 mm inclements. _____ mm			
3. Flight mounting spacing (*P*)	*Available from 50.8 mm with 25.4 mm intervals. _____ mm			
4. Flight height (*F*)	☐ 50.8 mm ☐ 76.2 mm (maximum height) ☐ Customize _____ mm			
5. Indent (*N*)	☐ 0 mm ☐ 17 mm ☐ 34 mm ☐ 51 mm ☐ Other _____ mm			
6. Equipment	① Description	☐ New installation ☐ Remodeling (Existing equipment:)		
	② Layout	Layout sketch:		
	③ Horizontal conveyance distance	Drive side: mm	Driven side: mm	
7. Conveyed products	① Conveyed products			
	② Mass	kg/m^2		
	③ Conveying speed	m/min		
	④ Ambient temperature	from °C up to °C		
	⑤ Temperature of conveyed products	from °C up to °C		
	⑥ Amount of conveyance	kg/min		
	⑦ Impact	☐ None ☐ Yes (Description:)		

Plastic Modular Chain WT3109-W Inquiry Sheet

If you are considering the use of plastic modular chain WT3109-W, please inform us on the operating conditions such as application, conveyance, machine length, environment, speed, temperature, etc. in order to confirm availability. Please fill out the inquiry sheet below and contact us for further consultation.

Plastic Modular Chain WT3109-W Inquiry Sheet			
Company		Your name	
Contact number (fax)		E-mail address	
1. Application	☐ Assembly line ☐ Inspection line ☐ Others ( )		
2. Conveyed products	① Conveyed products	☐ Trolley ☐ Worker ☐ Others ( )	
	② Mass	_____ kg × _____ number of unit / _____ kg × _____ number of persons	
	③ Dimensions of trolley	(L) _____ × (W) _____ × (H) _____ mm	
3. Conveyor layout	① Conveyor length	m	
	② Width	*Chain width begins at 300 mm in 100 mm inclements. _____ mm	
	③ Layout	Sketch the layout in the space provided in “6. Description of the equipment and chains”.	
4. Conveying conditions	① Conveying speed	m / min	
	② Takt time operation	☐ No ☐ Yes (Distance per a takt _____ m, time per a takt _____ s)	
	③ Lubrication	☐ No ☐ Yes (Water or others:)	
	④ Operating time	Daily: hours, Yearly: days, _____ unit per meter	
	⑤ Wearstrip material	☐ Steel ☐ Stainless steel ☐ Wearstrip (Electrostatic preventive)	
	⑥ Method of support on the return-way	☐ Roller ☐ Wearstrip	
5. Operating environment	① Temperature	☐ Room temperature (-10˚C to 40˚C) ☐ Other (˚C to ˚C)	
	② Corrosive conditions (Chemical, disinfectant, detergent, etc.)	Type of chemicals, disinfectants, detergents, etc.: Concentration: % Usage frequency: _____times per _____ Water/Humidity: %	
	③ Abrasive conditions	☐ None ☐ Yes (☐ paint chips ☐ metal powder ☐ sand ☐ other:)	
	④ Others	Volatile gases: ☐ None ☐ Yes ( )	

6. Description of the equipment and the chain: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)

Inquiry Form

Plastic Modular Chain BTH16 Inquiry Sheet

If you are considering the use of plastic modular chain BTH16, please inform us of the operating conditions such as application, conveyance, machine length, environment, speed, temperature, etc. in order to confirm availability. Please fill out the inquiry sheet below and contact us.

Plastic Modular Chain BTH16 Inquiry Sheet			
Company		Your name	
Contact number (fax)		E-mail address	
1. Application	☐ Car washing line ☐ Assembly line ☐ Inspection line ☐ Others ( )		
2. Conveyed products	① Conveyed products	☐ Vehicle ☐ Trolley ☐ Worker ☐ Others ( )	
	② Mass	_____ kg × _____ number of unit / _____ kg × _____ number of persons	
	③ Dimensions of trolley	(L) _____ × (W) _____ × (H) _____ mm	
3. Conveyor layout	① Conveyor length	m	
	② Width	*Chain begins at 400 mm in 100 mm inclements _____ mm	
	③ Layout	Sketch the layout in the blank “6. Description of the equipment and chains”.	
4. Conveying conditions	① Conveying speed	m / min	
	② Takt time operation	☐ No ☐ Yes (Distance per a takt _____ m, time per a takt _____ s)	
	③ Lubrication	☐ No ☐ Yes (☐ Water ☐ others:)	
	④ Operating time	Daily: hours, Yearly: days, _____ unit per meter	
	⑤ Wearstrip material	☐ Steel ☐ Stainless steel ☐ Wearstrip (Electrostatic preventive)	
	⑥ Method of support on the return-way	☐ Roller ☐ Wearstrip	
	⑦ Vehicle involvement	☐ No ☐ Yes (Wearstrip: m/s^2)	
5. Operating environment	① Temperature	☐ Room temperature (–10˚C to 40˚C) ☐ Other (˚C to ˚C)	
	② Corrosive conditions (Chemical, disinfectant, detergent, etc.)	Type of chemicals, disinfectants, detergents, etc.: Concentration: % Usage frequency: _____times per _____ Water/Humidity: %	
	③ Abrasive conditions	☐ None ☐ Yes (☐ paint chips ☐ metal powder ☐ sand ☐ other:)	
	④ Others	Volatile gases: ☐ None ☐ Yes ( )	
6. Description of the equipment and chains: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)			

Chain Material LTW Freezer Series Inquiry Sheet

The temperature difference between in operation and off operation may cause dimension fluctuation of the freezer chain, therefore, conveyor design which includes installing sprockets or tensioners may carefully be studied in accordance with the operating conditions when using a freezer. Please fill out the inquiry sheet below and contact us for further consultation.

LTW Freezer Series Inquiry Sheet			
Company		Your name	
Contact number (fax)		E-mail address	
① Description	☐ New installation ☐ Replacement (Conveyor type of existing equipment:)		
② Reference model number of purchasing (interested) chain			
③ Chain width or conveyance width			
④ Conveying speed	m / min		
⑤ Conveyed products		⑥ Shape/material	
⑦ Mass of conveyed products	kg/m		
⑧ Is conveyed product prone to stick to conveyor surface?	☐ Yes ☐ No		
⑨ Accumulation	☐ Yes ☐ No		
⑩ Temperature, inside of freezer	℃	⑪ Temperature, outside of freezer	℃
⑫ Location of driver side	☐ Inside of freezer ☐ Outside of freezer		
⑬ Location of drive side	☐ Inside of freezer ☐ Outside of freezer		
⑭ Sprocket	No. of teeth [ ] Material [ ]		
	Bore diameter [ ] Shape of bore [☐ round ☐ square]		
⑮ Condition of chain surface	☐ Wet ☐ Dry		
⑯ Washing method		⑰ Name of used chemical	
⑱ Wearstrip material		⑲ Installation of tensioner	☐ Yes ☐ No
⑳ Freezer length	m	㉑ Conveyor length	m
㉒ Description of the equipment and chains: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)			

Inquiry Form

Plastic Block Chain RSP80-UPE (Low Temperature Application) Inquiry Sheet

For inquiries about plastic block chain RSP80-UPE or to request a quote, please fill in the inquiry sheet below.

Plastic Block Chain RSP80-UPE (Low-Temperature Application) Inquiry Sheet			
Company		Your name	
Contact number (fax)		E-mail address	
Description	☐ New installation ☐ Replacement (conveyor type of existing equipment:)		
① Conveying speed	m / min		
② Conveyed products		③ Shape/material of conveyed products	
④ Mass of conveyed products	Kg/m	⑤ Direction of travel of conveyed products	↑ conveyed products →
⑥ Is conveyed product likely to adhere to conveyor surface?	☐ Yes ☐ No		
⑦ Conveyor length	m		
⑧ Operating temperature range	from °C up to °C	⑨ Default temperature of freezer conveyor	°C
⑩ Low temperature section	☐ Drive section ☐ Section in between ☐ Driven section ☐ All		
⑪ Length of low temperature section	m		
⑫ Accumulation	☐ Yes ☐ No		
⑬ Accumulation section	☐ Drive section ☐ Section in between ☐ Driven section ☐ All		
⑭ Length of accumulation	m		
⑮ Sprocket	No. of teeth [ ] Material [ ]		
	Bore diameter [ ] Shape of bore [ ]		
⑯ Condition of chain surface	☐ Wet ☐ Dry		
⑰ Washing method		⑱ Name of used chemical	
⑲ Wearstrip material		⑳ Installation of tensioner	☐ Yes ☐ No

㉑ Description of the equipment and chains: (Please provide a layout sketch and other remarks such as shape of conveyed product, method of support on the return-way, etc.)

For Your Safety When Using the Chain

Warning

To avoid danger, observe the following rules.

General

- Do not use chain or chain accessories for any purpose other than their originally intended use.
- Never perform additional work on chain (including machining, grinding, annealing, cleaning with acids or alkalis, electroplating, or welding or cutting with a torch which will cause heat effects). These processes may cause the chain to break during operation, leading to a risk of severe injury.
- When replacing a worn or damaged part, do not replace just the worn or damaged part. Replace all parts with new parts. The chain may break during operation, leading to a risk of severe injury.
- When using chain in a lifting device, set up a safety barrier and do not allow anyone to go under the equipment. Also, when jigs or tools are connected to the edges of the chain, be sure to adequately lubricate the connecting parts. Detachment of the chain or unexpected chain breakage may lead to severe injury from flying or falling parts.
- Strictly observe the general guidelines listed in Section 1, Chapter 1, 2nd Edition of the Japanese Occupational Safety and Health Regulations as well as rules and regulations concerning occupational safety and health in your region/country. Always install safety equipment (safety covers, etc.) on chain and sprockets. There is a risk of severe injury from conveyed items or the chain as a result of becoming caught in the chain or from unexpected chain breakage.
- Chain and sprockets must be inspected on a regular basis. Damaged parts, or parts that have reached the end of their service life, should be replaced with new parts. There is a risk not only of the chain not functioning properly, but also of severe injury from chain breakage or abnormal operation. Perform the work as instructed in the manual, catalog or other documentation that was provided with the product.

During Installation

- Before starting work, turn off the power switch and take measures to prevent it from being turned on accidentally. There is a risk of severe injury from becoming caught in the chain.
- Always wear safety goggles when using hammers while working to connect chains. There is a risk of severe injury from flying metal fragments or splinters.
- Secure the chain and parts to prevent them from moving freely. There is a risk of severe injury from chain components moving under their own weight, or from falling and body parts becoming pinched in the chain.

Caution

To prevent accidents, observe the following rules.

- Understand the structure and specifications of the chain that you are handling.
- Before installing chain, inspect it to make sure no damage occurred during delivery.
- Inspect and maintain chain and sprockets at regular intervals.
- Chain strength varies by manufacturer. Only Tsubaki products should be used when chain is selected using Tsubaki catalogs.
- Start and stop the chain gradually, and do not subject it to sudden impact.
- Do not apply initial tension to the chain.
- Consult with a Tsubaki representative before using the chain in cases where it will be in contact with special liquids or used under special environments.
- Do not reuse the engineering plastic pins once removed since those may not engage properly or may come loose.
- When using chains with engineering plastic pins under wet conditions, make sure that the temperature does not exceed 60°C.
- The material for CB, ALF series, PLF rail and PMW rail contains silicone-based lubricant. Therefore, do not use these products in printing process or where silicone will have a harmful effect.
- The TP-IR18/IR60 (return rollers), PR520-M (M plastic rail), and SJ-CNO are dry conveyor parts (lube-free, no water adhesion). DIA, MPD, MF, HS, and KV150 series are specifically for dry environments. Do not use these on a conveyor under wet conditions (environments where they will come into contact with water, soapy water or other liquids), since this may cause the chain to malfunction. Bearing corner discs are also designed for use in dry environments.
- Using a plastic top chain in a wet environment will decrease the resin's self-lubricating ability and thus shorten the life of the chain. Since this is remarkable for the stainless steel pins, we recommend using plastic pins or KV series.
- The operating temperature range for accessories, sprockets, and idler wheels made of UHMW-PE (ultra-high molecular weight polyethylene) is –20°C to 60°C. Also, do not use in environments where such components will be exposed to steam.
- Toxic gases may be generated if the Chemical Resistant series (including Super Chemical Resistant) is exposed directly to open flame, or to temperatures above 150°C. Do not expose to excessive heat or to open flame.
- Plastic chain is flammable. Do not use at temperatures above the maximum allowable temperature or use near open flame. Combustion may generate dangerous toxic gases.

Warranty

1. Warranty Period

Products manufactured by Tsubakimoto Chain Co. ("Products") are warranted against defects in materials and workmanship for eighteen (18) months from the date of shipment from the factory or twelve (12) months from the date the Products are first placed into operation (calculated from the date the Products have been installed on the customer's equipment), whichever comes first.

2. Scope of Warranty

During the warranty period, if defects arise in the Products when installed, used, and maintained correctly in accordance with Tsubakimoto Chain's catalogs, installation manuals (including any documents specially prepared and provided to the customer) and the like, Tsubakimoto Chain will repair or replace such defective Products thereof free of charge upon confirmation of said defect by Tsubakimoto Chain. This warranty shall only apply to Products received, and Tsubakimoto Chain shall not be liable for the following costs and/or damages (including installation manuals or other documents specially prepared and provided to the customer):

(1) Costs required for removing the defective Products from or re-installing the replacement Products on the customer's equipment for replacement or repair of the defective Product, as well as any associated installation costs.
(2) Costs required to transport the customer's equipment, if needed, to a repair shop or the like.
(3) Any consequential or indirect damages or loss of profits or benefits the customer may incur due to the defects or repair of the Products.

3. Out of Warranty Service and Repair

Regardless of the warranty period, Tsubakimoto Chain will provide investigation, repair, and/or manufacture of the products for the defects by the following for a fee.

(1) Placement, installation (including connecting and disconnecting), lubrication, or maintenance of the Products not in accordance with Tsubakimoto Chain's catalogs, installation manuals (including documents specially prepared and provided to the customer), or the like.
(2) Use of the Products (including operating conditions, environment, and allowances) not in accordance with Tsubakimoto Chain's catalogs, installation manuals (including documents specially prepared and provided to the customer), or the like.
(3) Inappropriate disassembly, modification, or processing of the Products by the customer.
(4) Use of the Products with damaged or worn products. (Example: Use of the Products with a worn sprocket, drum, rail, or the like.)
(5) When the operating conditions exceed the performance of the Products as selected using the Tsubakimoto Chain selection method.
(6) Use of the Products in conditions other than what have been discussed.
(7) When consumables such as bearings, oil seals, and lubricant in the Products deplete, wear, or degrade.
(8) When secondary damage occurs to the Products due to initial or primary damage or failure to the customer's equipment.
(9) Damage or failure of the Products due to forces majeure such as natural disasters.
(10) Damage or failure of the Products due to unlawful conduct by third parties.
(11) Damage or failure of the Products due to causes not attributable to Tsubakimoto Chain

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CHINA

China	Tsubakimoto Chain (Shanghai) Co., Ltd.	https://www.tsubaki-sh.cn/

The Tsubaki Eco Link logo is used only on products that satisfy the standards for environmental friendliness set by the Tsubaki Group.

Note: In accordance with the policy of TSUBAKIMOTO CHAIN CO. to constantly improve its products, the specifications in this catalog are subject to change without notice.
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