Innovation in Motion
TSUBAKI

TSUBAKI
CABLEVEYOR (Cable Carriers)

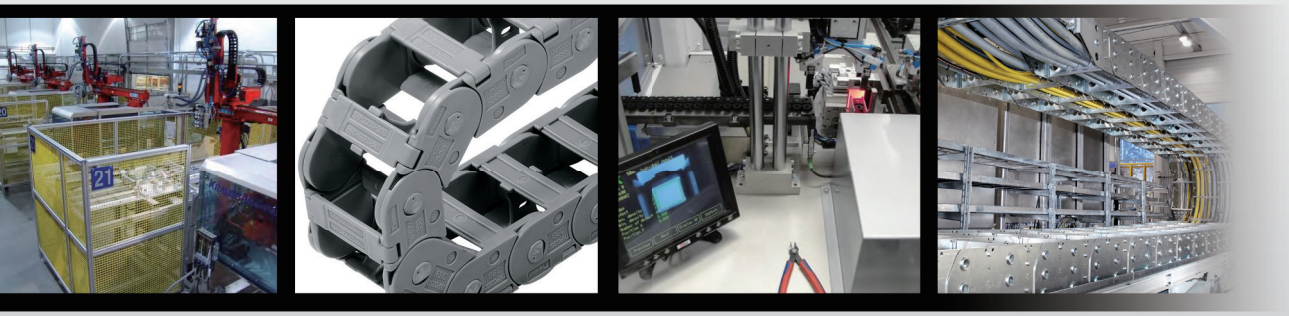
Hose and Cable Carrier System

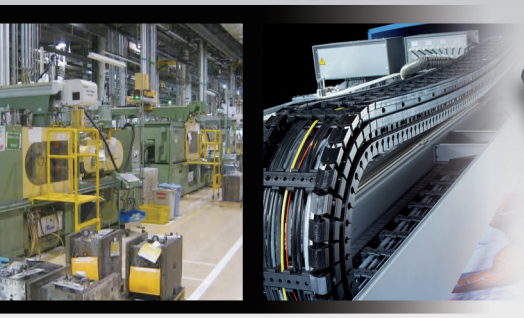


Catalog ver. 1

TSUBAKI ECO LINK

Tsubaki Cable Carriers — Protecting, Supporting, and Ensuring Reliability







* CABLEVEYOR is a registered trademark of Tsubakimoto Chain Co.

Tsubaki Group

Basic Environmental Policy

Philosophy

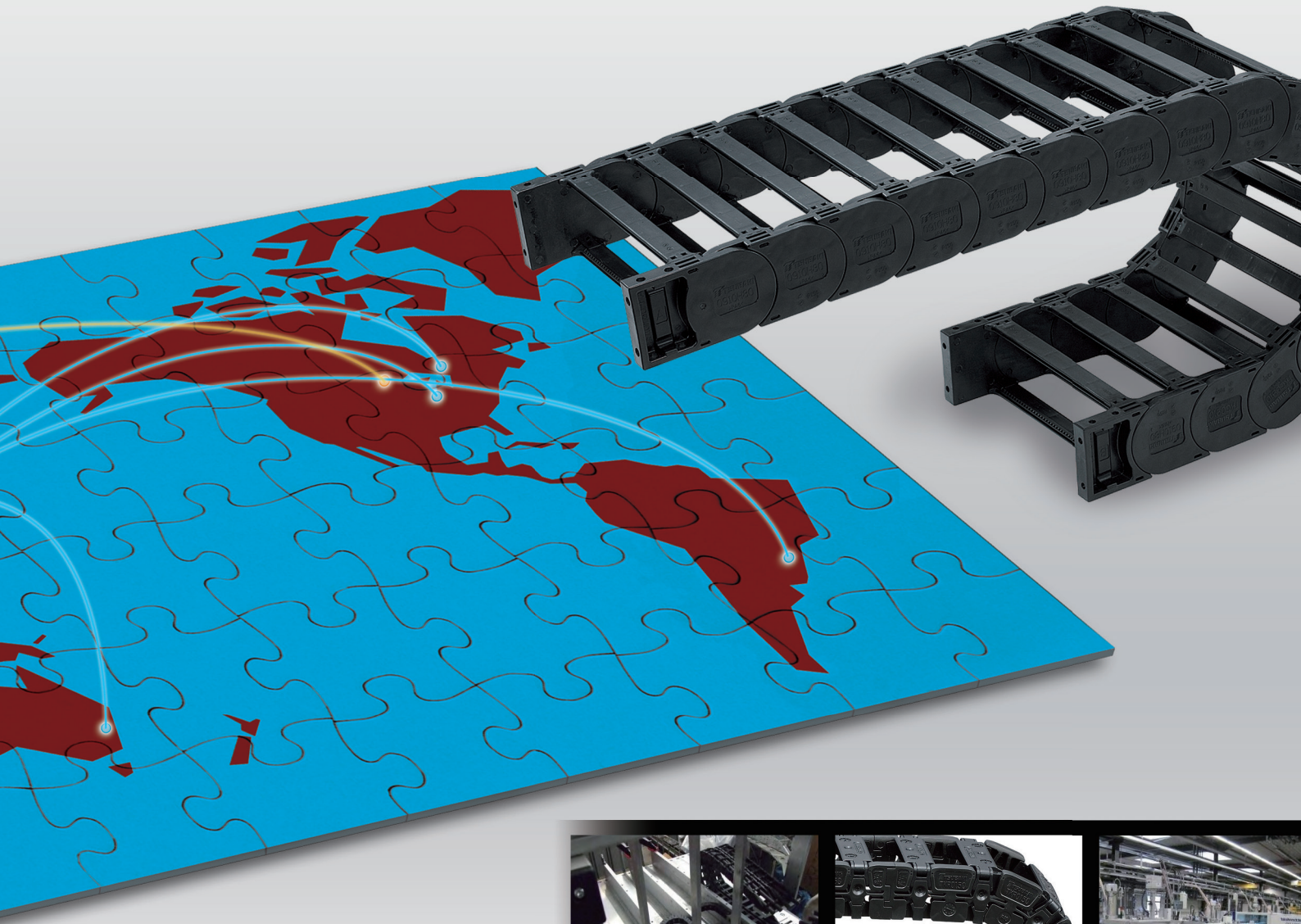
The Tsubaki Group Recognize that environmental conservation is one of the most important issues shared by humankind, and se-riously considers the environment in all aspects of its global business activities and contributes to the “development of a sustainable society” by generating environmental value and economic value through manufacturing.

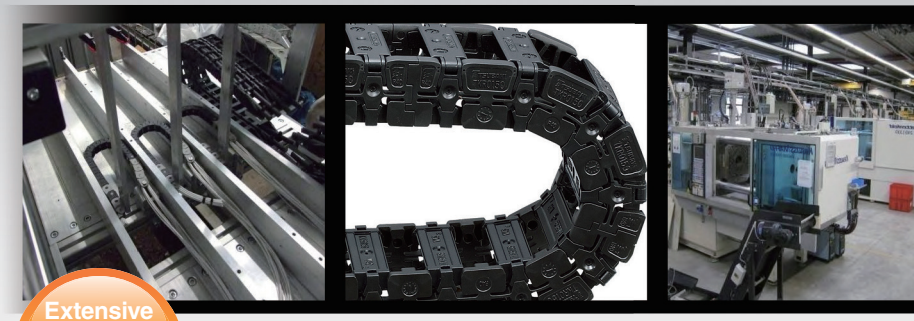
Environmental Policy

1. Reduce environmental impact / We will promote the efficient utilization of energy and resources, reduction of CO_2 emissions and appropriate management of wastes and hazardous chemicals, and work hard to reduce our environmental impact through lifecycles of products and services.
2. Develop and spread eco-products / We will actively develop and spread environmentally friendly products in pursuit of ecology and economy and aim to achieve both environmental conservation and economic benefits.
3. Observe laws and other requirements / We will observe applicable laws, arrangements and other requirements which our organiza-tion has agreed to.
4. Improve environmental awareness / We will improve the environmental awareness through environmental education, internal communications and other measures and promote environmentally friendly activities in our own jobs and living places.
5. Promote environmental communication / We will positively disclose appropriate environmental information to our stakeholders to in-crease social reliability.

Power to the World!

Tsubaki offers a wide range of products and a global supply system to customers around the world.







Kyotanabe Plant

Extensive sales network, services, and technical support

Stable quality and reliable lead time

More than half a century of products and experience



Tsubaki Kabelschlepp GmbH

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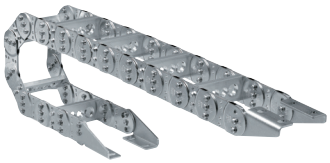
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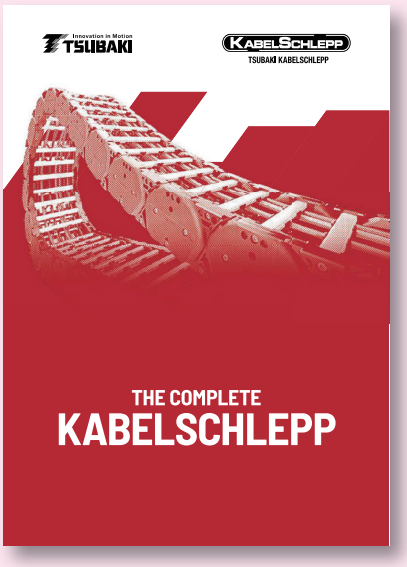
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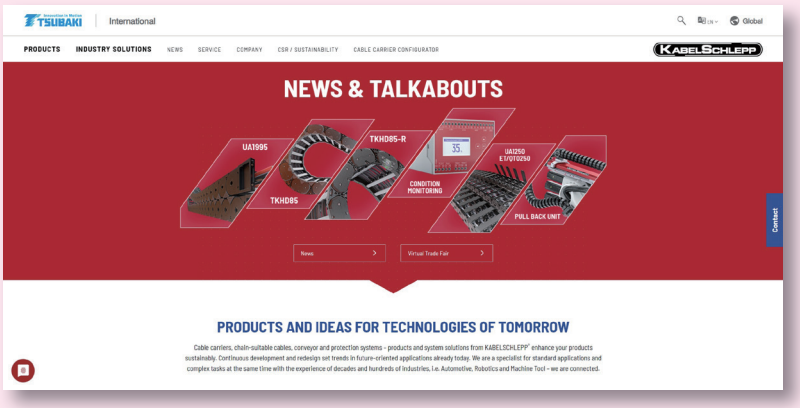
TSUBAKI ECOLINK
The Tsubaki Group cares about the environment. That is why we have established standards for evaluating the environmental friendliness of our products. Only products that meet our exacting guidelines are recognized as eco-products and certified with the Tsubaki Eco Link logo.

Please consider the cable carrier of TSUBAKI KABEL SCHLEPP, our group company.

Catalog



Website



Tsubaki KabelSchlepp

Search!!

For customers worried about debris generation in production and inspection equipment for Semiconductors Liquid crystals OLEDs

Tsubaki offers low debris generation products

FLATVEYOR

TSUBAKI ECO LINK Page 28

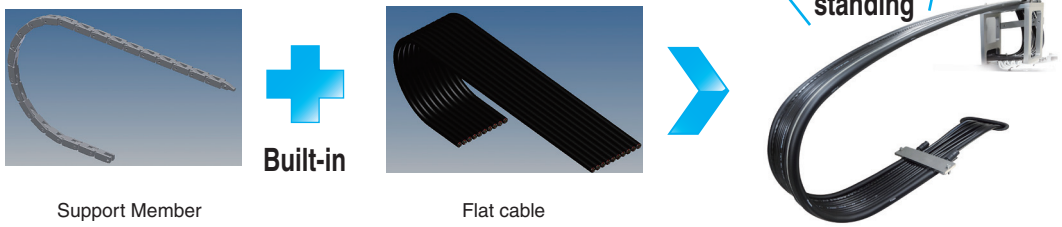


Clean class **ISO class 2** ★1 **achieved**

Low debris generation with free-standing flat cable structure.

Fraunhofer IPA TESTED® DEVICE
Tsubakimoto Chain Co.
FV-2018-0068
Report No. TS 1904-1108

Support members allow for a maximum travel length of up to 2.8 m ★2



Support Member　　Flat cable

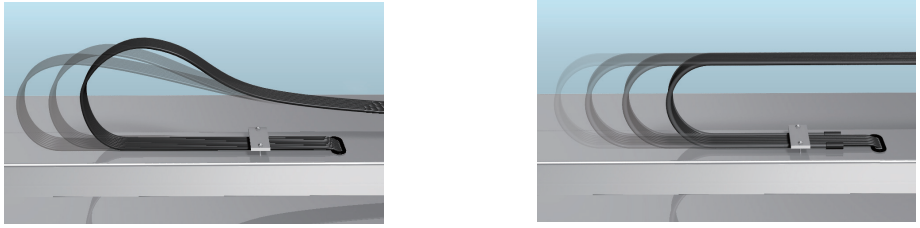
Deflection comparison between flat cable and Flatveyor



Flat cable (competitor)　　FLATVEYOR (Tsubaki)

Equipped with support members to minimize bouncing.

Bouncing comparison between flat cable and FLATVEYOR



Flat cable (competitor)　　FLATVEYOR (Tsubaki)

for different operating environments.

CLEANVEYOR

TSUBAKI ECO LINK Page 23



Clean class **ISO class 1** ★1 **achieved**

Top-class low debris generation through the use of fluoroplastic pods.

Fraunhofer IPA TESTED® DEVICE
Tsubakimoto Chain Co.
Cleanveyor 2 layers
Report No. TS 1908-1135

TKR Series

TSUBAKI ECO LINK Page 67



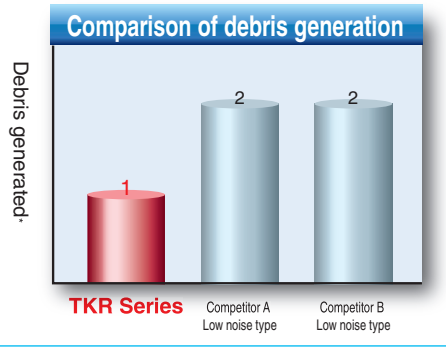
Clean class **ISO class 3** ★3 **achieved**

Low debris generation thanks to Tsubaki's unique structure.

No sliding wear between pins and pin holes and the use of highly wear resistant material with high slidability delivers the low debris generation.

In-house test conditions
- Installation: Standard (with floor)
- Travel speed: 120 m/min *No supports

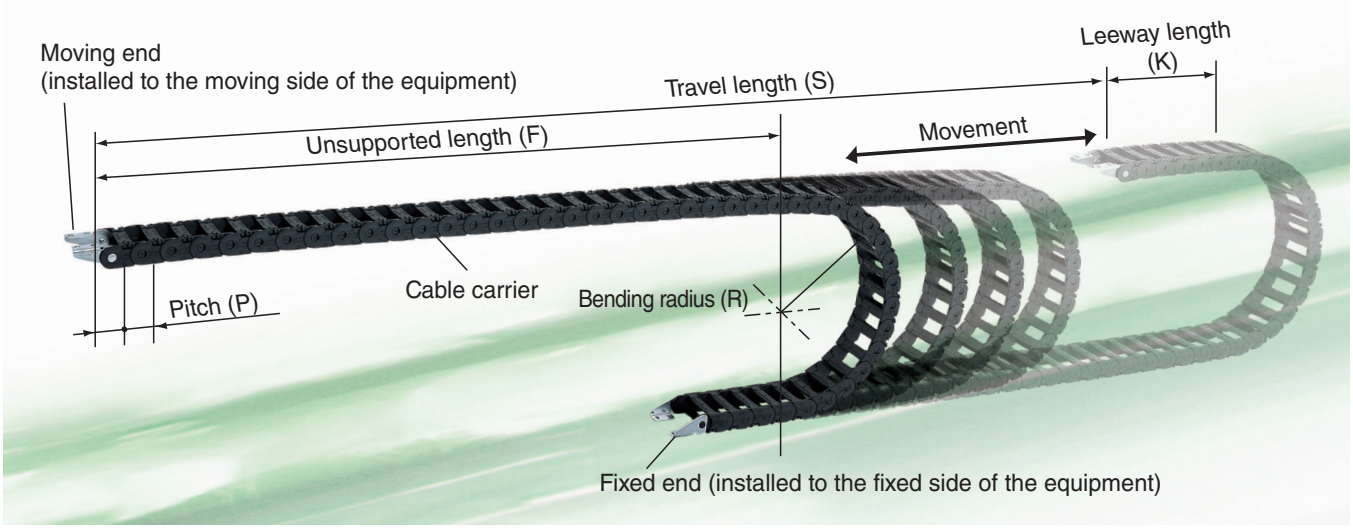
* Debris generated indicates the number of particles 0.1 μm or larger that exist in one cubic foot.



★1. Based on test results by Germany's Fraunhofer Institute for Manufacturing Engineering and Automation (IPA) in accordance with ISO 14644-1 "Classification of air cleanliness by particle concentration."
★2. Depending on operating conditions.
★3. Based on in-house test results in accordance with ISO 14644-1 "Classification of air cleanliness by particle concentration" (travel speed 120 m/min).

Description of Terms/Structure

Cable carriers are devices where electric cables and hydraulic/pneumatic hoses are installed inside so that they can be reliably supported and guided between moving equipment and their fixed end. The articulating areas bend only in one direction and at a constant radius.



The cables and hoses that deliver the power and signals are needed to move the equipment. When cables and hoses move freely with the movement of the equipment, the cables and hoses are exposed to excessive forces such as twisting and tension. The setup will also appear cluttered.
Tsubaki cable carriers install cables and hoses inside the cable carrier and provide steady, reliable support and guidance without exposing cables and hoses to excess forces. Cable carriers also protect cables and hoses with bending limit and keep cables and hoses on a defined path.

Unsupported length (*F*)

The distance from the moving end to the peak of the bending section. This is length that is self supported.
The allowable length is determined by the model. Check the load diagram on each product page.

Travel length (*S*)

The movement distance between two points where the moving end of the cable carrier (moving part of the equipment) completes one cycle.

Leeway length (*K*)

The leeway length the cable carrier has to absorb any differences in installation dimensions.
The leeway length depends on the model. Check the "Calculating no. of links" item on each product page.

Bending radius (*R*)

The cable carrier bends in a fixed direction at a constant radius. This radius is referred to as the bending radius. The bending radius depends on each model. Check the list of products (pages 11 to 14) or check each product page.

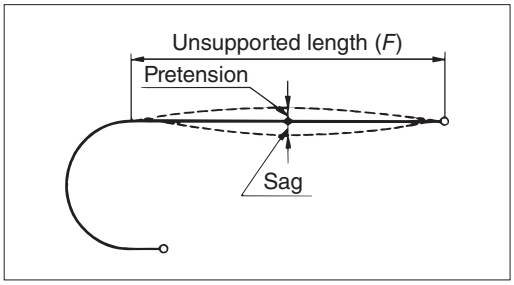
Load diagram

The load diagram shows the allowable range of the unsupported length and travel length for the cable/hose mass (kg/m). The cable carrier can be used if the operating conditions fall within the range of the dashed lines.
The load diagram depends on the model. Check the load diagram on each product page when selecting products.

Total height (*H*)/mounting height (*H'*)

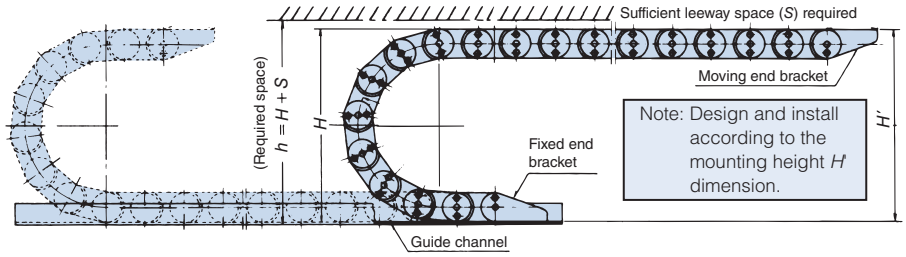
Total height (*H*): The height from the outside surface of the fixed end bracket to the peak of the bending section (outside).
Mounting height (*H'*): The height from the outside surface of the fixed end bracket to the outside surface of the moving end bracket.

To compensate for sag in the unsupported length section caused by the cable carrier's weight and cable/hose mass, the cable carrier has a structure given pretension.
If the cable carrier is installed at the total height, the pretension will be constrained and an excessive force will act on the cable carrier. This may reduce the service life of the cable carrier, so always use the mounting height when designing the equipment and installing the cable carrier.

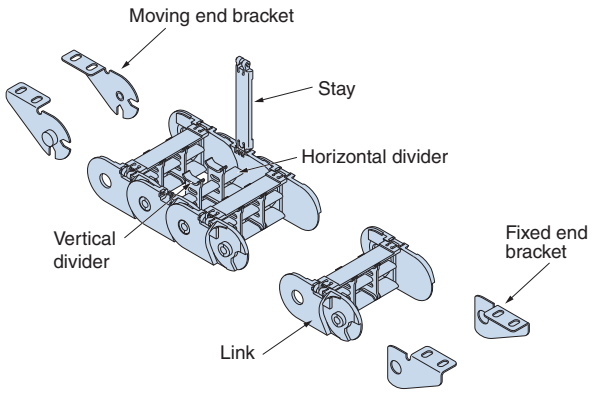


Required space (*h*)/leeway space (*S*)

Required space (*h*) is the space required to install the cable carrier in the equipment. Include the leeway space (*S*) to prevent the cable carrier from hitting the equipment due to pretension, chordal action, and flopping during movement.
Check the calculation method on page 157.

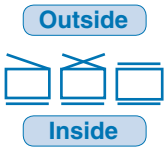


Explanation of Structure



Links

The cable carrier body is composed of links and stays and is the part that installs cables and hoses.
It has a function where it bends in one direction only at a constant radius. There are different types of openable stay structures, and these include the outside openable stay and inside openable stay.



For the type that opens both to the inside and outside, the inside stay is called a lock stay.

Brackets/steel brackets

These are parts for mounting the cable carrier on the equipment. Plastic parts are called brackets and metal parts are called steel brackets. There are various types depending on the structure and mounting method. The applicable types depend on each cable carrier. Check the product pages for further information. Page 16 shows images of the structures.

Divider

Dividers are parts that divide up the installing space inside the cable carrier.

Vertical dividers: Horizontally divide the installing space inside the cable carrier.
There are sliding types and fixed types. Dividers are normally installed every 2 links.

Horizontal dividers: Vertically divide the installing space inside the cable carrier.
There are types that divide the entire space and types that divide part of the space.
2 or more vertical dividers are required when using a horizontal divider.

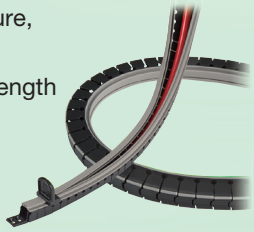
The lineup of dividers depends on each cable carrier model. Check the product pages for further information. In addition, refer to the operating precautions on page 153.

Wide variety of models to

Open

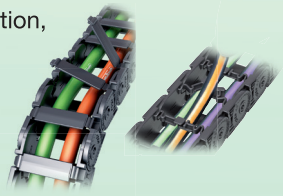
TKZP Series

Zipper structure,
cuts easily to
the required length



TKQT Series / TKET Series

Easy cable installation,
stays won't fall off



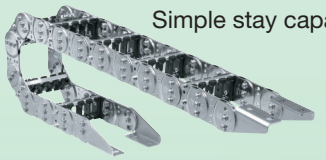
Handling

TKUA

Complementary products for the TKP lineup with strain relief comb* and increased quietness

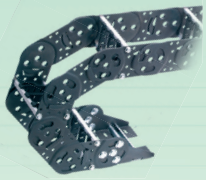
TKS Series

Simple stay capability



TKLS Series

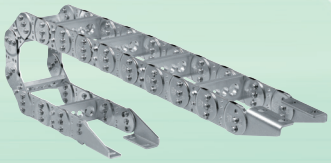
Lightweight type



TK Series / TKH Series

Highly durable

Increased protection of
cables and hoses
thanks to stays



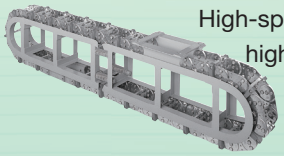
TKP

Standard open type

Anti-dust

TKV Series

High-speed,
high-frequency

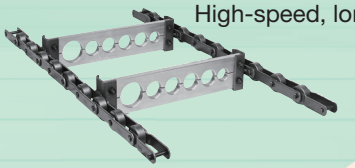


TKC

Standard
closed type

TKI Series

High-speed, long-length

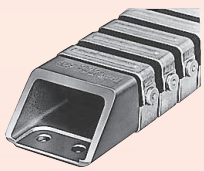


TKA

Complementary products for the TKC lineup with strain relief comb* and increased quietness

TKF Series

Steel Series
closed type



Discontinued

Plastic Series
Steel Series
3D Series

* Cable/hose brackets and clamps

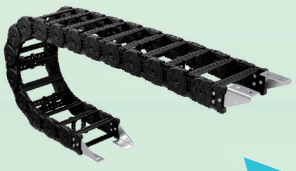
Closed

meet a wide range of needs

type

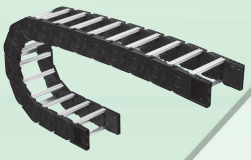
TKMK Series

Wide variety of models



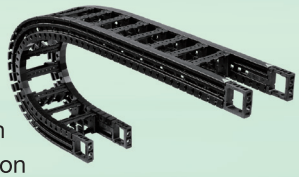
TKHC Series, TKLC Series, TKXC Series

Variable width (1 mm increments), strain relief comb*



TKQ Series

Quiet, smooth operation



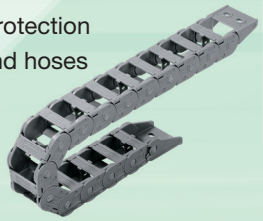
Variable sizes

Series



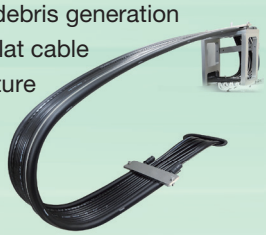
TKP Series, MW Type

Improved protection of cables and hoses



FLATVEYOR

Low debris generation with flat cable structure



Clean

Series



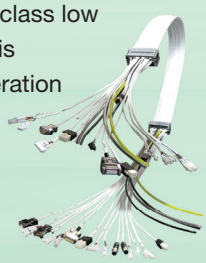
TKR Series

Quiet, low debris generation



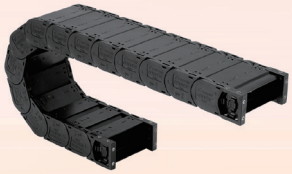
CLEANVEYOR

Top-class low debris generation



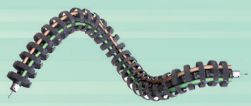
3D

Series



TKRB Series

Easy cable installation

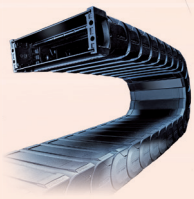


FTP Series

3D closed type

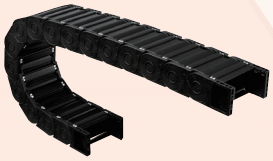


Series



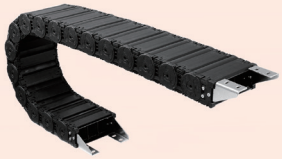
TKLT Series / TKXT Series

Variable width (1 mm increments), strain relief comb*



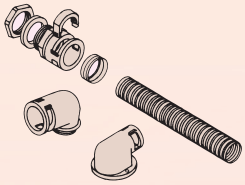
TKMT Series

Wide variety of models



PMA Series

3D waterproof closed type



Cable Carrier Plastic Series Products

Type	Product series	Model	Inner height (mm)	Inner width (mm)	Bending radius (mm)
Open type	**TKP Series** Wide selection and easy-to-handle products—from compact to large sizes.	**TKP13H10**	10	6/10/15/20: Openable stay 6/10/15/20: Single-part frame	18/20/28/37
		TKP17H11	11	10	17
		TKP18H14 **TKP18H15**	14/15	15/20/30/40: Openable stay 15/20/30/40: Single-part frame	28/37/50
		TKP25H15	15	15/20/30	28/37/50
		TKP35H22	22	13/25/38/50/63	37/50/75/100
		TKP35H32	32	16/25/38/50	48/60/75/100/125
		TKP45H25	25	38/58/78/103	50/75/95/125/150/200
		TKP58H39	39	50/75/100/125	60/75/90/125/150/200
		TKP62H34	34	150/200	75/90/125/150/200
		TKP68H46	46	75/100/125/150/175	75/100/125/150/200/250
		TKP90H50	50	100/150/200	130/200/250/300
		TKP91H56	56	150/175/200/225/250/275 300/325/350/400/450/500	150/200/250/300/350/400
		TKP91H80	80	150/175/200/225/250/275 300/325/350/400/450/500	150/200/250/300 350/400/450/500
		TKP125H74	74	150/250/350	185/250/350/450
	TKP Series, MW Type (Low Friction/ Anti-Wear Series) TKP Series products with better protection of cables and hoses and improved cleanliness.	**TKP13H10xxM**	10	10/20	18/28/37
		TKP18H14xxM	14	15/40	28/37/50
		TKP25H15xxM	15	15/20/30	28/37/50
		TKP35H22xxM	22	13/25/38/50/63	37/50/75/100
		TKP35H32xxM	32	16	60/75/100/125
		TKP45H25xxM	25	38/58/78/103	50/75/95/125/150/200
	TKR Series Top-of-its-class quietness and low debris generation. Optimal for clean environments.	**TKR15H22**	22	20/40/60	40/50/75
		TKR20H28	28	30/40/50/60/80/100/120	55/75/95/150
		TKR26H40	40	50/62/75/87/100/125/150/200	75/100/125/150
		TKR28H52	52	50/62/75/87/100/125/150/200	75/100/150/200
		TKR37H28	28	40/50/60/70/80	55/75/100
	TKZP Series	**TKZP10H13**	13	10/15/20/25	Minimum bending radius: 50
Closed type	**TKC Series** Protects cables/hoses from debris or spatter and provides high strength and rigidity.	**TKC28H30**	30	28/48	67/100/125
		TKC34H25	25	50/90/130	70/100/150
		TKC47H36	36	80/160	100/150/200/250
		TKC64H50	50	110/220	135/200/250/300
		TKC85H68	68	150/200/300/350	180/250/350
		TKC91H56	56	150/200/250/300/350/400	200/250/300/350/400
		TKC91H80	80	150/200/250/300/350/400	200/250/300/350/400/450/500

★1. The maximum outer diameter of cable and hose for the bending radius will vary by cable or hose. Contact your cable or hose manufacturer for further information.
★2. Refer to the explanation of the marks on page 14.

Pitch (mm)	Maximum travel length (m)	Cable/hose maximum outer diameter *1 (mm)	Cable/hose maximum mass (kg/m)	Special types: Gliding arrangements (Long Span)	Special types: Circular travel arrangement	Opening options *2								Dividers *2: Vertical divider	Dividers *2: DSA	Dividers *2: DSB	See page
13	1.3 (R18, R20: 1.0)	8 (W6: 4)	0.4		●	●	●	●									35
17	1.2	7	0.4			●											38
18	1.75 (R28: 1.5)	H14 12 H15 13	1		●	●	●	●									39
25	1.75 (R28: 1.5)	13	1		●			●	● W30 only								43
35	2.7 (R37, R50: 2.3)	20 (W13: 11)	2	●	●				●	●				●	● Excl. W13, W25		45
35	2.3 (R48, R60: 2.0)	29 (W16: 14, W25: 22)	2						●	● Excl. W16				● Excl. W16	● Excl. W16		47
45	3.3 (R50: 2.8, R75, R90: 3.2)	22	4	●	●				●	●				●	●	●	49
58	4.3 (R60: 3.9)	35	8	●	●				●	●				●	●	●	51
62.5	4.4	30	12	●	●						●			●	●	●	53
68	4.8	41	12	●	●				●	●				●	●	●	55
90	5.2	45	18	●	●						●			●	●	●	57
91	6.8	50	50	●	●								●	●	●	●	59
91	8.8	72	60	●	●								●	●	●	●	61
125	7.2	67	45	●	●						●			●	●	●	63
13	1.0 (R18: 0.8)	8	0.4		●		●										65
18	1.4 (R28: 1.2)	12	1		●		●										
25	1.4 (R28: 1.2)	13	1		●			●	● W30 only								
35	2.2 (R37, R50: 1.8)	20 (W13: 11)	2		●				●	●				●	● Excl. W13, W25		
35	1.8 (R60: 1.6)	20	2		●				●								
45	2.6 (R50: 2.3, R75, R90: 2.5)	22	4.5		●				●	●				●	●		
15	1.77	20 (W20: 18)	2						●					●	●		67
20	2.76 (R50: 2.46)	25	2.4									●		●	●		69
26	3.95	36	8									●		●	●	●	71
28	4.94	47 (W50: 45)	10									●		●	●	●	73
37	2.65	25	2.4										●	●	●		75
10	1.0	6	0.2 (W10, W15: 0.1)														77
28	2.7	W28: 25 W48: 27	2				●							● W48 only	● W48 only		79
34	3.3	22	12	●	●						●			●			81
47	4.3	32	17	●							●			●			83
64	5.8	45	25	●							●			●	●	●	85
85	7.8	61	60	●							●			●	●	●	87
91	6.8	50	50	●							●			●	●	●	89
91	8.8	72	60	●							●			●	●	●	91

Cable Carrier Plastic Series Common Specifications

1. Maximum travel speed : 300 m/min (TKP17H11: 150 m/min, TKZP Series: 100 m/min, support roller arrangement: 150 m/min)
2. Operating temperature : -40°C to 80°C (TKP Series MW Type: -20°C to 80°C, TKZP Series: 10°C to 80°C)
3. Operating environment : Cannot be used in acidic or alkaline environments. Refer to the data for chemical-resistant products. Usage in an outdoor environment is possible, but protect the cable carrier from wind, rain, snow, and dust with a cover or by other means. The stainless steel type is also recommended for steel parts. Be aware that the cable carrier cannot be used when frozen.

Cable Carrier Steel Series Products

Type	Product series	Model	Inner height (mm)	Inner width (mm)	Bending radius (mm)	Pitch (mm)	Maximum travel length (m)
Open type	**TK Series** High strength/rigidity. Steel cable carriers with superior heat resistance.	**TK070**	Custom dimensions	Custom dimensions	75/90/125/145	70	6.7
		TK095			125/145/200/250/300	95	8.7
		TK130			200/250/300/400	130	11.6
		TK180			250/300/400/500/600/700	180	15.7
	TKH Series Can be used in high-load, low-frequency applications.	**TKH250**	Custom dimensions	Custom dimensions	350/450/600/750	250	22
	TKS Series Can be used more affordably than the TK Series.	**TKS070**	31	100/150/200	75/90/125/145	70	6.7
		TKS095	46	100/150/200	125/145/200/250/300	95	8.7
Closed type	**TKF Series** Fully closed structure protects cables and hoses from dust and spatter. **Discontinued**	**TKF055**	25	45	60/100/150	20	2.7
		TKF085	38	74	100/200/250	20	3.7
		TKF115	52	102	140/225/300	25	4.7
		TKF175	72	162	185/250/350	30	5.2
Heavy load	**TKV Series** Can be used in high-speed, high-frequency applications.	**TKV130**	Custom dimensions	Custom dimensions	200/250/300/400	130	30
	TKI Series Can be used high-speed, long-length applications.		–	Custom dimensions	175/200/250/300/350/400/500	–	100

★1. The maximum outer diameter of cable and hose for the bending radius will vary by cable or hose. Contact your cable or hose manufacturer for further information.

★2. Refer to the explanation of the marks on page 14.

Cable Carrier Steel Series Common Specifications

1. Maximum travel speed : 60 m/min (TKV Series: 150 m/min, TKI Series: 120 m/min)
2. Operating temperature : -10°C to 150°C (TKS Series, TKF Series, TKV Series: -10°C to 80°C)
3. Operating environment : Cannot be used in acidic or alkaline environments. Refer to the data for chemical-resistant products. Usage in an outdoor environment is possible, but protect the cable carrier from wind, rain, snow, and dust with a cover or by other means. The stainless steel type is also recommended for steel parts. Be aware that the cable carrier cannot be used when frozen.
4. For the TK Series and TKH Series, contact a Tsubaki representative if the link plates must be stainless steel or if the stays must be engineering plastic.
   Link plates can be SUS304 and pins can be SUS630 (tempered).

Cable/hose maximum outer diameter (mm) *1	Cable/hose maximum mass (kg/m)	Materials			Divider system *2			See page
		Chain	Stay/frame	Bracket	Unsplit stay	Split stay	Vertical divider	
27	50	Steel (Trivalent chromate plating)	Aluminum	Steel (Trivalent chromate plating)	●	●		95
46	60				●	●		97
60	70				●	●		99
80	80				●	●		101
110	100	Steel (Trivalent chromate plating)	Aluminum	Steel (Trivalent chromate plating)	●	●		103
28	10	Steel (Trivalent chromate plating)	Aluminum/steel/ engineering plastic	Steel (Trivalent chromate plating)			●	105
41	10						●	106
22	12	Galvanized steel plate (Upper/lower frame)/ Engineering plastic (Middle frame)		Aluminum				107
35	21.5							108
48	30							109
60	40							110
60	50	Steel	Aluminum	–	●	●		111
80	100	Steel	Aluminum	–	●	●		112

Discontinued

◆ Explanation of marks

*1
Opening options

- Single-part frame (cannot be opened)
- Outside detachable stay
- Outside single-sided openable stay
- Outside dual-sided openable stay
- Inside dual-sided openable stay
- Outside single-sided openable stay, inside detachable lock stay
- Outside dual-sided openable stay, inside detachable lock stay
- Outside detachable stay and inside detachable lock stay

*2
Dividers and divider systems

- Vertical dividers only
- DSA type (Fully-stayed multiple height separation)
- DSB type (Partial multiple height separation)
- Unsplit stay type
- Split stay type

Ordering Information

When ordering cable carriers, you need to specify the product series code and dimensions, as well as information about the length (number of links) and brackets/steel brackets on both ends. This section introduces the basic configuration for model number and ordering examples. Contact a Tsubaki representative about made to order cable carriers.

1. Basic configuration of model number

Cable carriers have the model number configuration shown in the following examples (excluding certain models).

◆ **Model number: Cable carrier (links + brackets/steel brackets)**

TKP 45 H 25 - 30 W 58 R 50 + 20 L - FOA - MOA **1 set** (cable carrier)

(1) (2) (3) (4) (5) (6) (7) (8) (9) Qty. Unit

◆ **Model number: Brackets/steel brackets (individual)**

TKP 45 H 25 - FOA **1 pcs**

(1) (2) (3) (8) Qty. Unit

◆ **Model number: Vertical/horizontal divider (individual)**

TKP 45 H 25 - ST **14 pcs**

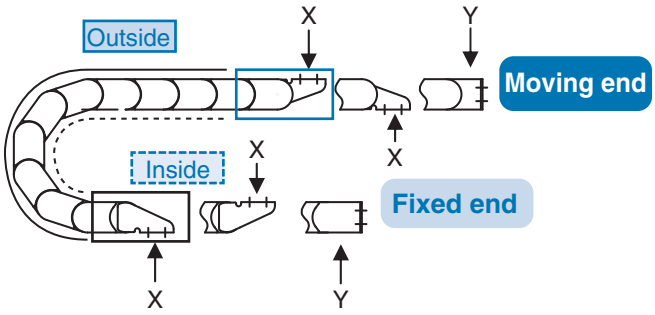
(1) (2) (3) (10) Qty. Unit

(1) Product series code	Indicates the product series as a code.
(2) Pitch	Indicates the pitch per link. (Expressed as an integer in the model number.)
(3) Inner height	Indicates the inner height of the cable carrier.
(4) Opening options	Indicates whether or not the stay opens and the type of structure as a number. Examples ◆ TKP Series, TKZP Series, TKC Series 20 = Single-part frame (stay cannot be opened) 30 = Outside openable stay 40 = Inside openable stay
(5) Inner width	Indicates the inner width of the cable carrier.
(6) Bending radius	Indicates the bending radius of the cable carrier.
(7) Number of links	Indicates the number of links per cable carrier. (Not including brackets/steel brackets)
(8) Fixed end bracket code	Indicates the variants of the bracket/steel bracket to install on the fixed end. (Refer to page 16.)
(9) Moving end bracket code	Indicates the variants of the bracket/steel bracket to install on the moving end. (Refer to page 16.)
(10) Divider type	Indicates the divider type as a code.

Notes: There are differences in the model number configuration and selectable types for each model. Refer to the individual product pages for further information.
1. For "(4) Opening options," the types and notation differ for each model.
2. For "(5) Inner width" and "(6) Bending radius," the selectable range differs for each model.
3. For "(8) Fixed end bracket code" and "(9) Moving end bracket code," the applicable types differ for each model.

2. Code types and mounting images of brackets/steel brackets

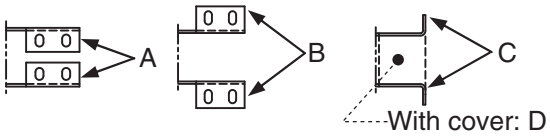
Plastic parts are called brackets and metal parts are called steel brackets.

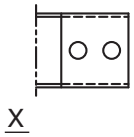
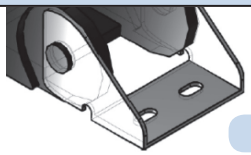
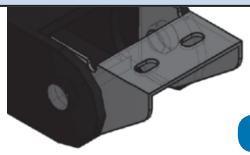
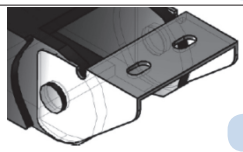
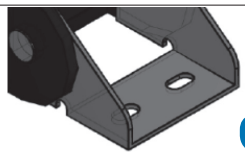
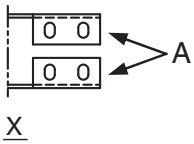
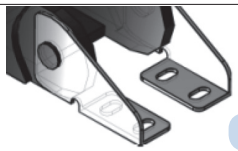
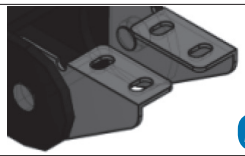
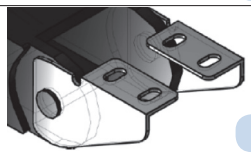
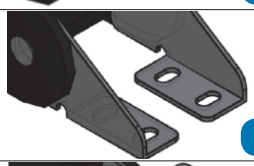
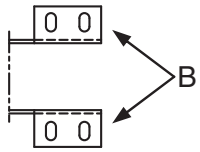
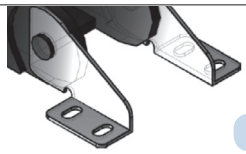
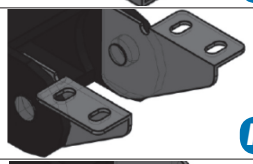
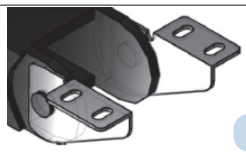
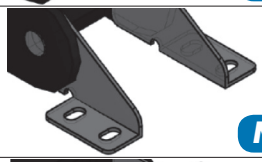
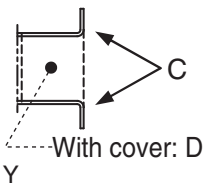
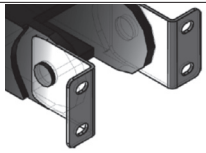
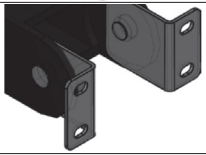
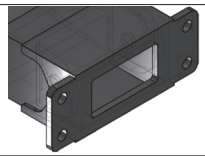
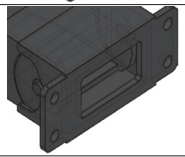
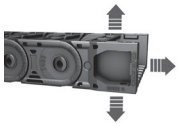
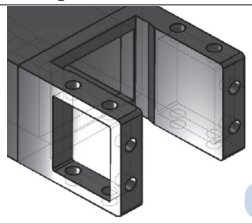
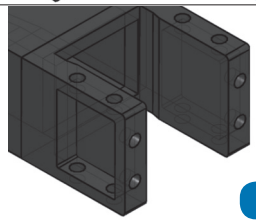


1) Fixed end/moving end ID — Fixed end = F, Moving end = M

2) Mounting direction ID — Outside = O, Inside = I

3) Direction of connection surface (split type only)



Brackets/steel brackets		Mounting direction	End point	
			Fixed end	Moving end
	Unsplit type	Outside mounting	 FO	 MO
		Inside mounting	 FI	 MI
	Split type	Outside mounting	 FOA	 MOA
		Inside mounting	 FIA	 MIA
	Split type	Outside mounting	 FOB	 MOB
		Inside mounting	 FIB	 MIB
	Split type	Flange mounting	 FC	 MC
	Split type With cover		 FD	 MD
	Split type	Selectable from two directions or three directions	 FU	 MU

Ordering Information

3. Ordering examples (Plastic Series: Basic examples)

Cable carrier (cable carrier plastic links + steel brackets for both ends)

➡ Ordering example

To order one TKP45H25-30W58R50 with 20 links, a fixed end bracket (outside mounting with connection surface inside), and a moving end bracket (outside mounting on cable carrier/inward mounting for equipment)

Model number	Quantity
TKP45H25-30W58R50+20L-FOA-MOA	**1 set**

Cable carrier (cable carrier plastic links + steel brackets for one end)

➡ Ordering example

To order one TKP45H25-30W58R50 with 20 links, a fixed end bracket (outside mounting with connection surface inside), and no a moving end bracket

Model number	Quantity
TKP45H25-30W58R50+20L-FOA	**1 set**

Cable carrier (cable carrier plastic links only)

➡ Ordering example

To order one TKP45H25-30W58R50 with 20 links (no fixed end/moving end brackets)

Model number	Quantity
TKP45H25-30W58R50+20L	**1 set**

Bracket/steel bracket (when ordering individual parts)

➡ Ordering example

To order one fixed end bracket (inside mounting with connection surface inside) to install on a model TKP45H25-30W58R50 cable carrier plastic links

Model number	Quantity
TKP45H25-FIA	**1 pcs**

Divider

➡ Ordering example

To order dividers installed to the cable carrier ordered in the example of "1. Cable carrier (cable carrier plastic links + brackets/steel brackets for both ends)"

Vertical dividers: Sliding type
Horizontal dividers: DSA type (fully stayed)

Model number	Quantity
TKP45H25-ST	**20 pcs**
TKP45H25-HS58	**10 pcs**

Notes: 1. Install dividers every 2 links.
2. When installing a horizontal divider, always install 2 or more vertical dividers per link.
3. Dividers are delivered uninstalled.

4. Ordering examples (Plastic Series: Specific examples)

This section introduces concrete ordering methods for models that require special attention when ordering.

TKR Series (TKR15H22)

➡ Ordering example

To order one TKR15H22-30W20R40 with 24 links, a fixed end bracket (outside mounting on cable carrier), and a moving end bracket (outside mounting on cable carrier)

Model number	Quantity
TKR15H22-30W20R40+24L-FO-MO	**1 set**

Note: Due to its structure, model TKR15H22 must always be ordered with an even number of links.

➡ Ordering example (for extension)

To order four links to extend a TKR15H22-30W20R40 cable carrier

Model number	Quantity
TKR15H22-30W20R40ETL+4L	**1 set**

Note: Due to its structure, model TKR15H22 must always be ordered with an even number of links.

Ordering Information

4. Ordering examples (Plastic Series: Specific examples)

Gliding Arrangement

The model number configuration for the gliding arrangement differs according to the gliding shoe installation conditions. Check the gliding shoe installation conditions in "Gliding shoe installation" on page 129 and refer to the ordering example that matches the installation conditions.

Contents described in "Gliding shoe installation"

"– (None)" → Refer to ordering example 1
"△ (Optional)" → Refer to ordering example 1
"● (Required)" → Refer to ordering example 2

➡ Ordering example 1

To order one TKP45H25-30W58R50 in the gliding arrangement with 100 links (fixed end bracket (outside mounting with connection surface inside) and moving end bracket (outside mounting with connection surface inside))

Model number	Quantity
TKP45H25-30W58R50+100L-FOA-MOAGA	**1 set**

Note: The special gliding arrangement moving end bracket may be required depending on the combination of model and bending radius.
Check "Moving end bracket - Type" on page 129. If the special gliding arrangement moving end bracket is required, add "GA" to the end of the code for the moving end bracket.

Moving end bracket type		Fixed end bracket code	Moving end bracket code
	"Standard"	**"GA"** not added to end	**"GA"** not added to end
	"Made-to-order"	**"GA"** not added to end	**"GA"** added to end

➡ Ordering example 2

To order one TKP91H56W150R200 in the gliding arrangement with 100 links (fixed end bracket (outside mounting with connection surface inside) and moving end bracket (outside mounting with connection surface inside))

Model number	Quantity
TKP91H56W150R200-GA+100L-FOAGA-MOAGA	**1 set**

Notes: 1. Add "-GA" after the bending radius (R200).
2. The special gliding arrangement moving end bracket may be required depending on the combination of model and bending radius.
Check "Moving end bracket - Type" on page 129.
If the special gliding arrangement moving end bracket is required, add "GA" to the end of each code for the fixed end/moving end bracket.
If using the standard moving end bracket, add "GA" to the end of the code for the fixed end bracket because only that bracket is a special gliding arrangement part.

Moving end bracket type		Fixed end bracket code	Moving end bracket code
	"Standard"	**"GA"** added to end	**"GA"** not added to end
	"Made-to-order"	**"GA"** added to end	**"GA"** added to end

5. Ordering examples (Steel Series)

TKS Series

➡ Ordering example

To order one TKS070 in the 100 mm frame width and 75 mm bending radius type with 35 links, a fixed end bracket (outside mounting with connection surface inside), and a moving end bracket (outside mounting with connection surface inside)

Model number	Quantity
TKS070SP100R75+35L-FOA-MOA	**1 set**

Notes: 1. Dividers must be installed when using frame widths of 150 mm and 200 mm (refer to the individual product pages for further information). Order dividers separately.
2. Frames are required when using the TKS Series as a cable carrier. However, when frames are not required, delete "SP□□" in the model number when ordering.

TKF Series

➡ Ordering example

Discontinued

To order one TKF085 in the 100 mm bending radius type with 80 links, a fixed end bracket (A type, outside mounting on cable carrier), and a moving end bracket (B type)

Model number	Quantity
TKF085R100+80L-KGAO-KGB	**1 set**

Note: Brackets/steel brackets are delivered installed.

TK Series/TKH Series

➡ Ordering example

To order one TK095R125 with 35 links, a fixed end bracket (outside mounting with connection surface inside), and a moving end bracket (outside mounting with connection surface inside)
In addition, to order 17 split stay (height 50 mm, width 125 mm, thickness 15 mm)

Model number	Quantity
TK095R125+35L-FOA-MOA	**1 set**
TK095-SP50-125-15B-TK	**17 pcs**

Note: Specify the stay bore diameter and distance between stay bores (refer to pages 95 to 104 for the specification method).

MEMO

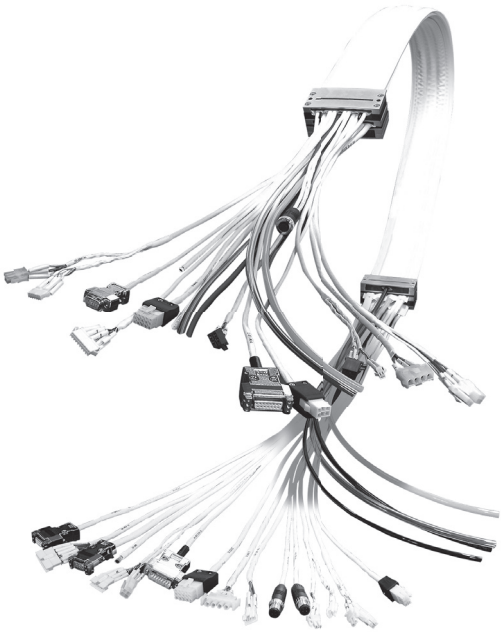
CLEANVEYOR/FLATVEYOR

CLEANVEYOR

CLEANVEYOR 23

FLATVEYOR

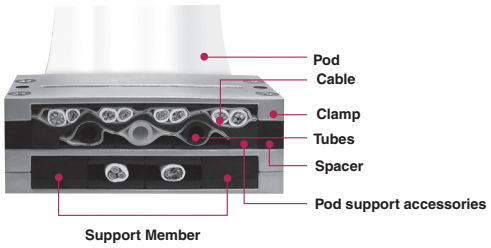
FLATVEYOR 28

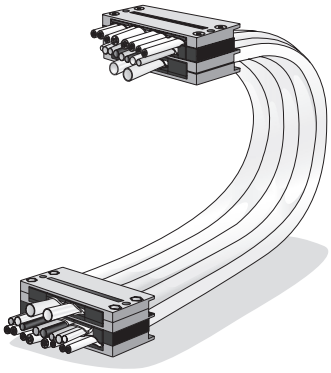


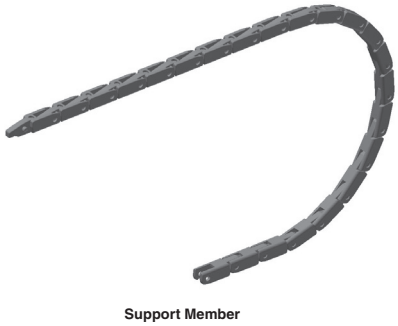


CLEANVEYOR (Patented)

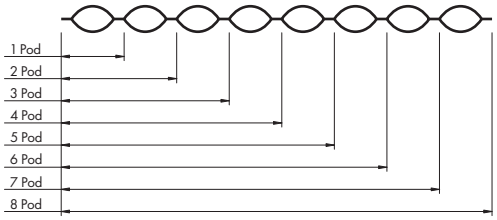
Structure







Pod types and dimensions

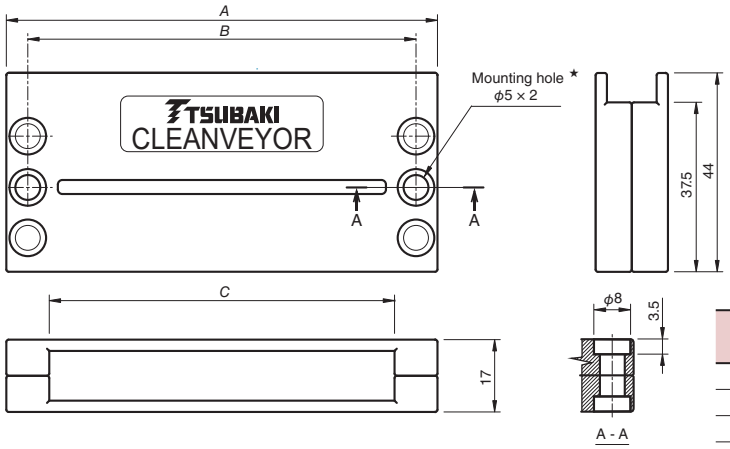


No. of pods	Pod thickness ★ (mm)	Pod width ★ (mm)	Connection width ★ (mm)	Total width (mm)
1Pod	1	19	2.3	23.6
2Pod				44.9
3Pod				66.2
4Pod				87.5
5Pod				108.8
6Pod				130.1
7Pod				151.4
8Pod				172.7

Note: ★ The dimensions of the pod when it is flat (closed). The dimensions given are nominal dimensions and may differ from the actual dimensions.

Cable/tube outer diameter (mm)	Installable No. of cables/ tubes/Pod	Installation image
Outer diameter ≤ 4.0	3	
4.0 < Outer diameter ≤ 6.3	2	
6.3 < Outer diameter ≤ 10	1	

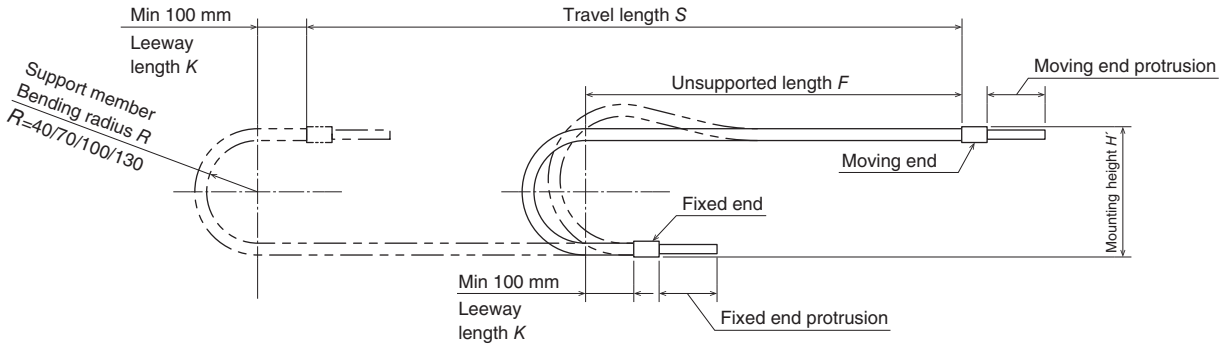
Clamp types and dimensions



Note: ★ Use bolt with hole M4 to fasten the clamps to the equipment.

Clamp type	A (mm)	B (mm)	C (mm)
2Pod	57.2	47.7	38.2
3Pod	76.3	66.8	57.3
4Pod	95.4	85.9	76.4
5Pod	114.5	105.0	95.5
6Pod	133.6	124.1	114.6
7Pod	152.7	143.2	133.7
8Pod	171.8	162.3	152.8

Basic specifications/capacities



Maximum travel length ★1 (mm)	Support member Bending radius R40 ····· 1600 Support member Bending radius R70 ····· 2200 Support member Bending radius R100 ····· 2800 Support member Bending radius R130 ····· 2800
Maximum cable length (mm)	8000
Maximum travel speed (m/sec)	2
Maximum acceleration (G)	4
Operating temperature range (°C)	-10 to 80
Minimum/maximum cable/tube outer diameter (mm)	3 to 10

Notes: ★1. When additional load is 0.4 kg/m.
2. Support member-Bending radius and bending radius when installing the CLEANVEYOR may differ.

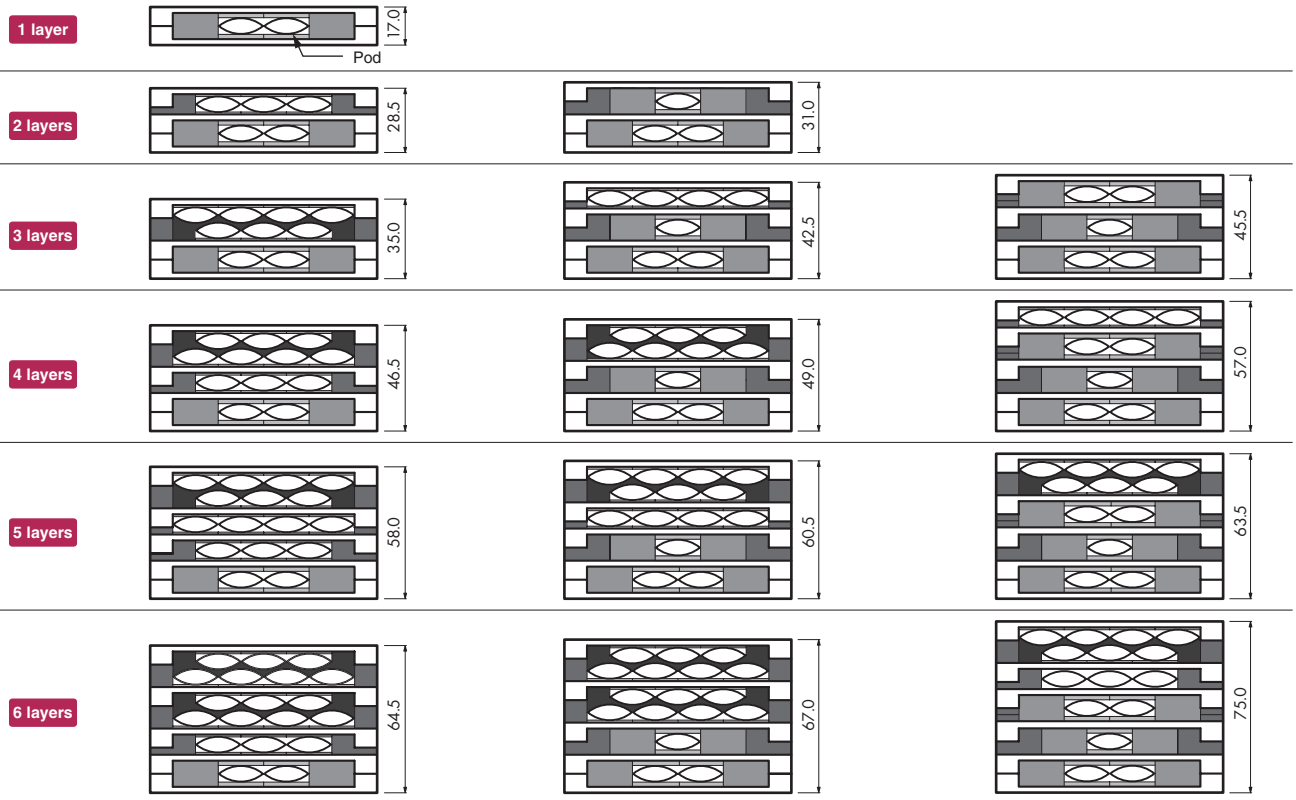
Pod		Fluoroplastic (ePTFE)
Cable	Conductor	Tinned annealed copper wire or annealed copper wire
	Insulator	Fluoroplastic (FEP, ETFE, PFA) or thermoplastic polyester elastomer (TPEE)
	Binder	Fluoroplastic (ePTFE)
	Shield	Tinned annealed copper wire
	Sheath	PVC LF (lead free)
Support Member		Engineering plastic
Clamp		Aluminum
Spacer		Engineering plastic
Pod support accessories		PVC

Note: Sheet of Ultra-High Molecular Weight Polyethylene (UHMW-PE) for sticking on the installation surface of CLEANVEYOR is attached at the time of delivery.

Selection

CLEANVEYOR products are all made to order. Write the operating conditions on the inquiry sheet (page 33) and send it to a Tsubaki representative.
Tsubaki will select the types.

Layering examples



CLEANVEYOR

300-V rated cables

UL STYLE No.	2464
Rated temperature ℃	80
Rated voltage V	300
Operating temperature range ℃	−10 to 80

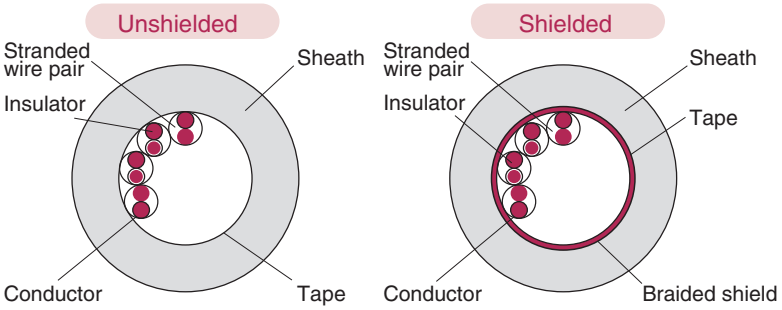
Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned annealed copper wire braid
Sheath	Oil resistant PVC (black)

With/without shield	Minimum bending radius
Unshielded	6 times the cable outer diameter or greater
Shielded	8 times the cable outer diameter or greater

Conductor			Core diameter mm	Pairs	Unshielded					Shielded					Permissible current* A (30℃)
SQ mm²	AWG size	Configuration			No.	Outer diameter mm	Approximate mass kg/km	Approximate mass kg/m	Minimum bending R outer diameter x 6	No.	Outer diameter mm	Approximate mass kg/km	Approximate mass kg/m	Minimum bending R outer diameter x 8	
0.1	28	49/0.05	0.74	1	S1	3.3	13	0.013	20	S32	3.8	21	0.021	31	2.4
				2	S2	4.4	20	0.020	27	S33	4.8	30	0.030	39	1.8
				3	S3	4.7	23	0.023	29	S34	5.1	34	0.034	41	1.6
				4	S4	5.0	27	0.027	30	S35	5.4	38	0.038	44	1.4
				5	S5	5.3	32	0.032	32	S36	5.7	43	0.043	46	1.3
				6	S6	5.6	36	0.036	34	S37	6.0	48	0.048	48	1.2
				7	S7	5.6	39	0.039	34	S38	6.0	50	0.050	48	1.2
				8	S8	6.0	43	0.043	36	S39	6.4	56	0.056	52	1.1
				10	S9	6.6	52	0.052	40	S40	7.0	66	0.066	56	1.0
0.2	25	102/0.05	0.93	1	S10	3.7	17	0.017	23	S41	4.2	25	0.025	34	3.8
				2	S11	5.0	27	0.027	30	S42	5.4	37	0.037	44	3.0
				3	S12	5.3	34	0.034	32	S43	5.7	45	0.045	46	2.6
				4	S13	5.7	39	0.039	35	S44	6.3	51	0.051	51	2.3
				5	S14	6.1	47	0.047	37	S45	6.5	60	0.060	52	2.1
				6	S15	6.6	54	0.054	40	S46	7.1	69	0.069	57	2.0
				7	S16	6.6	58	0.058	40	S47	7.1	73	0.073	57	1.9
				8	S17	7.1	65	0.065	43	S48	7.6	80	0.080	61	1.8
				10	S18	7.8	80	0.080	47	S49	8.2	97	0.097	66	1.7
0.3	23	108/0.06	1.09	1	S19	4.0	20	0.020	24	S50	4.4	28	0.028	36	5.2
				2	S20	5.5	36	0.036	33	S51	5.9	44	0.044	48	4.0
				3	S21	5.9	42	0.042	36	S52	6.4	54	0.054	52	3.5
				4	S22	6.3	51	0.051	38	S53	6.7	64	0.064	54	3.2
				5	S23	6.9	61	0.061	42	S54	7.3	76	0.076	59	2.9
				6	S24	7.4	72	0.072	45	S55	7.8	87	0.087	63	2.7
				7	S25	7.4	78	0.078	45	S56	7.8	94	0.094	63	2.5
				8	S26	8.0	88	0.088	48	S57	8.4	105	0.105	68	2.4
				10	S27	8.8	110	0.110	53	S58	9.2	130	0.130	74	2.3
0.5	21	177/0.06	1.36	1	S28	4.6	26	0.026	28	S59	5.0	37	0.037	30	7.7
				2	S29	6.4	51	0.051	39	S60	6.8	67	0.067	41	5.8
				3	S30	6.9	64	0.064	42	S61	7.3	82	0.082	44	4.9
				4	S31	7.5	75	0.075	45	S62	7.9	94	0.094	48	4.7

Note: * Permissible current is for reference and not a guaranteed value.

■ Sample cross section



■ Identification of insulators

Pair no.	Color	
	Core 1	Core 2
1	Blue	White
2	Yellow	Purple
3	Green	Black
4	Red	Gray
5	Purple	Orange

Pair no.	Color	
	Core 1	Core 2
6	Blue	Brown
7	Yellow	Black
8	Green	Gray
9	Red	Orange
10	Purple	White

Tubes

No.	Specifications			Configuration	
	Outer diameter mm	Inner diameter mm	Maximum working pressure MPa	Materials	Color
T1	4.0	2.5	0.8 (20℃)	Polyurethane	Black, yellow, blue, green, transparent, and white
T2	6.0	4.0	0.8 (20℃)	Polyurethane	Black, yellow, blue, green, transparent, and white
T3	8.0	5.0	0.8 (20℃)	Polyurethane	Black, yellow, blue, green, transparent, and white
T4	10.0	6.5	0.8 (20℃)	Polyurethane	Black, yellow, blue, green, transparent, and white

600-V rated cables

UL STYLE No.	2586
Rated temperature ℃	105
Rated voltage V	600
Operating temperature range ℃	−10 to 105

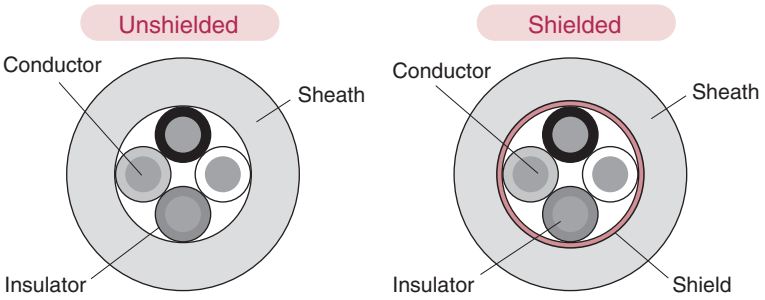
Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned annealed copper wire braid
Sheath	Oil resistant PVC (black)

With/without shield	Minimum bending radius
Unshielded	6 times the cable outer diameter or greater
Shielded	8 times the cable outer diameter or greater

Conductor			Core diameter mm	Cores	Unshielded					Shielded					Permissible current * A (30℃)
SQ mm²	AWG size	Configuration			No.	Outer diameter mm	Approximate mass kg/km	Approximate mass kg/m	Minimum bending R outer diameter x 6	No.	Outer diameter mm	Approximate mass kg/km	Approximate mass kg/m	Minimum bending R outer diameter x 8	
0.5	21	100/0.08	1.52	2	P1	5.3	34	0.034	32	P35	5.7	45	0.045	46	9.2
				3	P2	5.5	41	0.041	33	P36	5.9	53	0.053	48	8.0
				4	P3	5.9	49	0.049	36	P37	6.3	61	0.061	51	7.2
				5	P4	6.3	58	0.058	38	P38	6.7	72	0.072	54	6.7
				6	P5	6.8	66	0.066	41	P39	7.2	83	0.083	58	6.2
				8	P6	8.0	90	0.090	48	P40	8.4	110	0.110	68	5.6
				10	P7	8.9	110	0.110	54						5.1
0.75	19	150/0.08	1.73	2	P8	5.7	41	0.041	35	P41	6.1	53	0.053	49	12.0
				3	P9	5.9	51	0.051	36	P42	6.3	62	0.062	51	10.5
				4	P10	6.4	63	0.063	39	P43	6.8	75	0.075	55	9.4
				6	P11	7.4	87	0.087	45	P44	7.8	105	0.105	63	8.1
				8	P12	8.8	120	0.120	53	P45	9.3	145	0.145	75	7.3
				10	P13	9.7	145	0.145	59						6.7
1.25	17	7/36/0.08	2.2	2	P14	6.6	58	0.058	40	P46	7.0	72	0.072	56	17.3
				3	P15	7.0	75	0.075	42	P47	7.4	89	0.089	60	15.1
				4	P16	7.5	92	0.092	45	P48	7.9	110	0.110	64	13.5
				6	P17	8.8	130	0.130	53	P49	9.3	155	0.155	75	11.7
2	15	7/57/0.08	2.6	2	P20	7.4	79	0.079	45	P51	7.8	94	0.094	63	23.6
				3	P21	7.8	105	0.105	47	P52	8.2	120	0.120	66	20.6
				4	P22	8.5	130	0.130	51	P53	9.0	155	0.155	72	18.4
				6	P23	10.0	185	0.185	60						15.9
3.5	12	7/64/0.1	3.4	2	P26	9.3	125	0.125	56	P56	9.8	155	0.155	79	35.5
				3	P27	9.8	165	0.165	59						30.9

Note: * Permissible current is for reference and not a guaranteed value.

■ Sample cross section

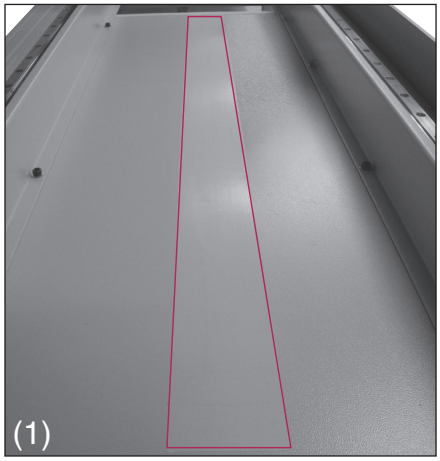


■ Identification of insulators

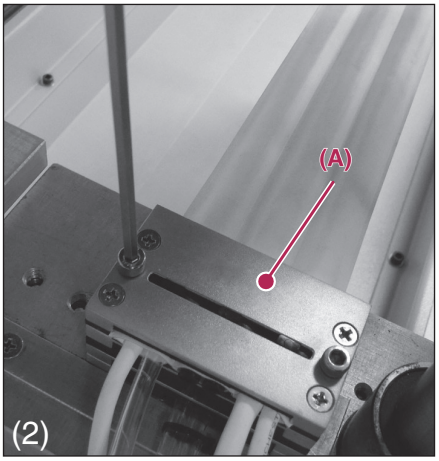
Core no.	Color
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Brown
7	Blue
8	Gray
9	Orange
10	Purple

CLEANVEYOR

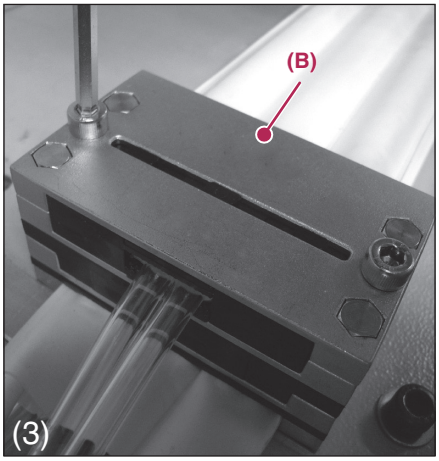
Installation steps



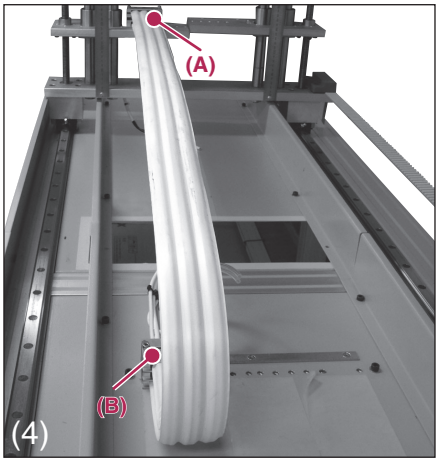
(1) Attach an ultra-high molecular weight polyethylene sheet to the floor where the CLEANVEYOR will be installed.



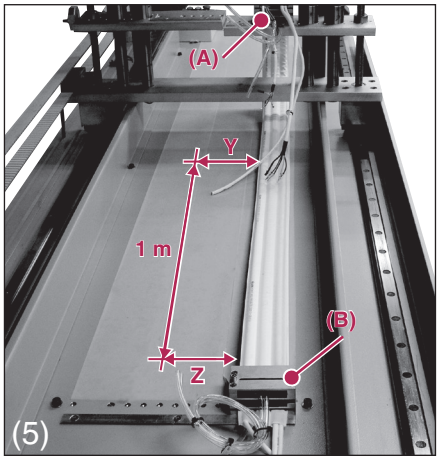
(2) Temporarily tighten the moving end clamp (A).



(3) Temporarily tighten the fixed end clamp (B).



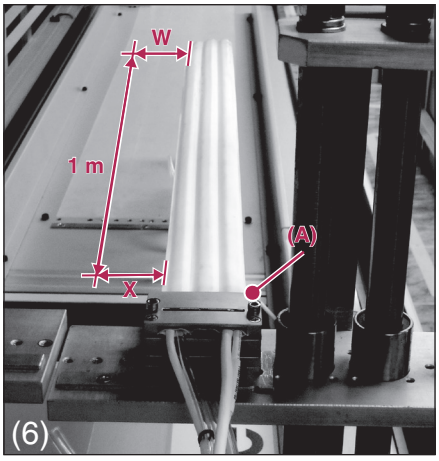
(4) With the moving (A) and fixed end clamps (B) temporarily tightened, run the moving end one cycle to check operation.



(5) Adjust the amount of lateral deviation in moving direction as follows.

1. Push the moving end clamp (A) by hand all the way back.
2. Check if the difference between Z dimension and Y dimension is within ± 10 mm per 1 m.
3. If it is within ± 10 mm, securely fix the fixed end clamp (B)★1.

Note: ★1. If there is a difference exceeding ± 10 mm, adjust the position of the fixed end clamp (B) to fix it within ± 10 mm.



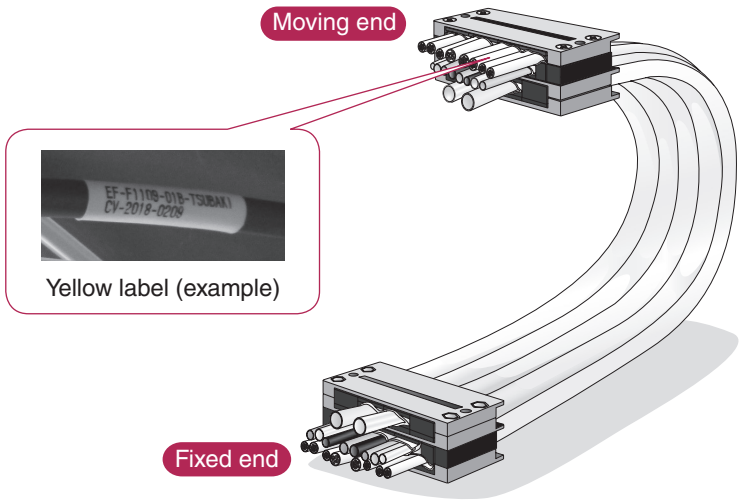
(6) Adjust the amount of lateral deviation in moving direction as follows.

1. Move the moving end clamp (A) to the position with the longest unsupported length.
2. Check if the difference between the X dimension and the W dimension is within ± 10 mm per 1 m.
3. If it is within ± 10 mm, securely fix the moving end clamp (A).

Note: ★1. If there is a difference exceeding ± 10 mm, adjust the position of the moving end clamp (A) to fix it within ± 10 mm.

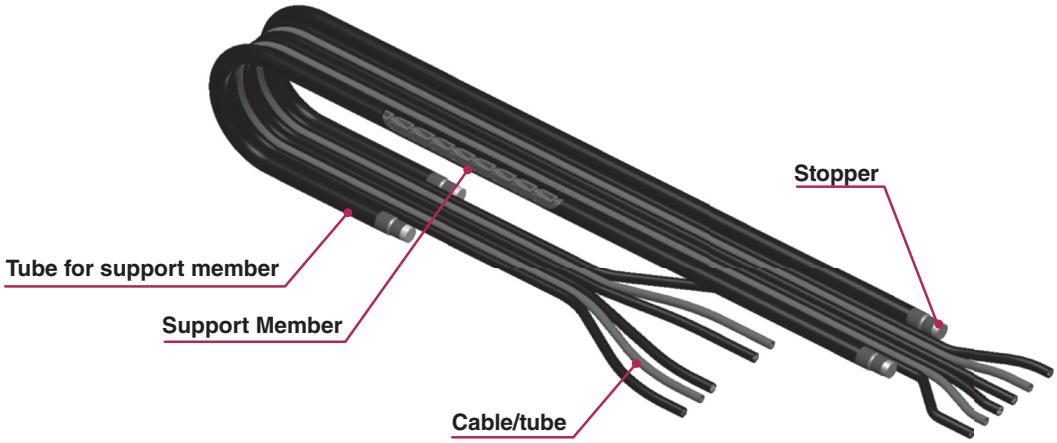
Operating precautions

- Remove any debris on the installation surface, and allow the CLEANVEYOR to slide on top of the included ultra-high molecular weight polyethylene sheet.
- Do not expose the product to organic solvents that will affect it.
- The moving end of cables and hoses is the end with the yellow label.

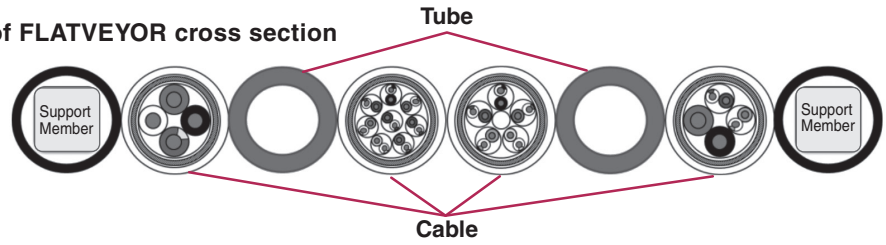


FLATVEYOR (Patented)

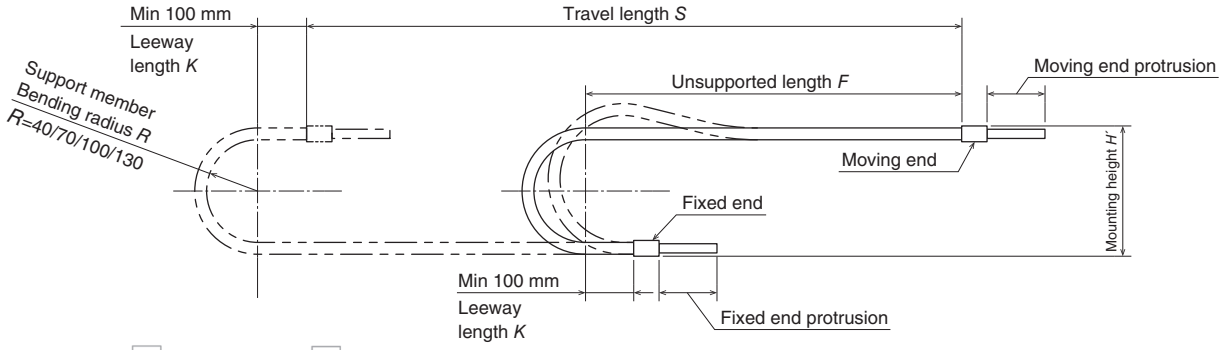
Structure

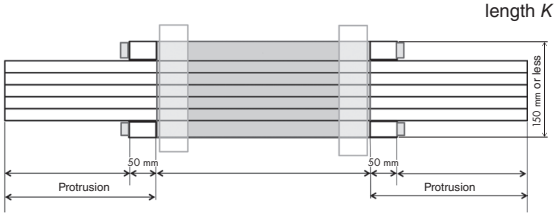


Example of FLATVEYOR cross section



Basic specifications/capacities





Maximum travel length * (mm)		Support member Bending radius R40·····1600 Support member Bending radius R70·····2200 Support member Bending radius R100····2800 Support member Bending radius R130····2800
Maximum travel speed (m/sec)		2
Maximum acceleration (G)		4
Operating temperature range (°C)		-10 to 80
Maximum cable/tube outer diameter (mm)		16 or less
Estimated maximum width (mm)		150 or less (see diagram above)
Materials	Support Member	Engineering plastic
	Tube for support member	PVC
	Stopper	P E

Support member Bending radius R	Mounting height H' (mm)
40	103 to 123
70	213 to 233
100	273 to 293
130	333 to 353

Notes: 1. When additional load is 0.4 kg/m.
2. Support member-Bending radius and bending radius when installing the FLATVEYOR may differ.

FLATVEYOR

Selection

FLATVEYOR products are all made to order. Write the operating conditions on the inquiry sheet (page 33) and send it to a Tsubaki representative.
Tsubaki will select the types.

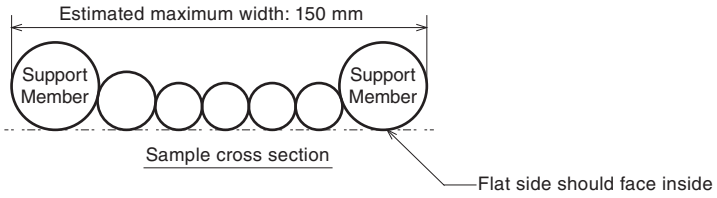
■ Precautions regarding cable and tube bonding

◆ Materials

Only cables with outer jackets made of PVC or polyurethane, or tubes made of the same, can be bonded.
Contact a Tsubaki representative to use materials other than those listed above.

◆ Differences in outer diameters

The ideal permissible difference between the outer diameters of adjacent cables and tubes should be less than approximately 30%. If there is an outer diameter difference that exceeds that, we may suggest using dummy tubes.



Option

■ Connector installation

If you provide us with the name of a specific connector manufacturer, the connector model number, the terminal number, and connection information, Tsubaki will confirm its usability for you.
The parts used can be either procured or supplied by us.

■ Installing cables not listed in this catalog

Installing is possible cables not listed our catalog. Contact a Tsubaki representative.

Our warranty is not applicable on cables supplied by a customer except for defects caused by the manufacture of FLATVEYOR.

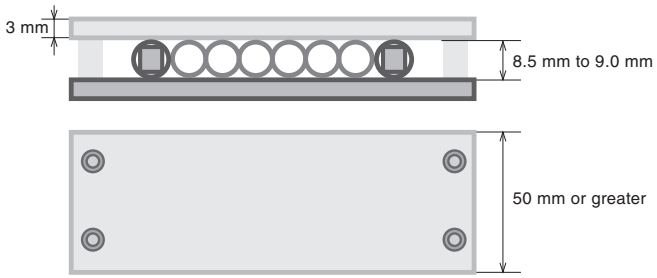
■ Clamp

Tsubaki can also manufacture clamps. If you will manufacture your own clamps, please follow the recommended dimensions below.

Handling FLATVEYOR attachment clamps

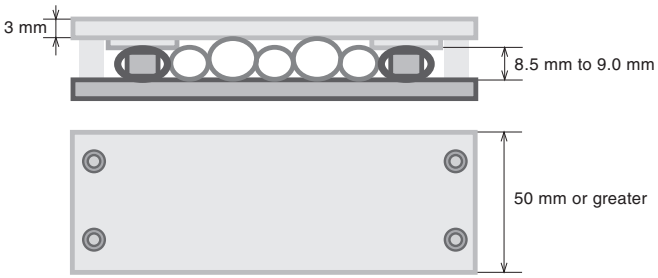
■ Cable diameter 8.5 mm or less

Ensure that the clamp length is 50 mm or greater and the clamp thickness is 3 mm or greater, and adjust the clamp inner heights between 8.5 mm and 9.0 mm. Fasten the clamp with M6 bolts in four locations.



■ Cable diameter greater than 8.5 mm

Ensure that the clamp length is 50 mm or greater and the clamp thickness is 3 mm or greater, and adjust inner heights between 8.5 mm and 9.0 mm at the tube for support member with spacers. Fasten the clamp with M6 bolts in four locations.



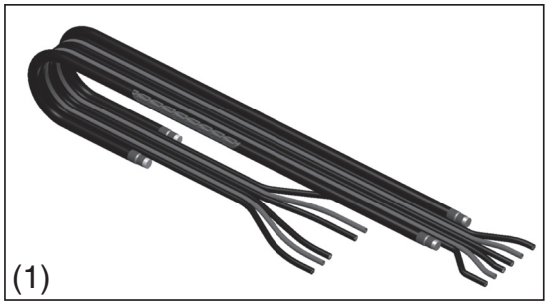
■ Precautions

Be advised that the support member will deform and may break if the height of the tube for support member section is less than 8.5 mm.

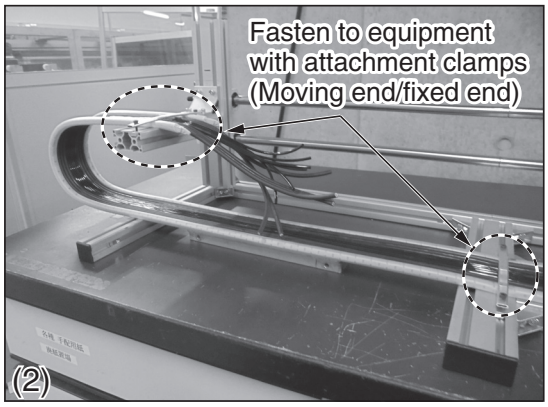
Installation steps

When installing the FLATVEYOR on the equipment, **install the attachment clamps in the positions shown on the Tsubaki product drawing.**

1. **Bend the FLATVEYOR** (1) before fastening it to the equipment.



2. **While in the state shown in (1)**, fasten the moving end and fixed end to the equipment with the attachment clamps. (2)



3. After fastening the moving end and fixed end, **confirm that the bent section of the FLATVEYOR is not skewed and that the unsupported length section is not twisted.** (3)
Next, move the FLATVEYOR slowly and confirm there are no problems with its operation.

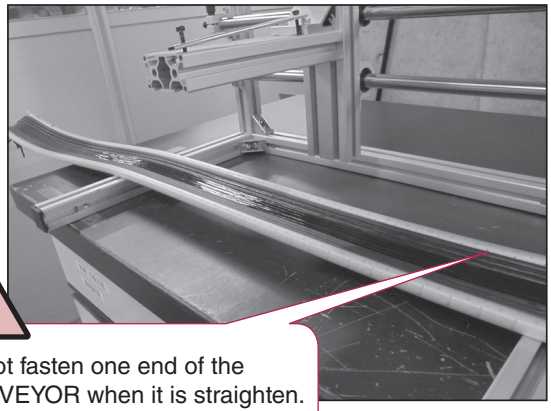
× Inclination of bending part

× Twist of unsupported length



Installation precautions

Do not fasten one end of the FLATVEYOR when it is straighten.
If one end (moving end or fixed end) of the FLATVEYOR is fastened to the equipment while the FLATVEYOR is straighten, and then the FLATVEYOR is bent, **the support members may twist and break.**



FLATVEYOR

600-V rated cables

UL STYLE No.	2586
Rated temperature (°C)	105
Rated voltage (V)	600
Operating temperature range (°C)	−10 to 105

Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned annealed copper wire braid
Sheath	Oil resistant PVC (black)

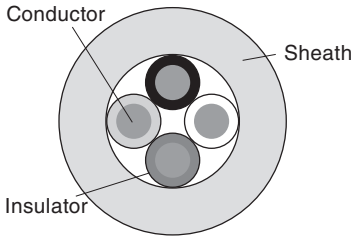
With/without shield	Minimum bending radius
Unshielded	6-times cable outer diameter or greater
Shielded	8-times cable outer diameter or greater

Conductor			Core diameter (mm)	Cores	Unshielded					Shielded					Permissible current ★ A (30°C)
SQ (mm^2)	AWG size	Configuration			No.	Outer diameter (mm)	Approximate mass (kg/km)	Approximate mass (kg/m)	Minimum bending R Outer diameter x 6	No.	Outer diameter (mm)	Approximate mass (kg/km)	Approximate mass (kg/m)	Minimum bending R Outer diameter x 8	
0.5	21	100/0.08	1.52	2	P1	5.3	34	0.034	32	P35	5.7	45	0.045	46	9.2
				3	P2	5.5	41	0.041	33	P36	5.9	53	0.053	48	8.0
				4	P3	5.9	49	0.049	36	P37	6.3	61	0.061	51	7.2
				5	P4	6.3	58	0.058	38	P38	6.7	72	0.072	54	6.7
				6	P5	6.8	66	0.066	41	P39	7.2	83	0.083	58	6.2
				8	P6	8.0	90	0.090	48	P40	8.4	110	0.110	68	5.6
				10	P7	8.9	110	0.110	54						5.1
0.75	19	150/0.08	1.73	2	P8	5.7	41	0.041	35	P41	6.1	53	0.053	49	12.0
				3	P9	5.9	51	0.051	36	P42	6.3	62	0.062	51	10.5
				4	P10	6.4	63	0.063	39	P43	6.8	75	0.075	55	9.4
				6	P11	7.4	87	0.087	45	P44	7.8	105	0.105	63	8.1
				8	P12	8.8	120	0.120	53	P45	9.3	145	0.145	75	7.3
				10	P13	9.7	145	0.145	59						6.7
1.25	17	7/36/0.08	2.2	2	P14	6.6	58	0.058	40	P46	7.0	72	0.072	56	17.3
				3	P15	7.0	75	0.075	42	P47	7.4	89	0.089	60	15.1
				4	P16	7.5	92	0.092	45	P48	7.9	110	0.110	64	13.5
				6	P17	8.8	130	0.130	53	P49	9.3	155	0.155	75	11.7
				8	P18	10.5	180	0.180	63	P50	11.1	210	0.210	89	10.6
				10	P19	11.6	220	0.220	70						9.7
2	15	7/57/0.08	2.6	2	P20	7.4	79	0.079	45	P51	7.8	94	0.094	63	23.6
				3	P21	7.8	105	0.105	47	P52	8.2	120	0.120	66	20.6
				4	P22	8.5	130	0.130	51	P53	9.0	155	0.155	72	18.4
				6	P23	10.0	185	0.185	60	P54	10.5	220	0.220	84	15.9
				8	P24	12.0	250	0.250	72	P55	12.5	290	0.290	100	14.4
				10	P25	13.2	310	0.310	80						13.2
3.5	12	7/64/0.1	3.4	2	P26	9.3	125	0.125	56	P56	9.8	155	0.155	79	35.5
				3	P27	9.8	165	0.165	59	P57	10.3	195	0.195	83	30.9
				4	P28	10.7	210	0.210	65	P58	11.2	240	0.240	90	27.6
				6	P29	12.9	290	0.290	78	P59	13.4	330	0.330	108	23.9
				8	P30	15.5	430	0.430	93	P60	16.0	470	0.470	128	21.6
5.5	10	7/100/0.1	4.15	2	P31	11.2	190	0.190	68	P61	11.7	220	0.220	94	48.7
				3	P32	11.8	250	0.250	71	P62	12.3	280	0.280	99	42.4
				4	P33	12.9	290	0.290	78	P63	13.4	320	0.320	108	38.0
				6	P34	15.5	470	0.470	93	P64	16.0	510	0.510	128	32.9

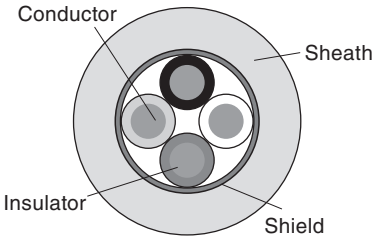
★: Permissible current is for reference and not a guaranteed value.

■ Sample cross section

Unshielded



Shielded



■ Identification of insulators

Core No.	Color
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Brown
7	Blue
8	Gray
9	Orange
10	Purple

300-V rated cables

UL STYLE No.	2464
Rated temperature (°C)	80
Rated voltage (V)	300
Operating temperature range (°C)	−10 to 80

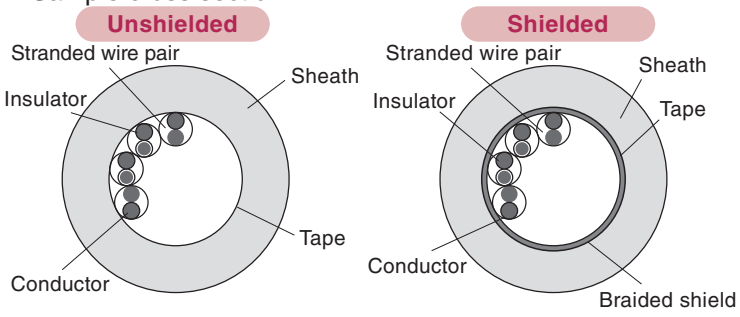
Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned annealed copper wire braid
Sheath	Oil resistant PVC (black)

With/without shield	Minimum bending radius
Unshielded	6-times cable outer diameter or greater
Shielded	8-times cable outer diameter or greater

Conductor			Core diameter (mm)	Pairs	Unshielded					Shielded					Permissible current * A (30°C)
SQ (mm²)	AWG size	Configuration			No.	Outer diameter (mm)	Approximate mass (kg/km)	Approximate mass (kg/m)	Minimum bending R Outer diameter x 6	No.	Outer diameter (mm)	Approximate mass (kg/km)	Approximate mass (kg/m)	Minimum bending R Outer diameter x 8	
0.1	28	49/0.05	0.74	1	S1	3.3	13	0.013	20	S32	3.8	21	0.021	31	2.4
				2	S2	4.4	20	0.020	27	S33	4.8	30	0.030	39	1.8
				3	S3	4.7	23	0.023	29	S34	5.1	34	0.034	41	1.6
				4	S4	5.0	27	0.027	30	S35	5.4	38	0.038	44	1.4
				5	S5	5.3	32	0.032	32	S36	5.7	43	0.043	46	1.3
				6	S6	5.6	36	0.036	34	S37	6.0	48	0.048	48	1.2
				7	S7	5.6	39	0.039	34	S38	6.0	50	0.050	48	1.2
				8	S8	6.0	43	0.043	36	S39	6.4	56	0.056	52	1.1
				10	S9	6.6	52	0.052	40	S40	7.0	66	0.066	56	1.0
0.2	25	102/0.05	0.93	1	S10	3.7	17	0.017	23	S41	4.2	25	0.025	34	3.8
				2	S11	5.0	27	0.027	30	S42	5.4	37	0.037	44	3.0
				3	S12	5.3	34	0.034	32	S43	5.7	45	0.045	46	2.6
				4	S13	5.7	39	0.039	35	S44	6.3	51	0.051	51	2.3
				5	S14	6.1	47	0.047	37	S45	6.5	60	0.060	52	2.1
				6	S15	6.6	54	0.054	40	S46	7.1	69	0.069	57	2.0
				7	S16	6.6	58	0.058	40	S47	7.1	73	0.073	57	1.9
				8	S17	7.1	65	0.065	43	S48	7.6	80	0.080	61	1.8
				10	S18	7.8	80	0.080	47	S49	8.2	97	0.097	66	1.7
0.3	23	108/0.06	1.09	1	S19	4.0	20	0.020	24	S50	4.4	28	0.028	36	5.2
				2	S20	5.5	36	0.036	33	S51	5.9	44	0.044	48	4.0
				3	S21	5.9	42	0.042	36	S52	6.4	54	0.054	52	3.5
				4	S22	6.3	51	0.051	38	S53	6.7	64	0.064	54	3.2
				5	S23	6.9	61	0.061	42	S54	7.3	76	0.076	59	2.9
				6	S24	7.4	72	0.072	45	S55	7.8	87	0.087	63	2.7
				7	S25	7.4	78	0.078	45	S56	7.8	94	0.094	63	2.5
				8	S26	8.0	88	0.088	48	S57	8.4	105	0.105	68	2.4
				10	S27	8.8	110	0.110	53	S58	9.2	130	0.130	74	2.3
0.5	21	177/0.06	1.36	1	S28	4.6	26	0.026	28	S59	5.0	37	0.037	30	7.7
				2	S29	6.4	51	0.051	39	S60	6.8	67	0.067	41	5.8
				3	S30	6.9	64	0.064	42	S61	7.3	82	0.082	44	4.9
				4	S31	7.5	75	0.075	45	S62	7.9	94	0.094	48	4.7

★: Permissible current is for reference and not a guaranteed value.

■ Sample cross section



■ Identification of insulators

Pair No.	Color	
	Core 1	Core 2
1	Blue	White
2	Yellow	Purple
3	Green	Black
4	Red	Gray
5	Purple	Orange

Pair No.	Color	
	Core 1	Core 2
6	Blue	Brown
7	Yellow	Black
8	Green	Gray
9	Red	Orange
10	Purple	White

Tubes

No.	Specifications			Configuration	
	Outer diameter (mm)	Inner diameter (mm)	Maximum working pressure (MPa)	Materials	Color
T1	4.0	2.5	0.8 (20°C)	Polyurethane	Black, Yellow, Blue, Green, Transparent, White
T2	6.0	4.0	0.8 (20°C)	Polyurethane	Black, Yellow, Blue, Green, Transparent, White
T3	8.0	5.0	0.8 (20°C)	Polyurethane	Black, Yellow, Blue, Green, Transparent, White
T4	10.0	6.5	0.8 (20°C)	Polyurethane	Black, Yellow, Blue, Green, Transparent, White

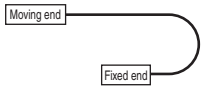
CLEANVEYOR and FLATVEYOR Inquiry Sheet

Product name

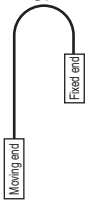
☐ CLEANVEYOR ☐ FLATVEYOR

Installation method

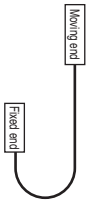
☐ Standard arrangement



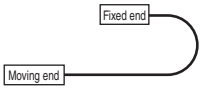
☐ Vertical arrangement (standing)



☐ Vertical arrangement (hanging)



☐ Top-fixed arrangement (bottom movement)



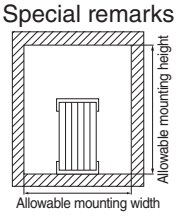
Note: Contact a Tsubaki representative regarding a side mount arrangement or nested arrangement.

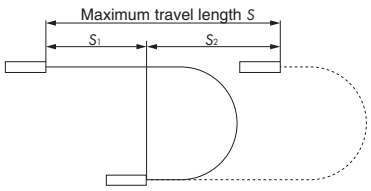
Specifications and conditions

1. Maximum travel length: *S* (required)
Write the distribution of the length when the front/back length is not S/2.
_____ mm
S_1:_____ mm S_2: _____ mm
2. Allowable mounting height (required)_____ mm
3. Allowable mounting width (required) _____ mm

If the mounting height or width does not satisfy the specifications and conditions, select the value to use as the standard.
☐ Mounting height ☐ Mounting width

4. Maximum acceleration (required) _____ m/s^2
5. Travel speed (required) _____ m/s
6. Machine to be used _____
7. Operating environment Temperature___°C Humidity ____ %
8. Frequency of use _____ times/day
9. Special remarks





Cables and tubes to be used

The items in the following tables are all required.

■ Cables (For CLEANVEYOR, cables can install a connector on one end or no connectors only. Cables cannot be installed when cables have connectors on both ends.)

No. ★1	Rated voltage (V)	Rated temperature (°C)	No. of cores C or no. of pairs P	Conductor size AWG or SQ	Shield With ○/ without ×	Outer diameter (mm)	Mass (kg/m)	Minimum bending radius (mm)	No. of cables	Fixed end protrusion (mm)	Moving end protrusion (mm)	Provided Yes ○/No ×	Connector ★2 With ○/without ×	
													Fixed end	Moving end
	300	80	4C	20AWG	○	5.0	0.01	40	1	1000	500	○	×	×
P11									2	1000	500		×	×

■ Tubes

No. ★1	Color ★3	Outer diameter (mm)	Inner diameter (mm)	Mass (kg/m)	Minimum bending radius (mm)	No. of tubes	Fixed end protrusion (mm)	Moving end protrusion (mm)	Provided Yes ○/No ×
A2	Blue	6.0	4.0	0.0193	15	1	1000	500	×

★1. Select the desired cable numbers and tubes numbers from pages 25 to 26 for a CLEANVEYOR and pages 31 to 32 for a FLATVEYOR.
★2. Include a harness drawing if connector fabrication is required.
★3. The color will be black unless otherwise specified.

Company name _____ Department _____

Name _____ TEL _____

Date of submission _____ E-MAIL _____

Cable Carrier Plastic Series

Open type

TKP Series

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TKR Series

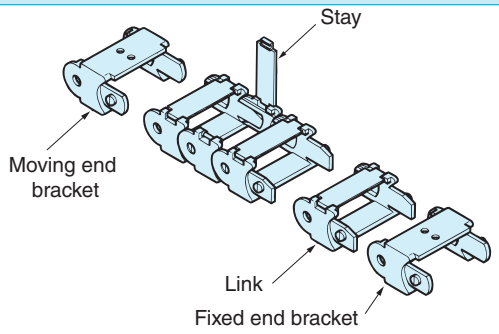
TKR15H22 67
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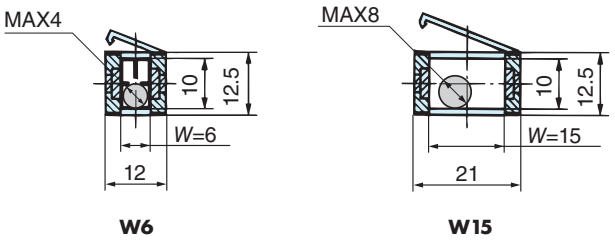
TKZP10H13 77

TKP13H10 Openable Stay (W6, W15)

Structure

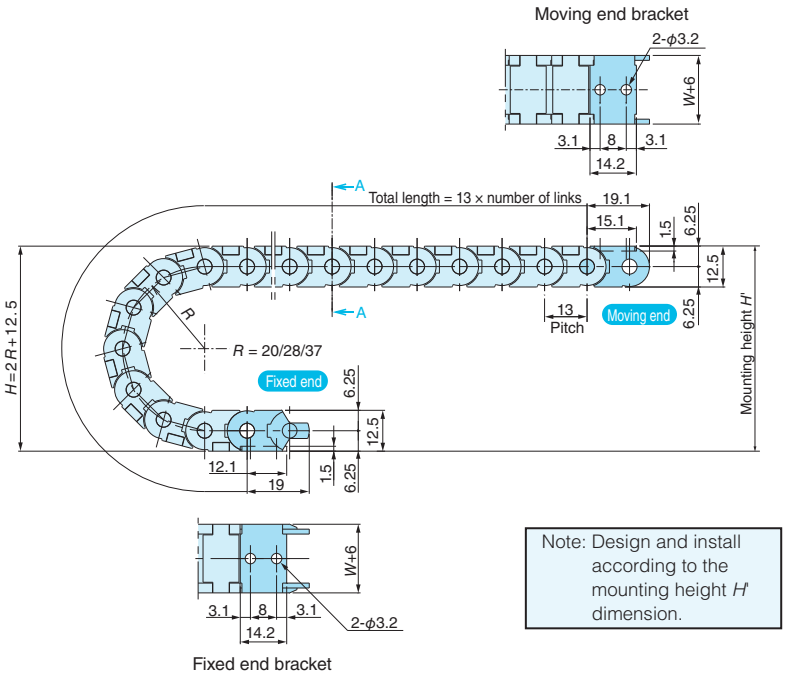


Cross-section dimensions



A–A arrow view

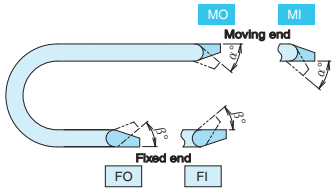
Dimensions & brackets



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
20	62.5 to 82.5
28	78.5 to 98.5
37	96.5 to 116.5

Note: MO, MI, FO, and FI brackets are all common parts.



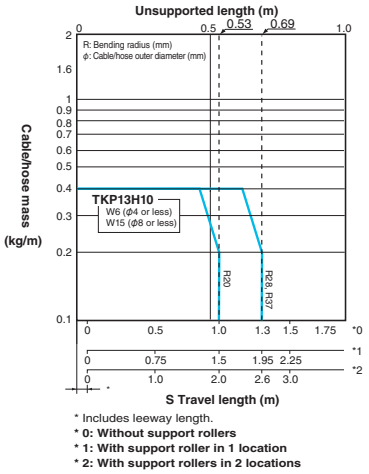
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all *R*	0	0

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		77

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

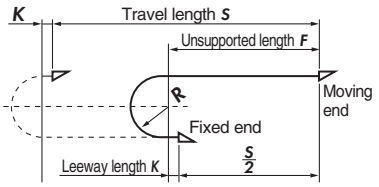


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 13 mm
K: Leeway length = 13 mm or greater

Model number

TKP13H10 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay

(2) Inner width
6
15

(3) Bending radius
20
28
37

(4) Number of links

(5) Fixed end
FO
FI

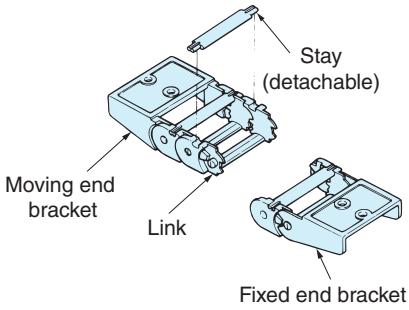
(6) Moving end
MO
MI

Note: Brackets are delivered uninstalled.

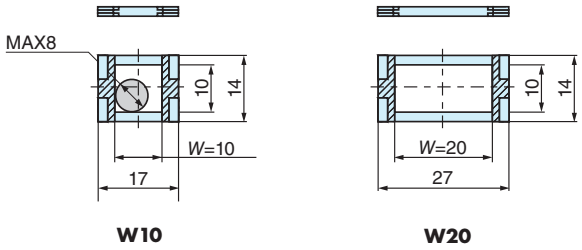
See page 15 for ordering information
See page 42 for model number of parts
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TKP13H10 Openable Stay (W10, W20)

Structure

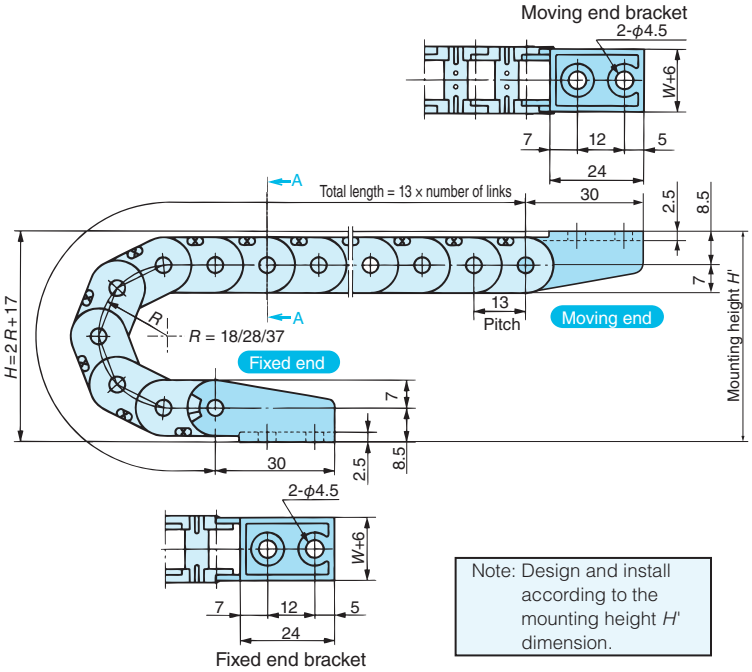


Cross-section dimensions



A–A arrow view

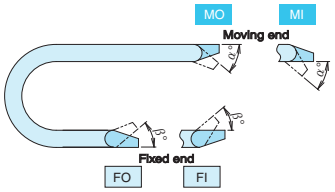
Dimensions & brackets



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
18	63 to 83
28	83 to 103
37	101 to 121

Notes: 1. MO and MI brackets and FO and FI brackets are each common parts.
2. Stays are delivered uninstalled.



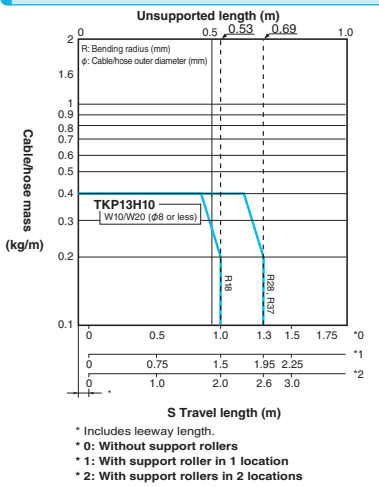
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
18	45	42
28		26
37		20

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		77

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

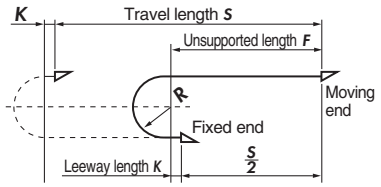


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 13 mm
K: Leeway length = 13 mm or greater

Model number

TKP13H10 - (1) W (2) R (3) TC + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay

(2) Inner width
10
20

(3) Bending radius
18
28
37

(4) Number of links

(5) Fixed end
FO
FI

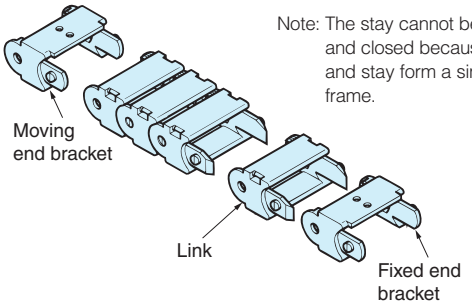
(6) Moving end
MO
MI

Note: Stays and brackets are delivered uninstalled.

See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

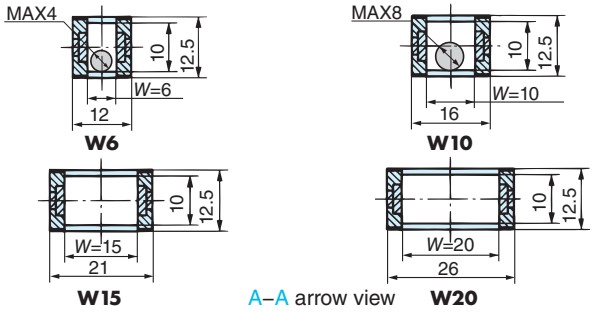
TKP13H10 Single-part Frame (W6, W10, W15, W20)

Structure

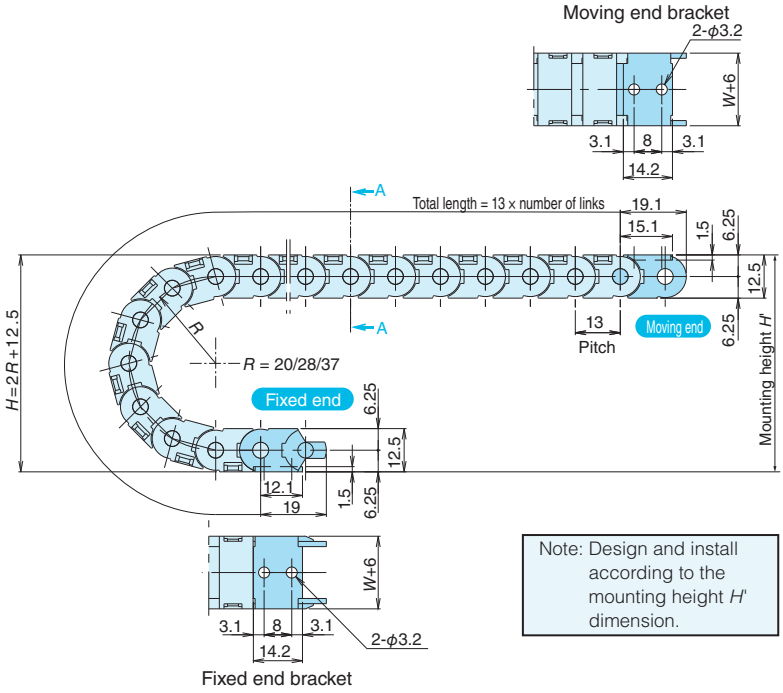


Note: The stay cannot be opened and closed because the link and stay form a single-part frame.

Cross-section dimensions



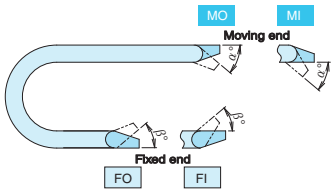
Dimensions & brackets



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
20	62.5 to 82.5
28	78.5 to 98.5
37	96.5 to 116.5

Note: MO, MI, FO, and FI brackets are all common parts.



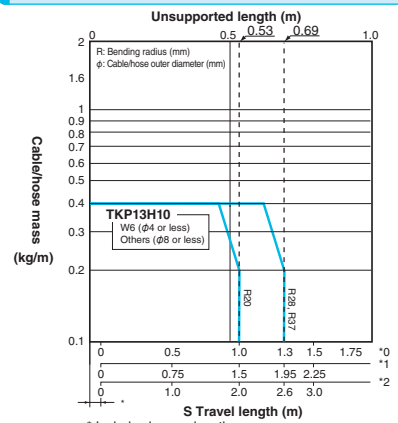
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all *R*	0	0

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		77

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

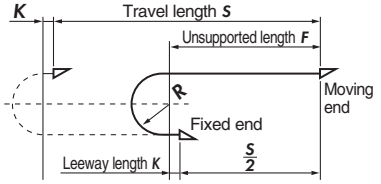


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 13 mm
K: Leeway length = 13 mm or greater

Model number

TKP13H10 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
20	Single-part frame (stay cannot be opened)

(2) Inner width
6
10
15
20

(3) Bending radius
20
28
37

(4) Number of links

(5) Fixed end
FO
FI

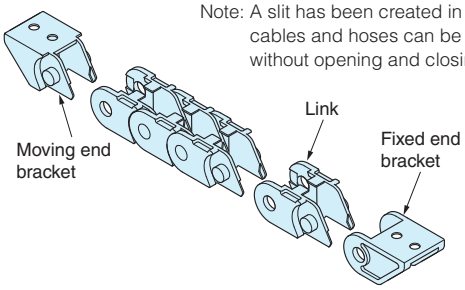
(6) Moving end
MO
MI

Note: Brackets are delivered uninstalled.

See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

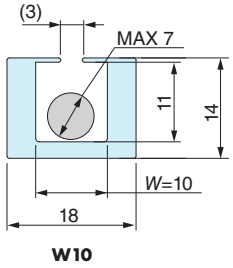
TKP17H11 (Patented)

Structure



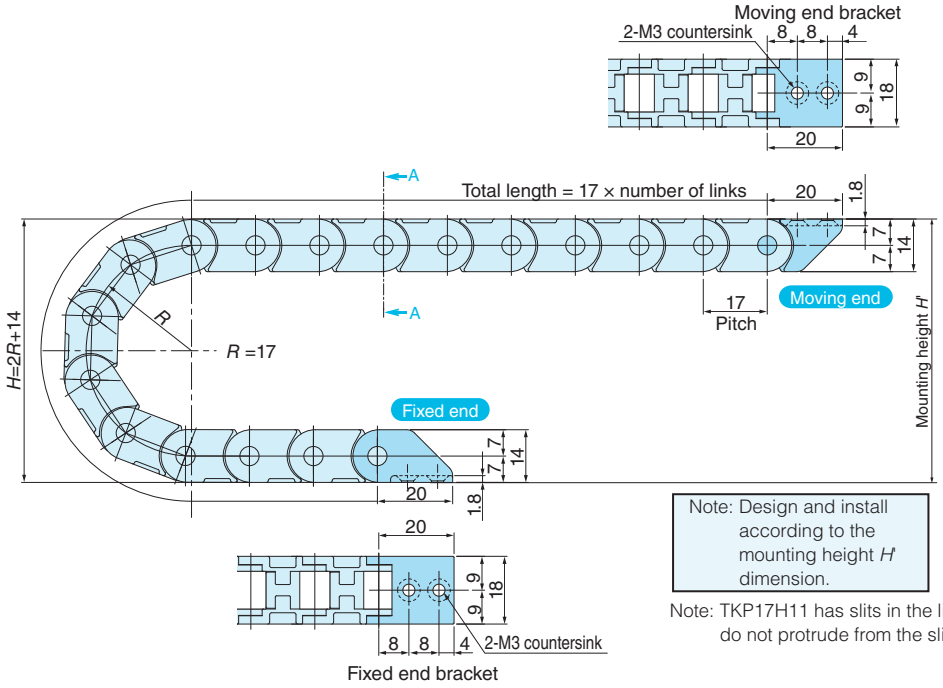
Note: A slit has been created in the link so cables and hoses can be installed without opening and closing stays.

Cross-section dimensions



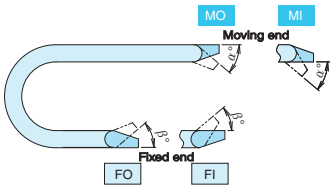
A–A arrow view

Dimensions & brackets



Bending radius R (mm)	Mounting height H' (mm)
17	58 to 78

Note: FO and FI brackets are common parts.



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
17	60	55

Note: Design and install according to the mounting height H' dimension.

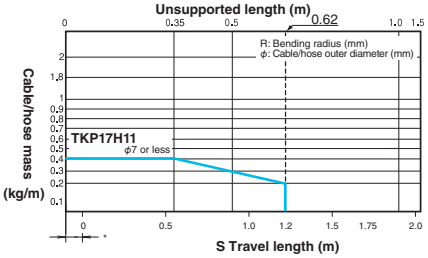
Note: TKP17H11 has slits in the links. Use flexible cables and hoses so that they do not protrude from the slits.

Basic specifications

Maximum travel speed (m/min)		150
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		60

Note: Cannot be used in acidic or alkaline environments.

Load diagram

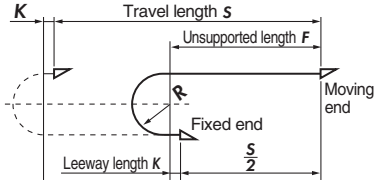


* Includes leeway length.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 17 mm
K: Leeway length = 17 mm or greater

Model number

TKP17H11 - (1) W (2) R (3) + (4) L - (5) - (6)

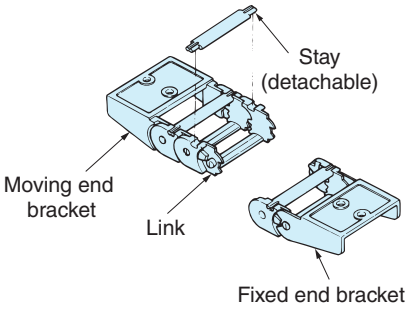
(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	10	17		FO	MO
				FI	MI

Note: Brackets are delivered uninstalled.

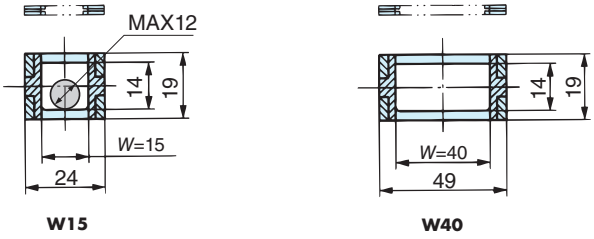
See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

TKP18H14 Openable Stay (W15, W40)

Structure

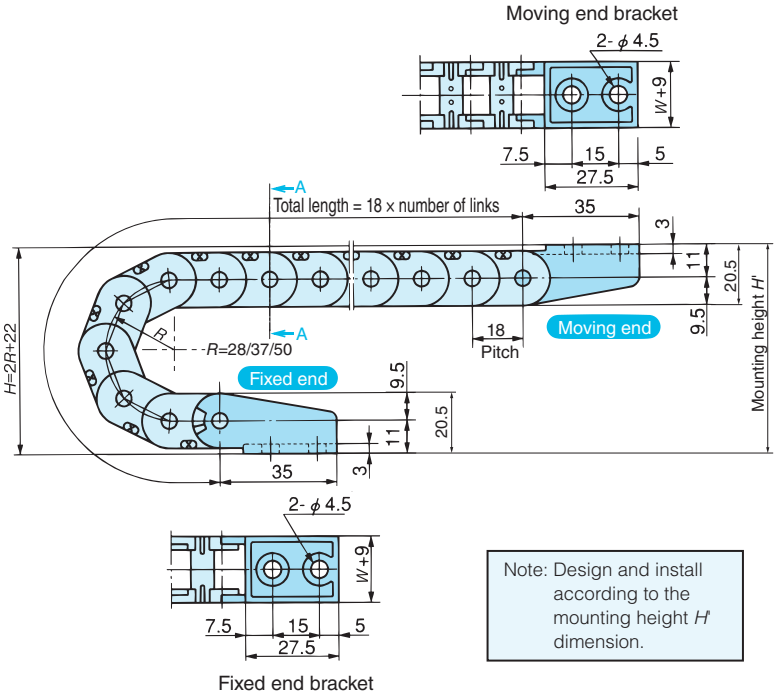


Cross-section dimensions



A–A arrow view

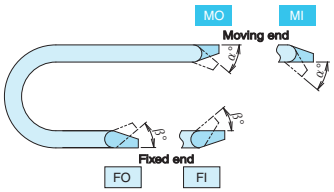
Dimensions & brackets



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
28	88 to 108
37	106 to 126
50	132 to 152

Notes: 1. MO and MI brackets and FO and FI brackets are each common parts.
2. Stays are delivered uninstalled.



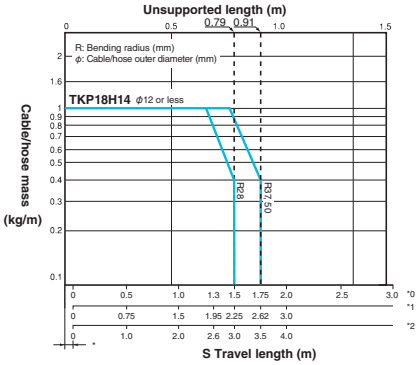
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
28	45	37
37		28
50		20

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		55

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

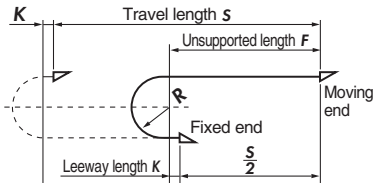


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 18 mm
K: Leeway length = 18 mm or greater

Model number

TKP18H14 - (1) W (2) R (3) TC + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay

(2) Inner width
15
40

(3) Bending radius
28
37
50

(4) Number of links

(5) Fixed end
FO
FI

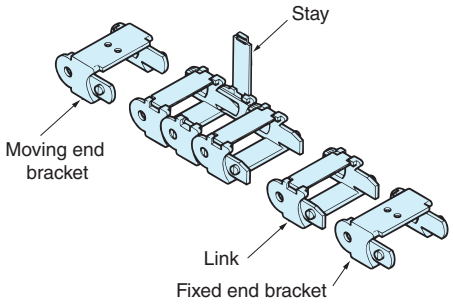
(6) Moving end
MO
MI

Note: Stays and brackets are delivered uninstalled.

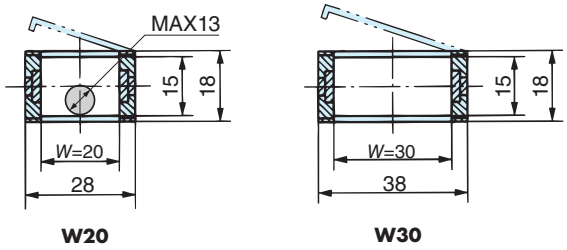
See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

TKP18H15 Openable Stay (W20, W30)

Structure

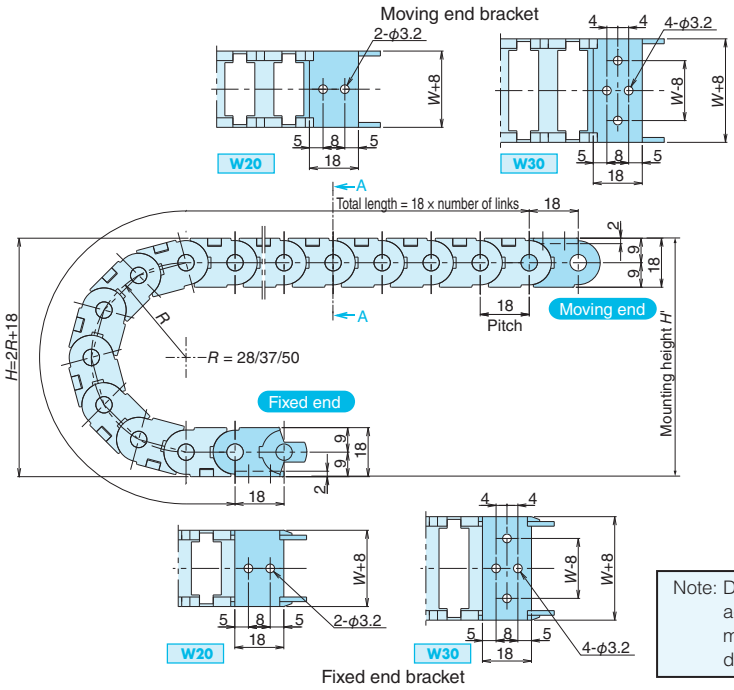


Cross-section dimensions



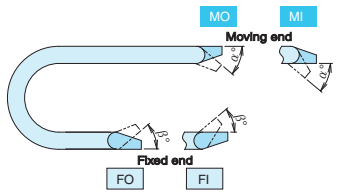
A–A arrow view

Dimensions & brackets



Bending radius R (mm)	Mounting height H' (mm)
28	84 to 104
37	102 to 122
50	128 to 148

Note: MO, MI, FO, and FI brackets are all common parts.



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all R	0	0

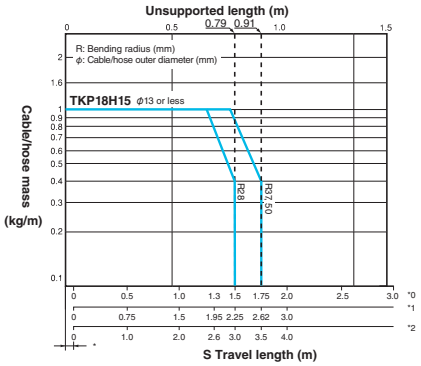
Note: Design and install according to the mounting height H' dimension.

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		55

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

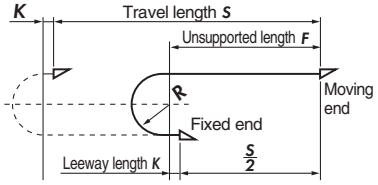


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 18 mm
K: Leeway length = 18 mm or greater

Model number

TKP18H15 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay

(2) Inner width
20
30

(3) Bending radius
28
37
50

(4) Number of links

(5) Fixed end
FO
FI

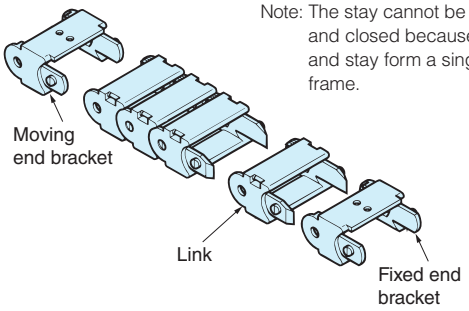
(6) Moving end
MO
MI

Note: Brackets are delivered uninstalled.

See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

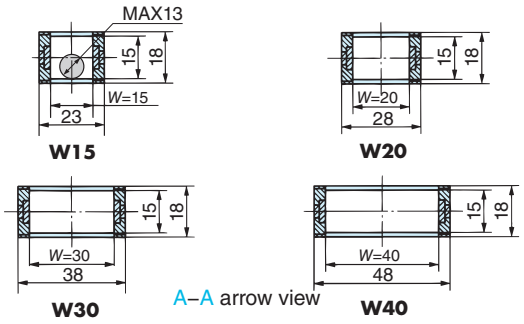
TKP18H15 Single-part Frame (W15, W20, W30, W40)

Structure

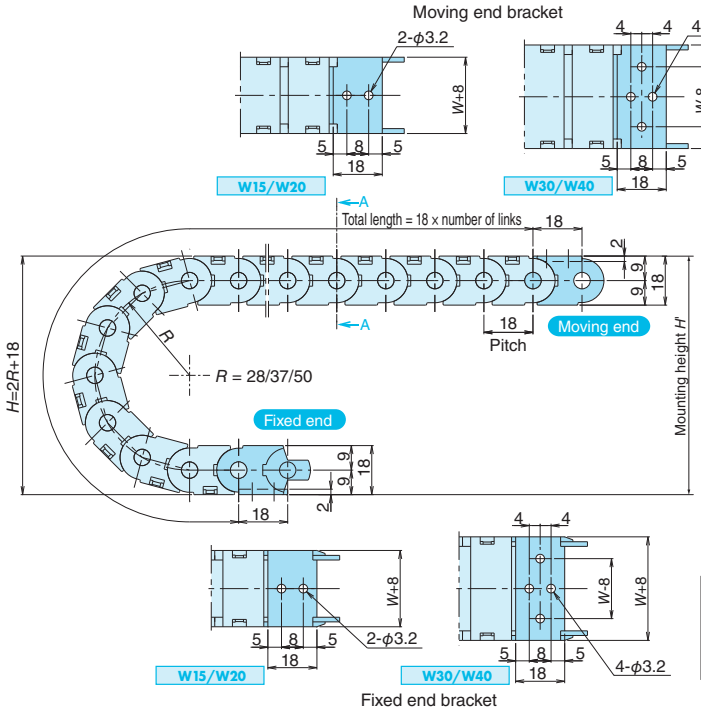


Note: The stay cannot be opened and closed because the link and stay form a single-part frame.

Cross-section dimensions

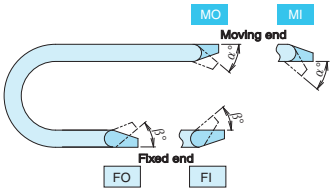


Dimensions & brackets



Bending radius R (mm)	Mounting height H' (mm)
28	84 to 104
37	102 to 122
50	128 to 148

Note: MO, MI, FO, and FI brackets are all common parts.



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all R	0	0

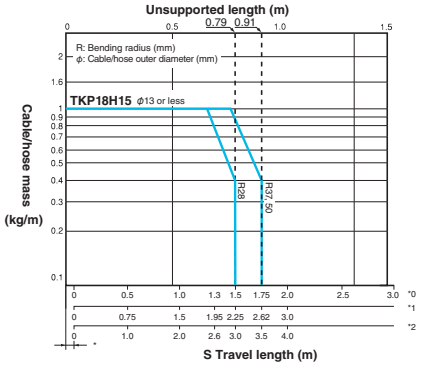
Note: Design and install according to the mounting height H' dimension.

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		55

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

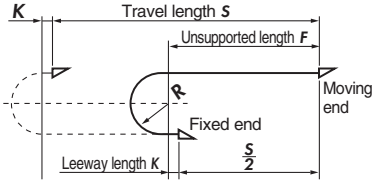


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 18 mm
K: Leeway length = 18 mm or greater

Model number

TKP18H15 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
20	Single-part frame (stay cannot be opened)

(2) Inner width
15
20
30
40

(3) Bending radius
28
37
50

(4) Number of links

(5) Fixed end
FO
FI

(6) Moving end
MO
MI

Note: Brackets are delivered uninstalled.

See page 15 for ordering information
See page 42 for model number of parts
See page 143 for product mass

TKP13H10 to TKP18H15 Bracket Model Number

TKP13H10

■ Bracket (openable stay)

Model number	For cable carrier model number
TKP13H10W6-MO	TKP13H10-30W6R■■
TKP13H10W6-MI	
TKP13H10W6-FO	
TKP13H10W6-FI	
TKP13H10W10TC-MO	TKP13H10-30W10R■■TC
TKP13H10W10TC-MI	
TKP13H10W10TC-FO	
TKP13H10W10TC-FI	
TKP13H10W15-MO	TKP13H10-30W15R■■
TKP13H10W15-MI	
TKP13H10W15-FO	
TKP13H10W15-FI	
TKP13H10W20TC-MO	TKP13H10-30W20R■■TC
TKP13H10W20TC-MI	
TKP13H10W20TC-FO	
TKP13H10W20TC-FI	

■ Bracket (single-part frame)

Model number	For cable carrier model number
TKP13H10W6-MO	TKP13H10-20W6R■■
TKP13H10W6-MI	
TKP13H10W6-FO	
TKP13H10W6-FI	
TKP13H10W10-MO	TKP13H10-20W10R■■
TKP13H10W10-MI	
TKP13H10W10-FO	
TKP13H10W10-FI	
TKP13H10W15-MO	TKP13H10-20W15R■■
TKP13H10W15-MI	
TKP13H10W15-FO	
TKP13H10W15-FI	
TKP13H10W20-MO	TKP13H10-20W20R■■
TKP13H10W20-MI	
TKP13H10W20-FO	
TKP13H10W20-FI	

TKP17H11

■ Bracket

Model number	For cable carrier model number
TKP17H11W10-MO	TKP17H11-30W10R17
TKP17H11W10-MI	
TKP17H11W10-FO	
TKP17H11W10-FI	

TKP18H14/TKP18H15

■ Bracket (openable stay)

Model number	For cable carrier model number
TKP18H14W15TC-MO	TKP18H14-30W15R■■TC
TKP18H14W15TC-MI	
TKP18H14W15TC-FO	
TKP18H14W15TC-FI	
TKP18H15W20-MO	TKP18H15-30W20R■■
TKP18H15W20-MI	
TKP18H15W20-FO	
TKP18H15W20-FI	
TKP18H15W30-MO	TKP18H15-30W30R■■
TKP18H15W30-MI	
TKP18H15W30-FO	
TKP18H15W30-FI	
TKP18H14W40TC-MO	TKP18H14-30W40R■■TC
TKP18H14W40TC-MI	
TKP18H14W40TC-FO	
TKP18H14W40TC-FI	

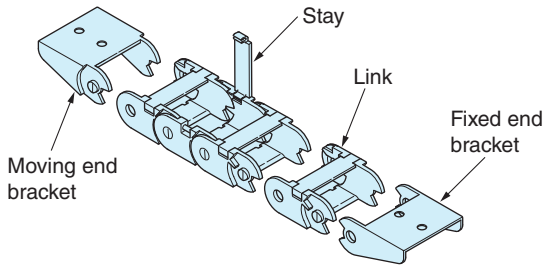
■ Bracket (single-part frame)

Model number	For cable carrier model number
TKP18H15W15-MO	TKP18H15-20W15R■■
TKP18H15W15-MI	
TKP18H15W15-FO	
TKP18H15W15-FI	
TKP18H15W20-MO	TKP18H15-20W20R■■
TKP18H15W20-MI	
TKP18H15W20-FO	
TKP18H15W20-FI	
TKP18H15W30-MO	TKP18H15-20W30R■■
TKP18H15W30-MI	
TKP18H15W30-FO	
TKP18H15W30-FI	
TKP18H15W40-MO	TKP18H15-20W40R■■
TKP18H15W40-MI	
TKP18H15W40-FO	
TKP18H15W40-FI	

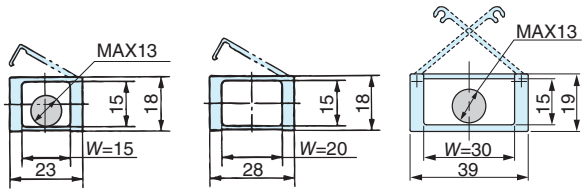
See page 15 for ordering information
See page 143 for product mass

TKP25H15

Structure



Cross-section dimensions

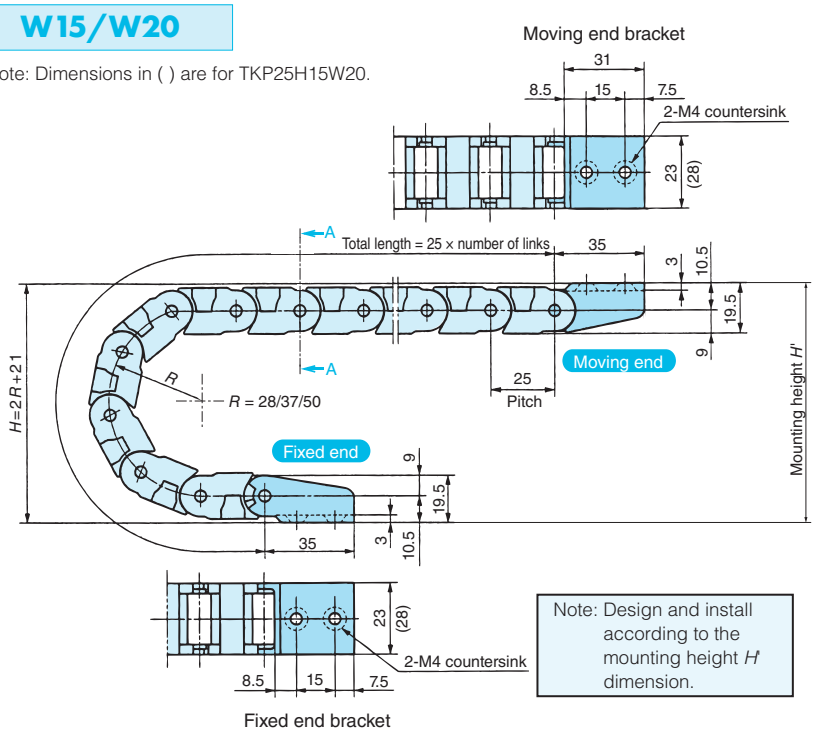


A–A arrow view

Dimensions & brackets

W15/W20

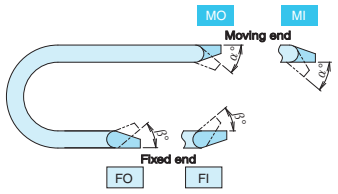
Note: Dimensions in ( ) are for TKP25H15W20.



Note: Design and install according to the mounting height *H'* dimension.

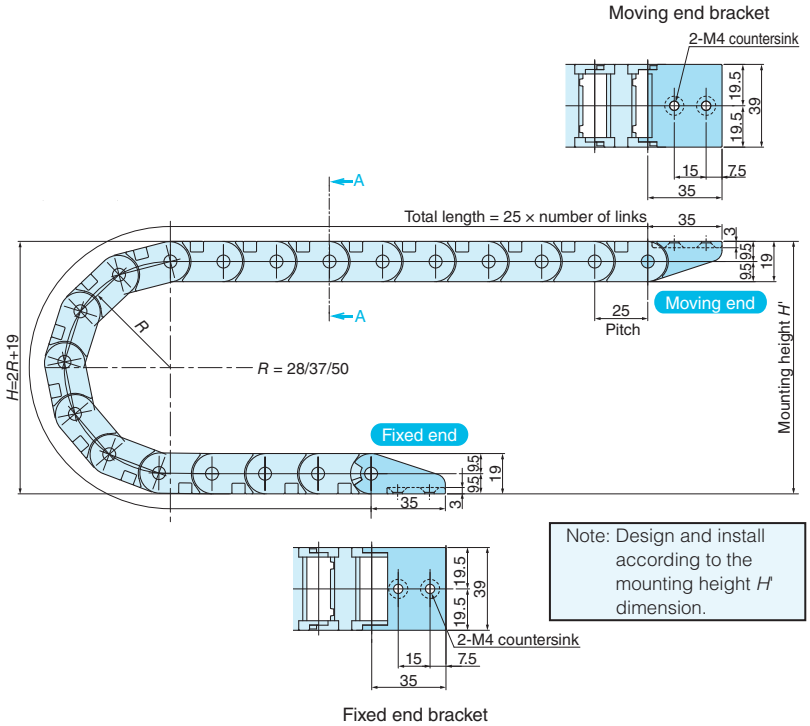
Bending radius *R* (mm)	Mounting height *H'* (mm)
28	87 to 107
37	105 to 125
50	131 to 151

Note: MO and MI brackets and FO and FI brackets are each common parts.



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
28	30	53
37		39
50		28

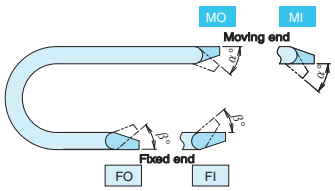
W30



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
28	85 to 105
37	103 to 123
50	129 to 149

Note: FO and FI brackets are common parts.



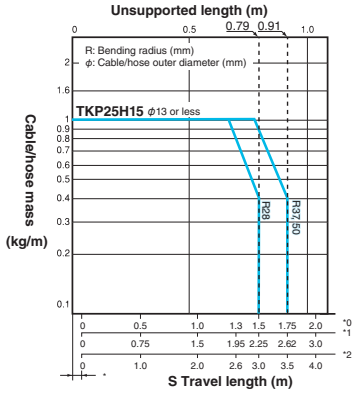
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
28	40	53
37		
50		

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
Standard length (No. of links)		40

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

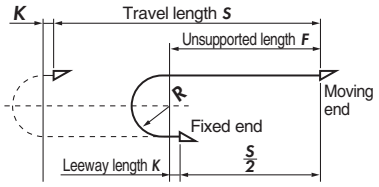


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 25 mm
K: Leeway length = 25 mm or greater

Model number

TKP25H15 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options		(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30	Outside openable stay	15	28		FO	MO
		20	37		FI	MI
		30	50			

Note: Brackets are delivered uninstalled.

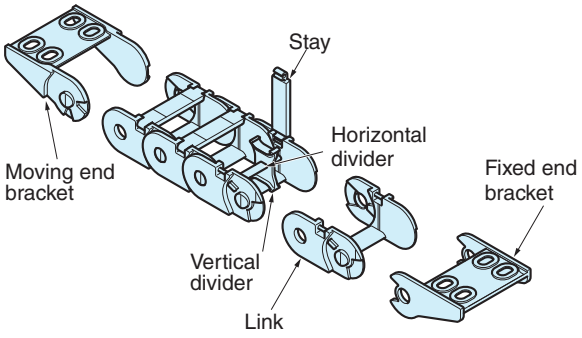
■ Bracket

Model number	For cable carrier model number
TKP25H15W15-MO	TKP25H15-30W15R■■
TKP25H15W15-MI	
TKP25H15W15-FO	
TKP25H15W15-FI	
TKP25H15W20-MO	TKP25H15-30W20R■■
TKP25H15W20-MI	
TKP25H15W20-FO	
TKP25H15W20-FI	
TKP25H15W30-MO	TKP25H15-30W30R■■
TKP25H15W30-MI	
TKP25H15W30-FO	
TKP25H15W30-FI	

See page 15 for ordering information
See page 143 for product mass

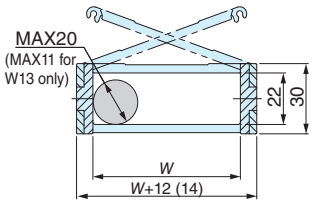
TKP35H22

Structure

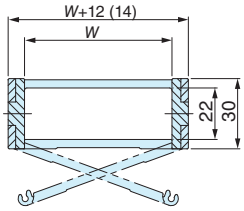


Cross-section dimensions

Outside openable stay



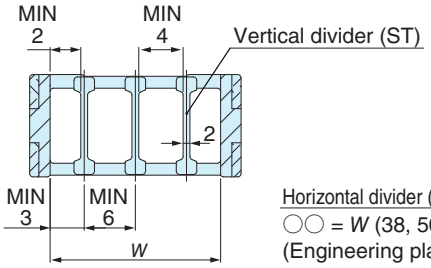
Inside openable stay



Note: Figures in ( ) are for W = 63.
W = 13, 25, 38, 50, 63
A–A arrow view

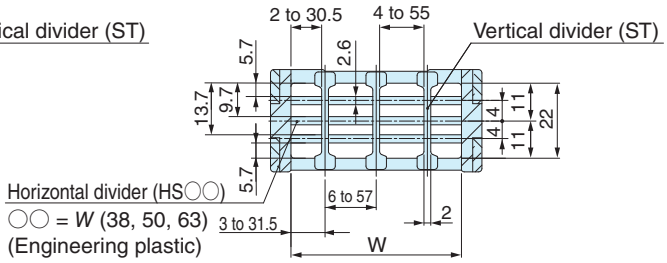
Divider dimensions

(1) When using only vertical dividers



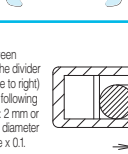
W = 13, 25, 38, 50, 63

(2) Fully-stayed multiple height separation (DSA type)

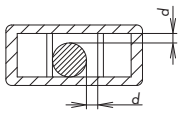


W = 38, 50, 63 (W = 13, 25 are not applicable)

Vertical divider

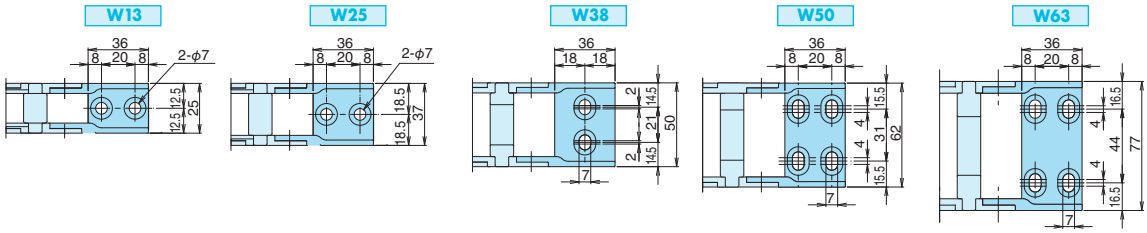


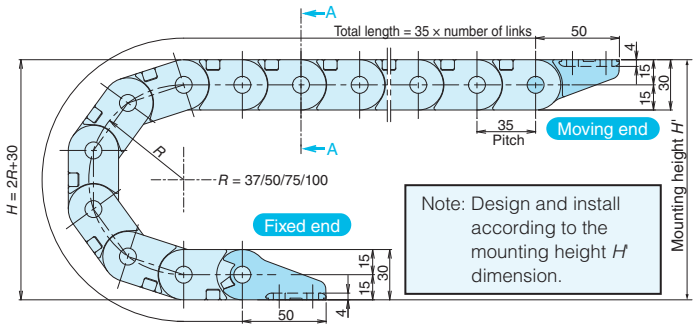
Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



Dimensions & brackets

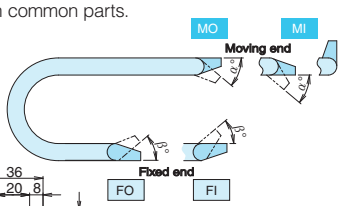
Moving end bracket

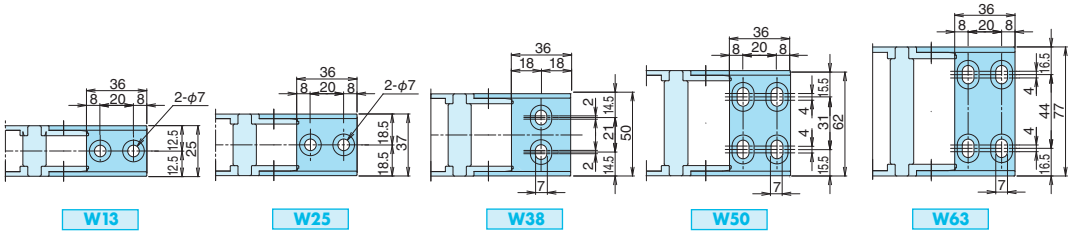




Bending radius R (mm)	Mounting height H' (mm)
37	114 to 134
50	140 to 160
75	190 to 210
100	240 to 260

Note: MO and MI brackets and FO and FI brackets are each common parts.





Fixed end bracket

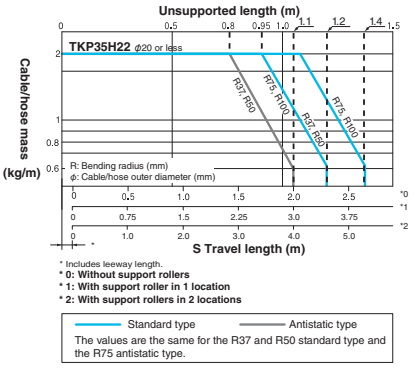
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
37	0	60
50		
75		
100		

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
Standard length (No. of links)		25

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

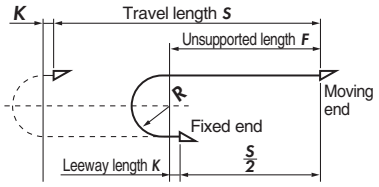


Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 35 mm
K: Leeway length = 35 mm or greater

Model number

TKP35H22 - (1) W (2) R (3) + (4) L - (5) - (6)

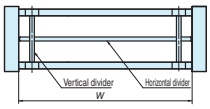
(1) Opening options		(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30	Outside openable stay	13	37		FO	MO
40	Inside openable stay	25	50		FI	MI
		38	75			
		50	100			
		63				

Notes: 1. Install dividers every 2 links.
2. Brackets and dividers are delivered uninstalled.
3. Refer to page 131 for model number for the gliding arrangement.
4. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP35H22-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP35H22-HS (Dimension *W*) *W* = 38/50/63	1 horizontal divider	K (pcs)

DSA type



■ Vertical divider

Model number	For cable carrier model number
TKP35H22-ST	TKP35H22-30/40W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP35H22-HS38	TKP35H22-30/40W38R■■
TKP35H22-HS50	TKP35H22-30/40W50R■■
TKP35H22-HS63	TKP35H22-30/40W63R■■

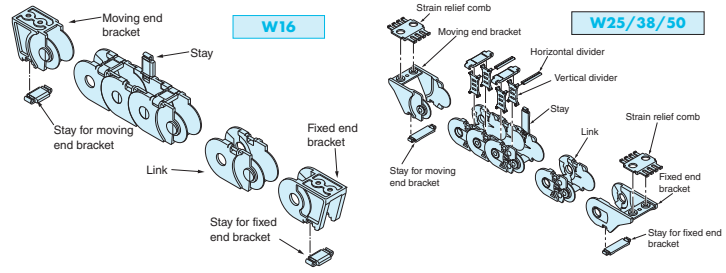
■ Bracket

Model number	For cable carrier model number
TKP35H22W13-MO	TKP35H22-30/40W13R■■
TKP35H22W13-MI	
TKP35H22W13-FO	
TKP35H22W13-FI	
TKP35H22W25-MO	TKP35H22-30/40W25R■■
TKP35H22W25-MI	
TKP35H22W25-FO	
TKP35H22W25-FI	
TKP35H22W38-MO	TKP35H22-30/40W38R■■
TKP35H22W38-MI	
TKP35H22W38-FO	
TKP35H22W38-FI	
TKP35H22W50-MO	TKP35H22-30/40W50R■■
TKP35H22W50-MI	
TKP35H22W50-FO	
TKP35H22W50-FI	
TKP35H22W63-MO	TKP35H22-30/40W63R■■
TKP35H22W63-MI	
TKP35H22W63-FO	
TKP35H22W63-FI	

See page 15 for ordering information
See page 143 for product mass

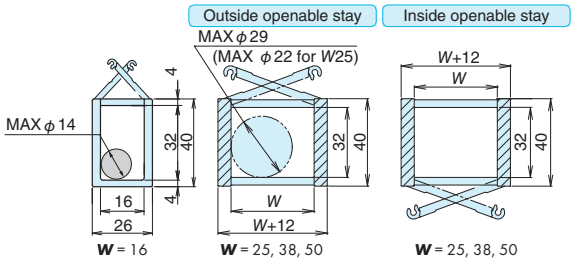
TKP35H32

Structure



Note: The stay, stay for the moving end bracket, and stay for the fixed end bracket are common parts.

Cross-section dimensions

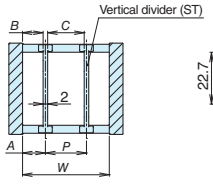


A–A arrow view

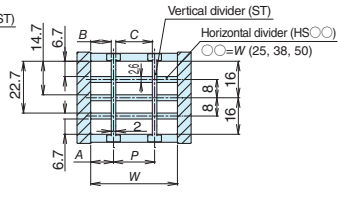
Note: Cable carrier must be used at low speeds and frequencies when cables and hoses are stacked inside.

Divider dimensions

(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



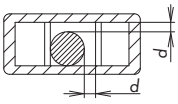
Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)
ST (sliding installation)	25/38/50	3 to 21	2 to 20	6 to 44	4 to 42
ST (fixable installation)	25	4.5 to 14.5 (2 mm increments)	3.5 to 13.5 (2 mm increments)	6 to 16 (2 mm increments)	4 to 14 (2 mm increments)
	38	5 to 21 (2 mm increments)	4 to 20 (2 mm increments)	6 to 28 (2 mm increments)	4 to 26 (2 mm increments)
	50	5 to 21 (2 mm increments)	4 to 20 (2 mm increments)	6 to 40 (2 mm increments)	4 to 38 (2 mm increments)

Notes: 1. Vertical dividers and horizontal dividers cannot be installed to the W16.
2. The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers. 2 or more vertical dividers are required when using a horizontal divider.

Notes:

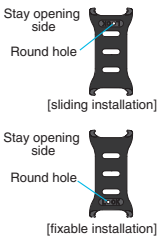
A: **Distance from center of vertical divider to end face of link**
B: **Gap between vertical divider and link**
P: **Distance between the centers of neighboring vertical dividers**
C: **Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



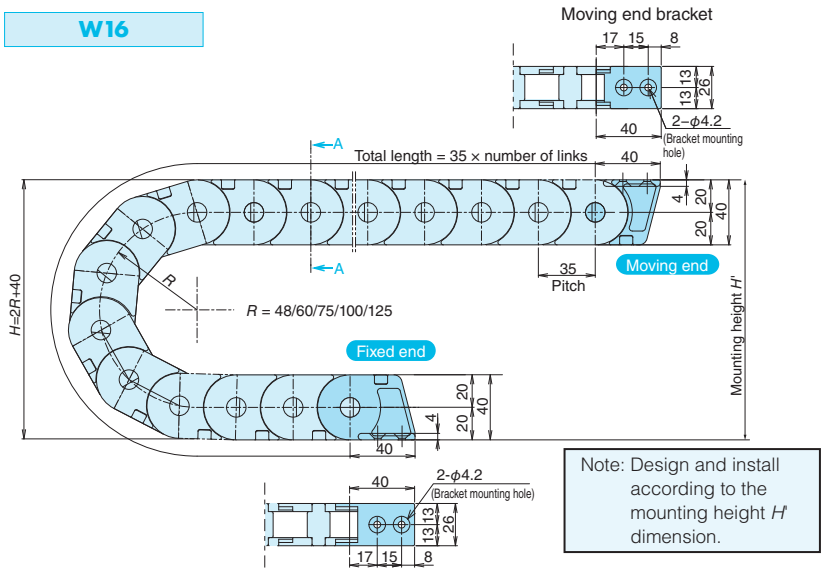
Vertical divider (fastening method)

◆ Fixable installation and sliding installation can be selected by the direction the same part is installed.



Dimensions & brackets

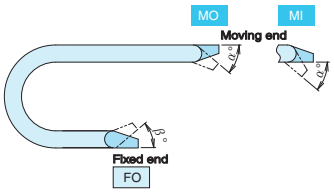
W16



Note: Design and install according to the mounting height *H'* dimension.

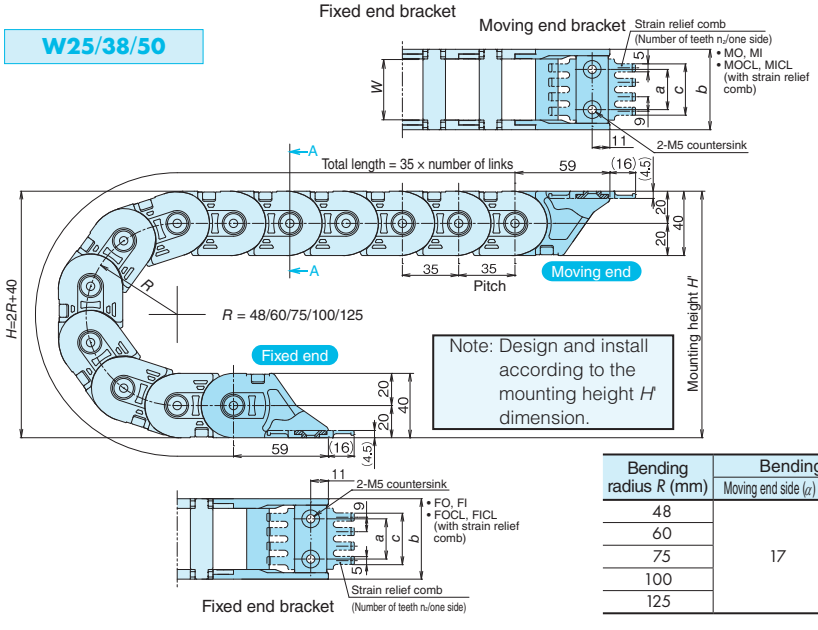
Bending radius *R* (mm)	Mounting height *H'* (mm)
48	146 to 166
60	170 to 190
75	200 to 220
100	250 to 270
125	300 to 320

Note: MO and MI brackets are common parts.



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (*α*)	Fixed end side (*β*)
48	28	27
60		
75		
100		
125		

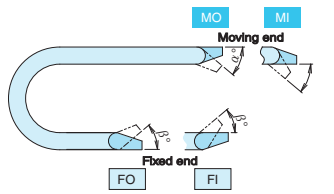
W25/38/50



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
48	146 to 166
60	170 to 190
75	200 to 220
100	250 to 270
125	300 to 320

Note: MO and MI brackets and FO and FI brackets are each common parts.



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (*α*)	Fixed end side (*β*)
48	17	27
60		17
75		10
100		3
125		0

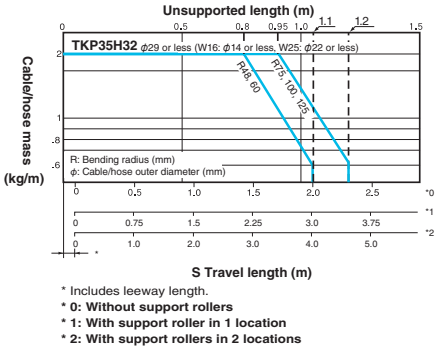
W (mm)	*a* (mm)	*b* (mm)	*c* (mm)	Strain relief comb n_z (Number of teeth)
25	12	37	23	3
38	25	50	32	4
50	37	62	50	6

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		-40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider ★2	
	Horizontal divider ★2	Engineering plastic (white)
Standard length (No. of links)		25

Notes: ★1. 150 m/min for support roller arrangement.
★2. Vertical dividers and horizontal dividers cannot be installed to the W16.
3. Cannot be used in acidic or alkaline environments.

Load diagram

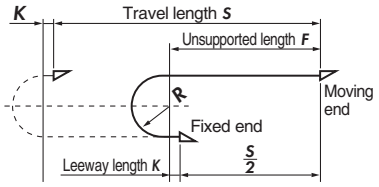


* Includes leeway length.
* 0: Without support rollers
* 1: With support roller in 1 location
* 2: With support rollers in 2 locations

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 35 mm
K: Leeway length = 35 mm or greater

Model number

W16

TKP35H32 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options		(2) Inner width	(3) Bending radius		(4) Number of links	(5) Fixed end	(6) Moving end
30	Outside openable stay	16	48	100		FO	MO
			60	125			MI
			75				

W25/38/50

TKP35H32 - (1) W (2) R (3) + (4) L - (5) - (6)

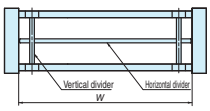
(1) Opening options		(2) Inner width	(3) Bending radius		(4) Number of links	(5) Fixed end		(6) Moving end	
30	Outside openable stay	25	48	100		FO	FOCL	MO	MOCL
40	Inside openable stay	38	60	125		FI	FICL	MI	MICL
		50	75						

Notes: 1. Install dividers every 2 links.
2. Brackets, vertical dividers, horizontal dividers, and strain relief combs are delivered uninstalled.
3. Vertical dividers and horizontal dividers cannot be installed with an inner width of 16 mm.

■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP35H32-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP35H32-HS (Dimension W) W = 25/38/50	1 horizontal divider	K (pcs)

DSA type



■ Vertical divider

Model number	For cable carrier model number
TKP35H32-ST	TKP35H32-30/40W■■ (■■ = 25/38/50)

■ Horizontal divider

Model number	For cable carrier model number
TKP35H32-HS25	TKP35H32-30/40W25R■■
TKP35H32-HS38	TKP35H32-30/40W38R■■
TKP35H32-HS50	TKP35H32-30/40W50R■■

■ Strain relief comb

Model number	Applicable bracket
TKP35H32W25-CL-P	TKP35H32W25-○○
TKP35H32W38-CL-P	TKP35H32W38-○○
TKP35H32W50-CL-P	TKP35H32W50-○○

■ Bracket

Model number	For cable carrier model number
TKP35H32W16-MO	TKP35H32-30W16R■■
TKP35H32W16-MI	
TKP35H32W16-FO	
TKP35H32W25-MO	TKP35H32-30/40W25R■■
TKP35H32W25-MI	
TKP35H32W25-FO	
TKP35H32W25-FI	
TKP35H32W38-MO	TKP35H32-30/40W38R■■
TKP35H32W38-MI	
TKP35H32W38-FO	
TKP35H32W38-FI	
TKP35H32W50-MO	TKP35H32-30/40W50R■■
TKP35H32W50-MI	
TKP35H32W50-FO	
TKP35H32W50-FI	

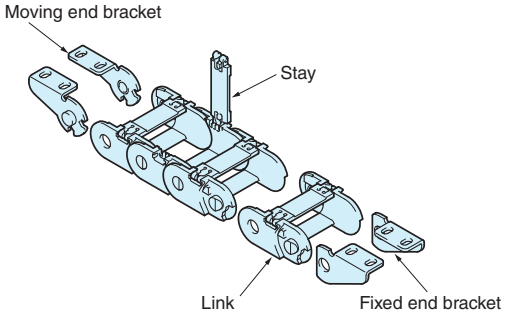
■ Bracket (with strain relief comb)

Model number	For cable carrier model number
TKP35H32W25-MOCL	TKP35H32-30/40W25R■■
TKP35H32W25-MICL	
TKP35H32W25-FOCL	
TKP35H32W25-FICL	
TKP35H32W38-MOCL	TKP35H32-30/40W38R■■
TKP35H32W38-MICL	
TKP35H32W38-FOCL	
TKP35H32W38-FICL	
TKP35H32W50-MOCL	TKP35H32-30/40W50R■■
TKP35H32W50-MICL	
TKP35H32W50-FOCL	
TKP35H32W50-FICL	

See page 15 for ordering information
See page 143 for product mass

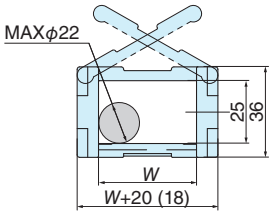
TKP45H25

Structure

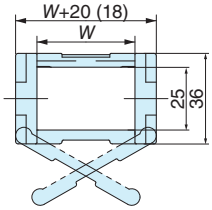


Cross-section dimensions

Outside openable stay



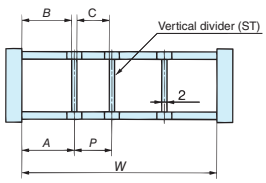
Inside openable stay



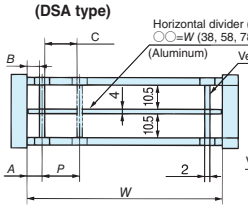
Note: Figures in ( ) are for W = 38.
W = 38, 58, 78, 103
A–A arrow view

Divider dimensions

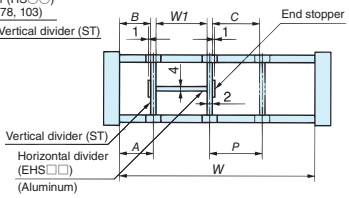
(1) When using only vertical dividers



(2) Fully-stayed 2-layers height separation (DSA type)



(3) Partial 2-layers height separation (DSB type)



Vertical divider

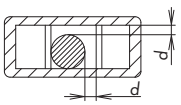


Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)	W1 (mm)
ST (sliding installation)	38	4 to 43	3 to 42	8 to 95	6 to 93	11 to W−10 (1 mm increments)
	58					
	78					
	103					

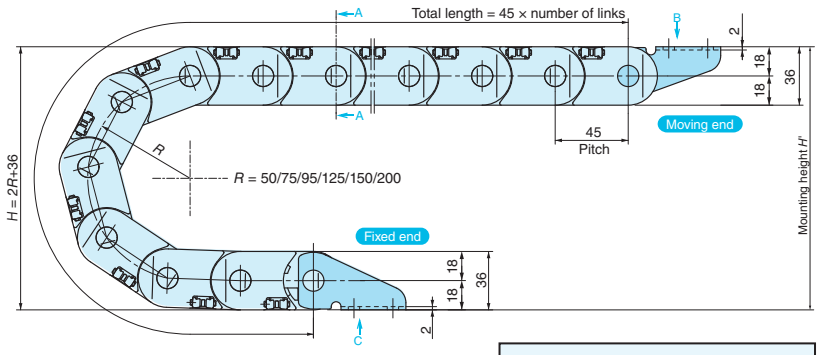
Notes:

A: **Distance from center of vertical divider to end face of link**
B: **Gap between vertical divider and link**
P: **Distance between the centers of neighboring vertical dividers**
C: **Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



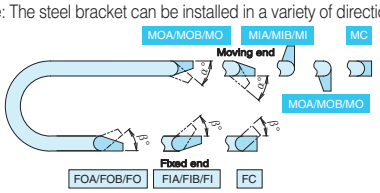
Dimension drawings



Note: Design and install according to the mounting height H' dimension.

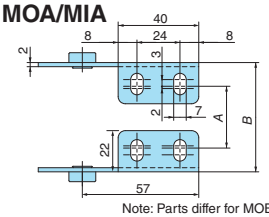
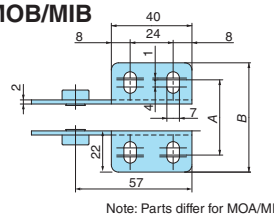
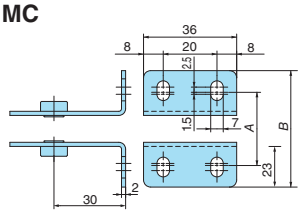
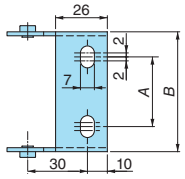
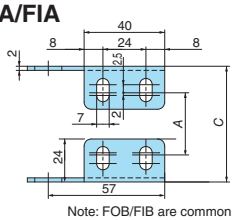
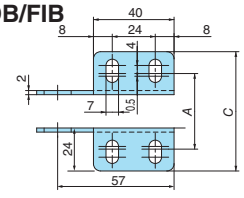
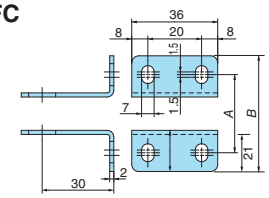
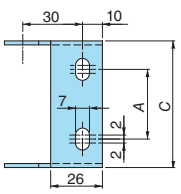
Bending radius R (mm)	Mounting height H' (mm)
50	146 to 166
75	196 to 216
95	236 to 256
125	296 to 316
150	346 to 366
200	446 to 466

Note: The steel bracket can be installed in a variety of directions.



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all R	0	25

Steel bracket variants and dimensions

	Connection surface inside	Connection surface outside	Flange mounting	Single-part steel bracket
Moving end bracket B arrow view	**MOA/MIA**  Note: Parts differ for MOB/MIB.	**MOB/MIB**  Note: Parts differ for MOA/MIA.	**MC** 	**MO/MI** 
Fixed end bracket C arrow view	**FOA/FIA**  Note: FOB/FIB are common parts.	**FOB/FIB**  Note: FOA/FIA are common parts.	**FC** 	**FO/FI** 

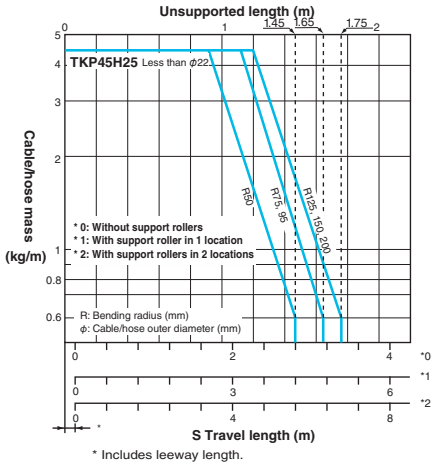
Inner width W (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	A (mm)	B (mm)	C (mm)
38	23	48	52	72	88	96	70	90	25	48	53
58	44	69	73	93	109	117	91	111	44	69	74
78	64	89	93	113	129	137	111	131	64	89	94
103	89	114	118	138	154	162	136	156	90	114	119

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			20

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

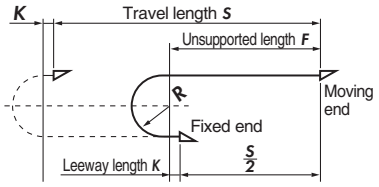


Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 45 mm
K: Leeway length = 45 mm or greater

Model number

TKP45H25 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay
40	Inside openable stay

(2) Inner width
38
58
78
103

(3) Bending radius
50
75
95
125
150
200

(4) Number of links

(5) Fixed end
FOA
FIA
FOB
FIB
FC
FO
FI

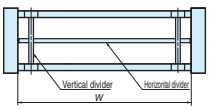
(6) Moving end
MOA
MIA
MOB
MIB
MC
MO
MI

Notes: 1. Steel brackets (excluding single-part steel brackets) and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. Steel brackets and dividers are delivered uninstalled.
4. Refer to page 131 for model number for the gliding arrangement.
5. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

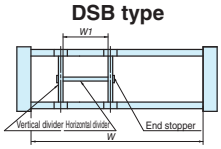
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP45H25-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP45H25-HS (Dimension W) W = 38/58/78/103	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKP45H25-EHS (Dimension W1) W1 = 11 to (W-10): 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKP45H25-ST	TKP45H25-30/40W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP45H25-HS38	TKP45H25-30/40W38R■■
TKP45H25-HS58	TKP45H25-30/40W58R■■
TKP45H25-HS78	TKP45H25-30/40W78R■■
TKP45H25-HS103	TKP45H25-30/40W103R■■

■ Horizontal divider with end stoppers

Model number
TKP45H25-EHS□□

□□: Integer between 11 and 93

■ Split steel bracket

Model number	For cable carrier model number
TKP45H25-MOA	TKP45H25-30/40W■■R■■
TKP45H25-MIA	
TKP45H25-MOB	
TKP45H25-MIB	
TKP45H25-MC	
TKP45H25-FOA	
TKP45H25-FIA	
TKP45H25-FOB	
TKP45H25-FIB	
TKP45H25-FC	

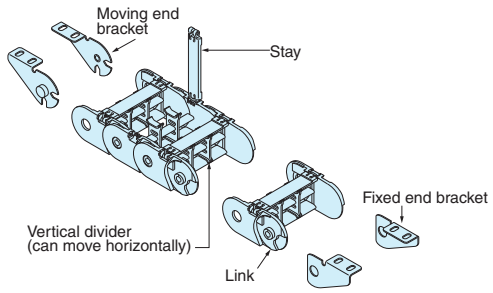
■ Single-part steel bracket

Model number	For cable carrier model number
TKP45H25W38-MO	TKP45H25-30/40W38R■■
TKP45H25W38-MI	
TKP45H25W38-FO	
TKP45H25W38-FI	
TKP45H25W58-MO	TKP45H25-30/40W58R■■
TKP45H25W58-MI	
TKP45H25W58-FO	
TKP45H25W58-FI	
TKP45H25W78-MO	TKP45H25-30/40W78R■■
TKP45H25W78-MI	
TKP45H25W78-FO	
TKP45H25W78-FI	
TKP45H25W103-MO	TKP45H25-30/40W103R■■
TKP45H25W103-MI	
TKP45H25W103-FO	
TKP45H25W103-FI	

See page 15 for ordering information
See page 143 for product mass

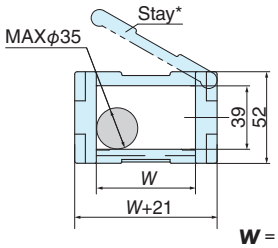
TKP58H39

Structure

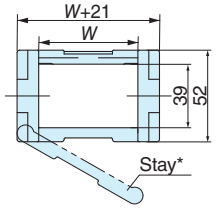


Cross-section dimensions

Outside openable stay



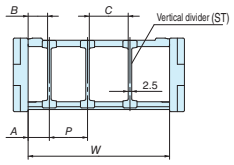
Inside openable stay



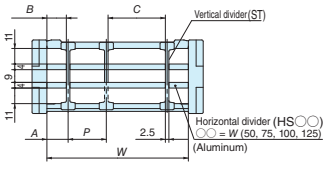
W = 50, 75, 100, 125
A–A arrow view
* Change the orientation of the stay to change the direction that the stay opens.

Divider dimensions

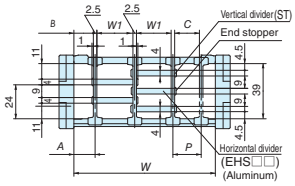
(1) When using only vertical dividers



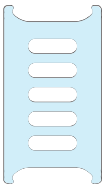
(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



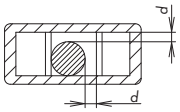
Vertical divider



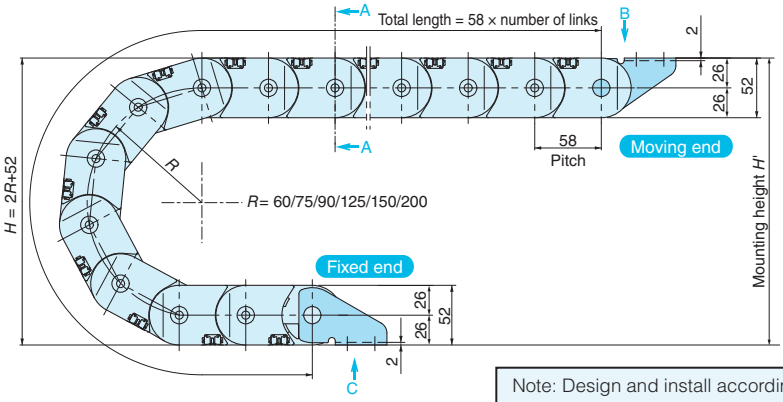
Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)	W1 (mm)
ST (sliding installation)	50	5 to 43	3.75 to 41.75	10 to 115	7.5 to 112.5	11 to W−13 (1 mm increments)
	75					
	100					
	125					

Notes:
A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



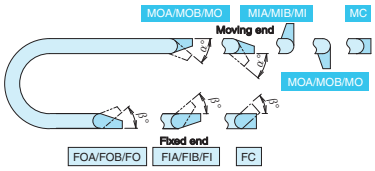
Dimension drawings



Note: Design and install according to the mounting height *H'* dimension.

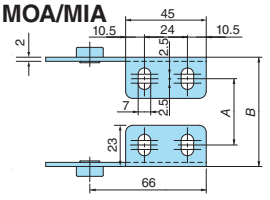
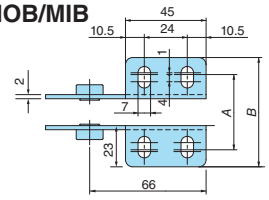
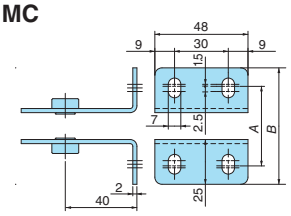
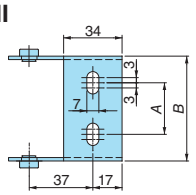
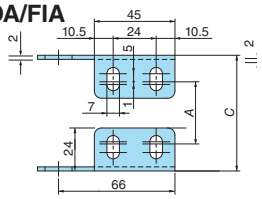
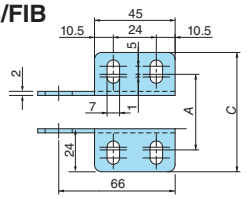
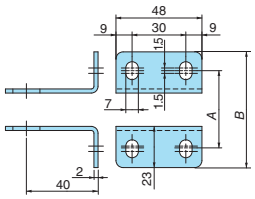
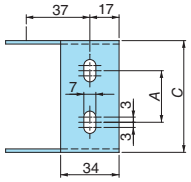
Bending radius *R* (mm)	Mounting height *H'* (mm)
60	182 to 202
75	212 to 232
90	242 to 262
125	312 to 332
150	362 to 382
200	462 to 482

Note: The steel bracket can be installed in a variety of directions.



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
Common for all *R*	0	67

Steel bracket variants and dimensions

	Connection surface inside	Connection surface outside	Flange mounting	Single-part steel bracket
Moving end bracket B arrow view	**MOA/MIA**  Note: Parts differ for MOB/MIB.	**MOB/MIB**  Note: Parts differ for MOA/MIA.	**MC** 	**MO/MI** 
Fixed end bracket C arrow view	**FOA/FIA**  Note: FOB/FIB are common parts.	**FOB/FIB**  Note: FOA/FIA are common parts.	**FC** 	**FO/FI** 

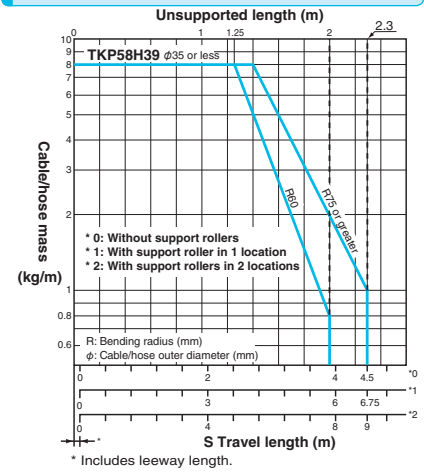
Inner width W (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	A (mm)	B (mm)	C (mm)
50	37	61	67	83	103	110	87	108	30	61	66
75	62	86	92	108	128	135	112	133	55	86	91
100	87	111	117	133	153	160	137	158	80	111	116
125	112	136	142	158	178	185	162	183	105	136	141

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			20

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

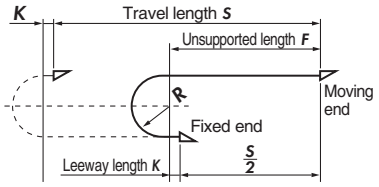


Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 58 mm
K: Leeway length = 58 mm or greater

Model number

TKP58H39 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	
30	Outside openable stay
40	Inside openable stay

(2) Inner width
50
75
100
125

(3) Bending radius
60
75
90
125
150
200

(4) Number of links

(5) Fixed end
FOA
FIA
FOB
FIB
FC
FO
FI

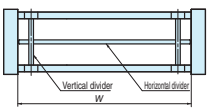
(6) Moving end
MOA
MIA
MOB
MIB
MC
MO
MI

Notes: 1. Steel brackets (excluding single-part steel brackets) and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. Steel brackets and dividers are delivered uninstalled.
4. Refer to page 131 for model number for the gliding arrangement.
5. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

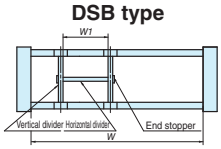
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP58H39-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP58H39-HS (Dimension W) W = 50/75/100/125	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKP58H39-EHS (Dimension W1) W1 = 11 to (W-13): 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKP58H39-ST	TKP58H39-30/40W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP58H39-HS50	TKP58H39-30/40W50R■■
TKP58H39-HS75	TKP58H39-30/40W75R■■
TKP58H39-HS100	TKP58H39-30/40W100R■■
TKP58H39-HS125	TKP58H39-30/40W125R■■

■ Horizontal divider with end stoppers

Model number
TKP58H39-EHS□□

□□: Integer between 11 and 112

■ Split steel bracket

Model number	For cable carrier model number
TKP58H39-MOA	TKP58H39-30/40W■■R■■
TKP58H39-MIA	
TKP58H39-MOB	
TKP58H39-MIB	
TKP58H39-MC	
TKP58H39-FOA	TKP58H39-30/40W■■R■■
TKP58H39-FIA	
TKP58H39-FOB	
TKP58H39-FIB	
TKP58H39-FC	

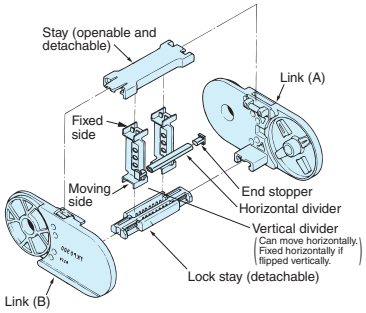
■ Single-part steel bracket

Model number	For cable carrier model number
TKP58H39W50-MO	TKP58H39-30/40W50R■■
TKP58H39W50-MI	
TKP58H39W50-FO	
TKP58H39W50-FI	
TKP58H39W75-MO	TKP58H39-30/40W75R■■
TKP58H39W75-MI	
TKP58H39W75-FO	
TKP58H39W75-FI	
TKP58H39W100-MO	TKP58H39-30/40W100R■■
TKP58H39W100-MI	
TKP58H39W100-FO	
TKP58H39W100-FI	
TKP58H39W125-MO	TKP58H39-30/40W125R■■
TKP58H39W125-MI	
TKP58H39W125-FO	
TKP58H39W125-FI	

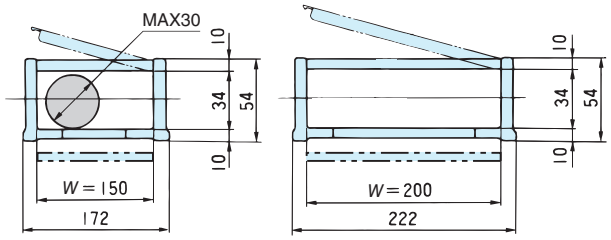
See page 15 for ordering information
See page 143 for product mass

TKP62H34

Structure



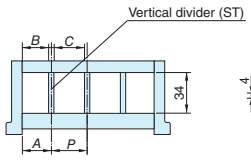
Cross-section dimensions



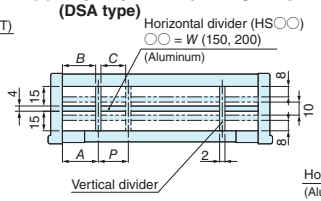
A–A arrow view

Divider dimensions

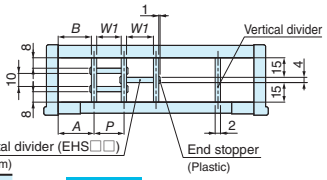
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



Vertical divider (fastening method)



Note: For the sliding installation, position the protrusion on the stay side. For the fixable installation, position the protrusion on the lock stay side.

Protrusion

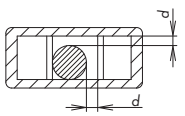
Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)	W1 (mm)
ST (sliding installation)	Common for all widths	27.5 to 42.5	26.5 to 41.5	15 to 135	13 to 133	13 to 133 (adjustable in 1 mm increments)
ST (fixable installation)	150	27.5 to 42.5 (5 mm increments)	26.5 to 41.5 (5 mm increments)	15 to 95 (5 mm increments)	13 to 93 (5 mm increments)	13 to 93 (5 mm increments)
	200	27.5 to 42.5 (5 mm increments)	26.5 to 41.5 (5 mm increments)	15 to 145 (5 mm increments)	13 to 143 (5 mm increments)	13 to 133 (5 mm increments)

Notes: 1. The maximum values for gaps *A* and *P* are applied when using horizontal dividers.
2. The divider can slide between *W*–55. The fastening pitch of fixable dividers is 5 mm increments. However, the pitch of neighboring dividers is 15 mm or greater.

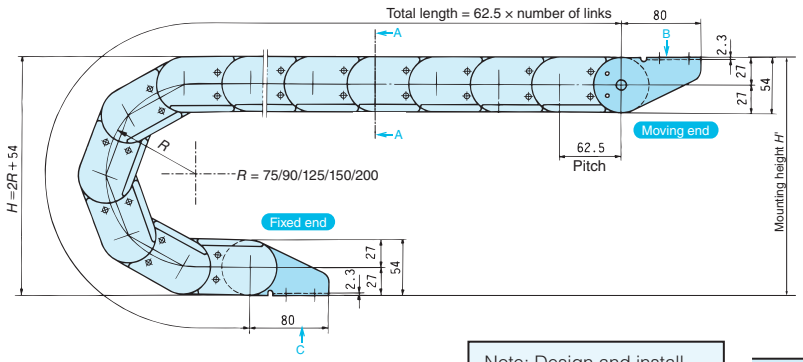
Notes:

A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

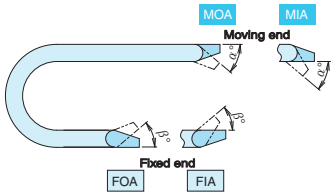


Dimension drawings



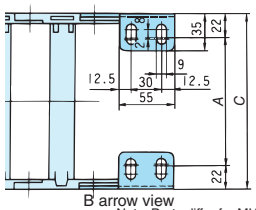
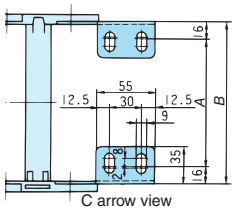
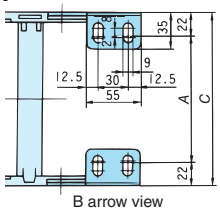
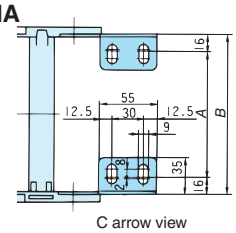
Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
75	214 to 234
90	244 to 264
125	314 to 334
150	364 to 384
200	464 to 484



Bending radius *R* (mm)	Bending angle (°)		
	MOA Moving end side (α)	MIA Moving end side (α)	Fixed end side (β)
75	56	39	FOA: 64 FIA: 38
90	47	39	
125	35	35	
150	30	30	
200	24	24	

Steel bracket variants and dimensions

	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
	MOA	**FOA**	**MIA**	**FIA**
	 B arrow view Note: Parts differ for MIA.	 C arrow view Note: FOA/FIA are common parts.	 B arrow view Note: Parts differ for MOA.	 C arrow view Note: FOA/FIA are common parts.

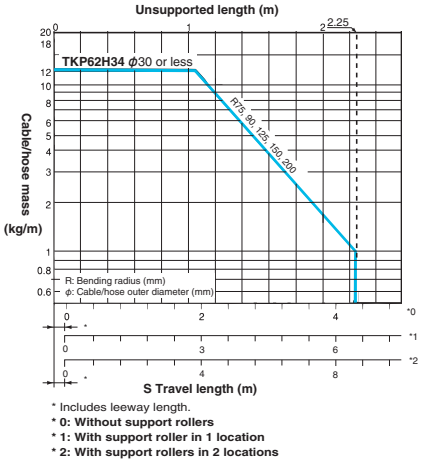
Inner width W (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)
150	123	155	167	123	155	167
200	173	205	217	173	205	217

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			−40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			60

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



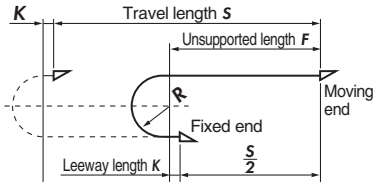
* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 62.5 mm
K: Leeway length = 63 mm or greater

Model number

TKP62H34W (1) R (2) + (3) L - (4) - (5)

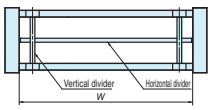
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
150	75		FOA	MOA
200	90		FIA	MIA
	125			
	150			
	200			

Notes: 1. Steel brackets and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. The moving end bracket is delivered installed. The fixed end bracket and dividers are delivered uninstalled.
4. Refer to page 131 for model number for the gliding arrangement.
5. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

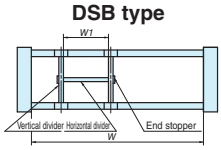
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP62H34-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP62H34-HS (Dimension *W*) *W* = 150/200	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKP62H34-EHS (Dimension *W*1) *W*1 = 13 to 133: 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKP62H34-ST	TKP62H34W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP62H34-HS150	TKP62H34W150R■■
TKP62H34-HS200	TKP62H34W200R■■

■ Horizontal divider with end stoppers

Model number
TKP62H34-EHS□□

□□: Integer between 13 and 133

■ Steel bracket

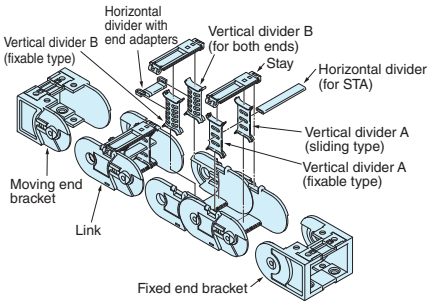
Model number	For cable carrier model number
TKP62H34-MOA	TKP62H34W■■R■■
TKP62H34-MIA	
TKP62H34-FOA	TKP62H34W■■R■■
TKP62H34-FIA	

See page 15 for ordering information
See page 144 for product mass

TKP68H46

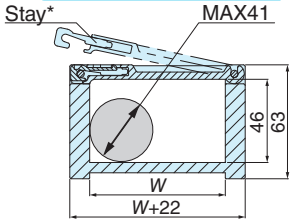
(Patented)

Structure

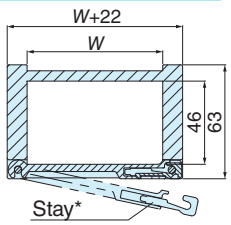


Cross-section dimensions

Outside openable stay



Inside openable stay



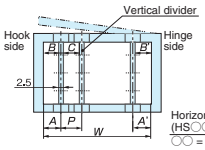
W = 75, 100, 125, 150, 175

A–A arrow view

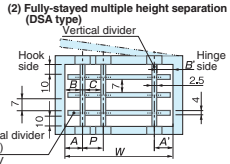
* Change the orientation of the stay to change the direction that the stay opens.

Divider dimensions

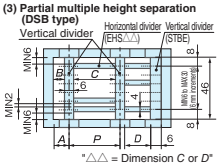
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



Vertical divider (fastening method)	Inner width W (mm)	A (mm)	A' (mm)	B (mm)	B' (mm)	P (mm)	C (mm)	D (mm)
STAS (sliding installation)	Common for all widths	7.25 to 47.25	5 to 47.25	6 to 46	3.75 to 46	10 to 54	7.5 to 51.5	
STAL (fixable installation)	75	9.5 to 44.5	Same as A	8.25 to 43.25	Same as B	14 to 42	11.5 to 39.5	
	100	11.5 to 46.5		10.25 to 45.25				
	125	10 to 45		8.75 to 43.75				
	150	12 to 47		10.75 to 45.75				
	175	10.5 to 45.5		9.25 to 44.25				
STBL (fixable installation)	75	min 9.5		min 6.5		28 to 56	22 to 50	21.5 to 49.5
	100	min 11.5		min 8.5				23.5 to 51.5
	125	min 10		min 7				22 to 50
	150	min 12		min 9				24 to 52
	175	min 10.5		min 7.5				22.5 to 50.5

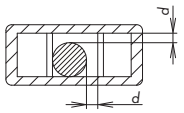
7 mm increments

Note: A' and B' are the hinge side.

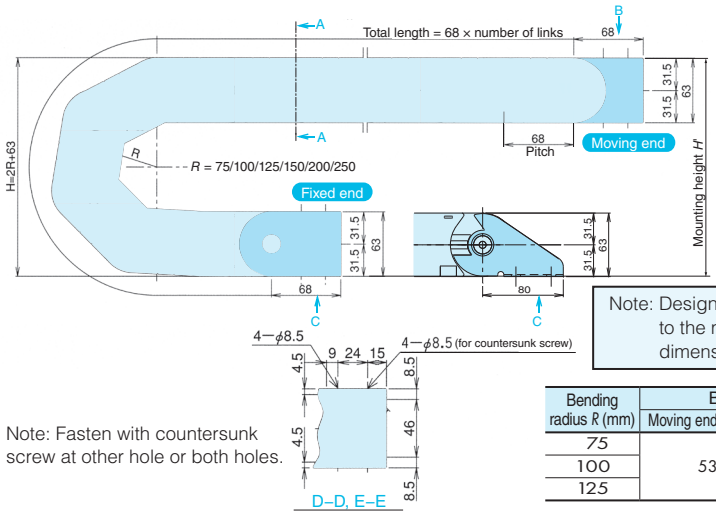
Notes:

A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**
D : **Gap between neighboring vertical dividers when vertical dividers/dividers for both ends are installed**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



Dimension drawings

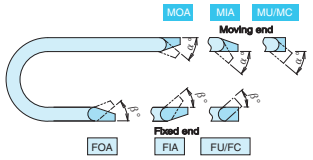


Note: Fasten with countersunk screw at other hole or both holes.

Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
75	223 to 243
100	273 to 293
125	323 to 343
150	373 to 393
200	473 to 493
250	573 to 593

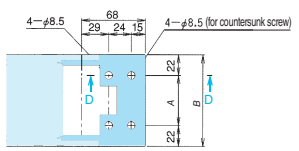
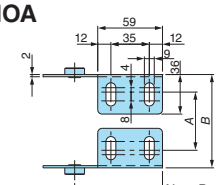
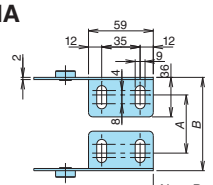
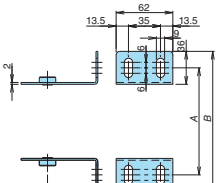
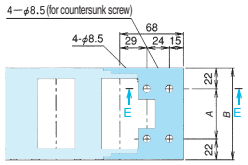
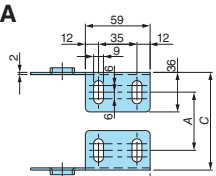
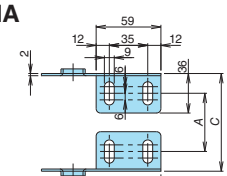
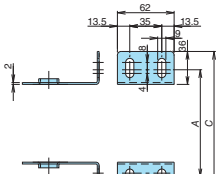
Note: The bracket (FU/MU) has mounting holes for two vertical directions.



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
75	53	53
100		39
125		31

Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
150	53	26
200		19
250		15

Bracket variants and dimensions

	Bracket (FU/MU)	Outside mounting	Inside mounting	Flange mounting
Moving end bracket B arrow view	**MU** 	**MOA**  Note: Parts differ for MIA.	**MIA**  Note: Parts differ for MOA.	**MC** 
Fixed end bracket C arrow view	**FU** 	**FOA**  Note: Parts differ for FIA.	**FIA**  Note: Parts differ for FOA.	**FC** 

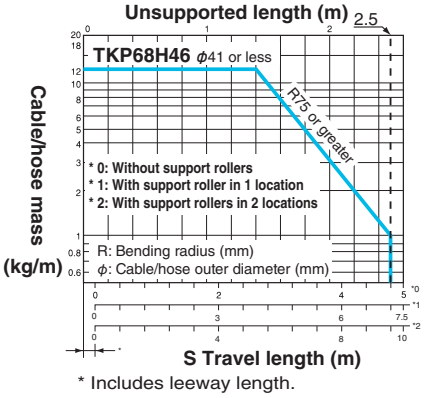
Inner width W (mm)	A (mm)	B (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)
75	53	97	53	85	89	53	85	89	117	153	157
100	78	122	78	110	114	78	110	114	142	178	182
125	103	147	103	135	139	103	135	139	167	203	207
150	128	172	128	160	164	128	160	164	192	228	232
175	153	197	153	185	189	153	185	189	217	253	257

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket (FU/MU)	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			50

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



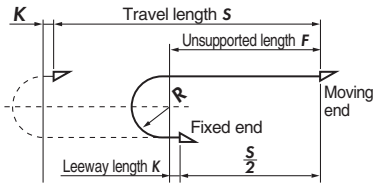
* Includes leeway length.

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 68 mm
K: Leeway length = 68 mm or greater

Model number

TKP68H46 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options		(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30	Outside openable stay	75	75		FU	MU
40	Inside openable stay	100	100		FOA	MOA
		125	125		FIA	MIA
		150	150		FC	MC
		175	200			
			250			

Notes: 1. Steel brackets (excluding FU and MU) and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. Stays, steel brackets, and dividers are delivered uninstalled. (For the FU and MU, these parts are delivered installed.)
4. Refer to page 131 for model number for the gliding arrangement.

■ Divider

Method	Type		Model number
DSA Type	Vertical divider	STAS sliding installation	TKP68H46-STAS
		STAL fixable installation	TKP68H46-STAL
	Horizontal divider		TKP68H46-HS (Dimension *W*) *W* = 75/100/125/150/175
DSB Type	Vertical divider	STBL fixable installation	TKP68H46-STBL
		STBE divider for both ends	TKP68H46-STBE
	Horizontal divider with end adapters		TKP68H46-EHS△△ △△ = Dimension *C* or *D* of divider dimensions

■ Vertical divider

Model number	For cable carrier model number
TKP68H46-STAS	TKP68H46-30/40W■■R■■
TKP68H46-STAL	
TKP68H46-STBL	
TKP68H46-STBE	

■ Horizontal divider

Model number	For cable carrier model number
TKP68H46-HS75	TKP68H46-30/40W75R■■
TKP68H46-HS100	TKP68H46-30/40W100R■■
TKP68H46-HS125	TKP68H46-30/40W125R■■
TKP68H46-HS150	TKP68H46-30/40W150R■■
TKP68H46-HS175	TKP68H46-30/40W175R■■

■ Bracket (FU/MU)

Model number	For cable carrier model number
TKP68H46W75-MU	TKP68H46-30/40W75R■■
TKP68H46W75-FU	
TKP68H46W100-MU	TKP68H46-30/40W100R■■
TKP68H46W100-FU	
TKP68H46W125-MU	TKP68H46-30/40W125R■■
TKP68H46W125-FU	
TKP68H46W150-MU	TKP68H46-30/40W150R■■
TKP68H46W150-FU	
TKP68H46W175-MU	TKP68H46-30/40W175R■■
TKP68H46W175-FU	

■ Horizontal divider with end adapters

Model number	For cable carrier model number
TKP68H46-EHS22	TKP68H46-30/40W■■R■■ (Common for all widths)
TKP68H46-EHS29	
TKP68H46-EHS36	
TKP68H46-EHS43	
TKP68H46-EHS50	
TKP68H46-EHS21.5	TKP68H46-30/40W75R■■
TKP68H46-EHS28.5	
TKP68H46-EHS35.5	
TKP68H46-EHS42.5	
TKP68H46-EHS49.5	
TKP68H46-EHS23.5	TKP68H46-30/40W100R■■
TKP68H46-EHS30.5	
TKP68H46-EHS37.5	
TKP68H46-EHS44.5	
TKP68H46-EHS51.5	
TKP68H46-EHS24	TKP68H46-30/40W150R■■
TKP68H46-EHS31	
TKP68H46-EHS38	
TKP68H46-EHS45	
TKP68H46-EHS52	
TKP68H46-EHS22.5	TKP68H46-30/40W175R■■
TKP68H46-EHS29.5	
TKP68H46-EHS36.5	
TKP68H46-EHS43.5	
TKP68H46-EHS50.5	

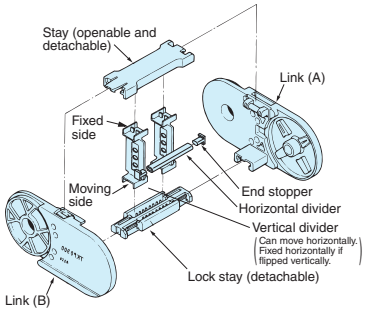
■ Steel bracket

Model number	For cable carrier model number
TKP68H46-MOA	TKP68H46-30/40W■■R■■
TKP68H46-MIA	
TKP68H46-MC	
TKP68H46-FOA	TKP68H46-30/40W■■R■■
TKP68H46-FIA	
TKP68H46-FC	

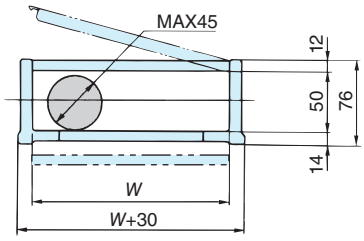
See page 15 for ordering information
See page 144 for product mass

TKP90H50

Structure



Cross-section dimensions

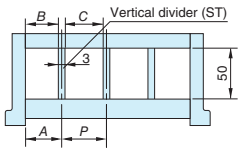


W = 100, 150, 200

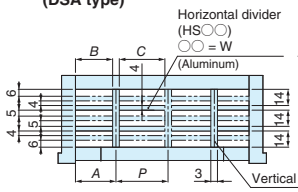
A–A arrow view

Divider dimensions

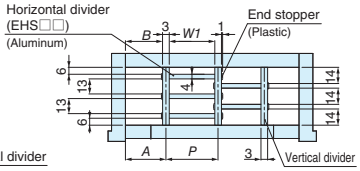
(1) When using only vertical dividers



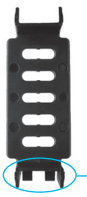
(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



Vertical divider (fastening method)



Note: For the sliding installation, position the protrusion on the stay side. For the fixable installation, position the protrusion on the lock stay side.

Protrusion

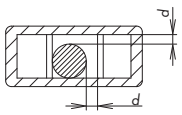
Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)		C (mm)		W1 (mm)	
ST (sliding installation)	Common for all widths	35 to 40		33.5 to 38.5		20 to 115		17 to 112		17 to 112 (adjustable in 1 mm increments)	
ST (fixable installation)	100	35 to 40	in 5 mm increments	35.5 to 38.5	in 5 mm increments	20 to 30	in 5 mm increments	17 to 27	in 5 mm increments	17 to 27	in 5 mm increments
	150					20 to 80		17 to 77		17 to 77	
	200					20 to 112		17 to 112		17 to 112	

Notes: 1. The maximum values for gaps *A* and *P* are applied when using horizontal dividers.
2. The divider can slide between W-70. The fastening pitch of fixable dividers is 5 mm increments. However, the pitch of neighboring dividers is 20 mm or greater.

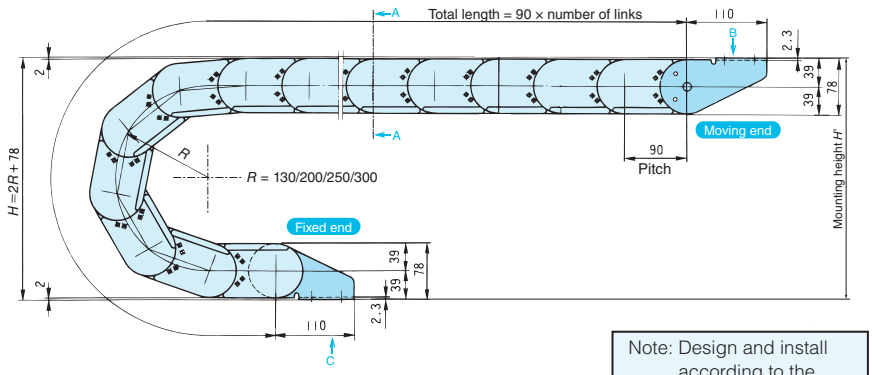
Notes:

A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**

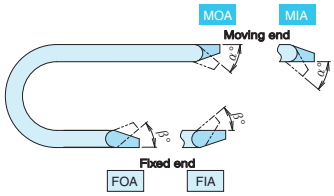
Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



Dimension drawings



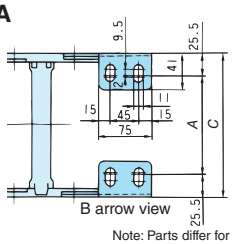
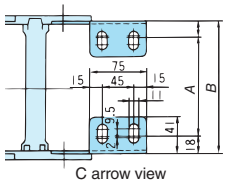
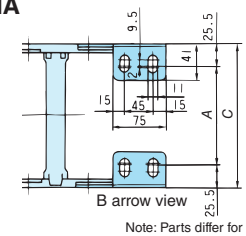
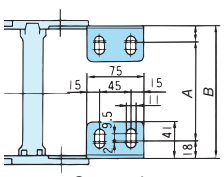
Bending radius R (mm)	Mounting height H' (mm)
130	348 to 368
200	488 to 508
250	588 to 608
300	688 to 708



Note: Design and install according to the mounting height *H'* dimension.

Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
130	37	47
200	23	
250	18	
300	14	

Steel bracket variants and dimensions

	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
	MOA	**FOA**	**MIA**	**FIA**
	 B arrow view	 C arrow view	 B arrow view	 C arrow view
	Note: Parts differ for MIA.	Note: Parts differ for FIA.	Note: Parts differ for MOA.	Note: Parts differ for FOA.

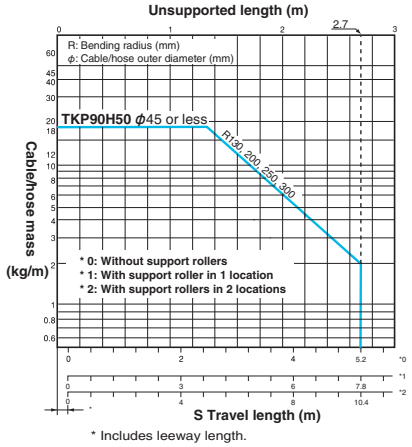
Inner width W (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)
100	71	107	122	71	107	122
150	121	157	172	121	157	172
200	171	207	222	171	207	222

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			40

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

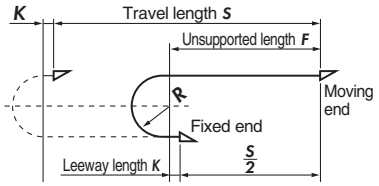


Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 90 mm
K: Leeway length = 90 mm or greater

Model number

TKP90H50W (1) R (2) + (3) L - (4) - (5)

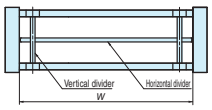
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
100	130		FOA	MOA
150	200		FIA	MIA
200	250			
	300			

Notes: 1. Steel brackets and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. The moving end bracket is delivered installed. The fixed end bracket and dividers are delivered uninstalled.
4. Refer to page 131 for model number for the gliding arrangement.
5. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

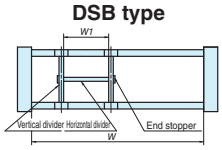
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP90H50-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP90H50-HS (Dimension W) W = 100/150/200	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKP90H50-EHS (Dimension W1) W1 = 17 to 112: 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKP90H50-ST	TKP90H50W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP90H50-HS100	TKP90H50W100R■■
TKP90H50-HS150	TKP90H50W150R■■
TKP90H50-HS200	TKP90H50W200R■■

■ Horizontal divider with end stoppers

Model number
TKP90H50-EHS□□

□□: Integer between 17 and 112

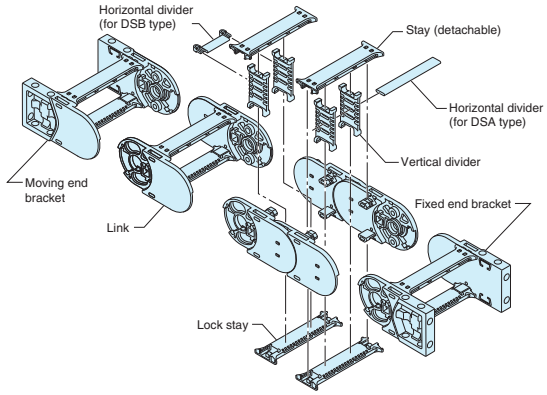
■ Steel bracket

Model number	For cable carrier model number
TKP90H50-MOA	TKP90H50W■■R■■
TKP90H50-MIA	
TKP90H50-FOA	TKP90H50W■■R■■
TKP90H50-FIA	

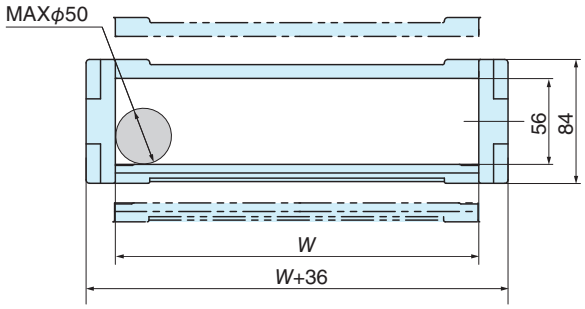
See page 15 for ordering information
See page 144 for product mass

TKP91H56 (Patented)

Structure



Cross-section dimensions

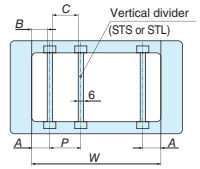


W = 150, 175, 200, 225, 250, 275, 300, 325, 350, 400, 450, 500

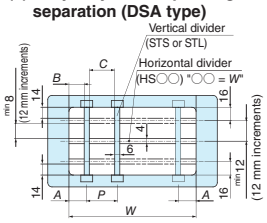
A–A arrow view

Divider dimensions

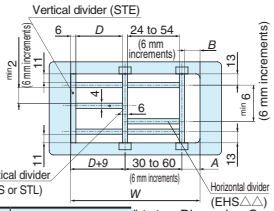
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)

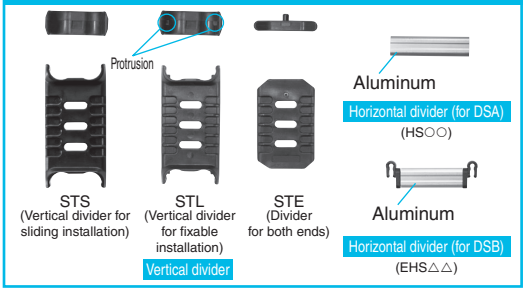


(3) Partial multiple height separation (DSB type)



"△△ = Dimension *C* or *D*"

Divider



Vertical divider (fastening method)	Inner width *W* (mm)	*A* (mm)	*B* (mm)	*P* (mm)	*C* (mm)	*D* (mm)
STS (sliding installation)	Common for all widths	20 to 40	17 to 37	14 to 100	8 to 94	
STL (fixable installation)	150	27, 33, 39	24, 30, 36	18 to 96 (6 mm increments)	12 to 90 (6 mm increments)	24 to 54
	175	33.5, 39.5	30.5, 36.5			24.5 to 54.5
	200	31, 37	28, 34			22 to 52
	225	31.5, 37.5	28.5, 34.5			22.5 to 52.5
	250	32, 38	29, 35			23 to 53
	275	32.5, 38.5	29.5, 35.5			23.5 to 53.5
	300	33, 39	30, 36			24 to 54
	325	33.5, 39.5	30.5, 36.5			24.5 to 54.5
	350	31, 37	28, 34			22 to 52
	400	32, 38	29, 35			23 to 53
	450	33, 39	30, 36			24 to 54
	500	31, 37	28, 34			22 to 52

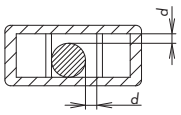
(6 mm increments)

Note: The maximum values for *A*, *B*, *P*, *C*, and *D* are applied when using horizontal dividers.

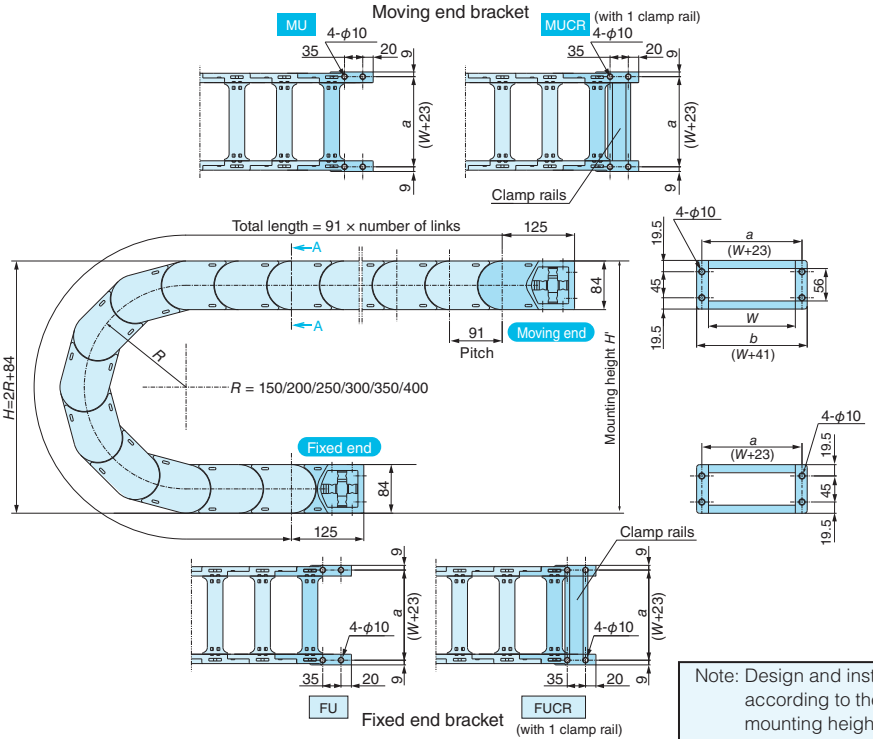
Notes:

A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**
D : **Gap between neighboring vertical dividers when vertical dividers/ dividers for both ends are installed**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

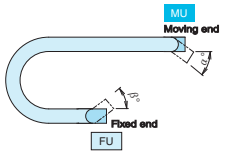


Dimensions & brackets



Bending radius *R* (mm)	Mounting height *H'* (mm)
150	394 to 414
200	494 to 514
250	594 to 614
300	694 to 714
350	794 to 814
400	894 to 914

W (mm)	*a* (mm)	*b* (mm)
150	173	191
175	198	216
200	223	241
225	248	266
250	273	291
275	298	316
300	323	341
325	348	366
350	373	391
400	423	441
450	473	491
500	523	541



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
150	35	35
200	26	
250	20	
300	17	
350	15	
400	13	

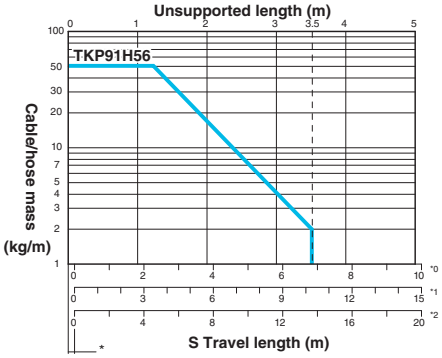
Note: Design and install according to the mounting height *H'* dimension.

Basic specifications

Maximum travel speed (m/min)			300 *1
Operating temperature range (°C)			-40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		Engineering plastic (black) With steel bush
	Vertical divider		Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			R350 or less: 20 R400 : 10

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



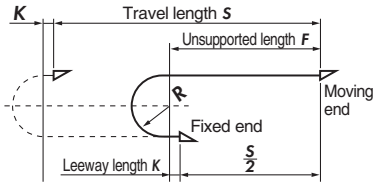
* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 91 mm
K: Leeway length = 91 mm or greater

Model number

TKP91H56W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	
150	300
175	325
200	350
225	400
250	450
275	500

(2) Bending radius
150
200
250
300
350
400

(3) Number of links

(4) Fixed end
FU
FUCR

(5) Moving end
MU
MUCR

Notes: 1. Dividers and clamp rails are delivered uninstalled.
2. Refer to page 131 for model number for the gliding arrangement.

■ Divider

Type	Model number
Vertical divider (sliding installation)	TKP91H56-STS
Vertical divider (fixable installation)	TKP91H56-STL
Vertical divider (for both ends)	TKP91H56-STE
Horizontal divider(for DSA type)	TKP91H56-HS○○
Horizontal divider (for DSB type)	TKP91H56-EHS△△

○○ = 150, 175, 200
△△ = Dimension *C* or *D* of divider dimensions.

■ Vertical divider

Model number	For cable carrier model number
TKP91H56-STS	TKP91H56W■■R■■
TKP91H56-STL	
TKP91H56-STE	

■ Horizontal divider

Model number	For cable carrier model number
TKP91H56-HS150	TKP91H56W150R■■
TKP91H56-HS175	TKP91H56W175R■■
TKP91H56-HS200	TKP91H56W200R■■

■ Horizontal divider with end adapters

Model number	For cable carrier model number
TKP91H56-EHS24	TKP91H56W■■R■■ (Common for all widths)
TKP91H56-EHS30	
TKP91H56-EHS36	
TKP91H56-EHS42	
TKP91H56-EHS48	
TKP91H56-EHS54	
TKP91H56-EHS24.5	TKP91H56W■■R■■ (* For *W* = 175,325)
TKP91H56-EHS30.5	
TKP91H56-EHS36.5	
TKP91H56-EHS42.5	
TKP91H56-EHS48.5	
TKP91H56-EHS54.5	
TKP91H56-EHS22	TKP91H56W■■R■■ (* For *W* = 200,350,500)
TKP91H56-EHS28	
TKP91H56-EHS34	
TKP91H56-EHS40	
TKP91H56-EHS46	
TKP91H56-EHS52	

■ Horizontal divider with end adapters

Model number	For cable carrier model number
TKP91H56-EHS22.5	TKP91H56W■■R■■ (* For *W* = 225)
TKP91H56-EHS28.5	
TKP91H56-EHS34.5	
TKP91H56-EHS40.5	
TKP91H56-EHS46.5	
TKP91H56-EHS52.5	
TKP91H56-EHS23	TKP91H56W■■R■■ (* For *W* = 250,400)
TKP91H56-EHS29	
TKP91H56-EHS35	
TKP91H56-EHS41	
TKP91H56-EHS47	
TKP91H56-EHS53	
TKP91H56-EHS23.5	TKP91H56W■■R■■ (* For *W* = 275)
TKP91H56-EHS29.5	
TKP91H56-EHS35.5	
TKP91H56-EHS41.5	
TKP91H56-EHS47.5	
TKP91H56-EHS53.5	

* When used on vertical divider for both ends (STE).

■ Bracket

Model number	For cable carrier model number
TKP91H56W150-MU	TKP91H56W150R■■
TKP91H56W150-FU	
TKP91H56W150-MUCR	
TKP91H56W150-FUCR	
TKP91H56W175-MU	TKP91H56W175R■■
TKP91H56W175-FU	
TKP91H56W175-MUCR	
TKP91H56W175-FUCR	
TKP91H56W200-MU	TKP91H56W200R■■
TKP91H56W200-FU	
TKP91H56W200-MUCR	
TKP91H56W200-FUCR	
TKP91H56W225-MU	TKP91H56W225R■■
TKP91H56W225-FU	
TKP91H56W225-MUCR	
TKP91H56W225-FUCR	

■ Bracket

Model number	For cable carrier model number
TKP91H56W250-MU	TKP91H56W250R■■
TKP91H56W250-FU	
TKP91H56W250-MUCR	
TKP91H56W250-FUCR	
TKP91H56W275-MU	TKP91H56W275R■■
TKP91H56W275-FU	
TKP91H56W275-MUCR	
TKP91H56W275-FUCR	
TKP91H56W300-MU	TKP91H56W300R■■
TKP91H56W300-FU	
TKP91H56W300-MUCR	
TKP91H56W300-FUCR	
TKP91H56W325-MU	TKP91H56W325R■■
TKP91H56W325-FU	
TKP91H56W325-MUCR	
TKP91H56W325-FUCR	

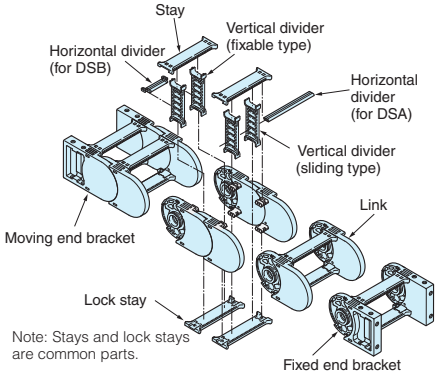
■ Bracket

Model number	For cable carrier model number
TKP91H56W350-MU	TKP91H56W350R■■
TKP91H56W350-FU	
TKP91H56W350-MUCR	
TKP91H56W350-FUCR	
TKP91H56W400-MU	TKP91H56W400R■■
TKP91H56W400-FU	
TKP91H56W400-MUCR	
TKP91H56W400-FUCR	
TKP91H56W450-MU	TKP91H56W450R■■
TKP91H56W450-FU	
TKP91H56W450-MUCR	
TKP91H56W450-FUCR	
TKP91H56W500-MU	TKP91H56W500R■■
TKP91H56W500-FU	
TKP91H56W500-MUCR	
TKP91H56W500-FUCR	

See page 15 for ordering information
See page 144 for product mass

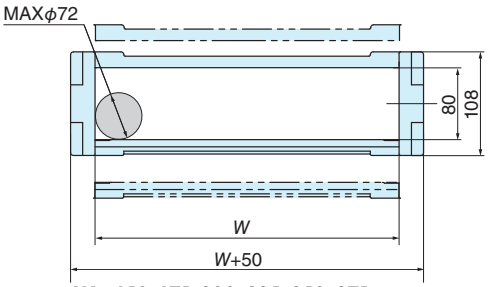
TKP91H80 (Patented)

Structure



Note: Stays and lock stays are common parts.

Cross-section dimensions

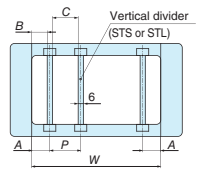


W = 150, 175, 200, 225, 250, 275, 300, 325, 350, 400, 450, 500

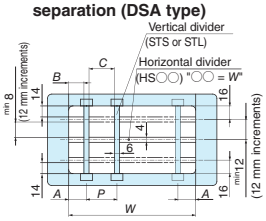
A–A arrow view

Divider dimensions

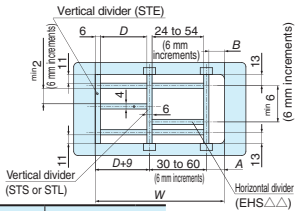
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



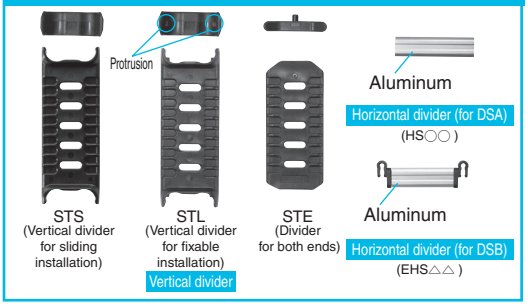
(3) Partial multiple height separation (DSB type)



Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)	C (mm)	D (mm)	
STS (sliding installation)	Common for all widths	20 to 40		17 to 37		14 to 100	8 to 94		
STL (fixable installation)	150	27, 33, 39	6 mm increments	24, 30, 36	6 mm increments	18 to 96 (6 mm increments)	12 to 90 (6 mm increments)	24 to 54	6 mm increments
	175	33.5, 39.5		30.5, 36.5				24.5 to 54.5	
	200	31, 37		28, 34				22 to 52	
	225	31.5, 37.5		28.5, 34.5				22.5 to 52.5	
	250	32, 38		29, 35				23 to 53	
	275	32.5, 38.5		29.5, 35.5				23.5 to 53.5	
	300	33, 39		30, 36				24 to 54	
	325	33.5, 39.5		30.5, 36.5				24.5 to 54.5	
	350	31, 37		28, 34				22 to 52	
	400	32, 38		29, 35				23 to 53	
	450	33, 39		30, 36				24 to 54	
	500	31, 37		28, 34				22 to 52	

Note: The maximum values for *A*, *B*, *P*, *C*, and *D* are applied when using horizontal dividers.

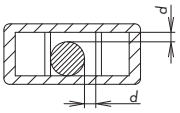
Divider



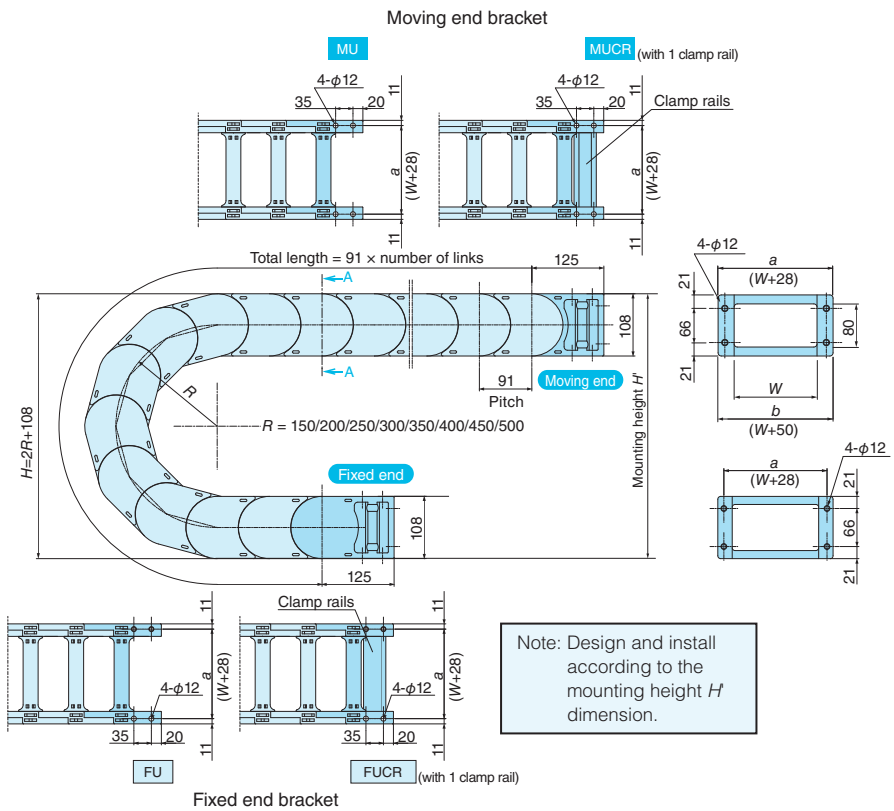
Notes:

A : **Distance from center of vertical divider to end face of link**
B : **Gap between vertical divider and link**
P : **Distance between the centers of neighboring vertical dividers**
C : **Gap between neighboring vertical dividers**
D : **Gap between neighboring vertical dividers when vertical dividers/ dividers for both ends are installed**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



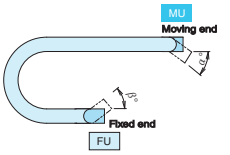
Dimensions & brackets



Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
150	418 to 438
200	518 to 538
250	618 to 638
300	718 to 738
350	818 to 838
400	918 to 938
450	1018 to 1038
500	1118 to 1138

W (mm)	*a* (mm)	*b* (mm)
150	178	200
175	203	225
200	228	250
225	253	275
250	278	300
275	303	325
300	328	350
325	353	375
350	378	400
400	428	450
450	478	500
500	528	550



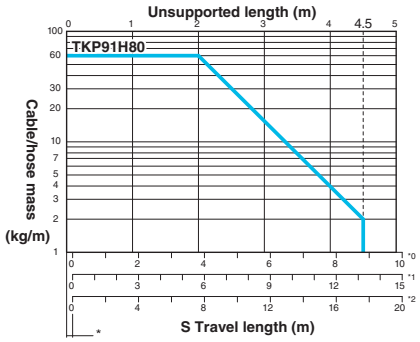
Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (*α*)	Fixed end side (*β*)
150	35	35
200	26	26
250	20	20
300	17	17
350	15	15
400	13	13
450	11	11
500	10	10

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Engineering plastic (black) With steel bush
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			R350 or less: 20 R400 to R500: 10

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



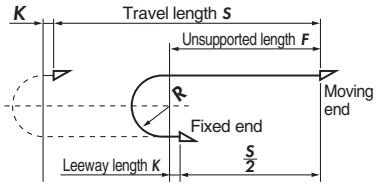
* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 91 mm
K: Leeway length = 91 mm or greater

Model number

TKP91H80W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	
150	300
175	325
200	350
225	400
250	450
275	500

(2) Bending radius	
150	350
200	400
250	450
300	500

(3) Number of links

(4) Fixed end
FU
FUCR

(5) Moving end
MU
MUCR

Notes: 1. Dividers and clamp rails are delivered uninstalled.
2. Refer to page 131 for model number for the gliding arrangement.

■ Divider

Type	Model number
Vertical divider (sliding installation)	TKP91H80-STS
Vertical divider (fixable installation)	TKP91H80-STL
Vertical divider (for both ends)	TKP91H80-STE
Horizontal divider (for DSA type)	TKP91H80-HS○○
Horizontal divider (for DSB type)	TKP91H80-EHS△△

○○ = 150, 175, 200
△△ = Dimension *C* or *D* of divider dimensions.

■ Vertical divider

Model number	For cable carrier model number
TKP91H80-STS	TKP91H80W■■R■■
TKP91H80-STL	
TKP91H80-STE	

■ Horizontal divider

Model number	For cable carrier model number
TKP91H80-HS150	TKP91H80W150R■■
TKP91H80-HS175	TKP91H80W175R■■
TKP91H80-HS200	TKP91H80W200R■■

■ Horizontal divider with end adapters

Model number	For cable carrier model number
TKP91H80-EHS24	TKP91H80W■■R■■ (Common for all widths)
TKP91H80-EHS30	
TKP91H80-EHS36	
TKP91H80-EHS42	
TKP91H80-EHS48	
TKP91H80-EHS54	
TKP91H80-EHS24.5	TKP91H80W■■R■■ (* For *W* = 175,325)
TKP91H80-EHS30.5	
TKP91H80-EHS36.5	
TKP91H80-EHS42.5	
TKP91H80-EHS48.5	
TKP91H80-EHS54.5	
TKP91H80-EHS22	TKP91H80W■■R■■ (* For *W* = 200,350,500)
TKP91H80-EHS28	
TKP91H80-EHS34	
TKP91H80-EHS40	
TKP91H80-EHS46	
TKP91H80-EHS52	

■ Horizontal divider with end adapters

Model number	For cable carrier model number
TKP91H80-EHS22.5	TKP91H80W■■R■■ (* For *W* = 225)
TKP91H80-EHS28.5	
TKP91H80-EHS34.5	
TKP91H80-EHS40.5	
TKP91H80-EHS46.5	
TKP91H80-EHS52.5	
TKP91H80-EHS23	TKP91H80W■■R■■ (* For *W* = 250,400)
TKP91H80-EHS29	
TKP91H80-EHS35	
TKP91H80-EHS41	
TKP91H80-EHS47	
TKP91H80-EHS53	
TKP91H80-EHS23.5	TKP91H80W■■R■■ (* For *W* = 275)
TKP91H80-EHS29.5	
TKP91H80-EHS35.5	
TKP91H80-EHS41.5	
TKP91H80-EHS47.5	
TKP91H80-EHS53.5	

* When used on vertical divider for both ends (STE).

■ Bracket

Model number	For cable carrier model number
TKP91H80W150-MU	TKP91H80W150R■■
TKP91H80W150-FU	
TKP91H80W150-MUCR	
TKP91H80W150-FUCR	
TKP91H80W175-MU	TKP91H80W175R■■
TKP91H80W175-FU	
TKP91H80W175-MUCR	
TKP91H80W175-FUCR	
TKP91H80W200-MU	TKP91H80W200R■■
TKP91H80W200-FU	
TKP91H80W200-MUCR	
TKP91H80W200-FUCR	
TKP91H80W225-MU	TKP91H80W225R■■
TKP91H80W225-FU	
TKP91H80W225-MUCR	
TKP91H80W225-FUCR	

■ Bracket

Model number	For cable carrier model number
TKP91H80W250-MU	TKP91H80W250R■■
TKP91H80W250-FU	
TKP91H80W250-MUCR	
TKP91H80W250-FUCR	
TKP91H80W275-MU	TKP91H80W275R■■
TKP91H80W275-FU	
TKP91H80W275-MUCR	
TKP91H80W275-FUCR	
TKP91H80W300-MU	TKP91H80W300R■■
TKP91H80W300-FU	
TKP91H80W300-MUCR	
TKP91H80W300-FUCR	
TKP91H80W325-MU	TKP91H80W325R■■
TKP91H80W325-FU	
TKP91H80W325-MUCR	
TKP91H80W325-FUCR	

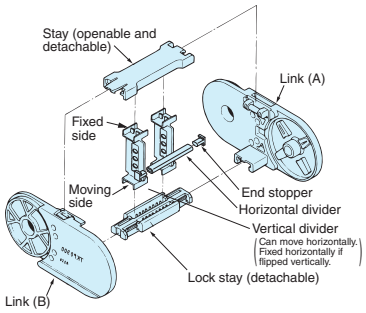
■ Bracket

Model number	For cable carrier model number
TKP91H80W350-MU	TKP91H80W350R■■
TKP91H80W350-FU	
TKP91H80W350-MUCR	
TKP91H80W350-FUCR	
TKP91H80W400-MU	TKP91H80W400R■■
TKP91H80W400-FU	
TKP91H80W400-MUCR	
TKP91H80W400-FUCR	
TKP91H80W450-MU	TKP91H80W450R■■
TKP91H80W450-FU	
TKP91H80W450-MUCR	
TKP91H80W450-FUCR	
TKP91H80W500-MU	TKP91H80W500R■■
TKP91H80W500-FU	
TKP91H80W500-MUCR	
TKP91H80W500-FUCR	

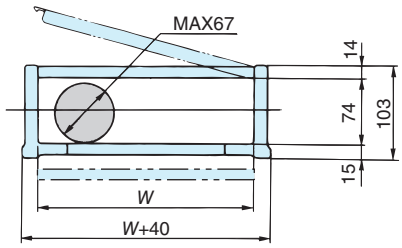
See page 15 for ordering information
See page 145 for product mass

TKP125H74

Structure



Cross-section dimensions

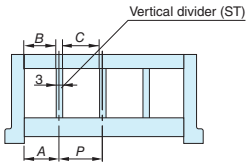


W = 150, 250, 350

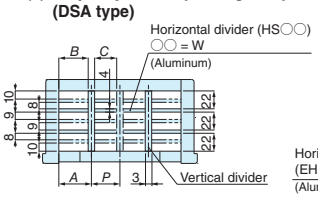
A–A arrow view

Divider dimensions

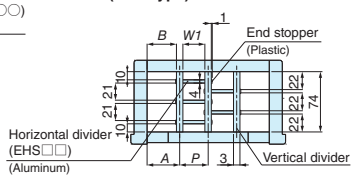
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



Vertical divider (fastening method)



Note: For the sliding installation, position the protrusion on the stay side. For the fixable installation, position the protrusion on the lock stay side.

Protrusion

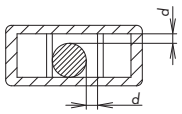
Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)		C (mm)		W1 (mm)	
ST (sliding installation)	Common for all widths	40		38.5		25 to 100		22 to 97		22 to 97	1 mm increments
ST (fixable installation)	150	40	5 mm increments	38.5	5 mm increments	25 to 70	5 mm increments	22 to 67	5 mm increments	22 to 67	5 mm increments
	250					25 to 100		22 to 97		22 to 97	
	350					25 to 100		22 to 97		22 to 97	

Note: The maximum values for gaps *A* and *P* are applied when using horizontal dividers.

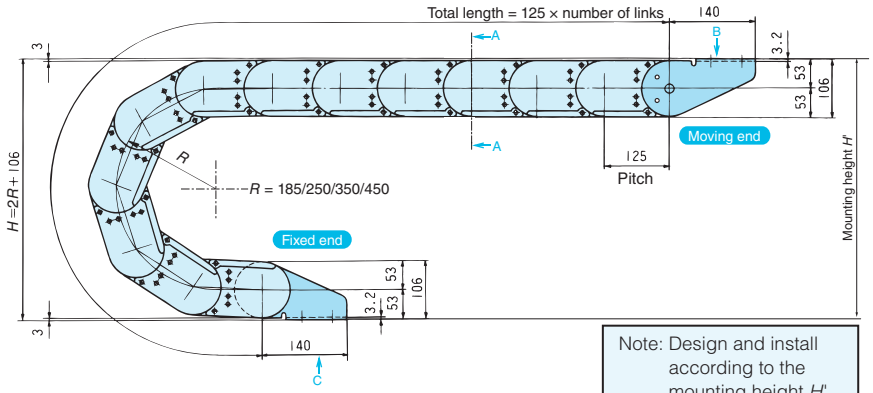
Notes:

- ***A*** **: Distance from center of vertical divider to end face of link**
- ***B*** **: Gap between vertical divider and link**
- ***P*** **: Distance between the centers of neighboring vertical dividers**
- ***C*** **: Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

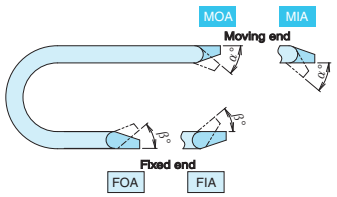


Dimension drawings



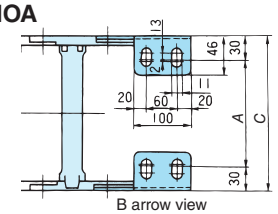
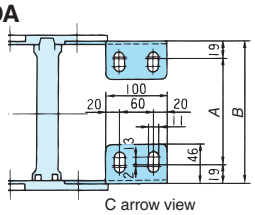
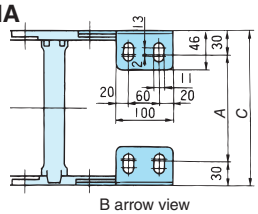
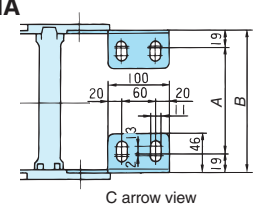
Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
185	486 to 506
250	616 to 636
350	816 to 836
450	1016 to 1036



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
185	27	38
250	16	
350	8	
450	3	

Steel bracket variants and dimensions

	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
	MOA  B arrow view	**FOA**  C arrow view	**MIA**  B arrow view	**FIA**  C arrow view
	Note: Parts differ for MIA.	Note: Parts differ for FIA.	Note: Parts differ for MOA.	Note: Parts differ for FOA.

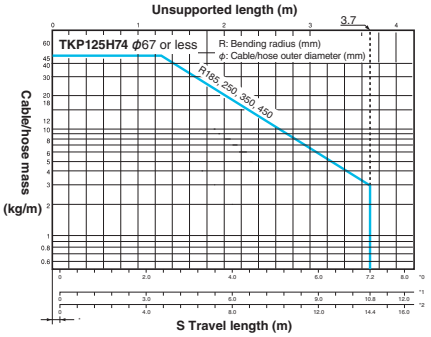
Inner width W (mm)	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)
150	120	158	180	120	158	180
250	220	258	280	220	258	280
350	320	358	380	320	358	380

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			-40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (Trivalent chromate plating)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			R250 or less: 30 R350 or more: 18

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



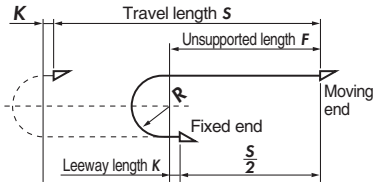
* Includes leeway length.
* 0: Without support rollers
* 1: With support roller in 1 location
* 2: With support rollers in 2 locations

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 125 mm
K: Leeway length = 125 mm or greater

Model number

TKP125H74W (1) R (2) + (3) L - (4) - (5)

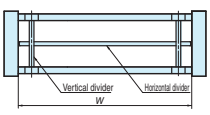
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
150	185		FOA	MOA
250	250		FIA	MIA
350	350			
	450			

Notes: 1. Steel brackets and vertical dividers are common parts regardless of the inner width.
2. Install dividers every 2 links.
3. The moving end bracket is delivered installed. The fixed end bracket and dividers are delivered uninstalled.
4. Refer to page 131 for model number for the gliding arrangement.
5. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further information.

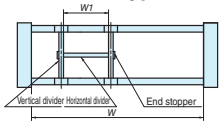
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKP125H74-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKP125H74-HS (Dimension W) W = 150/250	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKP125H74-EHS (Dimension W1) W1 = 22 to 97: 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKP125H74-ST	TKP125H74W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKP125H74-HS150	TKP125H74W150R■■
TKP125H74-HS250	TKP125H74W250R■■

■ Horizontal divider with end stoppers

Model number
TKP125H74-EHS□□

□□: Integer between 22 and 97

■ Steel bracket

Model number	For cable carrier model number
TKP125H74-MOA	TKP125H74W■■R■■
TKP125H74-MIA	
TKP125H74-FOA	TKP125H74W■■R■■
TKP125H74-FIA	

See page 15 for ordering information
See page 145 for product mass

TKP Series MW Type (Low Friction/Anti-Wear Series)

The TKP Series MW Type is a high-functionality cable carrier that offers better protection of cables and hoses while improving cleanliness by using special materials with high slidability.

Features

Better protection of cables and hoses and improved cleanliness

The TKP Series MW Type is effective in preventing jacket abrasion of cables and hoses.
Compared to the standard types, the MW Type reduces the amount of wear on cables and hoses from sliding with the cable carrier.
Cables and hoses are protected gently even in extreme operating conditions with high operating frequencies.

	MW Type	Standard type
Protection for cables/hoses	◎	○
Cleanliness	◎	○
Handling	◎	◎
Load (graph)	○	◎
Price	○	◎
Lead time	○	◎

◎: Superior ○: Normal

Lineup

Model	Inner height (mm)	Inner width (mm)	Bending radius (mm)	Pitch (mm)	Leeway length ★ (mm)	Cable/hose maximum outer diameter (mm)	Cable/hose maximum mass (kg/m)	Maximum unsupported length ★ (m)	Maximum travel length ★ (m)	Standard length (No. of links)
TKP13H10	10	10 20	18/28/37	13	26	8	0.4	0.55 (R18 = 0.42)	1.0 (R18 = 0.8)	77
TKP18H14	14	15 40	28/37/50	18	36	12	1	0.72 (R28 = 0.63)	1.4 (R28 = 1.2)	55
TKP25H15	15	15 20 30	28/37/50	25	38	13	1	0.72 (R28 = 0.63)	1.4 (R28 = 1.2)	40
TKP35H22	22	13 25 38 50 63	37/50/75/100	35	53	20 (W13 = 11)	2	R37/50 = 0.96 (R75 or more = 1.12)	2.2 (R37/R50 = 1.8)	25
TKP35H32	32	16	60/75 100/125	35	53	14	2	R60 = 0.88 R75/100/125 = 0.96	1.8 (R60 = 1.6)	25
TKP45H25	25	38 58 78 103	50/75/95 125/150 200	45	68	22	4.5	R50 = 1.12 R75/95 = 1.32 R125/150/200 = 1.40	R50 = 2.3 R75/95 = 2.5 R125/150/200 = 2.6	20

★: Be aware that this differs from the standard types.

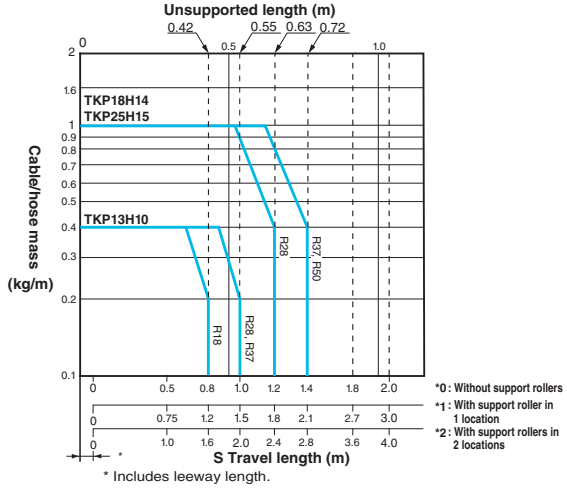
Basic specifications (common to each model)

Maximum travel speed (m/min)		300 ★12
Operating temperature range (°C)		−20 to 80
Materials	Link	Engineering plastic (gray)
	Bracket	Engineering plastic (gray) * Only TKP45H25 is steel (Trivalent chromate plating)

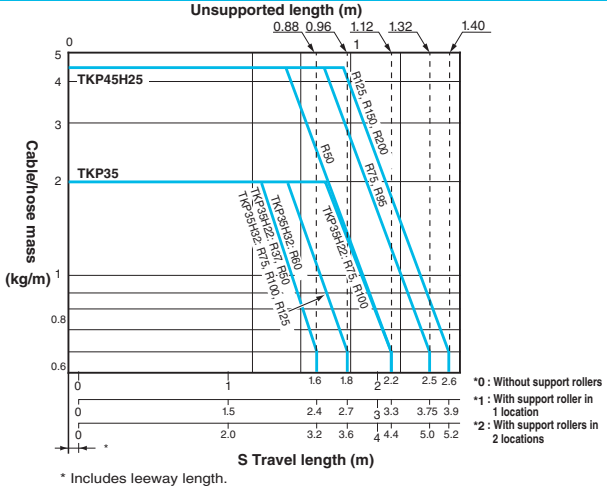
Notes:
1. The overall dimensions and structure are the same as the standard types. Refer to pages 35 to 50.
2. The leeway length for the MW Type differs from the standard types, so the number of required links will also differ. Refer to the leeway lengths in the table above.
3. If considering usage in a vertical installation, etc., with a travel length that exceeds the load diagram for the standard installation (*), contact a Tsubaki representative. (* Refer to page 123.)
4. Contact a Tsubaki representative for usage in a gliding arrangement or circular travel arrangement.
5. The TKP45H25 steel bracket is a common part with the steel standard bracket.
6. Be aware that the TKP45H25 single-part steel bracket cannot be used.
7. Be aware that TKP45H25 horizontal divider with end stoppers (DSB type) cannot be used.
8. Do not mix MW Type and standard type cable carriers. Install problems may occur, which can cause improper bending and links to fall off.
9. Do not use MW Type vertical and horizontal dividers on standard type cable carriers.
10. Aluminum horizontal dividers (TKP45H25-HS58, etc.) for standard type cable carriers have slightly different dimensions than aluminum horizontal dividers (TKP45H25M-HS58, etc.) for MW Type cable carriers.
    Be aware that standard type horizontal dividers may not be installed to MW Type chain links.
11. Cannot be used in acidic or alkaline environments.

★12. 150 m/min for support roller arrangement.

Load diagram



* Includes leeway length.



* Includes leeway length.

Model number

TKP13H10 MW Type

TKP13H10 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	10	18		FO	MO
	20	28		FI	MI
		37			

■ Bracket

Model number	For cable carrier model number
TKP13H10W10M-MO	TKP13H10-30W10R■■M
TKP13H10W10M-MI	
TKP13H10W10M-FO	
TKP13H10W10M-FI	
TKP13H10W20M-MO	TKP13H10-30W20R■■M
TKP13H10W20M-MI	
TKP13H10W20M-FO	
TKP13H10W20M-FI	

TKP18H14 MW Type

TKP18H14 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	15	28		FO	MO
	40	37		FI	MI
		50			

■ Bracket

Model number	For cable carrier model number
TKP18H14W15M-MO	TKP18H14-30W15R■■M
TKP18H14W15M-MI	
TKP18H14W15M-FO	
TKP18H14W15M-FI	
TKP18H14W40M-MO	TKP18H14-30W40R■■M
TKP18H14W40M-MI	
TKP18H14W40M-FO	
TKP18H14W40M-FI	

TKP25H15 MW Type

TKP25H15 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	15	28		FO	MO
	20	37		FI	MI
	30	50			

■ Bracket

Model number	For cable carrier model number
TKP25H15W15M-MO	TKP25H15-30W15R■■M
TKP25H15W15M-MI	
TKP25H15W15M-FO	
TKP25H15W15M-FI	
TKP25H15W20M-MO	TKP25H15-30W20R■■M
TKP25H15W20M-MI	
TKP25H15W20M-FO	
TKP25H15W20M-FI	
TKP25H15W30M-MO	TKP25H15-30W30R■■M
TKP25H15W30M-MI	
TKP25H15W30M-FO	
TKP25H15W30M-FI	

TKP35H22/TKP35H32 MW Type

TKP35H22 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	13 50	37 75		FO	MO
40 Inside openable stay	25 63	50 100		FI	MI
	38				

TKP35H32 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	16	60 100		FO	MO
		75 125			MI

■ Bracket

Model number	For cable carrier model number
TKP35H22W13M-MO	TKP35H22-30/40W13R■■M
TKP35H22W13M-MI	
TKP35H22W13M-FO	
TKP35H22W13M-FI	
TKP35H22W25M-MO	TKP35H22-30/40W25R■■M
TKP35H22W25M-MI	
TKP35H22W25M-FO	
TKP35H22W25M-FI	
TKP35H22W38M-MO	TKP35H22-30/40W38R■■M
TKP35H22W38M-MI	
TKP35H22W38M-FO	
TKP35H22W38M-FI	
TKP35H22W50M-MO	TKP35H22-30/40W50R■■M
TKP35H22W50M-MI	
TKP35H22W50M-FO	
TKP35H22W50M-FI	
TKP35H22W63M-MO	TKP35H22-30/40W63R■■M
TKP35H22W63M-MI	
TKP35H22W63M-FO	
TKP35H22W63M-FI	
TKP35H32W16M-MO	TKP35H32-30W16R■■M
TKP35H32W16M-MI	
TKP35H32W16M-FO	

■ Vertical divider

Model number	For cable carrier model number
TKP35H22M-ST	TKP35H22-30/40W■■R■■M

■ Horizontal divider

Model number	For cable carrier model number
TKP35H22M-HS38	TKP35H22-30/40W38R■■M
TKP35H22M-HS50	TKP35H22-30/40W50R■■M
TKP35H22M-HS63	TKP35H22-30/40W63R■■M

TKP45H25 MW Type

TKP45H25 - (1) W (2) R (3) M + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	38	50 125		FOA FIB	MOA MIB
40 Inside openable stay	58	75 150		FIA FC	MIA MC
	78	95 200		FOB	MOB
	103				

■ Steel bracket

Model number	For cable carrier model number
TKP45H25-MOA	TKP45H25-30/40W■■R■■M
TKP45H25-MIA	
TKP45H25-MOB	
TKP45H25-MIB	
TKP45H25-MC	
TKP45H25-FOA	TKP45H25-30/40W■■R■■M
TKP45H25-FIA	
TKP45H25-FOB	
TKP45H25-FIB	
TKP45H25-FC	

■ Vertical divider

Model number	For cable carrier model number
TKP45H25M-ST	TKP45H25-30/40W■■R■■M

■ Horizontal divider

Model number	For cable carrier model number
TKP45H25M-HS38	TKP45H25-30/40W38R■■M
TKP45H25M-HS58	TKP45H25-30/40W58R■■M
TKP45H25M-HS78	TKP45H25-30/40W78R■■M
TKP45H25M-HS103	TKP45H25-30/40W103R■■M

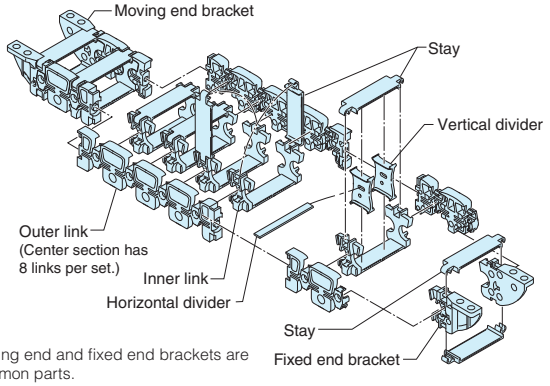
See page 15 for ordering information
See page 146 for product mass

TKR15H22

TSUBAKI eco LINK

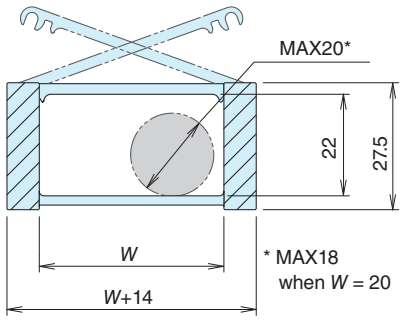
(Patented)

Structure



Note: 1. Moving end and fixed end brackets are common parts.
2. Due to the structure, the number of links is always even. (Cutting and connecting is done on every second links.)

Cross-section dimensions

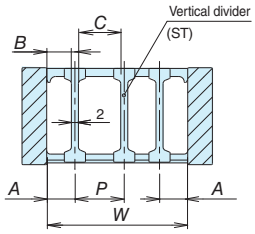


W = 20, 40, 60

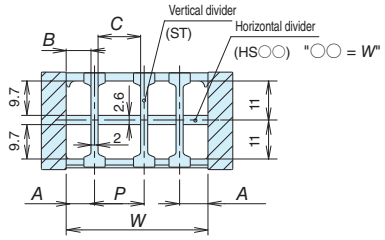
A–A arrow view

Divider dimensions

(1) When using only vertical dividers



(2) Fully-stayed 2-layers height separation



Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)
ST (sliding installation)	Common for all widths	5 to 21	4 to 20	6 to 50	4 to 48
ST (fixable installation)	20	6, 8	5, 7	6, 8	4, 6
	40	6 to 20	5 to 19	6 to 28	4 to 26
	60	6 to 20	5 to 19	6 to 48	4 to 46

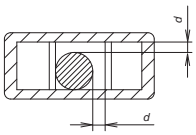
(ST fixable installation: increments 2 mm)

Note: The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers.

Notes:

A: **Distance from center of vertical divider to end face of link**
B: **Gap between vertical divider and link**
P: **Distance between the centers of neighboring vertical dividers**
C: **Gap between neighboring vertical dividers**

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



Vertical divider (fastening method)

Fixable installation and sliding installation can be selected by the direction the same part is installed.

Fixable installation

(Stay opening side)
Outside
Inside
Round hole



Sliding installation

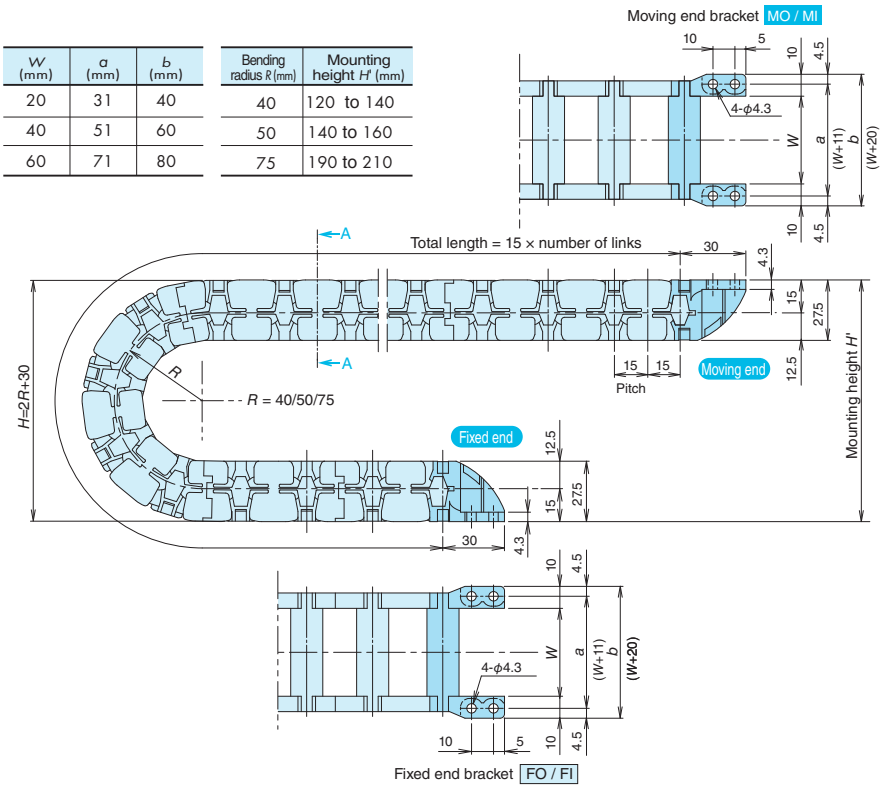
(Stay opening side)
Outside
Inside
Round hole



Dimensions & brackets

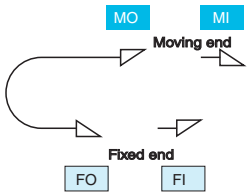
W (mm)	a (mm)	b (mm)
20	31	40
40	51	60
60	71	80

Bending radius R (mm)	Mounting height H' (mm)
40	120 to 140
50	140 to 160
75	190 to 210



Notes: 1. MO and FO brackets are common parts.
2. MI and FI brackets are common parts.

Bracket mounting directions



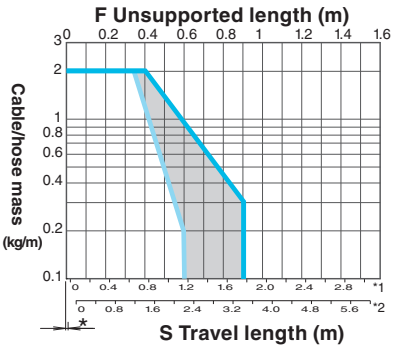
Note: Design and install according to the mounting height *H'* dimension.

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
Standard length (No. of links)		Specified number of links

Notes: ★1. 150 m/min for support roller arrangement.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load diagram



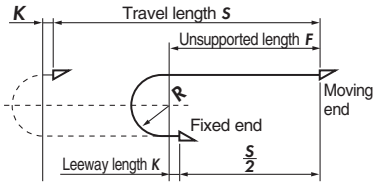
* Includes leeway length.
*** 1: Without support rollers**
*** 2: With support rollers**

Note: At the conditions in the shaded area ▨ of the load diagram, the unsupported length section may run with a sag. This may cause interference between the cable carrier and equipment depending on the installation conditions. Contact a Tsubaki representative for further information.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value.
* Due to the structure, the number of links must be even.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 15 mm
K: Leeway length = 15 mm or greater

* Set the leeway length *K* to 23 mm or greater for support roller arrangement. Set the installation distance of support rollers to 350 mm or less.

Model number

TKR15H22 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30 Outside openable stay	20	40		FO	MO
	40	50		FI	MI
	60	75			

Notes: 1. Moving end and fixed end brackets are common parts.
2. Dividers are delivered uninstalled.
3. Brackets are delivered installed.
4. Required number of vertical dividers: (normally installed every 4 links = installed every 2 stays)
   • Number of links N for installing vertical dividers = Total number of links (even) ÷ 4
   N: Integer (round down decimals)
   • Required number of vertical dividers = N x n
   n: Number of vertical dividers installed per spot on the link
5. Install vertical dividers from second stay on the moving end.

■ Plastic link (extension)

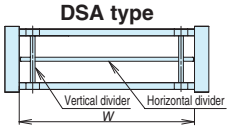
TKR15H22 - (1) W (2) R (3) ETL + (4) L

(1) Opening options	(2) Inner width	(3) Bending radius	(4) Number of links
30 Outside openable stay	20	40	
	40	50	
	60	75	

■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKR15H22-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKR15H22-HS (Dimension *W*) *W* = 20/40/60	1 horizontal divider	K (pcs)

DSA type



Note: 2 or more vertical dividers are required.

■ Vertical divider

Model number	For cable carrier model number
TKR15H22-ST	TKR15H22-30W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKR15H22-HS20	TKR15H22-30W20R■■
TKR15H22-HS40	TKR15H22-30W40R■■
TKR15H22-HS60	TKR15H22-30W60R■■

■ Bracket

Model number	For cable carrier model number
TKR15H22W20-MO	TKR15H22-30W20R■■
TKR15H22W20-MI	
TKR15H22W20-FO	
TKR15H22W20-FI	
TKR15H22W40-MO	TKR15H22-30W40R■■
TKR15H22W40-MI	
TKR15H22W40-FO	
TKR15H22W40-FI	
TKR15H22W60-MO	TKR15H22-30W60R■■
TKR15H22W60-MI	
TKR15H22W60-FO	
TKR15H22W60-FI	

Adding additional links

1) Ordering
When ordering, be sure that the plastic link (extension) model number is for an even number of links.
2) Delivery: (1), (2), and (3) below are delivered uninstalled in the following quantities.
(1) Outer links (8 links = 1 set): {Quantity (number of links) ÷ 8 (round up) × 2 (left/right)} × Number of sets
(2) Inner links: {Quantity (number of links) ÷ 2} × Number of sets
(3) Stays: {Quantity (number of links) ÷ 2} × Number of sets
* Outer links are common parts for both left and right sides. 8 links = 1 set and are delivered uncut.
Ex. 1: **TKR15H22-30W20R40ETL+2L 1H** 2 links × 1 set
(1) Outer links: 2 (2) Inner links: 1 (3) Stay: 1
Ex. 2: **TKR15H22-30W20R40ETL+10L 2H** 10 links × 2 sets
(1) Outer links: 8 (2) Inner links: 10 (3) Stays: 10

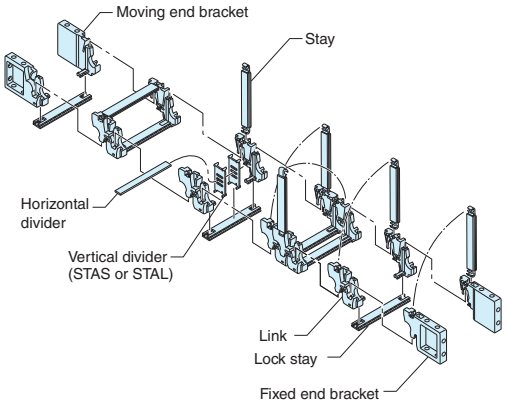
See page 18 for ordering information
See page 147 for product mass

TKR20H28

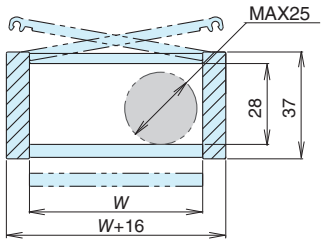
TSUBAKI eco LINK

(Patented)

Structure



Cross-section dimensions

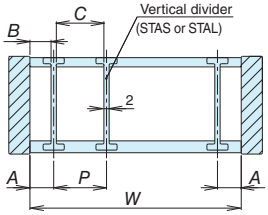


W = 30, 40, 50, 60, 80, 100, 120

A–A arrow view

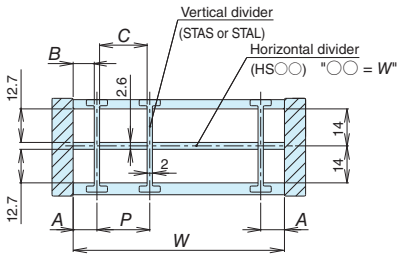
Divider dimensions

(1) When using only vertical dividers

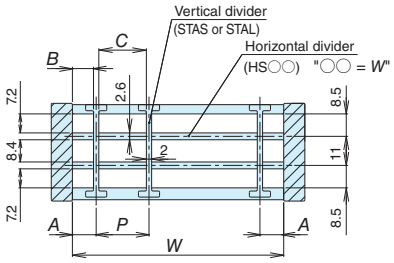


(2) Fully-stayed multiple height separation (DSA type)

When separating into 2 layers



When separating into 3 layers



Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)
STAS (sliding installation)	Common for all widths	4 to 21	3 to 20	8 to 82	6 to 80
STAL (fixable installation)	30	7 to 15	6 to 14	8 to 16	6 to 14
	40	4 to 20	3 to 19	8 to 32	6 to 30
	50	5 to 21	4 to 20	8 to 40	6 to 38
	60	6 to 18	5 to 17	8 to 48	6 to 46
	80	4 to 20	3 to 19	8 to 72	6 to 70
	100	6 to 18	5 to 17	8 to 80	6 to 82
	120	4 to 20	3 to 19	8 to 80	6 to 82

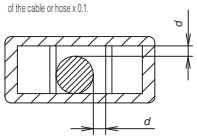
4 mm increments

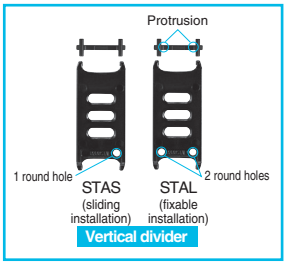
Note: The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers.

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

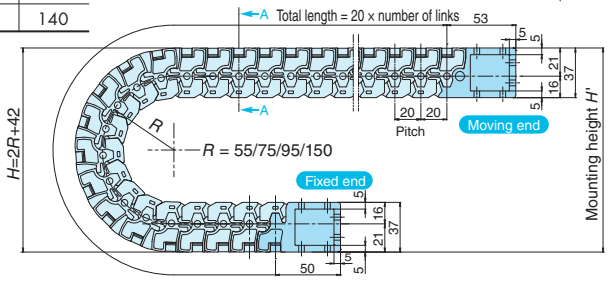




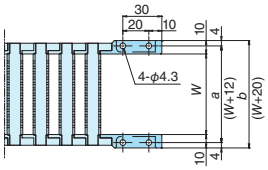
Dimensions & brackets

W (mm)	a (mm)	b (mm)
30	42	50
40	52	60
50	62	70
60	72	80
80	92	100
100	112	120
120	132	140

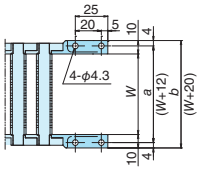
Bending radius R (mm)	Mounting height H' (mm)
55	182 to 202
75	222 to 242
95	262 to 282
150	372 to 392



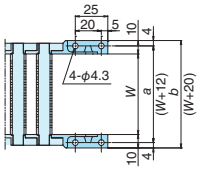
Moving end bracket MU

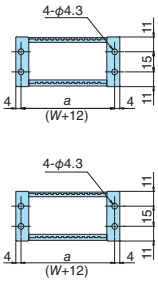


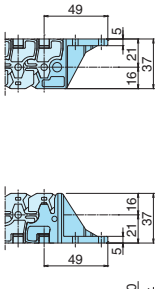
Moving end bracket MO

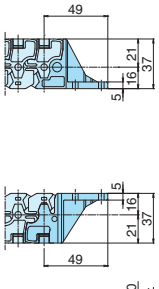


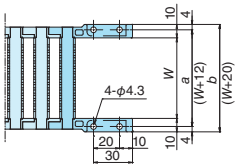
Moving end bracket MI





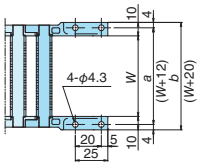




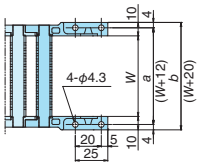


Fixed end bracket FU

Note: Design and install according to the mounting height *H'* dimension.



Fixed end bracket FO



Fixed end bracket FI

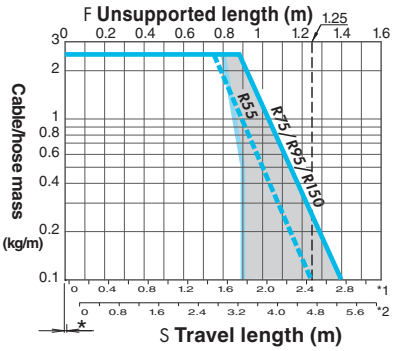
Note: The brackets are all different parts.

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
Standard length (No. of links)		100

Notes: ★1. 150 m/min for support roller arrangement.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load diagram



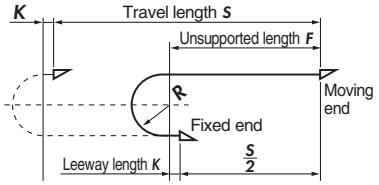
* Includes leeway length.
*** 1: Without support rollers**
*** 2: With support rollers**

Note: At the conditions in the shaded area of the load diagram, the unsupported length section may run with a sag. This may cause interference between the cable carrier and equipment depending on the installation conditions. Contact a Tsubaki representative for further information.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 20 mm
K: Leeway length = 40 mm or greater

* Set the leeway length *K* to 60 mm or greater for support roller arrangement. Set the installation distance of support rollers to 700 mm or less.

Model number

TKR20H28W (1) R (2) + (3)L - (4) - (5)

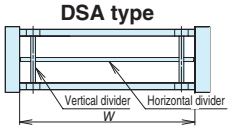
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
30	55		FU	MU
40	75		FO	MO
50	95		FI	MI
60	150			
80				
100				
120				

Notes: 1. Dividers are delivered uninstalled.
2. Brackets are delivered installed.
3. Required number of vertical dividers: (normally installed every 2 links)
Number of links N for installing vertical dividers = (Total number of links + 1) ÷ 2
N: Integer (round down decimals)
Required number of vertical dividers = N x n
n: Number of vertical dividers installed per spot on the link

■ Divider

Type	Model number	Part	Unit
(1) Vertical divider (sliding installation)	TKR20H28-STAS	1 vertical divider	K (pcs)
(2) Vertical divider (fixable installation)	TKR20H28-STAL	1 vertical divider	K (pcs)
(3) Horizontal divider (For DSA type)	TKR20H28-HS (Dimension *W*) *W* = 30/40/50/60/80/100/120	1 horizontal divider	K (pcs)

DSA type



Note: 2 or more vertical dividers are required.

■ Vertical divider

Model number	For cable carrier model number
TKR20H28-STAS	TKR20H28W■■R■■
TKR20H28-STAL	

■ Horizontal divider

Model number	For cable carrier model number
TKR20H28-HS30	TKR20H28W30R■■
TKR20H28-HS40	TKR20H28W40R■■
TKR20H28-HS50	TKR20H28W50R■■
TKR20H28-HS60	TKR20H28W60R■■
TKR20H28-HS80	TKR20H28W80R■■
TKR20H28-HS100	TKR20H28W100R■■
TKR20H28-HS120	TKR20H28W120R■■

■ Bracket

Model number	For cable carrier model number
TKR20H28W30-MU	TKR20H28W30R■■
TKR20H28W30-MO	
TKR20H28W30-MI	
TKR20H28W30-FU	
TKR20H28W30-FO	
TKR20H28W30-FI	
TKR20H28W40-MU	TKR20H28W40R■■
TKR20H28W40-MO	
TKR20H28W40-MI	
TKR20H28W40-FU	
TKR20H28W40-FO	
TKR20H28W40-FI	
TKR20H28W50-MU	TKR20H28W50R■■
TKR20H28W50-MO	
TKR20H28W50-MI	
TKR20H28W50-FU	
TKR20H28W50-FO	
TKR20H28W50-FI	
TKR20H28W60-MU	TKR20H28W60R■■
TKR20H28W60-MO	
TKR20H28W60-MI	
TKR20H28W60-FU	
TKR20H28W60-FO	
TKR20H28W60-FI	
TKR20H28W80-MU	TKR20H28W80R■■
TKR20H28W80-MO	
TKR20H28W80-MI	
TKR20H28W80-FU	
TKR20H28W80-FO	
TKR20H28W80-FI	
TKR20H28W100-MU	TKR20H28W100R■■
TKR20H28W100-MO	
TKR20H28W100-MI	
TKR20H28W100-FU	
TKR20H28W100-FO	
TKR20H28W100-FI	
TKR20H28W120-MU	TKR20H28W120R■■
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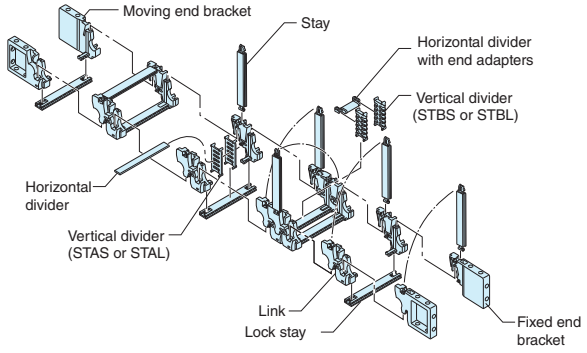
See page 15 for ordering information
See page 147 for product mass

TKR26H40

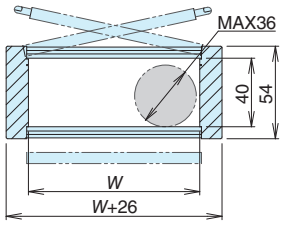
TSUBAKI eco LINK

(Patented)

Structure



Cross-section dimensions

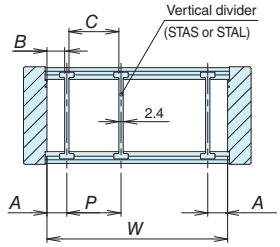


W = 50, 62, 75, 87, 100, 125, 150, 200

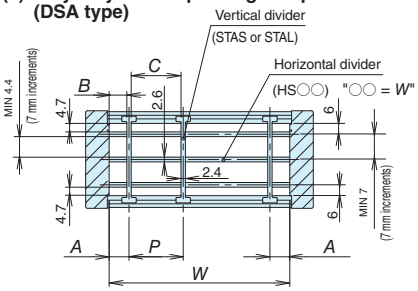
A–A arrow view

Divider dimensions

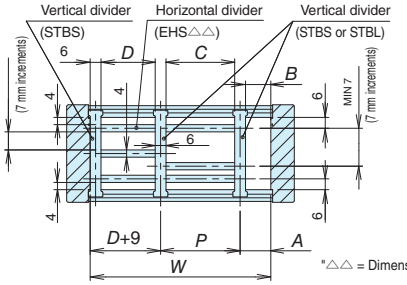
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



"△△ = Dimension *C* or *D*"

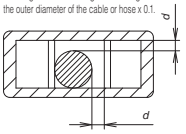
Vertical divider (fastening method)	Inner width *W* (mm)	*A* (mm)	*B* (mm)	*P* (mm)	*C* (mm)	*D* (mm)
STAS (sliding installation)	Common for all widths	3 to 65	1.8 to 63.8	8 to 140	5.6 to 137.6	
STAL (fixable installation)	50	5 to 37	3.8 to 35.8	8 to 40	5.6 to 37.6	4 mm increments
	62	7 to 47	5.8 to 45.8	8 to 48	5.6 to 45.6	
	75	5.5 to 61.5	4.3 to 60.8	8 to 64	5.6 to 61.6	
	87	3.5 to 63.5	2.3 to 62.3	8 to 80	5.6 to 77.6	
	100	6 to 62	4.8 to 60.8	8 to 88	5.6 to 85.6	
	125	6.5 to 62.5	5.3 to 61.3	8 to 112	5.6 to 109.6	
	150	7 to 63	5.8 to 61.8	8 to 136	5.6 to 133.6	
	200	4 to 64	2.8 to 62.3	8 to 192	5.6 to 189.6	
STBS (sliding installation)	Common for all widths	min 3	min 0	26 to (*W*−6)	20 to (*W*−12)	20 to (*W*−12)
STBL (fixable installation)	50	min 5	min 2	–	–	20 to 36
	62	min 7	min 4	–	–	20 to 46
	75	min 5.5	min 2.5	28 to 40	22 to 34	20.5 to 60.5
	87	min 3.5	min 0.5	28 to 52	22 to 46	22.5 to 74.5
	100	min 6	min 3	28 to 64	22 to 58	21 to 85
	125	min 6.5	min 3.5	28 to 88	22 to 82	21.5 to 109.5
	150	min 7	min 4	28 to 111	22 to 106	22 to 134
	200	min 4	min 1	28 to 164	22 to 138	23 to 187

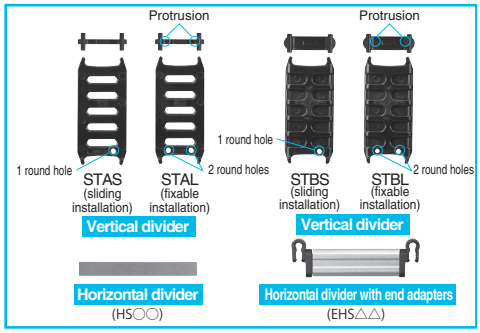
(4 mm increments)

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers
D: Gap between neighboring vertical dividers when vertical dividers / dividers for both ends are installed

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.





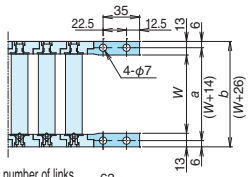
Note: The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers.

Dimensions & brackets

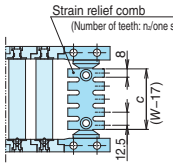
W (mm)	*a* (mm)	*b* (mm)	*c* (mm)	Strain relief comb n_z (toothed)
50	64	76	33	3
62	76	88	–	–
75	89	101	58	5
87	101	113	–	–
100	114	126	83	7
125	139	151	108	9
150	164	176	133	11
200	214	226	–	–

Bending radius *R* (mm)	Mounting height *H'* (mm)
75	238 to 258
100	288 to 308
125	338 to 358
150	388 to 408

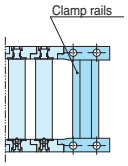
Moving end bracket **MU**

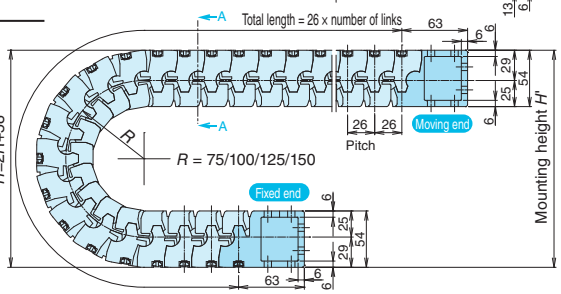


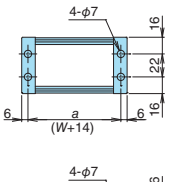
Moving end bracket **MUCL** ★3 (with 1 strain relief comb)

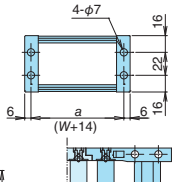


Moving end bracket **MUCR** (with 1 clamp rail)

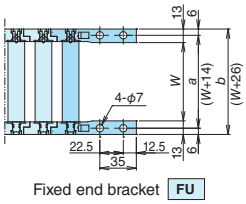




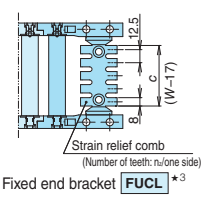




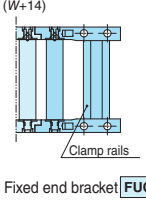
Note: Design and install according to the mounting height *H'* dimension.



Fixed end bracket **FU**



Fixed end bracket **FUCL** ★3 (with 1 strain relief comb)



Fixed end bracket **FUCR** (with 1 clamp rail)

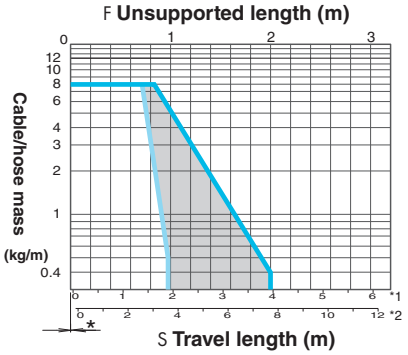
Notes: 1. Strain relief combs and clamp rails can be installed on the inside and outside.
2. Note that the strain relief comb and clamp rail cannot be added to the MU and FU brackets.
★3. Only when *W* = 50, 75, 100, 125, or 150.

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			−40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		
	Vertical divider		
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic + aluminum (black)
Standard length (No. of links)			100

Notes: ★1. 150 m/min for support roller arrangement.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load diagram



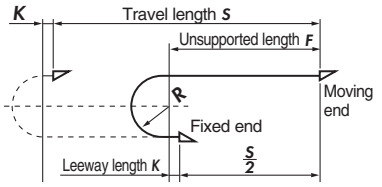
* Includes leeway length.
*** 1: Without support rollers**
*** 2: With support rollers**

Note: At the conditions in the shaded area of the load diagram, the unsupported length section may run with a sag. This may cause interference between the cable carrier and equipment depending on the installation conditions. Contact a Tsubaki representative for further information.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 26 mm
K: Leeway length = 52 mm or greater

* Set the leeway length *K* to 78 mm or greater for support roller arrangement.
Set the installation distance of support rollers to 700 mm or less.

Model number

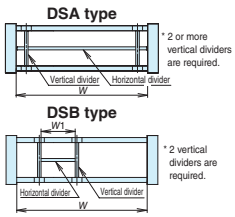
TKR26H40W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
50	75		FU	MU
62	100		FUCL ★4	MUCL ★4
75	125		FUCR	MUCR
87	150			
100				
125				
150				
200				

Notes: 1. Dividers, strain relief combs, and clamp rails are delivered uninstalled.
2. Brackets are delivered installed.
3. Required number of vertical dividers: (normally installed every 2 links)
Number of links N for installing vertical dividers = (Total number of links + 1) ÷ 2
N: Integer (round down decimals)
Required number of vertical dividers = N x n
n: Number of vertical dividers installed per spot on the link
★4. Those for *W* = 62, 87, and 200 cannot use the FUCL fixed end and MUCL moving end.

■ Divider

Method	Type		Model number	Part	Unit
DSA type	Vertical divider	Sliding installation	TKR26H40-STAS	1 vertical divider	K (pcs)
		Fixable installation	TKR26H40-STAL	1 vertical divider	K (pcs)
	Horizontal divider		TKR26H40-HS (Dimension *W*) *W* = 50/62/75/87/100/125/150/200	1 horizontal divider	K (pcs)
DSB type	Vertical divider	Sliding installation	TKR26H40-STBS	1 vertical divider	K (pcs)
		Fixable installation	TKR26H40-STBL	1 vertical divider	K (pcs)
	Horizontal divider with end adapters		TKR26H40-EHS△△ △△ = Dimension *C* or *D* of divider dimensions	1 horizontal divider 2 end adapters	K (pcs)



■ Strain relief comb (plastic)

Model number	Applicable bracket
TKR26H40W50-CL-U	TKR26H40W50-MU/FU
TKR26H40W75-CL-U	TKR26H40W75-MU/FU
TKR26H40W100-CL-U	TKR26H40W100-MU/FU
TKR26H40W125-CL-U	TKR26H40W125-MU/FU
TKR26H40W150-CL-U	TKR26H40W150-MU/FU

Note: None for W62, 87, and 200.

■ Vertical divider

Model number	For cable carrier model number
TKR26H40-STAS	TKR26H40W■■R■■
TKR26H40-STAL	
TKR26H40-STBS	
TKR26H40-STBL	

■ Horizontal divider with end adapters

Model number
TKR26H40-EHS△△

△△: 20 to less than 188 * Minimum 0.5 mm each

■ Horizontal divider

Model number	For cable carrier model number
TKR26H40-HS50	TKR26H40W50R■■
TKR26H40-HS62	TKR26H40W62R■■
TKR26H40-HS75	TKR26H40W75R■■
TKR26H40-HS87	TKR26H40W87R■■
TKR26H40-HS100	TKR26H40W100R■■
TKR26H40-HS125	TKR26H40W125R■■
TKR26H40-HS150	TKR26H40W150R■■
TKR26H40-HS200	TKR26H40W200R■■

■ Clamp rail (steel)

Model number	Applicable bracket
TKR26H40W50-CRA	TKR26H40W50-MU/FU
TKR26H40W62-CRA	TKR26H40W62-MU/FU
TKR26H40W75-CRA	TKR26H40W75-MU/FU
TKR26H40W87-CRA	TKR26H40W87-MU/FU
TKR26H40W100-CRA	TKR26H40W100-MU/FU
TKR26H40W125-CRA	TKR26H40W125-MU/FU
TKR26H40W150-CRA	TKR26H40W150-MU/FU
TKR26H40W200-CRA	TKR26H40W200-MU/FU

■ Bracket

Model number	For cable carrier model number
TKR26H40W50-MU	TKR26H40W50R■■
TKR26H40W50-FU	
TKR26H40W62-MU	TKR26H40W62R■■
TKR26H40W62-FU	
TKR26H40W75-MU	TKR26H40W75R■■
TKR26H40W75-FU	
TKR26H40W87-MU	TKR26H40W87R■■
TKR26H40W87-FU	
TKR26H40W100-MU	TKR26H40W100R■■
TKR26H40W100-FU	
TKR26H40W125-MU	TKR26H40W125R■■
TKR26H40W125-FU	
TKR26H40W150-MU	TKR26H40W150R■■
TKR26H40W150-FU	
TKR26H40W200-MU	TKR26H40W200R■■
TKR26H40W200-FU	

■ Bracket (with 1 strain relief comb)

Model number	For cable carrier model number
TKR26H40W50-MUCL	TKR26H40W50R■■
TKR26H40W50-FUCL	
TKR26H40W75-MUCL	TKR26H40W75R■■
TKR26H40W75-FUCL	
TKR26H40W100-MUCL	TKR26H40W100R■■
TKR26H40W100-FUCL	
TKR26H40W125-MUCL	TKR26H40W125R■■
TKR26H40W125-FUCL	
TKR26H40W150-MUCL	TKR26H40W150R■■
TKR26H40W150-FUCL	

■ Bracket (with 1 clamp rail)

Model number	For cable carrier model number
TKR26H40W50-MUCR	TKR26H40W50R■■
TKR26H40W50-FUCR	
TKR26H40W62-MUCR	TKR26H40W62R■■
TKR26H40W62-FUCR	
TKR26H40W75-MUCR	TKR26H40W75R■■
TKR26H40W75-FUCR	
TKR26H40W87-MUCR	TKR26H40W87R■■
TKR26H40W87-FUCR	
TKR26H40W100-MUCR	TKR26H40W100R■■
TKR26H40W100-FUCR	
TKR26H40W125-MUCR	TKR26H40W125R■■
TKR26H40W125-FUCR	
TKR26H40W150-MUCR	TKR26H40W150R■■
TKR26H40W150-FUCR	
TKR26H40W200-MUCR	TKR26H40W200R■■
TKR26H40W200-FUCR	

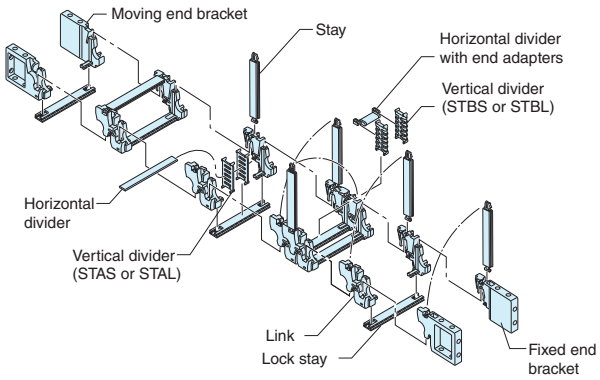
See page 15 for ordering information
See page 147 for product mass

TKR28H52

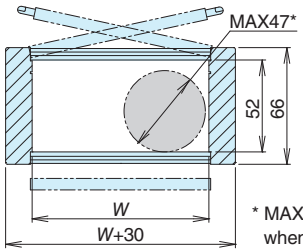
TSUBAKI eco LINK

(Patented)

Structure



Cross-section dimensions

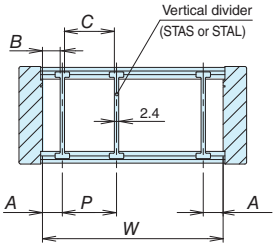


W = 50, 62, 75, 87, 100, 125, 150, 200

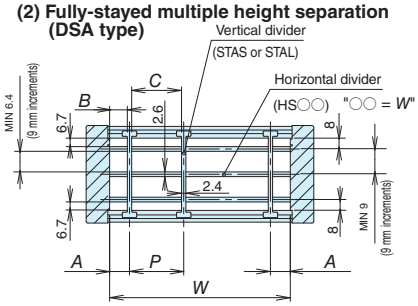
A–A arrow view

Divider dimensions

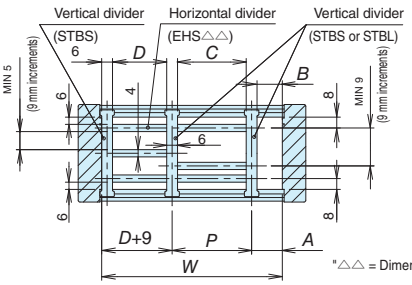
(1) When using only vertical dividers



(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)

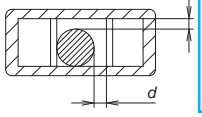


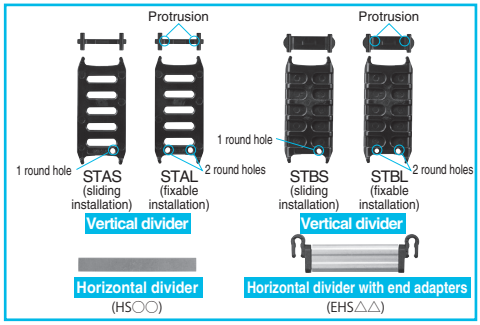
Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)	D (mm)
STAS (sliding installation)	Common for all widths	3 to 65	1.8 to 63.8	8 to 130	5.6 to 127.6	
STAL (fixable installation)	50	5 to 37	3.8 to 35.8	8 to 40	5.6 to 37.6	4 mm increments
	62	7 to 47	5.8 to 45.8	8 to 48	5.6 to 45.6	
	75	5.5 to 61.5	4.3 to 60.3	8 to 64	5.6 to 61.6	
	87	3.5 to 63.5	2.3 to 62.3	8 to 80	5.6 to 77.6	
	100	6 to 62	4.8 to 60.8	8 to 88	5.6 to 85.6	
	125	6.5 to 62.5	5.3 to 61.3	8 to 112	5.6 to 109.6	
	150	7 to 63	5.8 to 61.8	8 to 124	5.6 to 121.6	
	200	4 to 64	2.8 to 62.8	8 to 124	5.6 to 121.6	
STBS (sliding installation)	Common for all widths	min 3	min 0	26 to (W−6)	20 to (W−12)	20 to (W−12)
STBL (fixable installation)	50	min 5	min 2	–	–	20 to 36
	62	min 7	min 4	–	–	22 to 46
	75	min 5.5	min 2.5	28 to 40	22 to 34	20.5 to 60.5
	87	min 3.5	min 0.5	28 to 52	22 to 46	22.5 to 74.5
	100	min 6	min 3	28 to 64	22 to 58	21 to 85
	125	min 6.5	min 3.5	28 to 88	22 to 82	21.5 to 109.5
	150	min 7	min 4	28 to 112	22 to 106	22 to 134
	200	min 4	min 1	28 to 164	22 to 158	23 to 187

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers
D: Gap between neighboring vertical dividers when vertical dividers / dividers for both ends are installed

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.





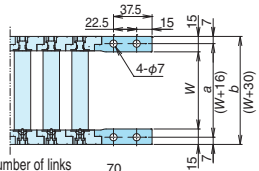
Note: The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers.

Dimensions & brackets

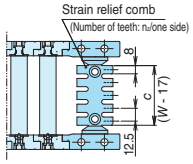
W (mm)	a (mm)	b (mm)	c (mm)	Strain relief comb n_z (toothed)
50	66	80	33	3
62	78	92	–	–
75	91	105	58	5
87	103	117	–	–
100	116	130	83	7
125	141	155	108	9
150	166	180	133	11
200	216	230	–	–

Bending radius R (mm)	Mounting height H' (mm)
75	252 to 272
100	302 to 322
150	402 to 422
200	502 to 522

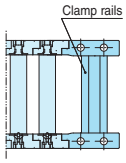
Moving end bracket **MU**

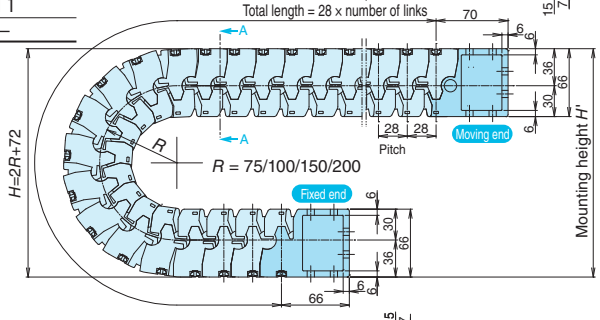


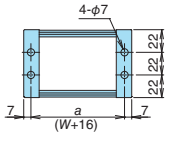
Moving end bracket **MUCL** ★3 (with 1 strain relief comb)

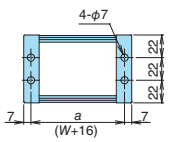


Moving end bracket **MUCR** (with 1 clamp rail)

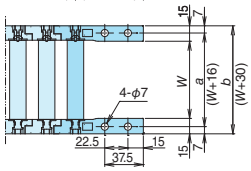




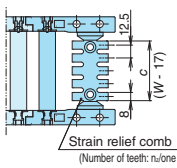




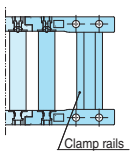
Note: Design and install according to the mounting height *H'* dimension.



Fixed end bracket **FU**



Fixed end bracket **FUCL** ★3 (with 1 strain relief comb)



Fixed end bracket **FUCR** (with 1 clamp rail)

Notes:
1. Strain relief combs and clamp rails can be installed on the inside and outside.
2. Note that the strain relief comb and clamp rail cannot be added to the MU and FU brackets.

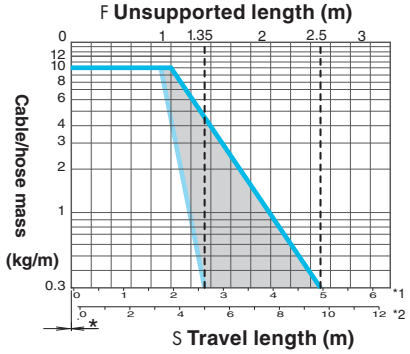
★3. Only when *W* = 50, 75, 100, 125, or 150.

Basic specifications

Maximum travel speed (m/min)			300 ★1
Operating temperature range (°C)			−40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		
	Vertical divider		
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic + aluminum (black)
Standard length (No. of links)			100

Notes: ★1. 150 m/min for support roller arrangement.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load diagram



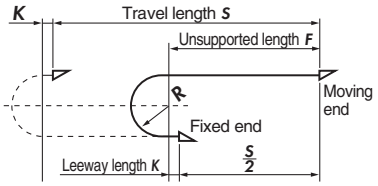
* Includes leeway length.
*** 1: Without support rollers**
*** 2: With support rollers**

Note: At the conditions in the shaded area of the load diagram, the unsupported length section may run with a sag. This may cause interference between the cable carrier and equipment depending on the installation conditions. Contact a Tsubaki representative for further information.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 28 mm
K: Leeway length = 56 mm or greater

* Set the leeway length *K* to 84 mm or greater for support roller arrangement.
Set the installation distance of support rollers to 900 mm or less.

Model number

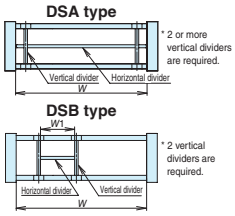
TKR28H52W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
50	75		FU	MU
62	100		FUCL ★4	MUCL ★4
75	150		FUCR	MUCR
87	200			
100				
125				
150				
200				

Notes: 1. Dividers, strain relief combs, and clamp rails are delivered uninstalled.
2. Brackets are delivered installed.
3. Required number of vertical dividers: (normally installed every 2 links)
Number of links N for installing vertical dividers = (Total number of links + 1) ÷ 2
N: Integer (round down decimals)
Required number of vertical dividers = N x n
n: Number of vertical dividers installed per spot on the link
★4. Those for *W* = 62, 87, and 200 cannot use the FUCL fixed end and MUCL moving end.

■ Divider

Method	Type		Model number	Part	Unit
DSA type	Vertical divider	Sliding installation	TKR28H52-STAS	1 vertical divider	K (pcs)
		Fixable installation	TKR28H52-STAL	1 vertical divider	K (pcs)
	Horizontal divider		TKR28H52-HS (Dimension *W*) *W* = 50/62/75/87/100/125/150/200	1 horizontal divider	K (pcs)
DSB type	Vertical divider	Sliding installation	TKR28H52-STBS	1 vertical divider	K (pcs)
		Fixable installation	TKR28H52-STBL	1 vertical divider	K (pcs)
	Horizontal divider with end adapters		TKR28H52-EHS△△ △△ = Dimension C or D of divider dimensions	1 horizontal divider 2 end adapters	K (pcs)



■ Strain relief comb (plastic)

Model number	Applicable bracket
TKR28H52W50-CL-U	TKR28H52W50-MU/FU
TKR28H52W75-CL-U	TKR28H52W75-MU/FU
TKR28H52W100-CL-U	TKR28H52W100-MU/FU
TKR28H52W125-CL-U	TKR28H52W125-MU/FU
TKR28H52W150-CL-U	TKR28H52W150-MU/FU

Note: None for W62, 87, and 200.

■ Vertical divider

Model number	For cable carrier model number
TKR28H52-STAS	TKR28H52W■■R■■
TKR28H52-STAL	
TKR28H52-STBS	
TKR28H52-STBL	

■ Horizontal divider with end adapters

Model number
TKR28H52-EHS△△

△△: 20 to less than 188 * Minimum 0.5 mm each

■ Horizontal divider

Model number	For cable carrier model number
TKR28H52-HS50	TKR28H52W50R■■
TKR28H52-HS62	TKR28H52W62R■■
TKR28H52-HS75	TKR28H52W75R■■
TKR28H52-HS87	TKR28H52W87R■■
TKR28H52-HS100	TKR28H52W100R■■
TKR28H52-HS125	TKR28H52W125R■■
TKR28H52-HS150	TKR28H52W150R■■
TKR28H52-HS200	TKR28H52W200R■■

■ Clamp rail (steel)

Model number	Applicable bracket
TKR28H52W50-CRA	TKR28H52W50-MU/FU
TKR28H52W62-CRA	TKR28H52W62-MU/FU
TKR28H52W75-CRA	TKR28H52W75-MU/FU
TKR28H52W87-CRA	TKR28H52W87-MU/FU
TKR28H52W100-CRA	TKR28H52W100-MU/FU
TKR28H52W125-CRA	TKR28H52W125-MU/FU
TKR28H52W150-CRA	TKR28H52W150-MU/FU
TKR28H52W200-CRA	TKR28H52W200-MU/FU

■ Bracket

Model number	For cable carrier model number
TKR28H52W50-MU	TKR28H52W50R■■
TKR28H52W50-FU	
TKR28H52W62-MU	TKR28H52W62R■■
TKR28H52W62-FU	
TKR28H52W75-MU	TKR28H52W75R■■
TKR28H52W75-FU	
TKR28H52W87-MU	TKR28H52W87R■■
TKR28H52W87-FU	
TKR28H52W100-MU	TKR28H52W100R■■
TKR28H52W100-FU	
TKR28H52W125-MU	TKR28H52W125R■■
TKR28H52W125-FU	
TKR28H52W150-MU	TKR28H52W150R■■
TKR28H52W150-FU	
TKR28H52W200-MU	TKR28H52W200R■■
TKR28H52W200-FU	

■ Bracket (with 1 strain relief comb)

Model number	For cable carrier model number
TKR28H52W50-MUCL	TKR28H52W50R■■
TKR28H52W50-FUCL	
TKR28H52W75-MUCL	TKR28H52W75R■■
TKR28H52W75-FUCL	
TKR28H52W100-MUCL	TKR28H52W100R■■
TKR28H52W100-FUCL	
TKR28H52W125-MUCL	TKR28H52W125R■■
TKR28H52W125-FUCL	
TKR28H52W150-MUCL	TKR28H52W150R■■
TKR28H52W150-FUCL	

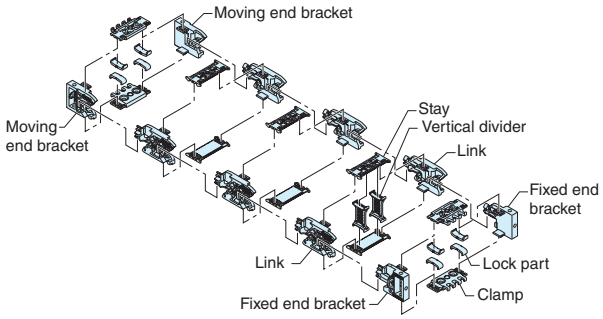
■ Bracket (with 1 clamp rail)

Model number	For cable carrier model number
TKR28H52W50-MUCR	TKR28H52W50R■■
TKR28H52W50-FUCR	
TKR28H52W62-MUCR	TKR28H52W62R■■
TKR28H52W62-FUCR	
TKR28H52W75-MUCR	TKR28H52W75R■■
TKR28H52W75-FUCR	
TKR28H52W87-MUCR	TKR28H52W87R■■
TKR28H52W87-FUCR	
TKR28H52W100-MUCR	TKR28H52W100R■■
TKR28H52W100-FUCR	
TKR28H52W125-MUCR	TKR28H52W125R■■
TKR28H52W125-FUCR	
TKR28H52W150-MUCR	TKR28H52W150R■■
TKR28H52W150-FUCR	
TKR28H52W200-MUCR	TKR28H52W200R■■
TKR28H52W200-FUCR	

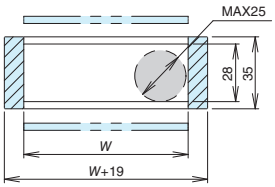
See page 15 for ordering information
See page 147 for product mass

TKR37H28

Structure



Cross-section dimensions

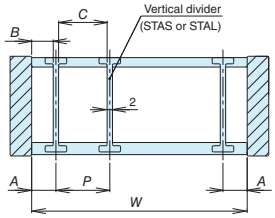


W = 40, 50, 60, 70, 80

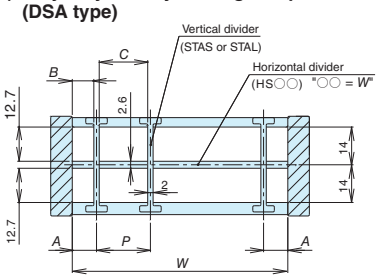
A–A arrow view

Divider dimensions

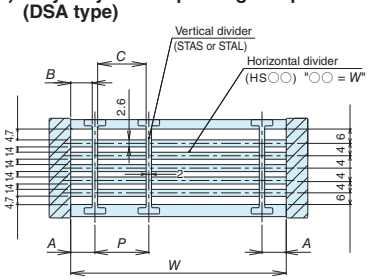
(1) When using only vertical dividers



(2) Fully-stayed 2-layers height separation (DSA type)



(3) Fully-stayed multiple height separation (DSA type)

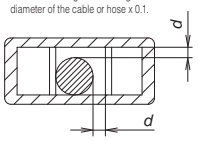


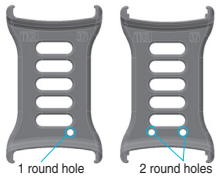
Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)		C (mm)	
STAS (sliding installation)	Common for all widths	7.5 to 21		6.5 to 20		8 to 65		6 to 63	
STAL (fixable installation)	40	8 to 20	2 mm increments	7 to 19	2 mm increments	8 to 24	2 mm increments	6 to 22	2 mm increments
	50	9 to 21		8 to 20		8 to 32		6 to 30	
	60	8 to 20		7 to 19		8 to 44		6 to 42	
	70	9 to 21		8 to 20		8 to 52		6 to 50	
	80	8 to 20		7 to 19		8 to 64		6 to 62	

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.





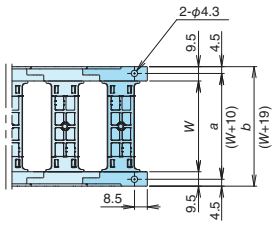
Vertical divider

Dimensions & brackets

W (mm)	a (mm)	b (mm)	c (mm)	Strain relief comb n_z (toothed)
40	50	59	22	3
50	60	69	32	4
60	70	79	42	5
70	80	89	52	6
80	90	99	62	7

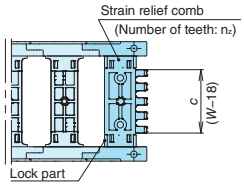
Bending radius R (mm)	Mounting height H' (mm)
55	180 to 200
75	220 to 240
100	270 to 290

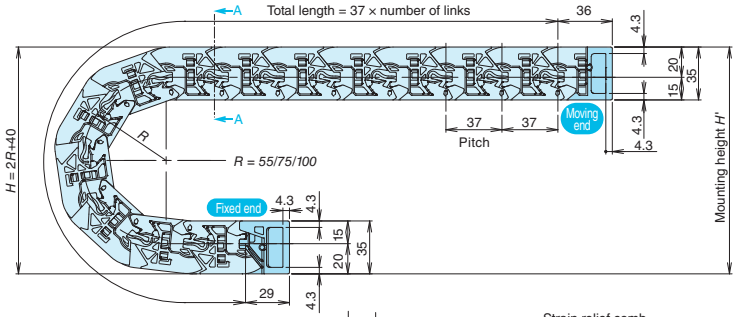
Moving end bracket **MU**

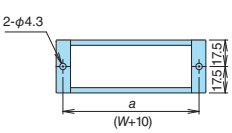


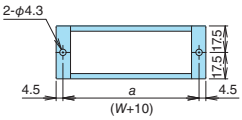
Moving end bracket **MUCLO / MUCLI / MUCLB**

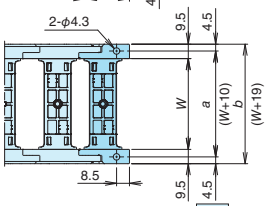
- MUCLO: Strain relief comb outside mounting
- MUCLI: Strain relief comb inside mounting
- MUCLB: Strain relief comb inside/outside mounting



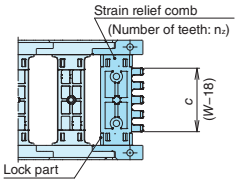








Fixed end bracket **FU**



Fixed end bracket **FUCLO / FUCLI / FUCLB**

- FUCLO: Strain relief comb outside mounting
- FUCLI: Strain relief comb inside mounting
- FUCLB: Strain relief comb inside/outside mounting

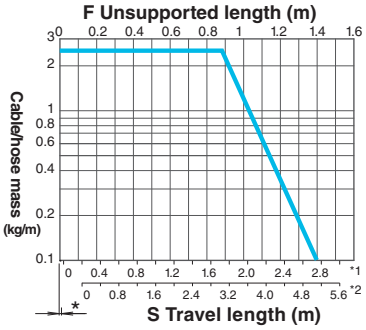
Note: Design and install according to the mounting height *H'* dimension.

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
	Clamp	Engineering plastic (black)
Standard length (No. of links)		50

Notes: ★1. 150 m/min for support roller arrangement.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load diagram

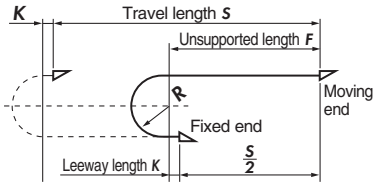


* Includes leeway length.
*** 1: Without support rollers**
*** 2: With support rollers**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 37 mm
K: Leeway length = 74 mm or greater

* Set the leeway length *K* to 111 mm or greater for support roller arrangement.
Set the installation distance of support rollers to 700 mm or less.

Model number

TKR37H28W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
40	55		FU	MU
50	75		FUCLO	MUCLO
60	100		FUCLI	MUCLI
70			FUCLB	MUCLB
80				

Notes: 1. Dividers are delivered uninstalled.
2. Brackets are delivered installed.
3. Install dividers every 2 links.
4. Required number of vertical dividers: (normally installed every 2 links)
Number of links N for installing vertical dividers = Total number of links ÷ 2 N: Integer (round down decimals)
Required number of vertical dividers = N x n n: Number of vertical dividers installed per spot on the link

■ Vertical divider

Model number	For cable carrier model number
TKR37H28-STAS	TKR37H28W■■R■■
TKR37H28-STAL	

■ Horizontal divider

Model number	For cable carrier model number
TKR37H28-HS40	TKR37H28W40R■■
TKR37H28-HS50	TKR37H28W50R■■
TKR37H28-HS60	TKR37H28W60R■■
TKR37H28-HS70	TKR37H28W70R■■
TKR37H28-HS80	TKR37H28W80R■■

■ Strain relief comb

Model number	Applicable bracket
TKR37H28W40-CL-U	TKR37H28W40-MU/FU
TKR37H28W50-CL-U	TKR37H28W50-MU/FU
TKR37H28W60-CL-U	TKR37H28W60-MU/FU
TKR37H28W70-CL-U	TKR37H28W70-MU/FU
TKR37H28W80-CL-U	TKR37H28W80-MU/FU

■ Bracket

Model number	For cable carrier model number
TKR37H28W40-MU	TKR37H28W40R■■
TKR37H28W40-FU	
TKR37H28W50-MU	TKR37H28W50R■■
TKR37H28W50-FU	
TKR37H28W60-MU	TKR37H28W60R■■
TKR37H28W60-FU	
TKR37H28W70-MU	TKR37H28W70R■■
TKR37H28W70-FU	
TKR37H28W80-MU	TKR37H28W80R■■
TKR37H28W80-FU	

■ Bracket (with 1 strain relief comb)

Model number	For cable carrier model number
TKR37H28W40-MUCLO	TKR37H28W40R■■
TKR37H28W40-FUCLO	
TKR37H28W40-MUCLI	
TKR37H28W40-FUCLI	
TKR37H28W50-MUCLO	TKR37H28W50R■■
TKR37H28W50-FUCLO	
TKR37H28W50-MUCLI	
TKR37H28W50-FUCLI	
TKR37H28W60-MUCLO	TKR37H28W60R■■
TKR37H28W60-FUCLO	
TKR37H28W60-MUCLI	
TKR37H28W60-FUCLI	
TKR37H28W70-MUCLO	TKR37H28W70R■■
TKR37H28W70-FUCLO	
TKR37H28W70-MUCLI	
TKR37H28W70-FUCLI	
TKR37H28W80-MUCLO	TKR37H28W80R■■
TKR37H28W80-FUCLO	
TKR37H28W80-MUCLI	
TKR37H28W80-FUCLI	

■ Bracket (with 2 strain relief combs)

Model number	For cable carrier model number
TKR37H28W40-MUCLB	TKR37H28W40R■■
TKR37H28W40-FUCLB	
TKR37H28W50-MUCLB	TKR37H28W50R■■
TKR37H28W50-FUCLB	
TKR37H28W60-MUCLB	TKR37H28W60R■■
TKR37H28W60-FUCLB	
TKR37H28W70-MUCLB	TKR37H28W70R■■
TKR37H28W70-FUCLB	
TKR37H28W80-MUCLB	TKR37H28W80R■■
TKR37H28W80-FUCLB	

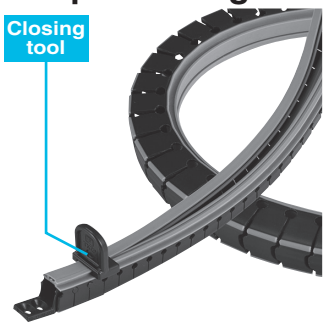
See page 15 for ordering information
See page 148 for product mass

TKZP10H13

TSUBAKI eco LINK

(Patented)

Proposes a lightweight, compact-structure cable and hose carrier system



Easy to handle thanks to its zipper structure

With the TKZP Series, cables and hoses can be set just by wrapping the cable carrier around the cables/hoses and zipping it up on the inside. This contributes to reduced labor for installation or maintenance of cables/hoses. In addition, it is easy to cut to the required length.

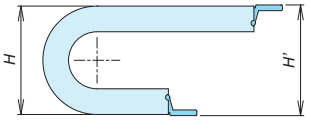
Provides stable movement and low noise/low wear generating operation

Can bend in only one direction. Enables quiet, low wear operation thanks to its short-pitch and link-less structure. Contributes to protection of cables and hoses and maintaining a clean environment.

Cable/hose storage

Cable/hose outer diameter (mm)	ϕ6 or less
Installing capacity	40% or less

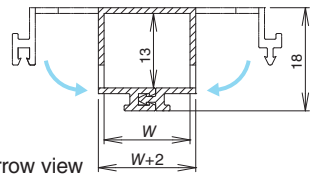
Installation dimensions



Mounting height H' (mm)	130 to 150
Total height H (mm)	min130 ★1

Notes: ★1. Greater than the rigidity of the cables and hoses to install.
2. The required length changes when the mounting height is 150 mm or greater.

Cross-section dimensions



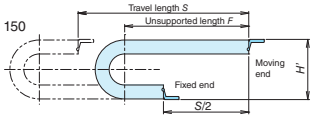
W = 10, 15, 20, 25

Required length calculation

When mounting height H' = 130 to 150

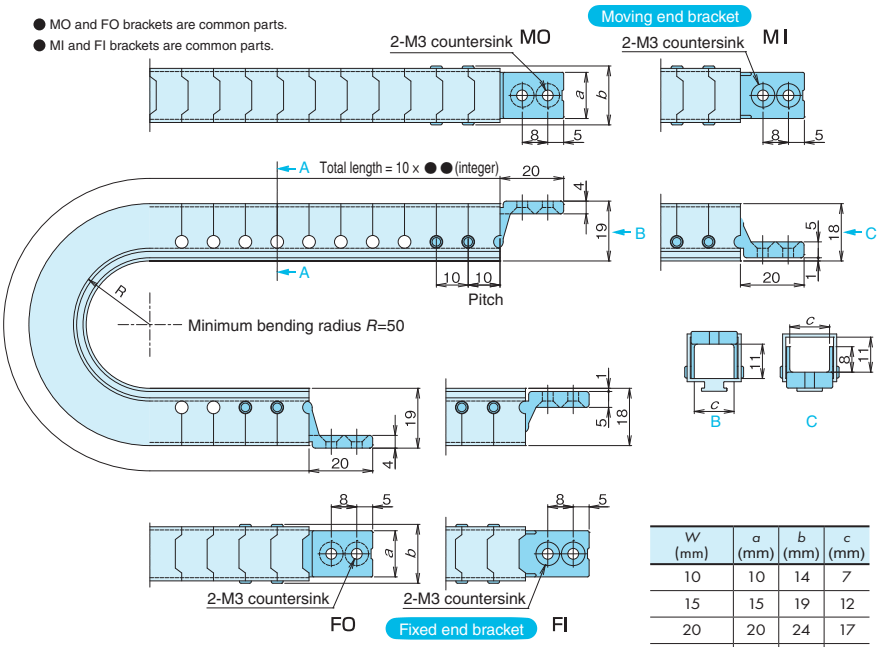
$$\text{Minimum required length} = \frac{S}{2} + 270 \quad \text{(Integer multiple of 10)}$$

Note: When fixed end is at the center of the travel length.
Round up to integer multiple of 10 after calculating.



Dimensions & brackets

● MO and FO brackets are common parts.
● MI and FI brackets are common parts.



W (mm)	a (mm)	b (mm)	c (mm)
10	10	14	7
15	15	19	12
20	20	24	17
25	25	29	22

Basic specifications/capacities

Model number	Material (color)		Operating temperature range (°C)
	Link	Bracket	
TKZP10H13-40W10	Special plastic (black/gray)	Engineering plastic (black)	10 to 80
TKZP10H13-40W15			
TKZP10H13-40W20			
TKZP10H13-40W25			

Model number	Maximum additional load (kg/m)
TKZP10H13-40W10	0.1
TKZP10H13-40W15	
TKZP10H13-40W20	0.2
TKZP10H13-40W25	

Maximum travel length (mm)	Maximum unsupported length (mm)	Maximum travel speed (m/min)	Maximum acceleration (m/s²)
1000 *	550 *	100	5

★: The maximum value for additional load is 0 to 0.1 kg/m or 0.2 kg/m.

Model number

TKZP10H13-40W (1)

(1) Inner width
10
15
20
25

Note: Length per piece is 10 m.

■ Closing tool

Model number	For cable carrier model number
TKZP10H13-AST	TKZP10H13-40W10
	TKZP10H13-40W15
	TKZP10H13-40W20
	TKZP10H13-40W25

Note: One closing tool is included per box.

■ Bracket

Model number	For cable carrier model number
TKZP10H13W10-MO	TKZP10H13-40W10
TKZP10H13W10-MI	
TKZP10H13W10-FO	
TKZP10H13W10-FI	
TKZP10H13W15-MO	TKZP10H13-40W15
TKZP10H13W15-MI	
TKZP10H13W15-FO	
TKZP10H13W15-FI	
TKZP10H13W20-MO	TKZP10H13-40W20
TKZP10H13W20-MI	
TKZP10H13W20-FO	
TKZP10H13W20-FI	
TKZP10H13W25-MO	TKZP10H13-40W25
TKZP10H13W25-MI	
TKZP10H13W25-FO	
TKZP10H13W25-FI	

See page 15 for ordering information
See page 148 for product mass

Cable Carrier Plastic Series

Closed type

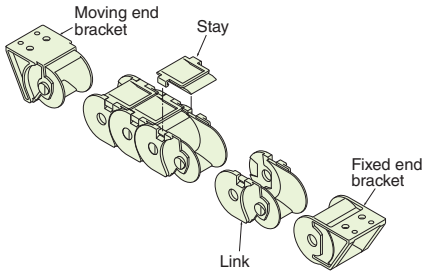
TKC Series

TKC28H30 79
TKC34H25 81
TKC47H36 83
TKC64H50 85
TKC85H68 87
TKC91H56 89
TKC91H80 91

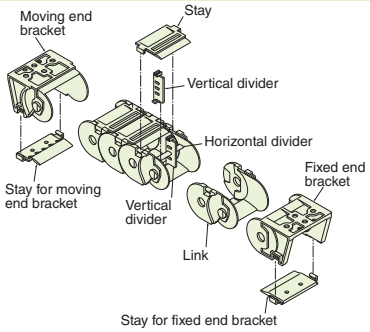
TKC28H30 (Patented)

Structure

W28

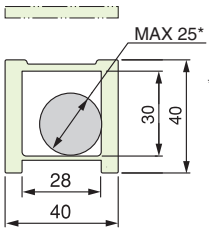


W48



Cross section/divider dimensions

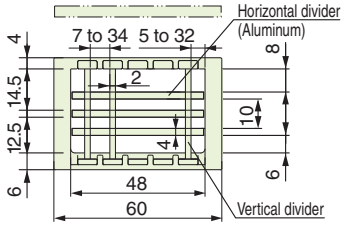
W28



Note: Vertical dividers and horizontal dividers cannot be installed to the W28.

A–A arrow view

W48



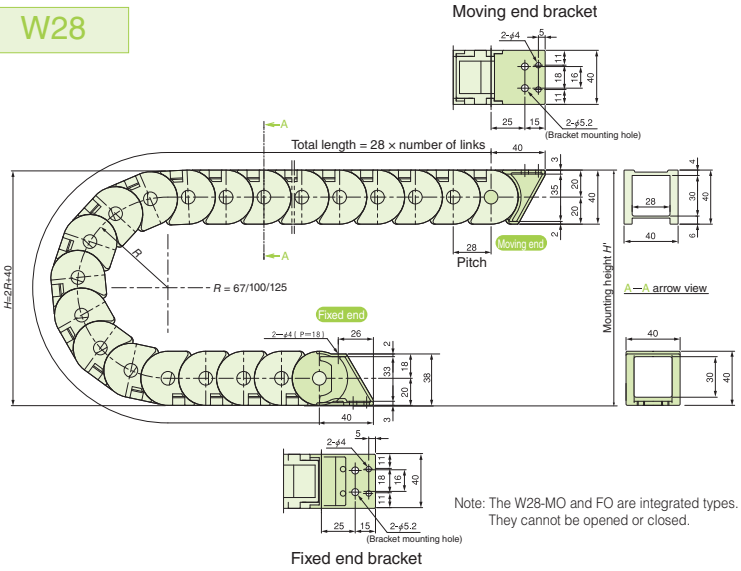
Note: Vertical dividers can be installed at a pitch of 9 mm. They do not slide.

Vertical divider



Dimensions & brackets

W28

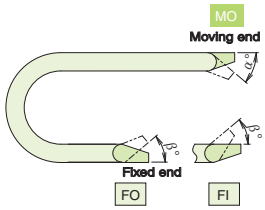


Note: The W28-MO and FO are integrated types. They cannot be opened or closed.

Bending radius R (mm)	Mounting height H' (mm)
67	184 to 204
100	250 to 270
125	300 to 320

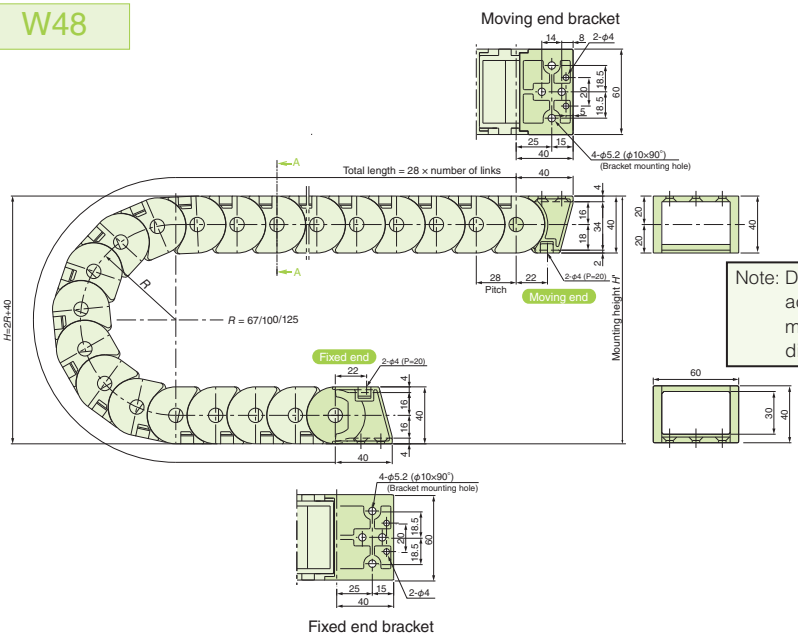
Note: FO and FI brackets are common parts.

Note: Design and install according to the mounting height H' dimension.



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
67	24	24
100		16
125		12

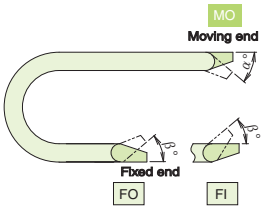
W48



Bending radius R (mm)	Mounting height H' (mm)
67	184 to 204
100	250 to 270
125	300 to 320

Note: FO and FI brackets are common parts.

Note: Design and install according to the mounting height H' dimension.



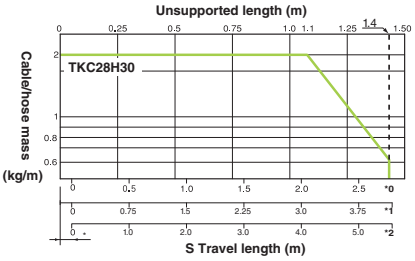
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
67	24	24
100		16
125		12

Basic specifications

Maximum travel speed (m/min)		300 ★1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	
	Vertical divider	Engineering plastic (black)
	Horizontal divider	Aluminum
Standard length (No. of links)		30

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram

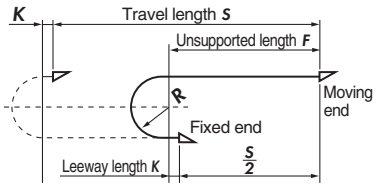


* Includes leeway length.
* 0: Without support rollers
* 1: With support roller in 1 location
* 2: With support rollers in 2 locations

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 28 mm
K: Leeway length = 28 mm or greater

Model number

TKC28H30 - (1) W (2) R (3) + (4) L - (5) - (6)

(1) Opening options		(2) Inner width	(3) Bending radius	(4) Number of links	(5) Fixed end	(6) Moving end
30	Outside openable stay	28	67		FO	MO
		48	100		FI	
			125			

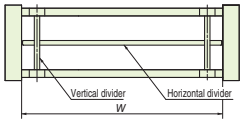
Notes: 1. Install dividers every 2 links.
(Dividers cannot be installed to the W28.)
2. Stays, brackets, and dividers for the plastic links are delivered uninstalled.

■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKC28H30-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKC28H30-HS (Dimension W) W = 48	1 horizontal divider	K (pcs)

Note: Vertical dividers and horizontal dividers cannot be installed to the W28.

DSA type



■ Vertical divider

Model number	For cable carrier model number
TKC28H30-ST	TKC28H30-30W48R■■

■ Horizontal divider

Model number	For cable carrier model number
TKC28H30-HS48	TKC28H30-30W48R■■

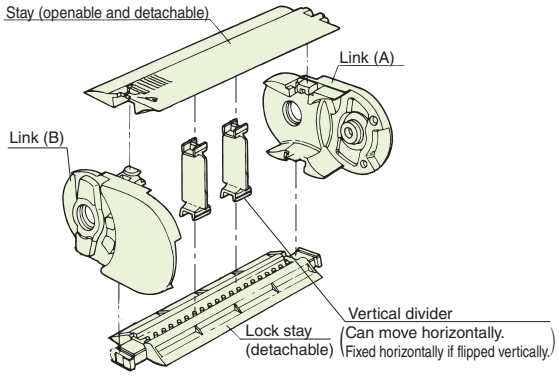
■ Bracket

Model number	For cable carrier model number
TKC28H30W28-MO	TKC28H30-30W28R■■
TKC28H30W28-FO	
TKC28H30W28-FI	
TKC28H30W48-MO	TKC28H30-30W48R■■
TKC28H30W48-FO	
TKC28H30W48-FI	

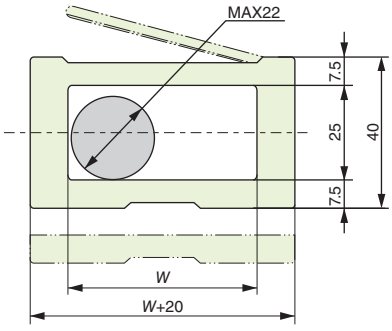
See page 15 for ordering information
See page 149 for product mass

TKC34H25

Structure



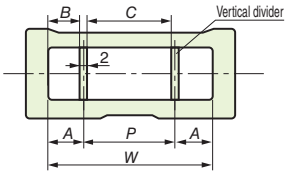
Cross-section dimensions



W = 50, 90, 130

A–A arrow view

Divider dimensions



Note: Can slide between *P* {10 to (*W*–40)}.
The fastening pitch of fixable dividers is 5 mm increments.
However, the pitch of neighboring dividers is 10 mm or greater.

Vertical divider (fastening method)

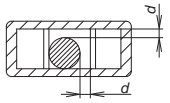


Vertical divider on lock stay:
◆Locks when installed to fixable side.
◆Slides when installed to sliding side.

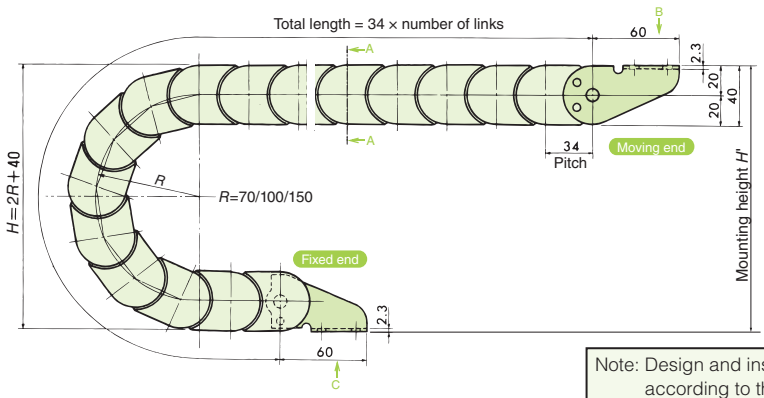
Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)		C (mm)	
ST (sliding installation)	Common for all width	min 20		min 19		10 to (W–40)		8 to (W–40)	
ST (fixable installation)	50	20 to 30	5 mm increments	19 to 29	5 mm increments	10	5 mm increments	8	5 mm increments
	90	20 to 70		19 to 69		10 to 50		8 to 48	
	130	20 to 110		19 to 129		10 to 90		8 to 88	

A : Distance from center of vertical divider to end face of link
B : Gap between vertical divider and link
P : Distance between the centers of neighboring vertical dividers
C : Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

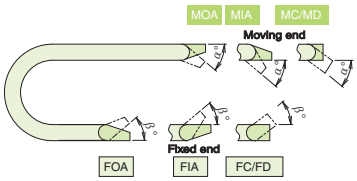


Dimension drawings



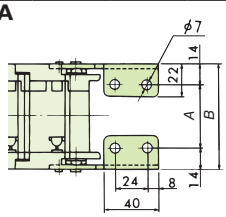
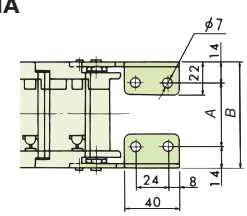
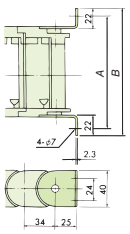
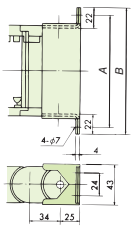
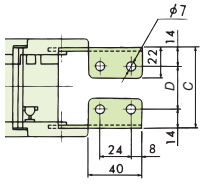
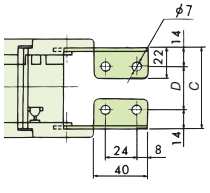
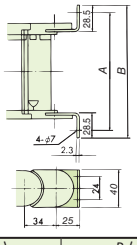
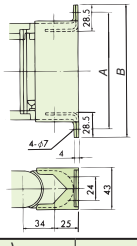
Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
70	190 to 210
100	250 to 270
150	350 to 370



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
70	29	29
100	20	
150	14	

Steel bracket variants and dimensions

	Outside mounting	Inside mounting	Flange mounting	Flange mounting with cover
Moving end bracket B arrow view	**MOA**  Note: Parts differ for MIA.	**MIA**  Note: Parts differ for MOA.	**MC** 	**MD** 
Fixed end bracket C arrow view	**FOA**  Note: FIA are common parts.	**FIA**  Note: FOA are common parts.	**FC** 	**FD** 

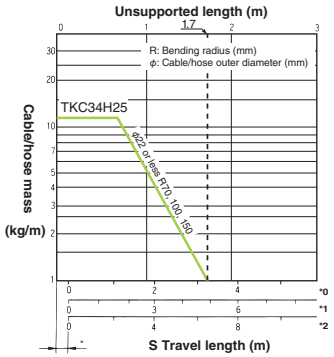
Inner width W (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	A (mm)	B (mm)
50	42	70	58	30	42	70	58	30	94	110	94	110
90	82	110	98	70	82	110	98	70	134	150	134	150
130	122	150	138	110	122	150	138	110	174	190	174	190

Basic specifications

Maximum travel speed (m/min)		300 *1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	Steel (black finish)
	Vertical divider	Engineering plastic (black)
Standard length (No. of links)		100

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



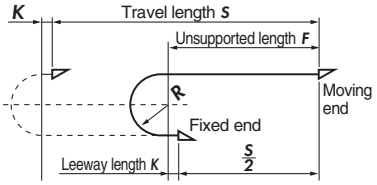
* Includes leeway length.
***0: Without support rollers**
***1: With support roller in 1 location**
***2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 34 mm
K: Leeway length = 34 mm or greater

Model number

TKC34H25W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
50	70		FOA	MOA
90	100		FIA	MIA
130	150		FC	MC
			FD	MD

Notes: 1. Vertical dividers are common parts regardless of the inner width. Install dividers every 2 links. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.
3. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further details.
4. Fixed end brackets are delivered uninstalled. Moving end brackets are delivered installed.
5. Covers for MD and FD brackets are delivered uninstalled.

■ Vertical divider

Model number	For cable carrier model number
TKC34H25-ST	TKC34H25W■■R■■

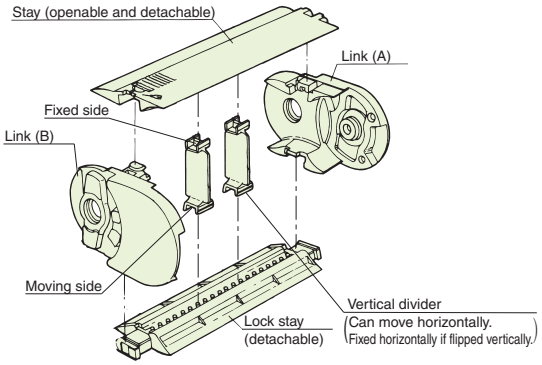
■ Steel bracket

Model number	For cable carrier model number
TKC34H25-MOA	TKC34H25W■■R■■
TKC34H25-MIA	
TKC34H25-MC	
TKC34H25-FOA	TKC34H25W■■R■■
TKC34H25-FIA	
TKC34H25-FC	
TKC34H25W50-MD	TKC34H25W50R■■
TKC34H25W50-FD	
TKC34H25W90-MD	TKC34H25W90R■■
TKC34H25W90-FD	
TKC34H25W130-MD	TKC34H25W130R■■
TKC34H25W130-FD	

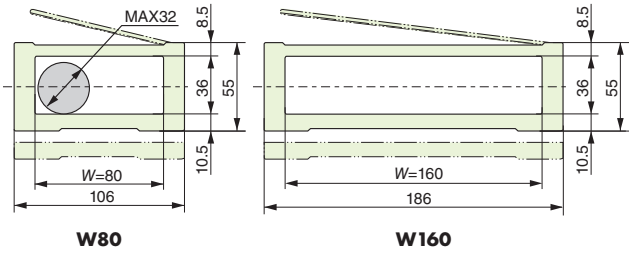
See page 15 for ordering information
See page 149 for product mass

TKC47H36

Structure

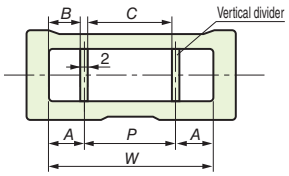


Cross-section dimensions



A–A arrow view

Divider dimensions



Note: Can slide between P {10 to (W–45)}.
The fastening pitch of fixable dividers is 5 mm increments.
However, the pitch of neighboring dividers is 10 mm or greater.

Vertical divider (fastening method)

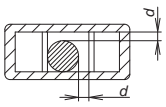


Vertical divider on lock stay:
- Locks when installed to fixable side.
- Slides when installed to sliding side.

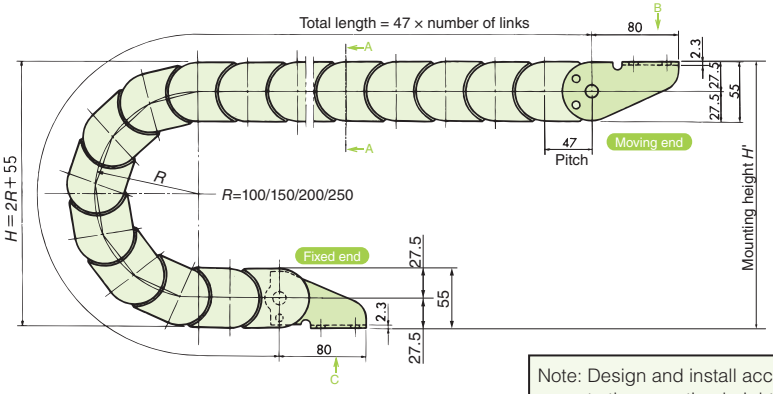
Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)		C (mm)	
ST (sliding installation)	Common for all width	min22.5		min21.5		10 to (W–45)		8 to (W–47)	
ST (fixable installation)	80	22.5 to 57.5	5 mm increments	21.5 to 56.5	5 mm increments	10 to 35	5 mm increments	8 to 33	5 mm increments
	160	22.5 to 137.5		21.5 to 136.5		10 to 115		8 to 113	

A : Distance from center of vertical divider to end face of link
B : Gap between vertical divider and link
P : Distance between the centers of neighboring vertical dividers
C : Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

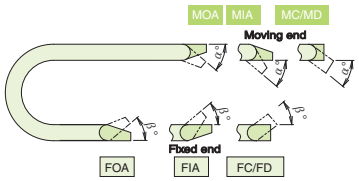


Dimension drawings



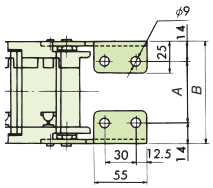
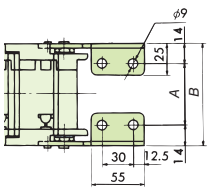
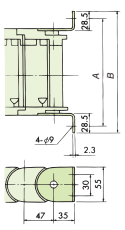
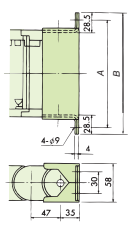
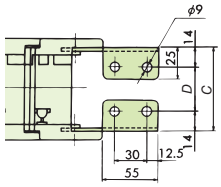
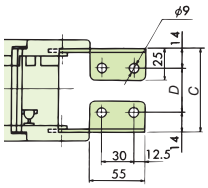
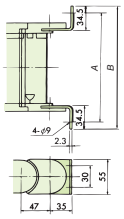
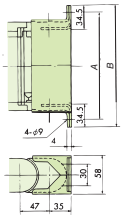
Note: Design and install according to the mounting height H' dimension.

Bending radius R (mm)	Mounting height H' (mm)
100	265 to 285
150	365 to 385
200	465 to 485
250	565 to 585



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
100	28	28
150	19	
200	14	
250	11	

Steel bracket variants and dimensions

	Outside mounting	Inside mounting	Flange mounting	Flange mounting with cover
Moving end bracket B arrow view	**MOA**  Note: Parts differ for MIA.	**MIA**  Note: Parts differ for MOA.	**MC** 	**MD** 
Fixed end bracket C arrow view	**FOA**  Note: FIA are common parts.	**FIA**  Note: FOA are common parts.	**FC** 	**FD** 

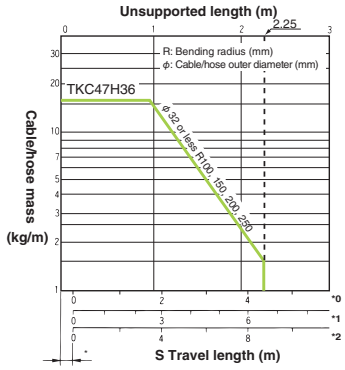
Inner width W (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	A (mm)	B (mm)
80	76	104	91	63	76	104	91	63	134	156	134	156
160	156	184	171	143	156	184	171	143	214	236	214	236

Basic specifications

Maximum travel speed (m/min)		300 *1
Operating temperature range (°C)		−40 to 80
Materials	Link	Engineering plastic (black)
	Bracket	Steel (black finish)
	Vertical divider	Engineering plastic (black)
Standard length (No. of links)		80

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



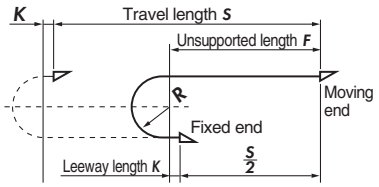
* Includes leeway length.
***0: Without support rollers**
***1: With support roller in 1 location**
***2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 47 mm
K: Leeway length = 47 mm or greater

Model number

TKC47H36W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
80	100		FOA	MOA
160	150		FIA	MIA
	200		FC	MC
	250		FD	MD

Notes: 1. Vertical dividers are common parts regardless of the inner width. Install dividers every 2 links. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.
3. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further details.
4. Brackets are delivered installed. However, FC and FD fixed end brackets are delivered uninstalled.
5. Covers for MD and FD brackets are delivered uninstalled.

■ Vertical divider

Model number	For cable carrier model number
TKC47H36-ST	TKC47H36W■■R■■

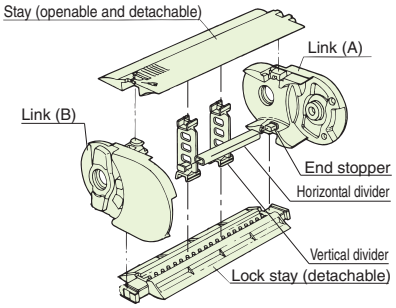
■ Steel bracket

Model number	For cable carrier model number
TKC47H36-MOA	TKC47H36W■■R■■
TKC47H36-MIA	
TKC47H36-MC	
TKC47H36-FOA	TKC47H36W■■R■■
TKC47H36-FIA	
TKC47H36-FC	
TKC47H36W80-MD	TKC47H36W80R■■
TKC47H36W80-FD	
TKC47H36W160-MD	TKC47H36W160R■■
TKC47H36W160-FD	

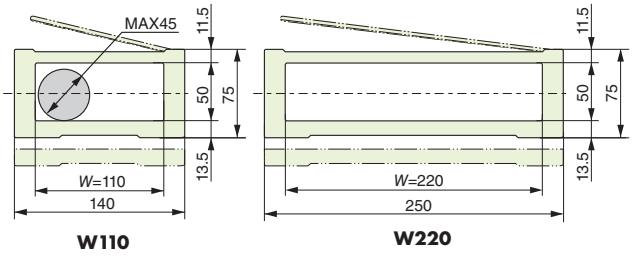
See page 15 for ordering information
See page 149 for product mass

TKC64H50

Structure



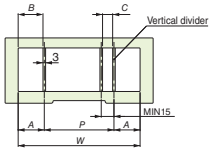
Cross-section dimensions



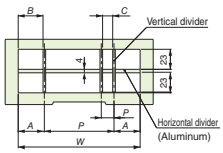
A–A arrow view

Divider dimensions

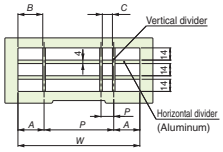
(1) When using only vertical dividers
Fastening pitch = 5 when vertical divider is locked



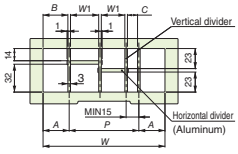
(2) Fully-stayed 2-layers height separation (DSA type)



(3) Fully-stayed 3-layers height separation (DSA type)



(4) Partial 2 or 3-layers height separation (DSB type)



Vertical divider (fastening method)



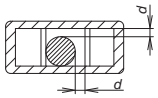
Vertical divider on lock stay:
- Locks when installed to fixable side.
- Slides when installed to sliding side.

Vertical divider (fastening method)	Inner width W (mm)	A (mm)	B (mm)	P (mm)	C (mm)	W1 (mm)
ST (sliding installation)	Common for all width	30 to 40	28.5 to 38.5	15 to (W−60)	12 to (W−63)	12 to 122 (1 mm increments)
ST (fixable installation)	110	30 to 40 (5 mm increments)	28.5 to 38.5 (5 mm increments)	15 to 60 (5 mm increments)	12 to 57 (5 mm increments)	12 to 57 (5 mm increments)
	220	30 to 40 (5 mm increments)	28.5 to 38.5 (5 mm increments)	15 to 125 (5 mm increments)	12 to 122 (5 mm increments)	12 to 122 (5 mm increments)

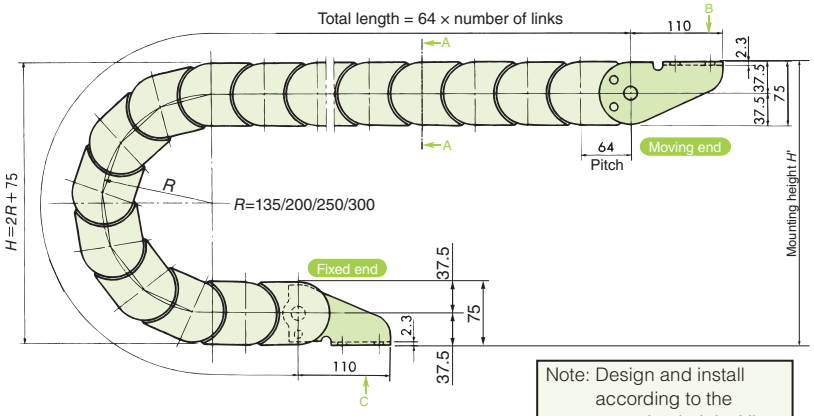
A : Distance from center of vertical divider to end face of link
B : Gap between vertical divider and link
P : Distance between the centers of neighboring vertical dividers
C : Gap between neighboring vertical dividers

Note: The maximum values for A, B, P, and C are applied when using horizontal dividers.

Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

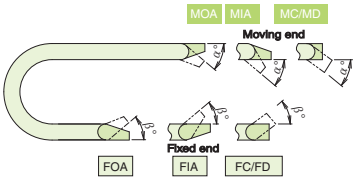


Dimension drawings



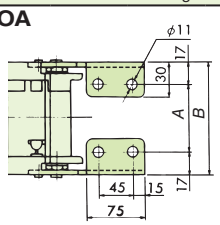
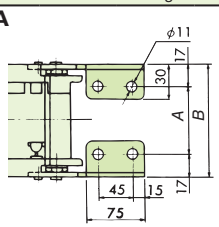
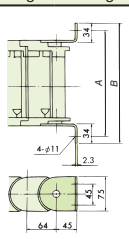
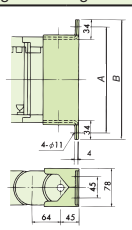
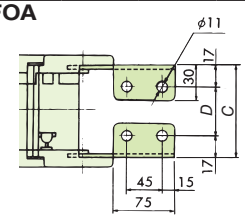
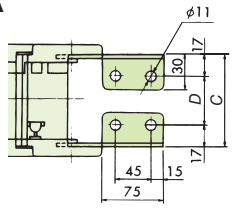
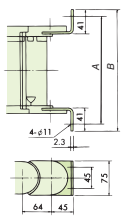
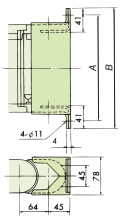
Note: Design and install according to the mounting height H' dimension.

Bending radius R (mm)	Mounting height H' (mm)
135	355 to 375
200	485 to 505
250	585 to 605
300	685 to 705



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
135	29	28
200	20	
250	16	
300	14	

Steel bracket variants and dimensions

	Outside mounting	Inside mounting	Flange mounting	Flange mounting with cover
Moving end bracket B arrow view	**MOA**  Note: Parts differ for MIA.	**MIA**  Note: Parts differ for MOA.	**MC** 	**MD** 
Fixed end bracket C arrow view	**FOA**  Note: FIA are common parts.	**FIA**  Note: FOA are common parts.	**FC** 	**FD** 

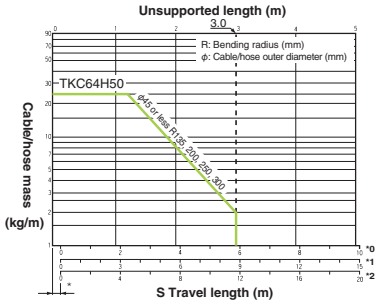
Inner width W (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	C (mm)	D (mm)	A (mm)	B (mm)	A (mm)	B (mm)
110	103	137	122	88	103	137	122	88	174	200	174	200
220	213	247	232	198	213	247	232	198	284	310	284	310

Basic specifications

Maximum travel speed (m/min)			300 *1
Operating temperature range (°C)			−40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		Steel (black finish)
	Vertical divider		Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			60

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



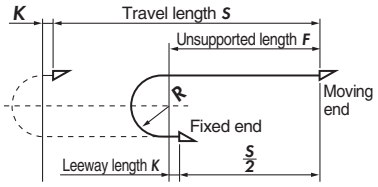
* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 64 mm
K: Leeway length = 64 mm or greater

Model number

TKC64H50W (1) R (2) + (3) L - (4) - (5)

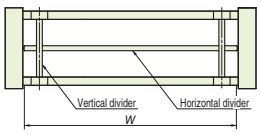
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
110	135		FOA	MOA
220	200		FIA	MIA
	250		FC	MC
	300		FD	MD

Notes: 1. Vertical dividers are common parts regardless of the inner width. Install dividers every 2 links. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.
3. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further details.
4. Brackets are delivered installed. However, FC and FD fixed end brackets are delivered uninstalled.
5. Covers for MD and FD brackets are delivered uninstalled.

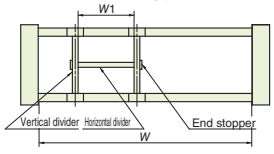
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKC64H50-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKC64H50-HS (Dimension W) W = 110/220	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKC64H50-EHS (Dimension W1) W1 = 12 to 122: 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Steel bracket

Model number	For cable carrier model number
TKC64H50-MOA	TKC64H50W■■R■■
TKC64H50-MIA	
TKC64H50-MC	
TKC64H50-FOA	TKC64H50W■■R■■
TKC64H50-FIA	
TKC64H50-FC	
TKC64H50W110-MD	TKC64H50W110R■■
TKC64H50W110-FD	
TKC64H50W220-MD	TKC64H50W220R■■
TKC64H50W220-FD	

■ Vertical divider

Model number	For cable carrier model number
TKC64H50-ST	TKC64H50W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKC64H50-HS110	TKC64H50W110R■■
TKC64H50-HS220	TKC64H50W220R■■

■ Horizontal divider with end stoppers

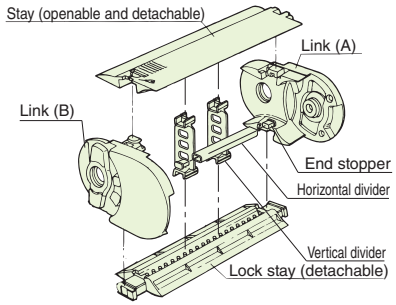
Model number
TKC64H50-EHS○○

○○: Integer between 12 and 122

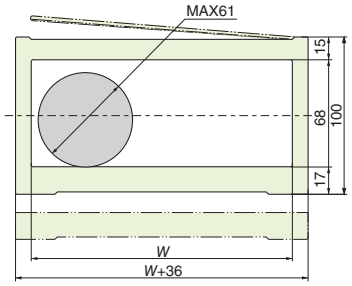
See page 15 for ordering information
See page 149 for product mass

TKC85H68

Structure



Cross-section dimensions

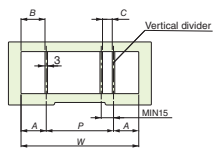


W = 150, 200, 300, 350

A–A arrow view

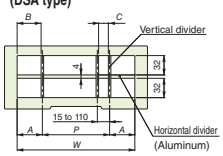
Divider dimensions

(1) When using only vertical dividers

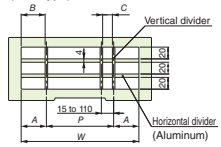


Fastening pitch = 5 when vertical divider is locked

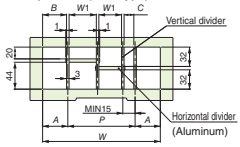
(2) Fully-stayed 2-layers height separation (DSA type)



(3) Fully-stayed 3-layers height separation (DSA type)



(4) Partial 2 or 3-layers height separation (DSB type)



Vertical divider (fastening method)



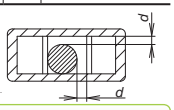
Vertical divider on lock stay:
- Locks when installed to fixable side.
- Slides when installed to sliding side.

Vertical divider (fastening method)	Inner width *W* (mm)	*A* (mm)	*B* (mm)	*P* (mm)	*C* (mm)	*W1* (mm)
ST (sliding installation)	Common for all width	40	38.5	15 to (*W*−80)	12 to (*W*−83)	12 to 107 (1 mm increments)
ST (fixable installation)	150	40	38.5	15 to 70 (5 mm increments)	12 to 67 (5 mm increments)	12 to 67 (5 mm increments)
	200			15 to 110 (5 mm increments)	12 to 107 (5 mm increments)	12 to 107 (5 mm increments)
	300			15 to 110 (5 mm increments)	12 to 107 (5 mm increments)	
	350			15 to 110 (5 mm increments)	12 to 107 (5 mm increments)	

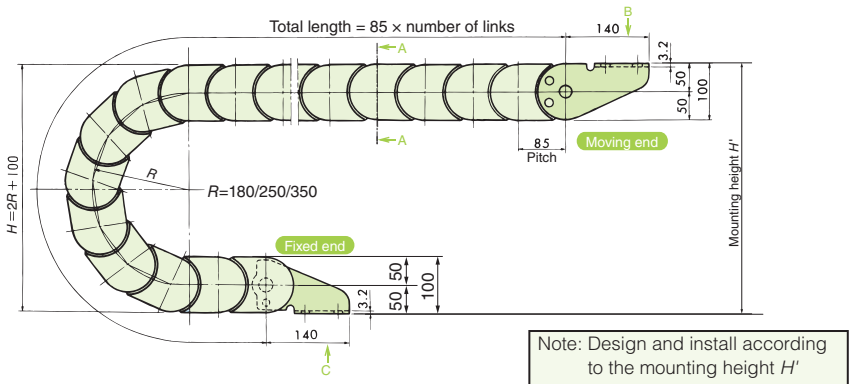
A : Distance from center of vertical divider to end face of link
B : Gap between vertical divider and link
P : Distance between the centers of neighboring vertical dividers
C : Gap between neighboring vertical dividers

Note: The maximum values for *A*, *B*, *P*, and *C* are applied when using horizontal dividers.

Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.

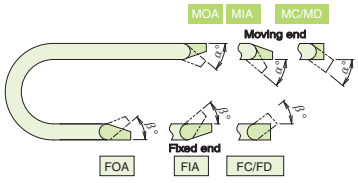


Dimension drawings



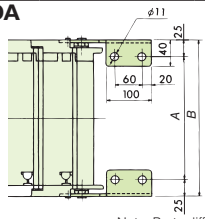
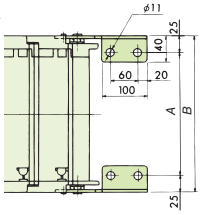
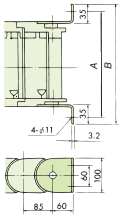
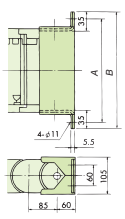
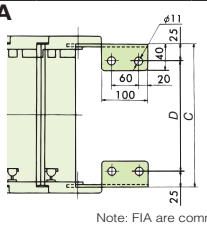
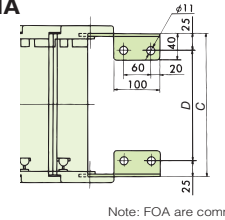
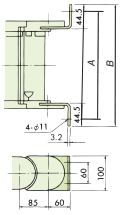
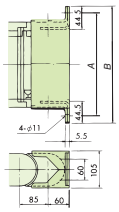
Note: Design and install according to the mounting height *H'* dimension.

Bending radius *R* (mm)	Mounting height *H'* (mm)
180	470 to 490
250	610 to 630
350	810 to 830



Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
180	28	28
250	20	
350	14	

Steel bracket variants and dimensions

	Outside mounting	Inside mounting	Flange mounting	Flange mounting with cover
Moving end bracket B arrow view	**MOA**  Note: Parts differ for MIA.	**MIA**  Note: Parts differ for MOA.	**MC** 	**MD** 
Fixed end bracket C arrow view	**FOA**  Note: FIA are common parts.	**FIA**  Note: FOA are common parts.	**FC** 	**FD** 

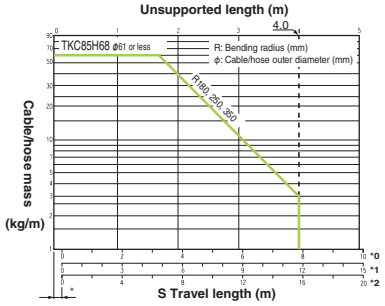
Inner width *W* (mm)	*A* (mm)	*B* (mm)	*C* (mm)	*D* (mm)	*A* (mm)	*B* (mm)	*C* (mm)	*D* (mm)	*A* (mm)	*B* (mm)	*A* (mm)	*B* (mm)
150	134	184	165	115	134	184	165	115	222	248	222	248
200	184	234	215	165	184	234	215	165	272	298	272	298
300	284	334	315	265	284	334	315	265	372	398	372	398
350	334	384	365	315	334	384	365	315	422	448	422	448

Basic specifications

Maximum travel speed (m/min)			300 *1
Operating temperature range (°C)			−40 to 80
Materials		Link	Engineering plastic (black)
		Bracket	Steel (black finish)
		Vertical divider	Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			40

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



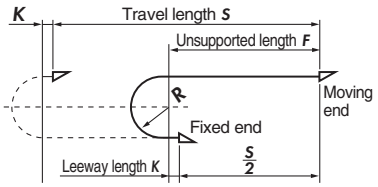
* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 85 mm
K: Leeway length = 85 mm or greater

Model number

TKC85H68W (1) R (2) + (3) L - (4) - (5)

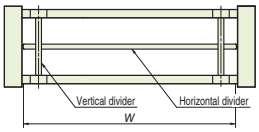
(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
150	180		FOA	MOA
200	250		FIA	MIA
300	350		FC	MC
350			FD	MD

Notes: 1. Vertical dividers are common parts regardless of the inner width. Install dividers every 2 links. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.
3. When ordering a circular travel arrangement, the made-to-order content will depend on the operating conditions. Contact a Tsubaki representative for further details.
4. Brackets are delivered installed. However, FC and FD fixed end brackets are delivered uninstalled.
5. Covers for MD and FD brackets are delivered uninstalled.

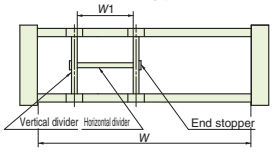
■ Divider

Type	Model number	Part	Unit
(1) Vertical divider	TKC85H68-ST	1 vertical divider	K (pcs)
(2) Horizontal divider (For DSA type)	TKC85H68-HS (Dimension W) W = 150/200	1 horizontal divider	K (pcs)
(3) Horizontal divider with end stoppers (For DSB type)	TKC85H68-EHS (Dimension W1) W1 = 12 to 107: 1 mm increments	1 horizontal divider 2 end stoppers	K (pcs)

DSA type



DSB type



■ Vertical divider

Model number	For cable carrier model number
TKC85H68-ST	TKC85H68W■■R■■

■ Horizontal divider

Model number	For cable carrier model number
TKC85H68-HS150	TKC85H68W150R■■
TKC85H68-HS200	TKC85H68W200R■■

■ Horizontal divider with end stoppers

Model number
TKC85H68-EHS○○

○○: Integer between 12 and 107

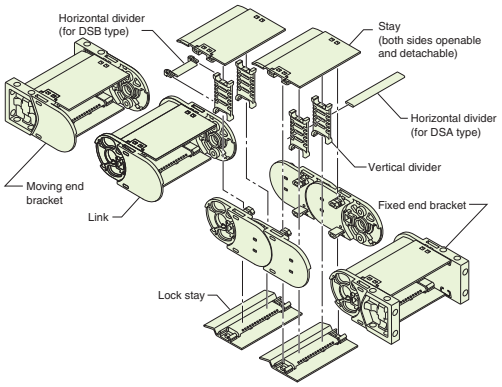
■ Steel bracket

Model number	For cable carrier model number
TKC85H68-MOA	TKC85H68W■■R■■
TKC85H68-MIA	
TKC85H68-MC	
TKC85H68-FOA	TKC85H68W■■R■■
TKC85H68-FIA	
TKC85H68-FC	
TKC85H68W150-MD	TKC85H68W150R■■
TKC85H68W150-FD	
TKC85H68W200-MD	TKC85H68W200R■■
TKC85H68W200-FD	
TKC85H68W300-MD	TKC85H68W300R■■
TKC85H68W300-FD	
TKC85H68W350-MD	TKC85H68W350R■■
TKC85H68W350-FD	

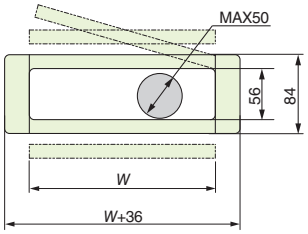
See page 15 for ordering information
See page 149 for product mass

TKC91H56 (Patented)

Structure



Cross-section dimensions

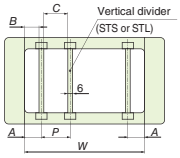


W = 150, 200, 250, 300, 350, 400

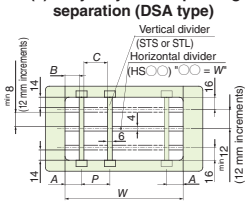
A–A arrow view

Divider dimensions

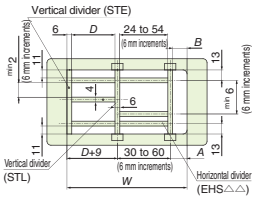
(1) When using only vertical dividers



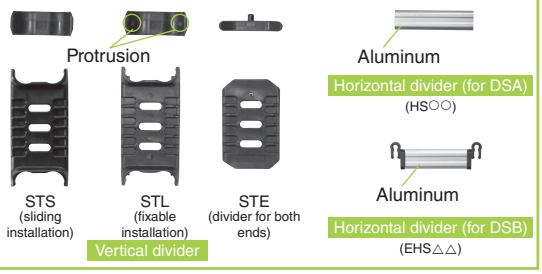
(2) Fully-stayed multiple height separation (DSA type)



(3) Partial multiple height separation (DSB type)



Divider

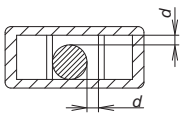


Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)	C (mm)	D (mm)	
STS (sliding installation)	Common for all widths	30 to 40		27 to 37		14 to 100	8 to 94		
STL (fixable installation)	150	33, 39	6 mm increments	30, 36	6 mm increments	18 to 96 (6 mm increments)	12 to 90 (6 mm increments)	24 to 54	6 mm increments
	200	31, 37		28, 34				22 to 52	
	250	32, 38		29, 35				23 to 53	
	300	30, 36		27, 33				21 to 51	
	350	31, 37		28, 34				22 to 52	
	400	32, 38		29, 35				23 to 53	

Notes:

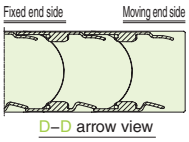
- *A* : Distance from center of vertical divider to end face of link
- *B* : Gap between vertical divider and link
- *P* : Distance between the centers of neighboring vertical dividers
- *C* : Gap between neighboring vertical dividers
- *D* : Gap between neighboring vertical dividers when vertical dividers/dividers for both ends are installed

Note: Make the gap between cables/hoses and the divider or link (*d* in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



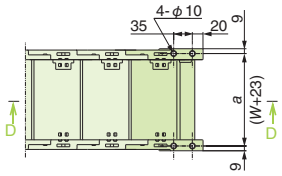
Note: The maximum values for *A*, *B*, *P*, *C*, and *D* are applied when using horizontal dividers.

Dimensions & brackets

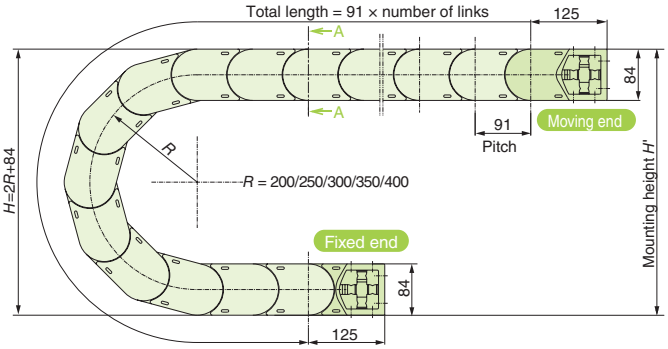


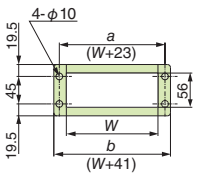
D–D arrow view

Moving end bracket

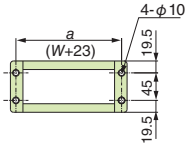


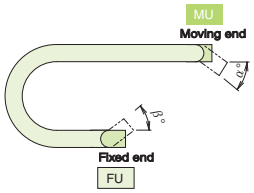
Bending radius R (mm)	Mounting height H' (mm)
200	494 to 514
250	594 to 614
300	694 to 714
350	794 to 814
400	894 to 914

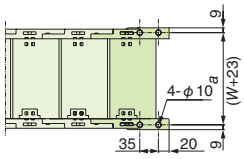




W (mm)	a (mm)	b (mm)
150	173	191
200	223	241
250	273	291
300	323	341
350	373	391
400	423	441







Fixed end bracket

Note: Design and install according to the mounting height *H'* dimension.

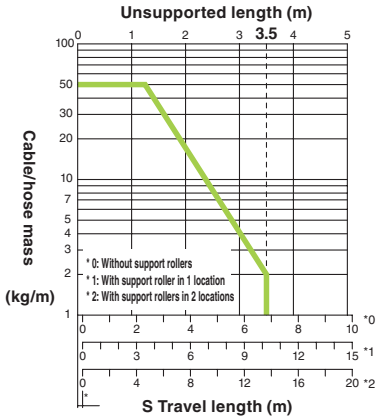
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
200	26	35
250	20	
300	17	
350	15	
400	13	

Basic specifications

Maximum travel speed (m/min)			300 *1
Operating temperature range (°C)			-40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		Engineering plastic (black) + steel bush
	Vertical divider		Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			R350 or less = 20 R400 =10

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



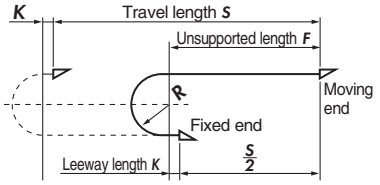
* Includes leeway length.

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 91 mm
K: Leeway length = 91 mm or greater

Model number

TKC91H56W (1) R (2) + (3)L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
150	200		FU	MU
200	250		FUCR	MUCR
250	300			
300	350			
350	400			
400				

Notes: 1. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.

■ Divider

Type	Model number
Vertical divider (sliding installation)	TKC91H56-STS
Vertical divider (fixable installation)	TKC91H56-STL
Vertical divider (for both ends)	TKC91H56-STE
Horizontal divider(for DSA type)	TKC91H56-HS○○○
Horizontal divider (for DSB type)	TKC91H56-EHS△△

○○○ = 150, 200
△△ = Dimension *C* or *D* of divider dimensions.

■ Vertical divider

Model number	For cable carrier model number
TKC91H56-STS	TKC91H56W■■R■■
TKC91H56-STL	
TKC91H56-STE	

■ Horizontal divider

Model number	For cable carrier model number
TKC91H56-HS150	TKC91H56W150R■■
TKC91H56-HS200	TKC91H56W200R■■

■ Bracket

Model number	For cable carrier model number
TKC91H56W150-MU	TKC91H56W150R■■
TKC91H56W150-FU	
TKC91H56W200-MU	TKC91H56W200R■■
TKC91H56W200-FU	
TKC91H56W250-MU	TKC91H56W250R■■
TKC91H56W250-FU	
TKC91H56W300-MU	TKC91H56W300R■■
TKC91H56W300-FU	
TKC91H56W350-MU	TKC91H56W350R■■
TKC91H56W350-FU	
TKC91H56W400-MU	TKC91H56W400R■■
TKC91H56W400-FU	

■ Horizontal divider with end stoppers

Model number	For cable carrier model number
TKC91H56-EHS24	TKC91H56W■■R■■ (Common for each width)
TKC91H56-EHS30	
TKC91H56-EHS36	
TKC91H56-EHS42	
TKC91H56-EHS48	
TKC91H56-EHS54	
TKC91H56-EHS22	TKC91H56W■■R■■ (* For W = 200, 350)
TKC91H56-EHS28	
TKC91H56-EHS34	
TKC91H56-EHS40	
TKC91H56-EHS46	
TKC91H56-EHS52	
TKC91H56-EHS23	TKC91H56W■■R■■ (* For W = 250, 400)
TKC91H56-EHS29	
TKC91H56-EHS35	
TKC91H56-EHS41	
TKC91H56-EHS47	
TKC91H56-EHS53	
TKC91H56-EHS21	TKC91H56W300R■■ (* For W = 300)
TKC91H56-EHS27	
TKC91H56-EHS33	
TKC91H56-EHS39	
TKC91H56-EHS45	
TKC91H56-EHS51	

* When used on vertical divider for both ends (STE).

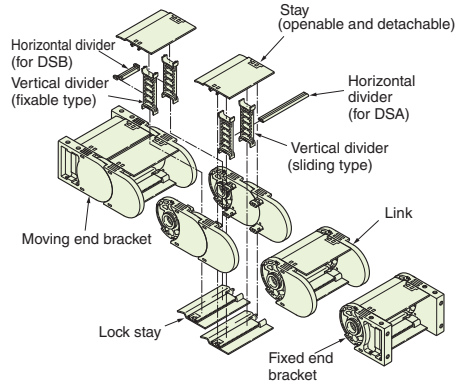
■ Bracket (with clamp rail)

Model number	For cable carrier model number
TKC91H56W150-MUCR	TKC91H56W150R■■
TKC91H56W150-FUCR	
TKC91H56W200-MUCR	TKC91H56W200R■■
TKC91H56W200-FUCR	
TKC91H56W250-MUCR	TKC91H56W250R■■
TKC91H56W250-FUCR	
TKC91H56W300-MUCR	TKC91H56W300R■■
TKC91H56W300-FUCR	
TKC91H56W350-MUCR	TKC91H56W350R■■
TKC91H56W350-FUCR	
TKC91H56W400-MUCR	TKC91H56W400R■■
TKC91H56W400-FUCR	

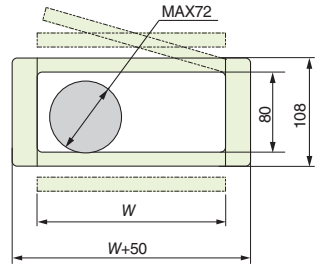
See page 15 for ordering information
See page 149 for product mass

TKC91H80 (Patented)

Structure



Cross-section dimensions

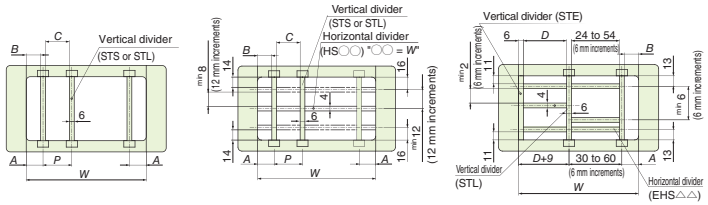


W = 150, 200, 250, 300, 350, 400

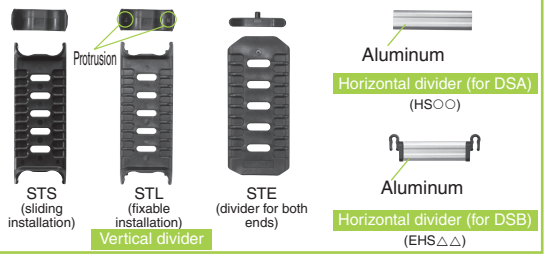
A–A arrow view

Divider dimensions

(1) When using only vertical dividers **(2) Fully-stayed multiple height separation (DSA type)** **(3) Partial multiple height separation (DSB type)**



Divider

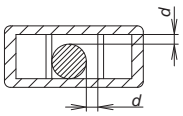


Vertical divider (fastening method)	Inner width W (mm)	A (mm)		B (mm)		P (mm)	C (mm)	D (mm)	
STS (sliding installation)	Common for all widths	30 to 40		27 to 37		14 to 100	8 to 94		
STL (fixable installation)	150	33, 39	6 mm increments	30, 36	6 mm increments	18 to 96 (6 mm increments)	12 to 90 (6 mm increments)	24 to 54	6 mm increments
	200	31, 37		28, 34				22 to 52	
	250	32, 38		29, 35				23 to 53	
	300	30, 36		27, 33				21 to 51	
	350	31, 37		28, 34				22 to 52	
	400	32, 38		29, 35				23 to 53	

Notes:

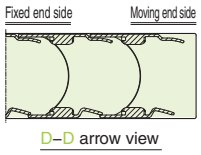
A : Distance from center of vertical divider to end face of link
B : Gap between vertical divider and link
P : Distance between the centers of neighboring vertical dividers
C : Gap between neighboring vertical dividers
D : Gap between neighboring vertical dividers when vertical dividers/dividers for both ends are installed

Note: Make the gap between cables/hoses and the divider or link (d in the figure to right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



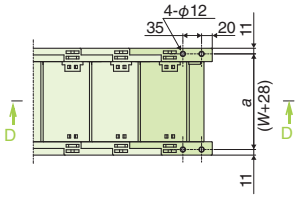
Note: The maximum values for *A*, *B*, *P*, *C*, and *D* are applied when using horizontal dividers.

Dimensions & brackets

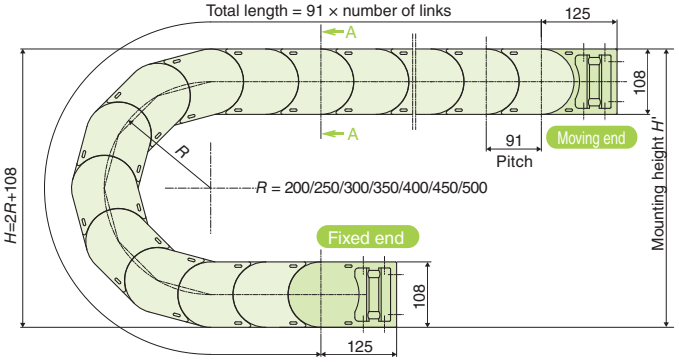


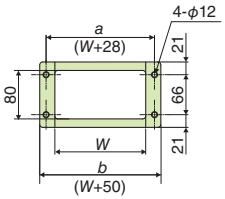
D–D arrow view

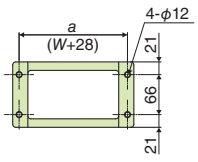
Moving end bracket



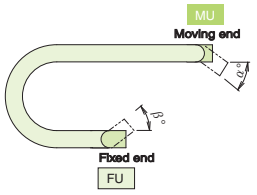
Bending radius R (mm)	Mounting height H′ (mm)
200	518 to 538
250	618 to 638
300	718 to 738
350	818 to 838
400	918 to 938
450	1018 to 1038
500	1118 to 1138

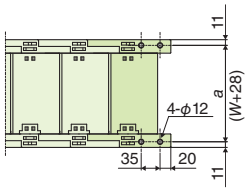






W (mm)	a (mm)	b (mm)
150	178	200
200	228	250
250	278	300
300	328	350
350	378	400
400	428	450





Fixed end bracket

Note: Design and install according to the mounting height *H′* dimension.

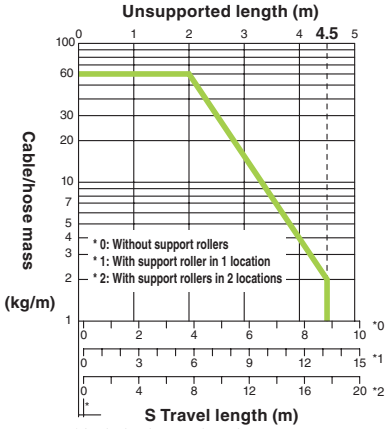
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
200	26	35
250	20	
300	17	
350	15	
400	13	
450	11	
500	10	

Basic specifications

Maximum travel speed (m/min)			300 *1
Operating temperature range (°C)			−40 to 80
Materials	Link		Engineering plastic (black)
	Bracket		Engineering plastic (black) + steel bush
	Vertical divider		Engineering plastic (black)
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic (black) + aluminum
Standard length (No. of links)			R350 or less = 20 R400 to R500 = 10

Notes: ★1. 150 m/min for support roller arrangement.
2. Cannot be used in acidic or alkaline environments.

Load diagram



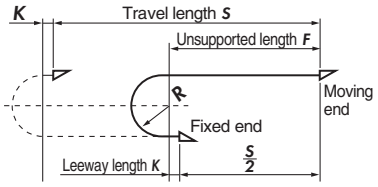
* Includes leeway length.

Note: Use the gliding arrangement (page 127 to 130) if the maximum travel length is exceeded when two support rollers are installed.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2}+\pi R+2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 91 mm
K: Leeway length = 91 mm or greater

Model number

TKC91H80W (1) R (2) + (3) L - (4) - (5)

(1) Inner width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
150	200		FU	MU
200	250		FUCR	MUCR
250	300			
300	350			
350	400			
400	450			
	500			

Notes: 1. Dividers are delivered uninstalled.
2. Refer to page 132 for model number for the gliding arrangement.

■ Divider

Type	Model number
Vertical divider (sliding installation)	TKC91H80-STS
Vertical divider (fixable installation)	TKC91H80-STL
Vertical divider (for both ends)	TKC91H80-STE
Horizontal divider(for DSA type)	TKC91H80-HS○○○
Horizontal divider (for DSB type)	TKC91H80-EHS△△

○○○ = 150, 200
△△ = Dimension *C* or *D* of divider dimensions.

■ Vertical divider

Model number	For cable carrier model number
TKC91H80-STS	TKC91H80W■■R■■
TKC91H80-STL	
TKC91H80-STE	

■ Horizontal divider

Model number	For cable carrier model number
TKC91H80-HS150	TKC91H80W150R■■
TKC91H80-HS200	TKC91H80W200R■■

■ Bracket

Model number	For cable carrier model number
TKC91H80W150-MU	TKC91H80W150R■■
TKC91H80W150-FU	
TKC91H80W200-MU	TKC91H80W200R■■
TKC91H80W200-FU	
TKC91H80W250-MU	TKC91H80W250R■■
TKC91H80W250-FU	
TKC91H80W300-MU	TKC91H80W300R■■
TKC91H80W300-FU	
TKC91H80W350-MU	TKC91H80W350R■■
TKC91H80W350-FU	
TKC91H80W400-MU	TKC91H80W400R■■
TKC91H80W400-FU	

■ Horizontal divider with end stoppers

Model number	For cable carrier model number
TKC91H80-EHS24	TKC91H80W■■R■■ (Common for each width)
TKC91H80-EHS30	
TKC91H80-EHS36	
TKC91H80-EHS42	
TKC91H80-EHS48	
TKC91H80-EHS54	
TKC91H80-EHS22	TKC91H80W■■R■■ (* For W = 200, 350)
TKC91H80-EHS28	
TKC91H80-EHS34	
TKC91H80-EHS40	
TKC91H80-EHS46	
TKC91H80-EHS52	
TKC91H80-EHS23	TKC91H80W■■R■■ (* For W = 250, 400)
TKC91H80-EHS29	
TKC91H80-EHS35	
TKC91H80-EHS41	
TKC91H80-EHS47	
TKC91H80-EHS53	
TKC91H80-EHS21	TKC91H80W300R■■ (* For W = 300)
TKC91H80-EHS27	
TKC91H80-EHS33	
TKC91H80-EHS39	
TKC91H80-EHS45	
TKC91H80-EHS51	

* When used on vertical divider for both ends (STE).

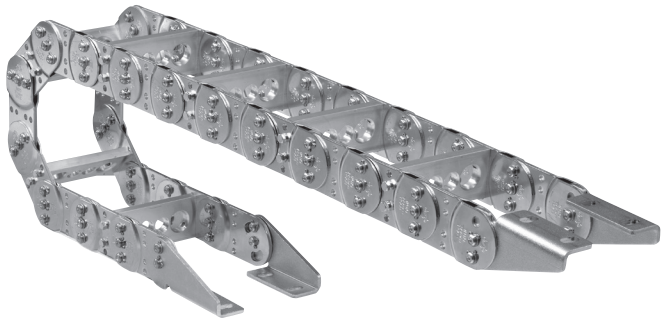
■ Bracket (with clamp rail)

Model number	For cable carrier model number
TKC91H80W150-MUCR	TKC91H80W150R■■
TKC91H80W150-FUCR	
TKC91H80W200-MUCR	TKC91H80W200R■■
TKC91H80W200-FUCR	
TKC91H80W250-MUCR	TKC91H80W250R■■
TKC91H80W250-FUCR	
TKC91H80W300-MUCR	TKC91H80W300R■■
TKC91H80W300-FUCR	
TKC91H80W350-MUCR	TKC91H80W350R■■
TKC91H80W350-FUCR	
TKC91H80W400-MUCR	TKC91H80W400R■■
TKC91H80W400-FUCR	

See page 15 for ordering information
See page 149 for product mass

MEMO

Cable Carrier Steel Series



TK Series

TK070 95
TK095 97
TK130 99
TK180 101

TKF Series Discontinued

TKF055 107
TKF085 108
TKF115 109
TKF175 110

TKH Series

TKH250 103

TKV Series

TKV130 111

TKS Series

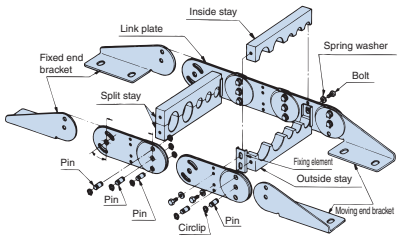
TKS070 105
TKS095 106

TKI Series

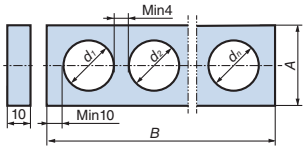
TKI Series 112

TK070

Structure



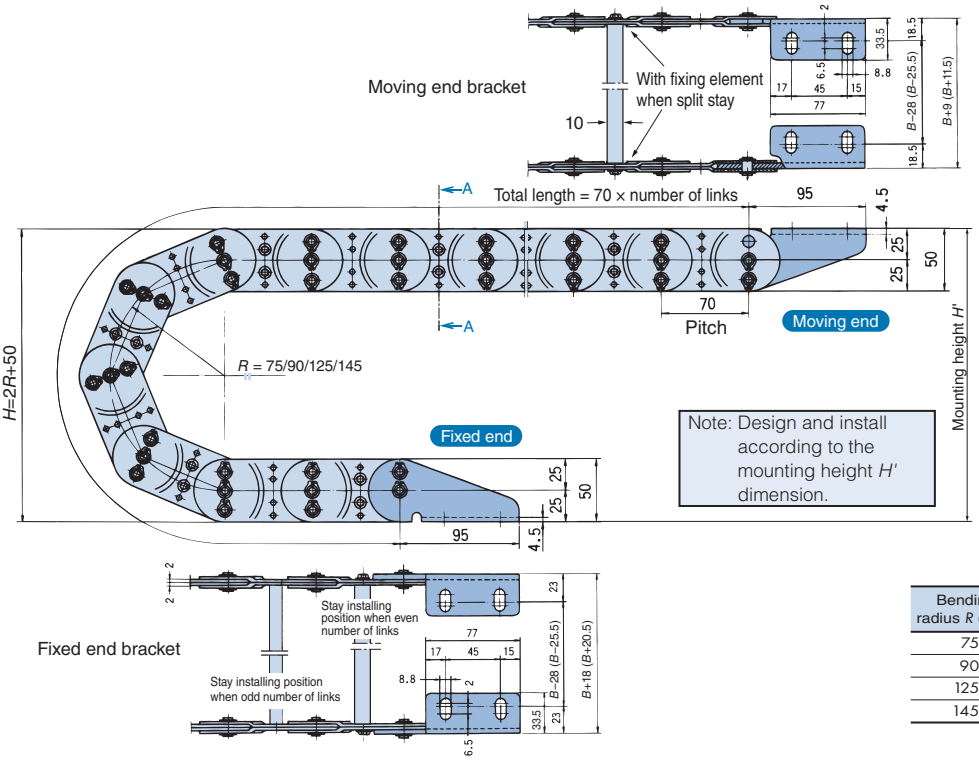
Stay dimensions



Cable/hose maximum outer diameter d (mm)	Stay maximum bore diameter (mm)	Stay height A (mm)	Stay width B (mm)								
			60	80	100	125	150	200	250	300	350
ϕ18	ϕ20	35	○	○	○	○	○	○	○	–	–
ϕ27	ϕ30	45	○	○	○	○	○	○	○	○	○

Notes: 1. A stay width that exceeds 350 mm can also be used in certain cases. Contact a Tsubaki representative for further information.
2. The L-shaped fixing element type is used for a stay width that exceeds 600 mm. Refer to page 103.

Dimension drawings/steel bracket dimensions



Bending radius R (mm)	Mounting height H' (mm)
75	210
90	240
125	310
145	350

Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
75	0	54
90	0	45
125	0	31
145	0	27

Direction of connection surface \ Mounting direction	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

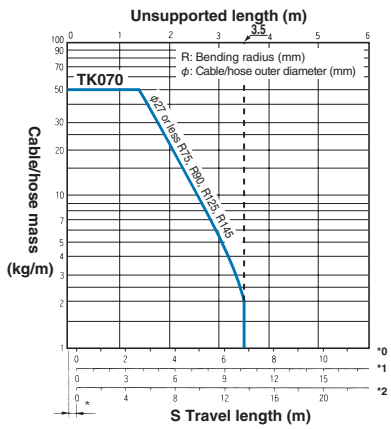
Notes: 1. Dimensions in ( ) are for the split stay. However, the L-shaped fixing element type is excluded.
2. The steel bracket can be installed in a variety of directions.
3. FOA, FOB, FIA, FIB, MOA, MOB, MIA, and MIB steel brackets are common parts.
4. Stays and steel brackets are delivered installed.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 150
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Stay	Aluminum
Standard length (No. of links)		50

Note: About support rollers
First consider the cable carrier without support rollers. If conditions/specifications are not satisfied, add the support rollers. When increasing the travel length, increasing the size can be more cost effective than adding support rollers.

Load diagram

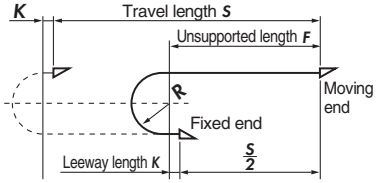


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 70 mm
K: Leeway length = 105 mm or greater

Model number

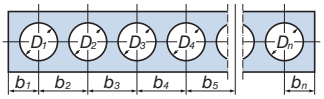
TK070R (1) + (2) L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
75		FOA	MOA
90		FIA	MIA
125		FOB	MOB
145		FIB	MIB

■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TK070-MOA	TK070R■■
TK070-MOB	
TK070-MIA	
TK070-MIB	
TK070-FOA	
TK070-FOB	
TK070-FIA	
TK070-FIB	

■ Bore dimensions



Example: Bore diameter (from left) 21/19/14/14
Distance between stay bores (from left) 20.5/24/20.5/18/17

Bore diameter	D_1	D_2	D_3	D_4	
	21	19	14	14	
Distance between stay bores	b_1	b_2	b_3	b_4	b_5
	20.5	24	20.5	18	17

Note: "From left" means as viewed from the direction of the A–A arrow view in the dimensional drawing.

■ Stay (thickness 10 mm)

Example:
TK070-SP45-100-10 B -TK

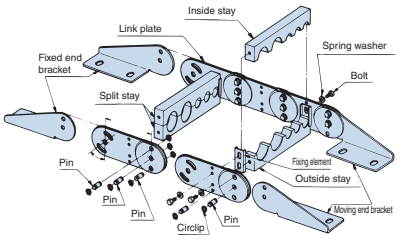
Stay height / Stay width / Stay thickness / Stay type (B: Split type, T: Unsplit type)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK070-SP35-60-10T-TK	35	60	TK070R■■
TK070-SP35-60-10B-TK			
TK070-SP35-80-10T-TK		80	
TK070-SP35-80-10B-TK			
TK070-SP35-100-10T-TK		100	
TK070-SP35-100-10B-TK			
TK070-SP35-125-10T-TK		125	
TK070-SP35-125-10B-TK			
TK070-SP35-150-10T-TK		150	
TK070-SP35-150-10B-TK			
TK070-SP35-200-10T-TK		200	
TK070-SP35-200-10B-TK			
TK070-SP35-250-10T-TK		250	
TK070-SP35-250-10B-TK			
TK070-SP45-60-10T-TK	45	60	TK070R■■
TK070-SP45-60-10B-TK			
TK070-SP45-80-10T-TK		80	
TK070-SP45-80-10B-TK			
TK070-SP45-100-10T-TK		100	
TK070-SP45-100-10B-TK			
TK070-SP45-125-10T-TK		125	
TK070-SP45-125-10B-TK			
TK070-SP45-150-10T-TK		150	
TK070-SP45-150-10B-TK			
TK070-SP45-200-10T-TK		200	
TK070-SP45-200-10B-TK			
TK070-SP45-250-10T-TK		250	
TK070-SP45-250-10B-TK			
TK070-SP45-300-10T-TK		300	
TK070-SP45-300-10B-TK			
TK070-SP45-350-10T-TK		350	
TK070-SP45-350-10B-TK			

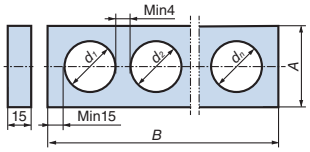
See page 20 for ordering information
See page 150 for product mass

TK095

Structure



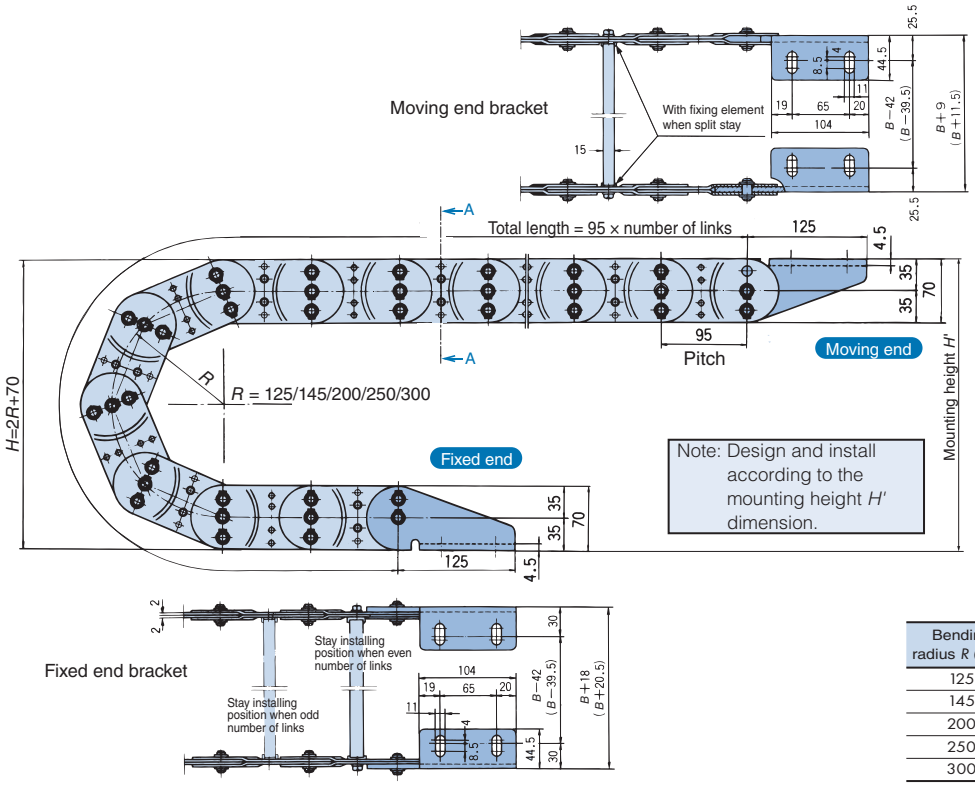
Stay dimensions

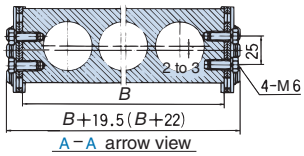


Cable/hose maximum outer diameter d (mm)	Stay maximum bore diameter (mm)	Stay height A (mm)	Stay width B (mm)										
			80	100	125	150	200	250	300	350	400	450	500
ϕ31	ϕ35	50	○	○	○	○	○	○	○	○	○	–	–
ϕ46	ϕ50	65	○	○	○	○	○	○	○	○	○	○	○

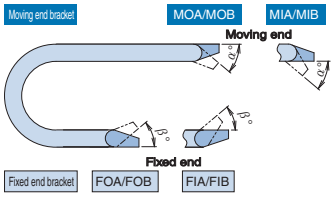
Notes: 1. A stay width that exceeds 500 mm can also be used in certain cases. Contact a Tsubaki representative for further information.
2. The L-shaped fixing element type is used for a stay width that exceeds 600 mm. Refer to page 103.

Dimension drawings/steel bracket dimensions





Bending radius R (mm)	Mounting height H' (mm)
125	330
145	370
200	480
250	580
300	680



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
125	0	44
145	0	37
200	0	26
250	0	21
300	0	17

Mounting direction / Direction of connection surface	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

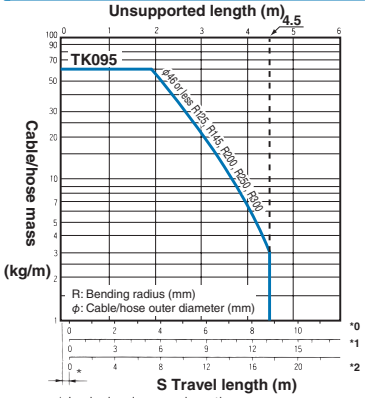
Notes: 1. Dimensions in ( ) are for the split stay. However, the L-shaped fixing element type is excluded.
2. The steel bracket can be installed in a variety of directions.
3. FOA, FOB, FIA, FIB, MOA, MOB, MIA, and MIB steel brackets are common parts.
4. Stays and steel brackets are delivered installed.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 150
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Stay	Aluminum
Standard length (No. of links)		25

Note: About support rollers
First consider the cable carrier without support rollers. If conditions/specifications are not satisfied, add the support rollers. When increasing the travel length, increasing the size can be more cost effective than adding support rollers.

Load diagram

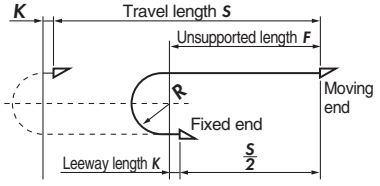


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 95 mm
K: Leeway length = 145 mm or greater

Model number

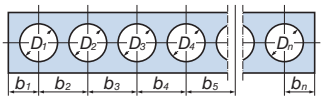
TK095R (1) + (2) L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
125		FOA	MOA
145		FIA	MIA
200		FOB	MOB
250		FIB	MIB
300			

■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TK095-MOA	TK095R■■
TK095-MOB	
TK095-MIA	
TK095-MIB	
TK095-FOA	
TK095-FOB	
TK095-FIA	
TK095-FIB	

■ Bore dimensions



Example: Bore diameter (from left) 20/20/20/20
Distance between stay bores (from left) 25/25/25/25/25

Bore diameter	D_1	D_2	D_3	D_4	
	20	20	20	20	
Distance between stay bores	b_1	b_2	b_3	b_4	b_5
	25	25	25	25	25

Note: "From left" means as viewed from the direction of the A–A arrow view in the dimensional drawing.

■ Stay (thickness 15 mm)

Example:
TK095-SP50-100-15 B -TK

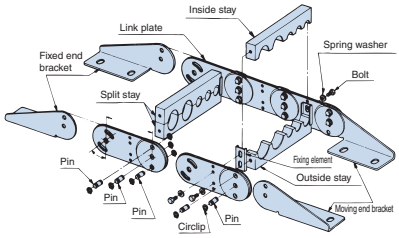
Stay height / Stay width / Stay thickness / Stay type (B: Split type, T: Unsplit type)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK095-SP50-80-15T-TK	50	80	TK095R■■
TK095-SP50-80-15B-TK			
TK095-SP50-100-15T-TK		100	
TK095-SP50-100-15B-TK			
TK095-SP50-125-15T-TK		125	
TK095-SP50-125-15B-TK			
TK095-SP50-150-15T-TK		150	
TK095-SP50-150-15B-TK			
TK095-SP50-200-15T-TK		200	
TK095-SP50-200-15B-TK			
TK095-SP50-250-15T-TK		250	
TK095-SP50-250-15B-TK			
TK095-SP50-300-15T-TK		300	
TK095-SP50-300-15B-TK			
TK095-SP50-350-15T-TK		350	
TK095-SP50-350-15B-TK			
TK095-SP50-400-15T-TK		400	
TK095-SP50-400-15B-TK			
TK095-SP65-80-15T-TK	65	80	TK095R■■
TK095-SP65-80-15B-TK			
TK095-SP65-100-15T-TK		100	
TK095-SP65-100-15B-TK			
TK095-SP65-125-15T-TK		125	
TK095-SP65-125-15B-TK			
TK095-SP65-150-15T-TK		150	
TK095-SP65-150-15B-TK			
TK095-SP65-200-15T-TK		200	
TK095-SP65-200-15B-TK			
TK095-SP65-250-15T-TK		250	
TK095-SP65-250-15B-TK			
TK095-SP65-300-15T-TK		300	
TK095-SP65-300-15B-TK			
TK095-SP65-350-15T-TK		350	
TK095-SP65-350-15B-TK			
TK095-SP65-400-15T-TK		400	
TK095-SP65-400-15B-TK			
TK095-SP65-450-15T-TK		450	
TK095-SP65-450-15B-TK			
TK095-SP65-500-15T-TK		500	
TK095-SP65-500-15B-TK			

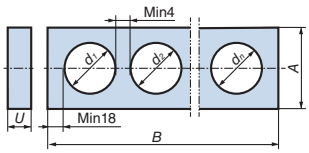
See page 20 for ordering information
See page 150 for product mass

TK130

Structure



Stay dimensions

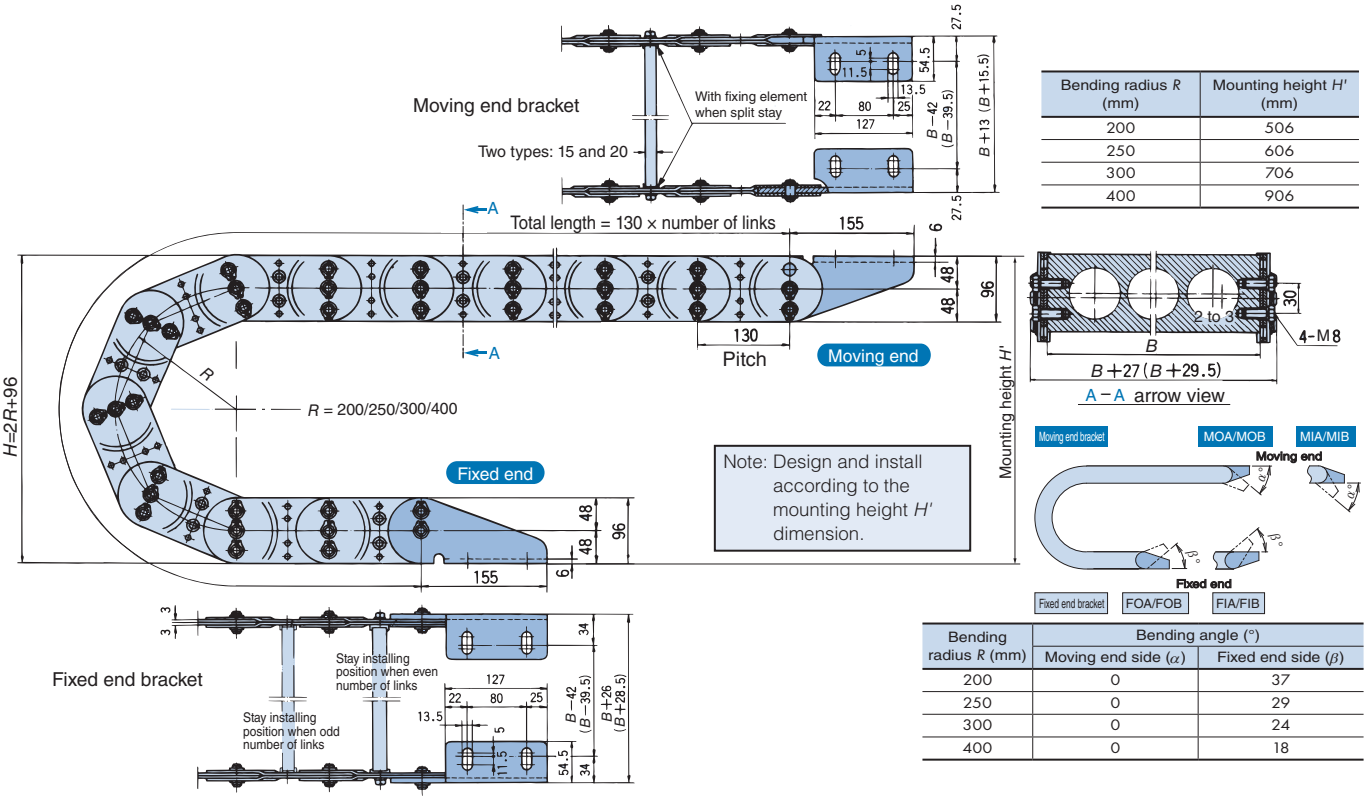


Cable/hose maximum outer diameter d (mm)	Stay maximum bore diameter (mm)	Stay height A (mm)	Stay width B (mm)											
			100	125	150	200	250	300	350	400	450	500	550	600
ϕ46	ϕ50	65	○	○	○	○	○	○	○	○	○	○	-	-
ϕ55	ϕ60	75	○	○	○	○	○	○	○	○	△	△	-	-
ϕ60	ϕ66	90	○	○	○	○	○	○	○	○	△	△	△	△

○: Thickness U = 15 mm and 20 mm can be supported
△: Thickness U = 20 mm can be supported only

Notes: 1. A stay width that exceeds 600 mm can also be used in certain cases. Contact a Tsubaki representative for further information.
2. The L-shaped fixing element type is used for a stay width that exceeds 600 mm. Refer to page 103.

Dimension drawings/steel bracket dimensions



Bending radius R (mm)	Mounting height H' (mm)
200	506
250	606
300	706
400	906

Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
200	0	37
250	0	29
300	0	24
400	0	18

Mounting direction / Direction of connection surface	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

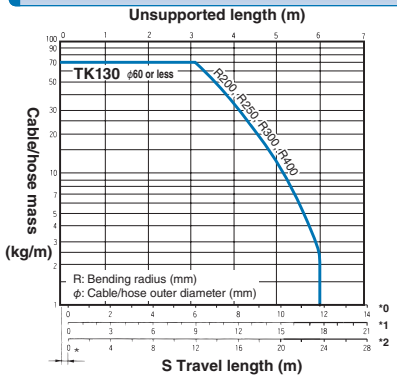
Notes: 1. Dimensions in ( ) are for the split stay. However, the L-shaped fixing element type is excluded.
2. The steel bracket can be installed in a variety of directions.
3. FOA, FOB, FIA, FIB, MOA, MOB, MIA, and MIB steel brackets are common parts.
4. Stays and steel brackets are delivered installed.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		-10 to 150
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Stay	Aluminum
Standard length (No. of links)		R300 or less = 19 R400 or more = 13

Note: About support rollers
First consider the cable carrier without support rollers. If conditions/specifications are not satisfied, add the support rollers. When increasing the travel length, increasing the size can be more cost effective than adding support rollers.

Load diagram

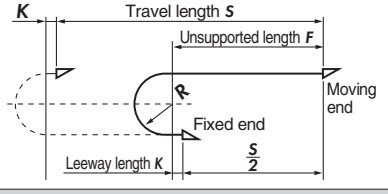


* Includes leeway length.
*** 0: Without support rollers**
*** 1: With support roller in 1 location**
*** 2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{S}{2} + \pi R + 2K \Big/ P$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 130 mm
K: Leeway length = 195 mm or greater

Model number

TK130R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
200		FOA	MOA
250		FIA	MIA
300		FOB	MOB
400		FIB	MIB

■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TK130-MOA	TK130R■■
TK130-MOB	
TK130-MIA	
TK130-MIB	
TK130-FOA	
TK130-FOB	
TK130-FIA	
TK130-FIB	

■ Stay

Example:
TK130-SP65-125-15 B -TK

- Stay height: 125
- Stay width: 15
- Stay thickness: B
- Stay type: B: Split type, T: Unsplit type

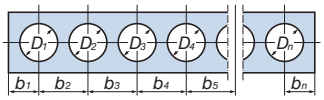
■ Stay (thickness 15 mm)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK130-SP65-100-15T-TK	65	100	TK130R■■
TK130-SP65-100-15B-TK			
TK130-SP65-125-15T-TK		125	
TK130-SP65-125-15B-TK			
TK130-SP65-150-15T-TK		150	
TK130-SP65-150-15B-TK			
TK130-SP65-200-15T-TK		200	
TK130-SP65-200-15B-TK			
TK130-SP65-250-15T-TK		250	
TK130-SP65-250-15B-TK			
TK130-SP65-300-15T-TK		300	
TK130-SP65-300-15B-TK			
TK130-SP65-350-15T-TK		350	
TK130-SP65-350-15B-TK			
TK130-SP65-400-15T-TK		400	
TK130-SP65-400-15B-TK			
TK130-SP65-450-15T-TK		450	
TK130-SP65-450-15B-TK			
TK130-SP65-500-15T-TK		500	
TK130-SP65-500-15B-TK			
TK130-SP75-100-15T-TK	75	100	
TK130-SP75-100-15B-TK			
TK130-SP75-125-15T-TK		125	
TK130-SP75-125-15B-TK			
TK130-SP75-150-15T-TK		150	
TK130-SP75-150-15B-TK			
TK130-SP75-200-15T-TK		200	
TK130-SP75-200-15B-TK			
TK130-SP75-250-15T-TK		250	
TK130-SP75-250-15B-TK			
TK130-SP75-300-15T-TK		300	
TK130-SP75-300-15B-TK			
TK130-SP75-350-15T-TK		350	
TK130-SP75-350-15B-TK			
TK130-SP75-400-15T-TK		400	
TK130-SP75-400-15B-TK			
TK130-SP90-100-15T-TK	90	100	
TK130-SP90-100-15B-TK			
TK130-SP90-125-15T-TK		125	
TK130-SP90-125-15B-TK			
TK130-SP90-150-15T-TK		150	
TK130-SP90-150-15B-TK			
TK130-SP90-200-15T-TK		200	
TK130-SP90-200-15B-TK			
TK130-SP90-250-15T-TK		250	
TK130-SP90-250-15B-TK			
TK130-SP90-300-15T-TK		300	
TK130-SP90-300-15B-TK			
TK130-SP90-350-15T-TK		350	
TK130-SP90-350-15B-TK			
TK130-SP90-400-15T-TK		400	
TK130-SP90-400-15B-TK			

■ Stay (thickness 20 mm)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK130-SP65-100-20T-TK	65	100	TK130R■■
TK130-SP65-100-20B-TK			
TK130-SP65-125-20T-TK		125	
TK130-SP65-125-20B-TK			
TK130-SP65-150-20T-TK		150	
TK130-SP65-150-20B-TK			
TK130-SP65-200-20T-TK		200	
TK130-SP65-200-20B-TK			
TK130-SP65-250-20T-TK		250	
TK130-SP65-250-20B-TK			
TK130-SP65-300-20T-TK		300	
TK130-SP65-300-20B-TK			
TK130-SP65-350-20T-TK		350	
TK130-SP65-350-20B-TK			
TK130-SP65-400-20T-TK		400	
TK130-SP65-400-20B-TK			
TK130-SP65-450-20T-TK		450	
TK130-SP65-450-20B-TK			
TK130-SP65-500-20T-TK		500	
TK130-SP65-500-20B-TK			
TK130-SP75-100-20T-TK	75	100	
TK130-SP75-100-20B-TK			
TK130-SP75-125-20T-TK		125	
TK130-SP75-125-20B-TK			
TK130-SP75-150-20T-TK		150	
TK130-SP75-150-20B-TK			
TK130-SP75-200-20T-TK		200	
TK130-SP75-200-20B-TK			
TK130-SP75-250-20T-TK		250	
TK130-SP75-250-20B-TK			
TK130-SP75-300-20T-TK		300	
TK130-SP75-300-20B-TK			
TK130-SP75-350-20T-TK		350	
TK130-SP75-350-20B-TK			
TK130-SP75-400-20T-TK		400	
TK130-SP75-400-20B-TK			
TK130-SP75-450-20T-TK		450	
TK130-SP75-450-20B-TK			
TK130-SP75-500-20T-TK		500	
TK130-SP75-500-20B-TK			
TK130-SP90-100-20T-TK	90	100	
TK130-SP90-100-20B-TK			
TK130-SP90-125-20T-TK		125	
TK130-SP90-125-20B-TK			
TK130-SP90-150-20T-TK		150	
TK130-SP90-150-20B-TK			
TK130-SP90-200-20T-TK		200	
TK130-SP90-200-20B-TK			
TK130-SP90-250-20T-TK		250	
TK130-SP90-250-20B-TK			
TK130-SP90-300-20T-TK		300	
TK130-SP90-300-20B-TK			
TK130-SP90-350-20T-TK		350	
TK130-SP90-350-20B-TK			
TK130-SP90-400-20T-TK		400	
TK130-SP90-400-20B-TK			
TK130-SP90-450-20T-TK		450	
TK130-SP90-450-20B-TK			
TK130-SP90-500-20T-TK		500	
TK130-SP90-500-20B-TK			
TK130-SP90-550-20T-TK		550	
TK130-SP90-550-20B-TK			
TK130-SP90-600-20T-TK		600	
TK130-SP90-600-20B-TK			

■ Bore dimensions



Example: Bore diameter (from left) 20/16/16/20
Distance between stay bores (from left) 28/23/23/23/28

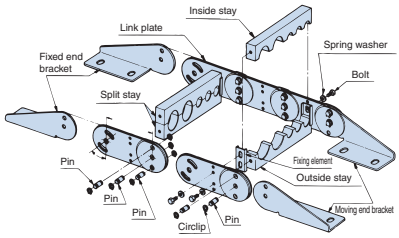
Bore diameter	D_1	D_2	D_3	D_4	
	20	16	16	20	
Distance between stay bores	b_1	b_2	b_3	b_4	b_5
	28	23	23	23	28

Note: "From left" means as viewed from the direction of the A–A arrow view in the dimensional drawing.

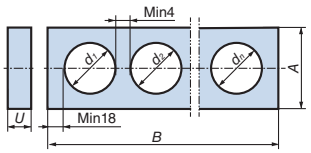
See page 20 for ordering information
See page 150 for product mass

TK180

Structure (for reference)



Stay dimensions

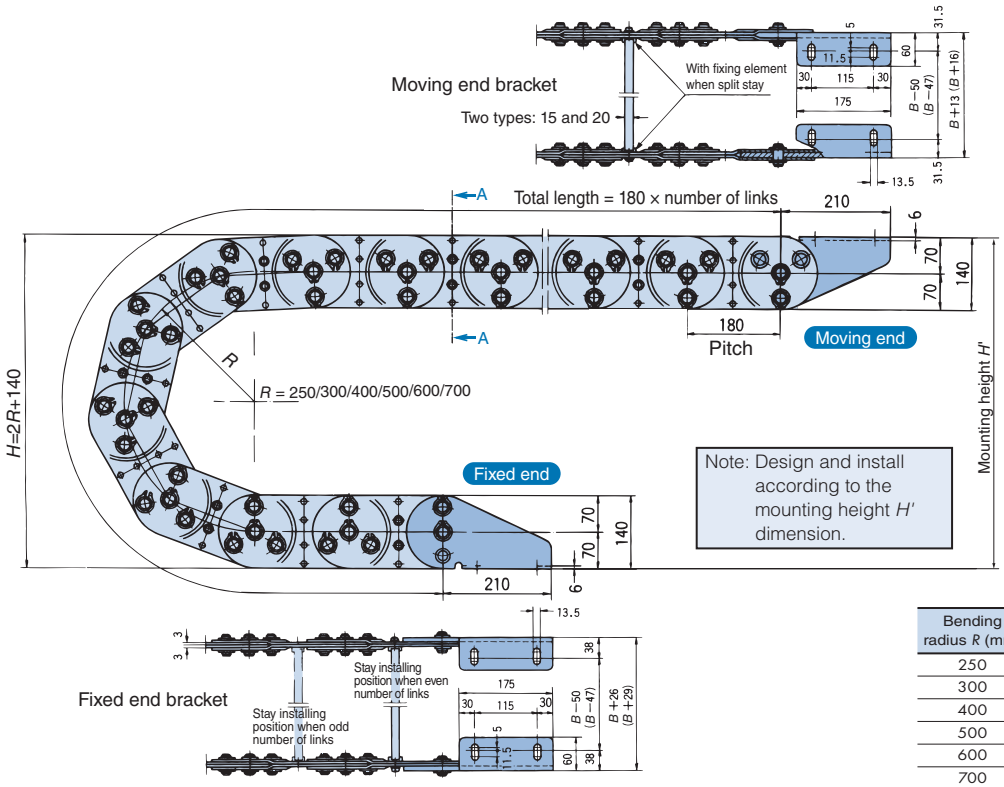


Cable/hose maximum outer diameter d (mm)	Stay maximum bore diameter (mm)	Stay height A (mm)	Stay width B (mm)										
			125	150	200	250	300	350	400	450	500	550	600
ϕ55	ϕ60	75	○	○	○	○	○	○	○	△	△	-	-
ϕ60	ϕ66	90	○	○	○	○	○	○	○	△	△	△	△
ϕ80	ϕ88	110	△	△	△	△	△	△	△	△	△	△	△

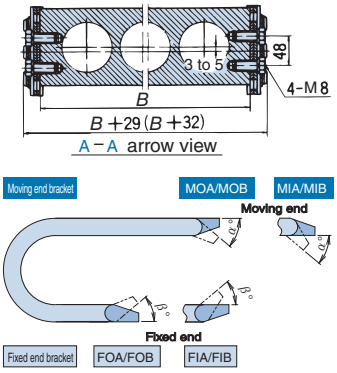
○: Thickness U = 15 mm and 20 mm can be supported
△: Thickness U = 20 mm can be supported only

Notes: 1. A stay width that exceeds 600 mm can also be used in certain cases. Contact a Tsubaki representative for further information.
2. The L-shaped fixing element type is used for a stay width that exceeds 600 mm. Refer to page 103.

Dimension drawings/steel bracket dimensions



Bending radius R (mm)	Mounting height H' (mm)
250	650
300	750
400	950
500	1150
600	1350
700	1550



Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
250	0	41
300	0	34
400	0	25
500	0	20
600	0	16
700	0	14

Direction of connection surface \ Mounting direction	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

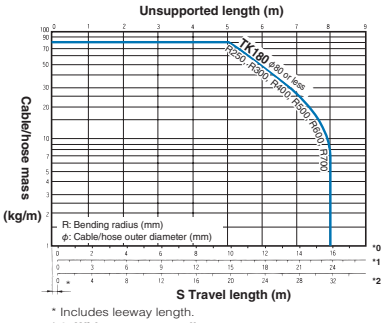
Notes: 1. Dimensions in ( ) are for the split stay. However, the L-shaped fixing element type is excluded.
2. The steel bracket can be installed in a variety of directions.
3. FOA, FOB, FIA, FIB, MOA, MOB, MIA, and MIB steel brackets are common parts.
4. Stays and steel brackets are delivered installed.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		-10 to 150
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Stay	Aluminum
Standard length (No. of links)		R300 or less = 12 R400 or more = 9

Note: About support rollers
First consider the cable carrier without support rollers. If conditions/specifications are not satisfied, add the support rollers. When increasing the travel length, increasing the size can be more cost effective than adding support rollers.

Load diagram

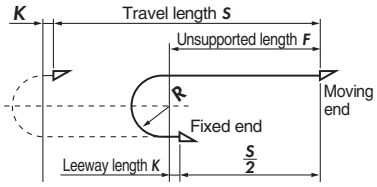


* Includes leeway length.
* 0: Without support rollers
* 1: With support roller in 1 location
* 2: With support rollers in 2 locations

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 180 mm
K: Leeway length = 270 mm or greater

Model number

TK180R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
250		FOA	MOA
300		FIA	MIA
400		FOB	MOB
500		FIB	MIB
600			
700			

■ Stay

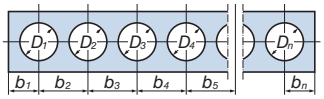
Example:
TK180-SP75-125-15 B -TK

Stay height: 125
Stay width: 15
Stay thickness: B
Stay type: B: Split type, T: Unsplit type

■ Stay (thickness 15 mm)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK180-SP75-125-15T-TK	75	125	TK180R■■
TK180-SP75-125-15B-TK			
TK180-SP75-150-15T-TK		150	
TK180-SP75-150-15B-TK			
TK180-SP75-200-15T-TK		200	
TK180-SP75-200-15B-TK			
TK180-SP75-250-15T-TK		250	
TK180-SP75-250-15B-TK			
TK180-SP75-300-15T-TK		300	
TK180-SP75-300-15B-TK			
TK180-SP75-350-15T-TK		350	
TK180-SP75-350-15B-TK			
TK180-SP75-400-15T-TK		400	
TK180-SP75-400-15B-TK			
TK180-SP90-125-15T-TK	90	125	
TK180-SP90-125-15B-TK			
TK180-SP90-150-15T-TK		150	
TK180-SP90-150-15B-TK			
TK180-SP90-200-15T-TK		200	
TK180-SP90-200-15B-TK			
TK180-SP90-250-15T-TK		250	
TK180-SP90-250-15B-TK			
TK180-SP90-300-15T-TK		300	
TK180-SP90-300-15B-TK			
TK180-SP90-350-15T-TK		350	
TK180-SP90-350-15B-TK			
TK180-SP90-400-15T-TK		400	
TK180-SP90-400-15B-TK			

■ Bore dimensions



Example: Bore diameter (from left) 15/23/23/16
Distance between stay bores (from left) 25.5/23/27/23.5/26

Bore diameter	D_1	D_2	D_3	D_4	
	15	23	23	16	
Distance between stay bores	b_1	b_2	b_3	b_4	b_5
	25.5	23	27	23.5	26

Note: "From left" means as viewed from the direction of the A–A arrow view in the dimensional drawing.

■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TK180-MOA	TK180R■■
TK180-MOB	
TK180-MIA	
TK180-MIB	
TK180-FOA	
TK180-FOB	
TK180-FIA	
TK180-FIB	

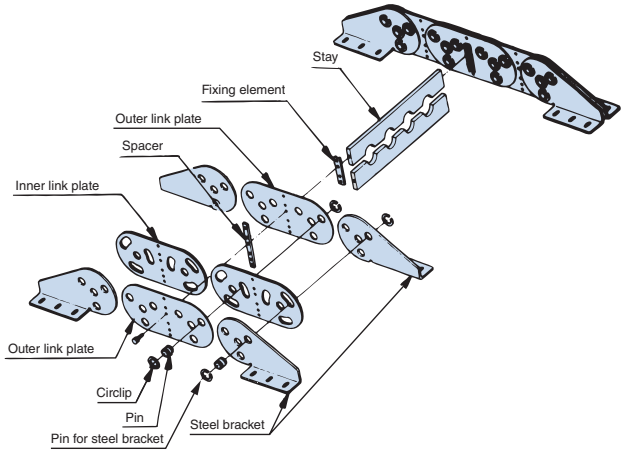
■ Stay (thickness 20 mm)

Model number	Stay height *A*	Stay width *B*	For cable carrier model number
TK180-SP75-125-20T-TK	75	125	TK180R■■
TK180-SP75-125-20B-TK			
TK180-SP75-150-20T-TK		150	
TK180-SP75-150-20B-TK			
TK180-SP75-200-20T-TK		200	
TK180-SP75-200-20B-TK			
TK180-SP75-250-20T-TK		250	
TK180-SP75-250-20B-TK			
TK180-SP75-300-20T-TK		300	
TK180-SP75-300-20B-TK			
TK180-SP75-350-20T-TK		350	
TK180-SP75-350-20B-TK			
TK180-SP75-400-20T-TK		400	
TK180-SP75-400-20B-TK			
TK180-SP75-450-20T-TK		450	
TK180-SP75-450-20B-TK			
TK180-SP75-500-20T-TK		500	
TK180-SP75-500-20B-TK			
TK180-SP90-125-20T-TK	90	125	
TK180-SP90-125-20B-TK			
TK180-SP90-150-20T-TK		150	
TK180-SP90-150-20B-TK			
TK180-SP90-200-20T-TK		200	
TK180-SP90-200-20B-TK			
TK180-SP90-250-20T-TK		250	
TK180-SP90-250-20B-TK			
TK180-SP90-300-20T-TK		300	
TK180-SP90-300-20B-TK			
TK180-SP90-350-20T-TK		350	
TK180-SP90-350-20B-TK			
TK180-SP90-400-20T-TK		400	
TK180-SP90-400-20B-TK			
TK180-SP90-450-20T-TK		450	
TK180-SP90-450-20B-TK			
TK180-SP90-500-20T-TK		500	
TK180-SP90-500-20B-TK			
TK180-SP90-550-20T-TK		550	
TK180-SP90-550-20B-TK			
TK180-SP90-600-20T-TK		600	
TK180-SP90-600-20B-TK			
TK180-SP110-125-20T-TK	110	125	
TK180-SP110-125-20B-TK			
TK180-SP110-150-20T-TK		150	
TK180-SP110-150-20B-TK			
TK180-SP110-200-20T-TK		200	
TK180-SP110-200-20B-TK			
TK180-SP110-250-20T-TK		250	
TK180-SP110-250-20B-TK			
TK180-SP110-300-20T-TK		300	
TK180-SP110-300-20B-TK			
TK180-SP110-350-20T-TK		350	
TK180-SP110-350-20B-TK			
TK180-SP110-400-20T-TK		400	
TK180-SP110-400-20B-TK			
TK180-SP110-450-20T-TK		450	
TK180-SP110-450-20B-TK			
TK180-SP110-500-20T-TK		500	
TK180-SP110-500-20B-TK			
TK180-SP110-550-20T-TK		550	
TK180-SP110-550-20B-TK			
TK180-SP110-600-20T-TK		600	
TK180-SP110-600-20B-TK			

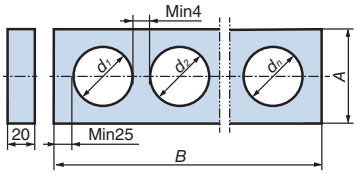
See page 20 for ordering information
See page 150 for product mass

TKH250

Structure



Stay dimensions



Bending radius *R* (mm)	Stay width *B* (mm)					
	350	400	450	500	550	600
350	○	○	○	○	○	○
450	○	○	○	○	○	○
600	–	○	○	○	○	○
750	–	–	○	○	○	○

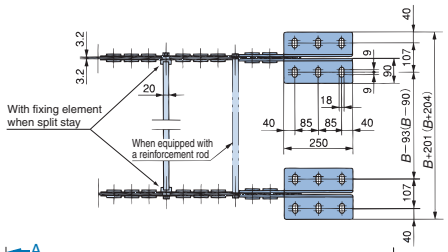
Cable/hose maximum outer diameter *d* (mm)	Stay maximum bore diameter (mm)	Stay height *A* (mm)
ϕ60	ϕ66	90
ϕ80	ϕ88	110
ϕ110	ϕ121	150
Exceeds ϕ110	Contact a Tsubaki representative for further information.	

Notes: 1. The TKH Series is suited to low operating frequencies with long travel lengths, large cable/hose diameters, and/or heavy loads. The TKI and TKV Series are recommended for high operating frequencies.
2. In the following cases, install reinforcement bars alternately with stays.
- When using support rollers
- When stay height *A* = 90
- When stay width *B* < 350
- Reinforcement bars may be installed when the cable carrier is made to order.

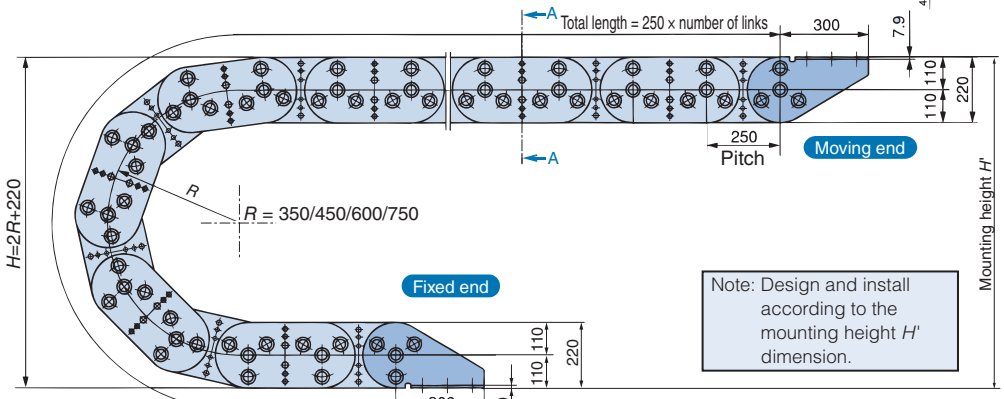
3. Stay width *B* > 600 can also be used in certain cases. Contact a Tsubaki representative for further information.
4. The L-shaped fixing element type is used when stay width *B* > 600.

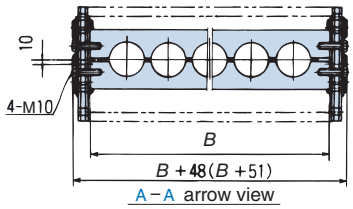
Dimension drawings/steel bracket dimensions

Moving end bracket

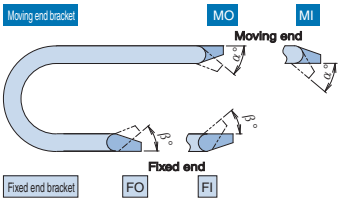


Bending radius *R* (mm)	Mounting height *H'* (mm)
350	950
450	1150
600	1450
750	1750

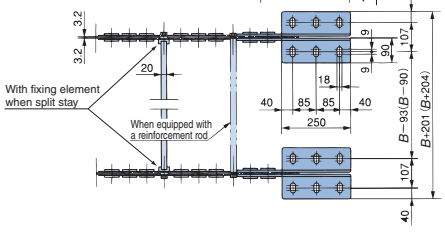




Note: Design and install according to the mounting height *H'* dimension.



Fixed end bracket

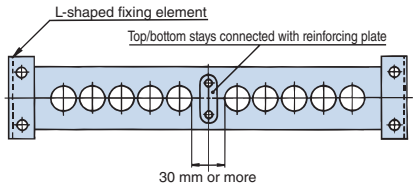


Bending radius *R* (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
350	41	41
450	31	31
600	23	23
750	18	18

Outside mounting		Inside mounting	
Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
MO	FO	MI	FI

Notes: 1. Dimensions in ( ) are for the split stay. However, the L-shaped fixing element type is excluded.
2. Stays and steel brackets are delivered installed.

Stay widths (TK Series/TKH Series)



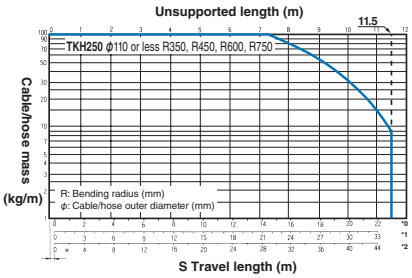
Notes: 1. Stays can also be manufactured in widths (*B* dimension) greater than those listed in the stay dimensions table.
2. For supports with *B* > 600 mm, the stay is installed with L-shaped fixing elements and not tapped holes as a general rule. For split stays, the top and bottom stays are also connected with a reinforcing plate.
3. The *B* dimension can also be manufactured at sizes not listed in the table.
4. Select the *A* dimension from the standard stays.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 150
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Stay	Aluminum
Standard length (No. of links)		6

Note: About support rollers
First consider the cable carrier without support rollers. If conditions/specifications are not satisfied, add the support rollers.

Load diagram

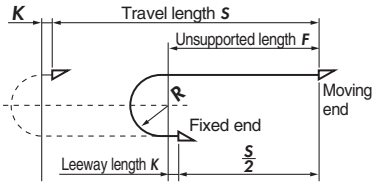


* Includes leeway length.
* **0: Without support rollers**
* **1: With support roller in 1 location**
* **2: With support rollers in 2 locations**

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length.
Always round up the value after calculating.
* The number of links must be an odd number.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 250 mm
K: Leeway length = 270 mm or greater

Model number

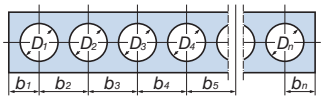
TKH250R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
350		FO	MO
450		FI	MI
600			
750			

■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TKH250-MO	TKH250R■■
TKH250-MI	
TKH250-FO	
TKH250-FI	

■ Bore dimensions



Example: Bore diameter (from left) 40/50/50/40
Distance between stay bores (from left) 45/90/90/80/45

Bore diameter	D_1	D_2	D_3	D_4	
	40	50	50	40	
Distance between stay bores	b_1	b_2	b_3	b_4	b_5
	45	90	90	80	45

Note: "From left" means as viewed from the direction of the A–A arrow view in the dimensional drawing.

■ Stay (thickness 20 mm)

Example:
TKH250-SP110-450 B -TK

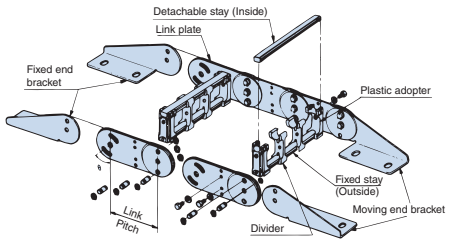
Stay height	Stay width	Stay type
		B: Split type
		T: Unsplit type

Model number	Stay height A	Stay width B	For cable carrier model number
TKH250-SP90-350T-TK	90	350	TKH250R■■
TKH250-SP90-350B-TK			
TKH250-SP90-400T-TK		400	
TKH250-SP90-400B-TK			
TKH250-SP90-450T-TK		450	
TKH250-SP90-450B-TK			
TKH250-SP90-500T-TK		500	
TKH250-SP90-500B-TK			
TKH250-SP90-550T-TK		550	
TKH250-SP90-550B-TK			
TKH250-SP90-600T-TK		600	
TKH250-SP90-600B-TK			
TKH250-SP110-350T-TK	110	350	
TKH250-SP110-350B-TK			
TKH250-SP110-400T-TK		400	
TKH250-SP110-400B-TK			
TKH250-SP110-450T-TK		450	
TKH250-SP110-450B-TK			
TKH250-SP110-500T-TK		500	
TKH250-SP110-500B-TK			
TKH250-SP110-550T-TK		550	
TKH250-SP110-550B-TK			
TKH250-SP110-600T-TK		600	
TKH250-SP110-600B-TK			
TKH250-SP150-350T-TK	150	350	
TKH250-SP150-350B-TK			
TKH250-SP150-400T-TK		400	
TKH250-SP150-400B-TK			
TKH250-SP150-450T-TK		450	
TKH250-SP150-450B-TK			
TKH250-SP150-500T-TK		500	
TKH250-SP150-500B-TK			
TKH250-SP150-550T-TK		550	
TKH250-SP150-550B-TK			
TKH250-SP150-600T-TK		600	
TKH250-SP150-600B-TK			

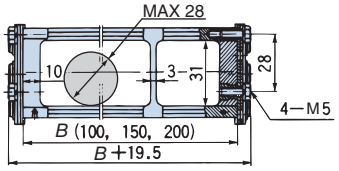
See page 20 for ordering information
See page 150 for product mass

TKS070

Structure



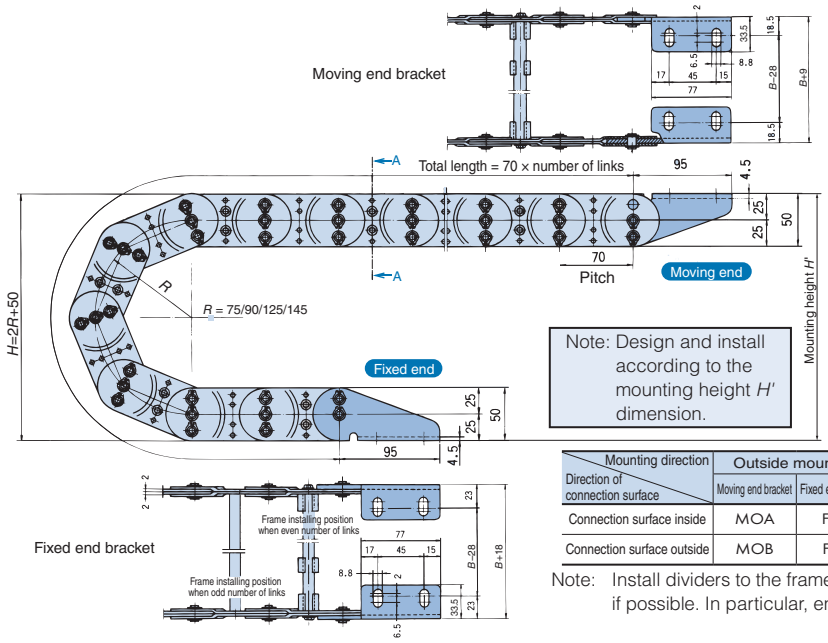
Cross-section dimensions



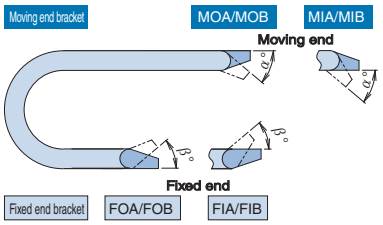
A–A arrow view

Cable/hose maximum outer diameter d_{MAX} (mm)		27		
Frame width B (mm)		100	150	200
Divider	Minimum number required	0	1	2
	Maximum number installable	5	8	12

Dimension drawings/steel bracket dimensions



Bending radius R (mm)	Mounting height H' (mm)
75	210
90	240
125	310
145	350



Mounting direction / Direction of connection surface	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

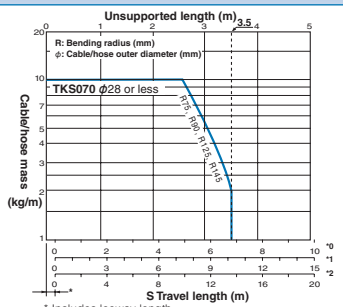
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
75	0	54
90	0	45
125	0	31
145	0	27

Note: Install dividers to the frame and ensure that one cable or hose goes through one opening if possible. In particular, ensure that cables and hoses do not lay on each other.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 80
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Frame	Aluminum Steel/engineering plastic
Standard length (No. of links)		50

Load diagram

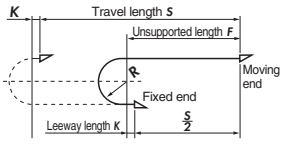


* Includes leeway length.
* 0: Without support rollers
* 1: With support roller in 1 location
* 2: With support rollers in 2 locations

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 70 mm
K: Leeway length = 105 mm or greater

Model number

TKS070SP (1) R (2) + (3) L - (4) - (5)

(1) Frame width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
100	75		FOA	MOA
150	90		FIA	MIA
200	125		FOB	MOB
	145		FIB	MIB

Note: Frames and steel brackets are delivered installed.

■ Frame (no dividers)

Model number	Frame width B	For cable carrier model number
TKS070-SP100	100	TKS070SP100R■■
TKS070-SP150	150	TKS070SP150R■■
TKS070-SP200	200	TKS070SP200R■■

■ Divider

Model number	For cable carrier model number
TKS070-ST	TKS070SP■■R■■

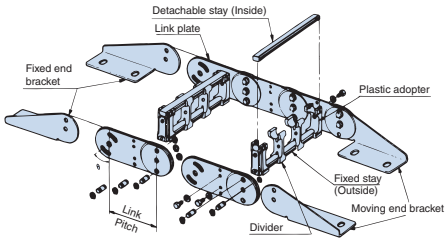
■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TKS070-MOA	TKS070SP■■R■■
TKS070-MOB	
TKS070-MIA	
TKS070-MIB	
TKS070-FOA	
TKS070-FOB	
TKS070-FIA	
TKS070-FIB	

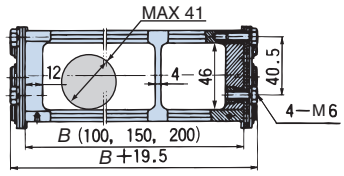
See page 20 for ordering information
See page 150 for product mass

TKS095

Structure



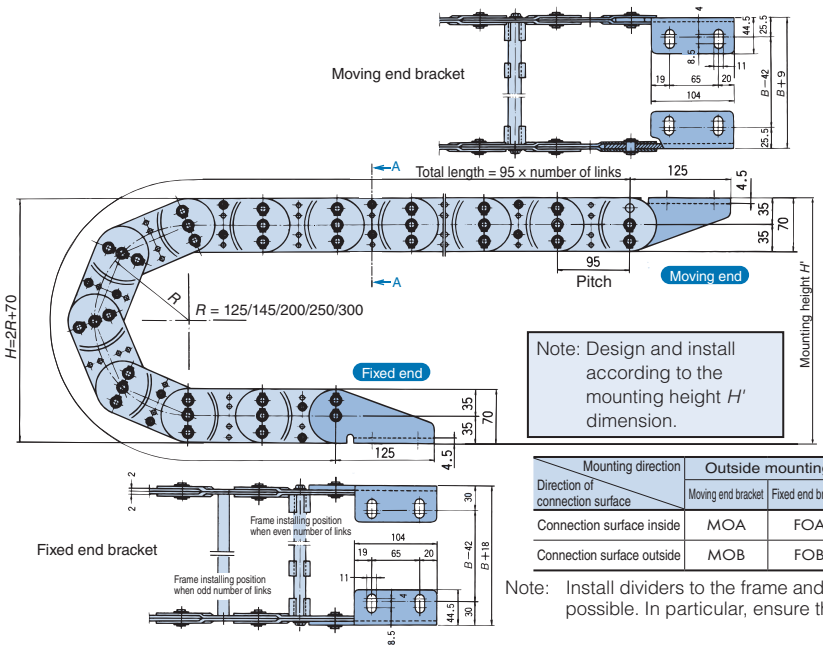
Cross-section dimensions



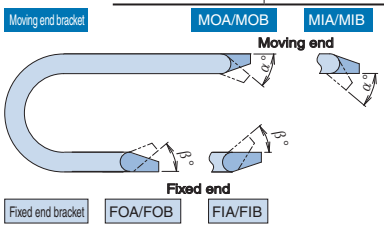
A–A arrow view

Cable/hose maximum outer diameter d_{MAX} (mm)		42		
Frame width B (mm)		100	150	200
Divider	Minimum number required	0	1	2
	Maximum number installable	4	7	11

Dimension drawings/steel bracket dimensions



Bending radius R (mm)	Mounting height H' (mm)
125	330
145	370
200	480
250	580
300	680



Mounting direction / Direction of connection surface	Outside mounting		Inside mounting	
	Moving end bracket	Fixed end bracket	Moving end bracket	Fixed end bracket
Connection surface inside	MOA	FOA	MIA	FIA
Connection surface outside	MOB	FOB	MIB	FIB

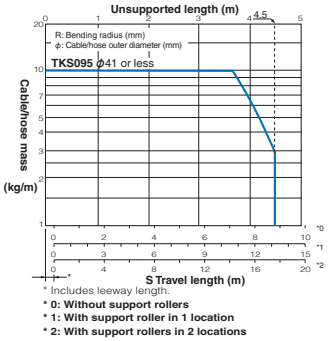
Bending radius R (mm)	Bending angle (°)	
	Moving end side (α)	Fixed end side (β)
125	0	44
145	0	37
200	0	26
250	0	21
300	0	17

Note: Install dividers to the frame and ensure that one cable or hose goes through one opening if possible. In particular, ensure that cables and hoses do not lay on each other.

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 80
Materials	Chain	Steel (Trivalent chromate plating)
	Bracket	Steel (Trivalent chromate plating)
	Frame	Aluminum Steel/engineering plastic
Standard length (No. of links)		25

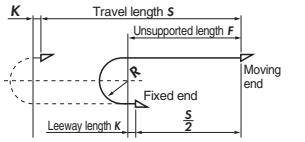
Load diagram



Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 95 mm
K: Leeway length = 145 mm or greater

Model number

TKS095SP (1) R (2) + (3) L - (4) - (5)

(1) Frame width	(2) Bending radius	(3) Number of links	(4) Fixed end	(5) Moving end
100	125		FOA	MOA
150	145		FIA	MIA
200	200		FOB	MOB
	250		FIB	MIB
	300			

Note: Frames and steel brackets are delivered installed.

■ Frame (no dividers)

Model number	Frame width B	For cable carrier model number
TKS095-SP100	100	TKS095SP100R■■
TKS095-SP150	150	TKS095SP150R■■
TKS095-SP200	200	TKS095SP200R■■

■ Divider

Model number	For cable carrier model number
TKS095-ST	TKS095SP■■R■■

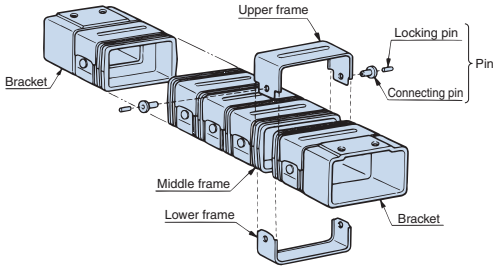
■ Steel bracket (including pin and circlip)

Model number	For cable carrier model number
TKS095-MOA	TKS095SP■■R■■
TKS095-MOB	
TKS095-MIA	
TKS095-MIB	
TKS095-FOA	
TKS095-FOB	
TKS095-FIA	
TKS095-FIB	

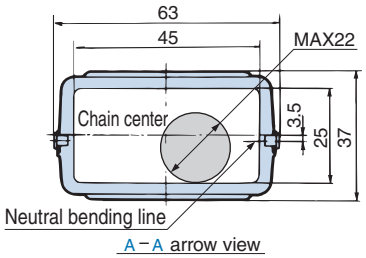
See page 20 for ordering information
See page 150 for product mass

TKF055 Discontinued

Structure



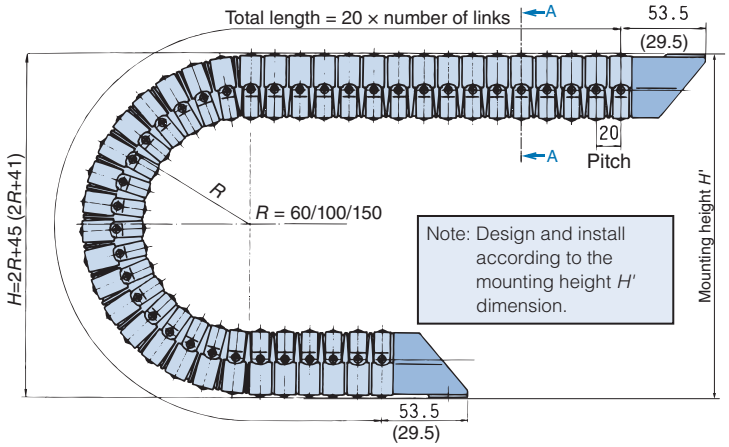
Cross-section dimensions



Dimension drawings/bracket dimensions

Chain

Dimensions in ( ) are for the B and C type brackets.

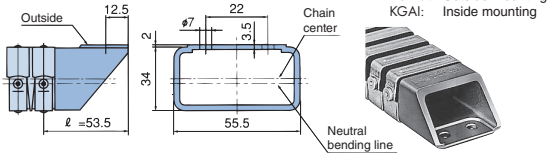


Bending radius *R* (mm)	Mounting height *H'* (mm)	
	A type	B/C type
60	185 to 195	181 to 191
100	265 to 275	261 to 271
150	365 to 375	361 to 371

Bracket

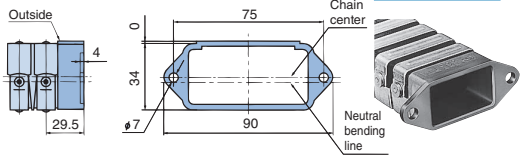
(1) A type

TKF055-KGAO/KGAI
KGAO: Outside mounting
KGAI: Inside mounting



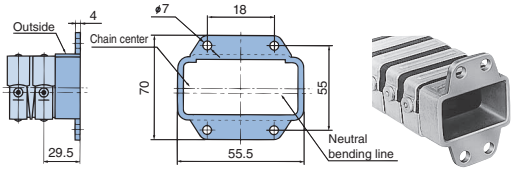
(2) B type

TKF055-KGB



(3) C type

TKF055-KGC

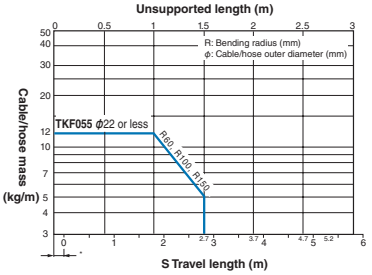


Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 80
Materials	Chain	Galvanized steel plate (upper/lower frame) Engineering plastic (middle frame)
	Bracket	Aluminum
Standard length (No. of links)		R60 = 90 R100 = 96 R150 = 104

Note: The TKF series cannot use support rollers.

Load diagram

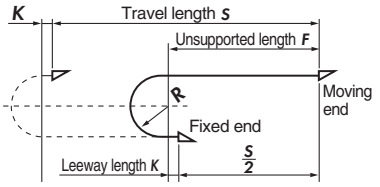


* Includes leeway length.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 20 mm
K: Leeway length = 120 mm or greater

Model number

TKF055R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
60		KGAO	KGAO
100		KGAI	KGAI
150		KGB	KGB
		KGC	KGC

■ Bracket

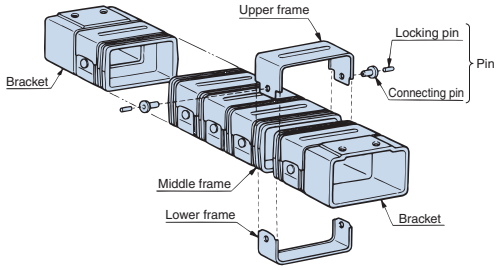
Model number	For cable carrier model number
TKF055-KGAO	TKF055R■■
TKF055-KGAI	
TKF055-KGB	
TKF055-KGC	

Notes: 1. Brackets are delivered installed.
2. The mounting holes of the A type bracket are delivered installed on the outside for the KGAO and the inside for the KGAI.

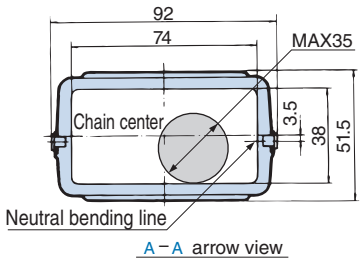
See page 20 for ordering information
See page 150 for product mass

TKF085 Discontinued

Structure

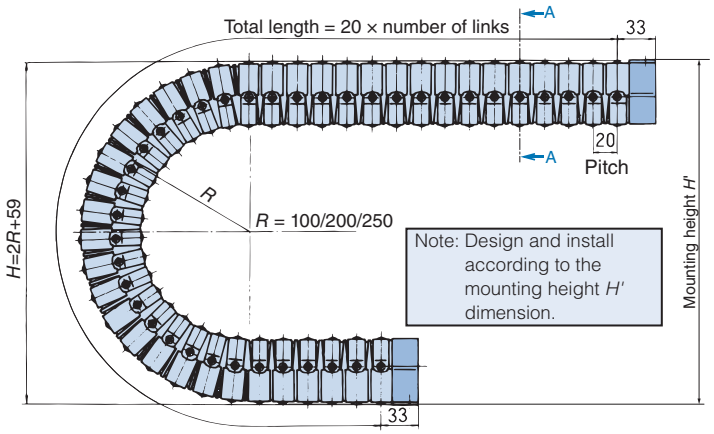


Cross-section dimensions



Dimension drawings/steel bracket dimensions

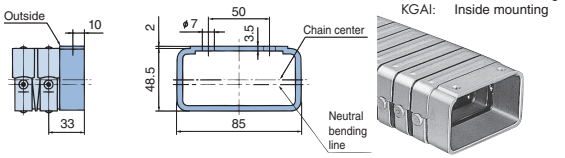
Chain



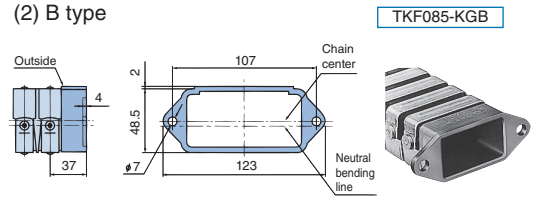
Bending radius R (mm)	Mounting height H' (mm)
100	279 to 289
200	479 to 489
250	579 to 589

Bracket

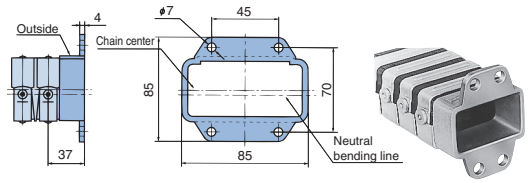
(1) A type



(2) B type



(3) C type

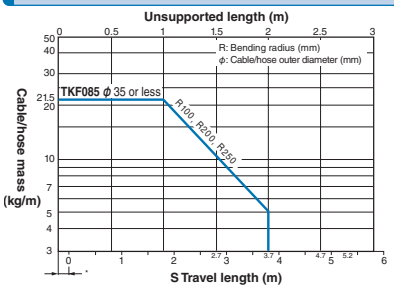


Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 80
Materials	Chain	Galvanized steel plate (upper/lower frame) Engineering plastic (middle frame)
	Bracket	Aluminum
Standard length (No. of links)		R100 = 121 R200 = 137 R250 = 145

Note: The TKF series cannot use support rollers.

Load diagram

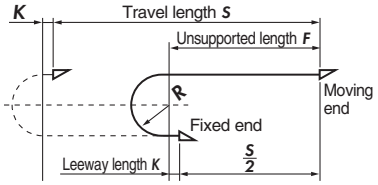


* Includes leeway length.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 20 mm
K: Leeway length = 120 mm or greater

Model number

TKF085R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links
100	
200	
250	

(3) Fixed end	(4) Moving end
KGAO	KGAO
KGAI	KGAI
KGB	KGB
KGC	KGC

■ Steel bracket

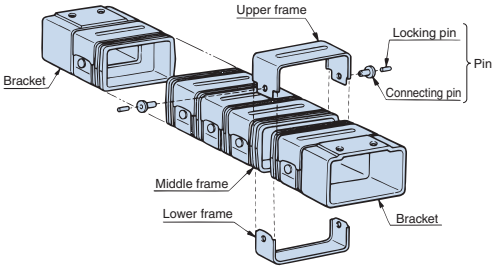
Model number	For cable carrier model number
TKF085-KGAO	TKF085R■■
TKF085-KGAI	
TKF085-KGB	
TKF085-KGC	

Notes: 1. Steel brackets are delivered installed.
2. The mounting holes of the A type bracket are delivered installed on the outside for the KGAO and the inside for the KGAI.

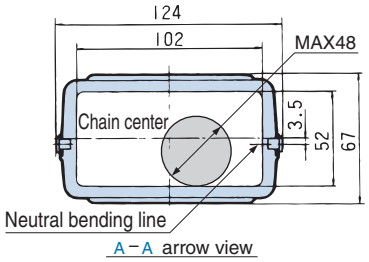
See page 20 for ordering information
See page 150 for product mass

TKF115 Discontinued

Structure

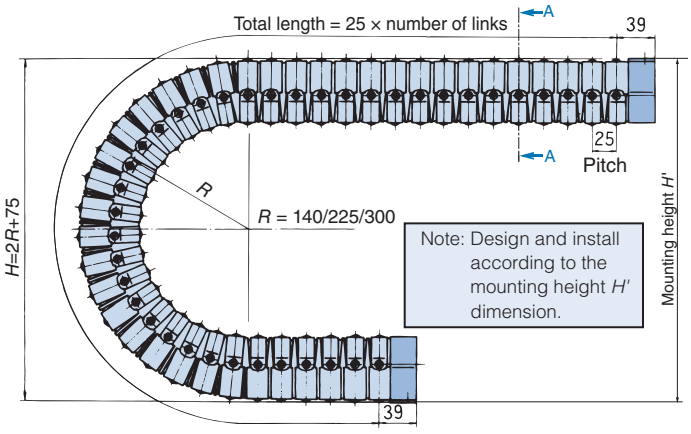


Cross-section dimensions



Dimension drawings/bracket dimensions

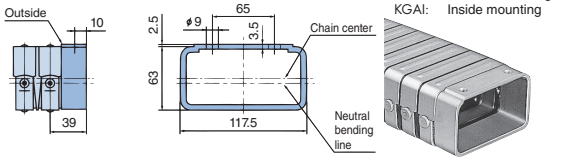
Chain



Bending radius *R* (mm)	Mounting height *H'* (mm)
140	375 to 385
225	545 to 555
300	695 to 705

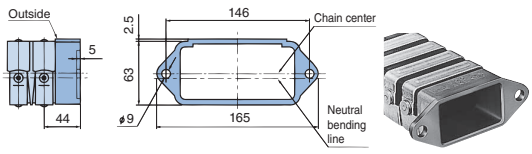
Bracket

(1) A type



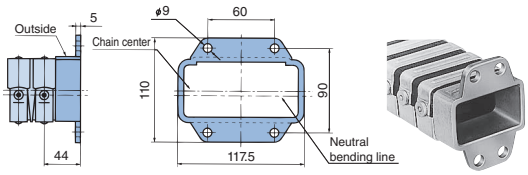
TKF115-KGAO/KGAI
KGAO: Outside mounting
KGAI: Inside mounting

(2) B type



TKF115-KGB

(3) C type



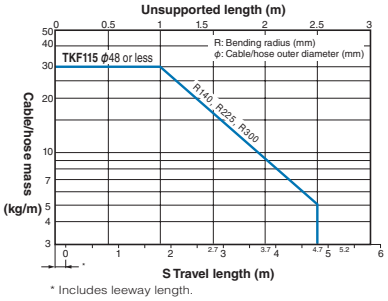
TKF115-KGC

Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		-10 to 80
Materials	Chain	Galvanized steel plate (upper/lower frame) Engineering plastic (middle frame)
	Bracket	Aluminum
Standard length (No. of links)		R140 = 123 R225 = 133 R300 = 143

Note: The TKF series cannot use support rollers.

Load diagram

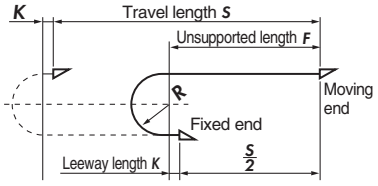


* Includes leeway length.

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 25 mm
K: Leeway length = 140 mm or greater

Model number

TKF115R (1) + (2) L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
140		KGAO	KGAO
225		KGAI	KGAI
300		KGB	KGB
		KGC	KGC

Notes: 1. Brackets are delivered installed.
2. The mounting holes of the A type bracket are delivered installed on the outside for the KGAO and the inside for the KGAI.

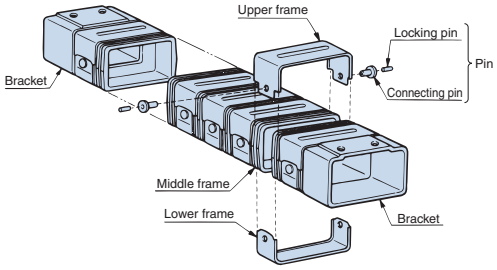
■ Bracket

Model number	For cable carrier model number
TKF115-KGAO	TKF115R■■
TKF115-KGAI	
TKF115-KGB	
TKF115-KGC	

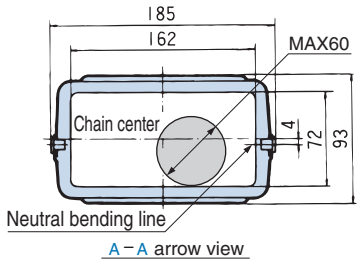
See page 20 for ordering information
See page 150 for product mass

TKF175 Discontinued

Structure

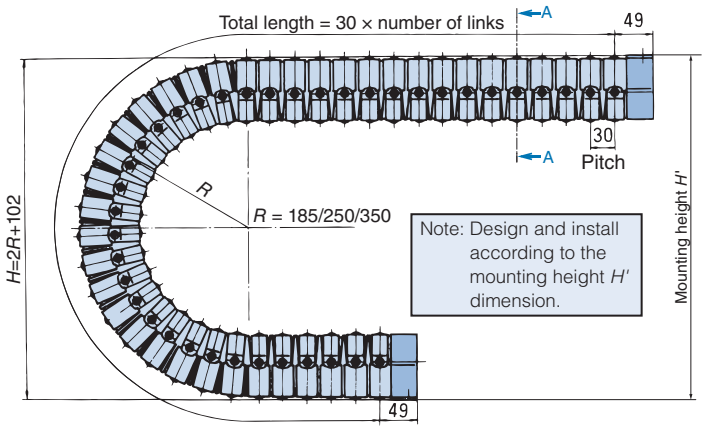


Cross-section dimensions



Dimension drawings/bracket dimensions

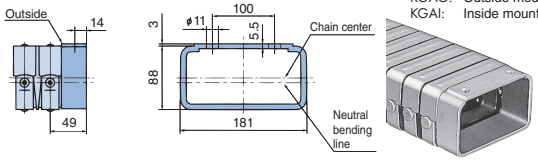
Chain



Bending radius R (mm)	Mounting height H' (mm)
185	492 to 502
250	622 to 632
350	822 to 832

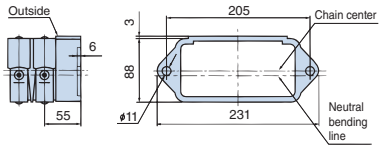
Bracket

(1) A type



TKF175-KGAO/KGAI
KGAO: Outside mounting
KGAI: Inside mounting

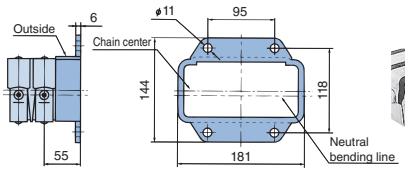
(2) B type



TKF175-KGB



(3) C type



TKF175-KGC

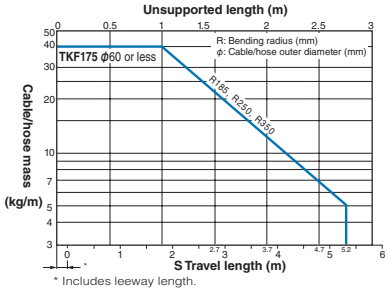


Basic specifications

Maximum travel speed (m/min)		60
Operating temperature range (°C)		−10 to 80
Materials	Chain	Galvanized steel plate (upper/lower frame) Engineering plastic (middle frame)
	Bracket	Aluminum
Standard length (No. of links)		R185 = 117 R250 = 124 R350 = 135

Note: The TKF series cannot use support rollers.

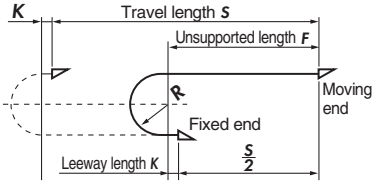
Load diagram



Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Note: When fixed end is at the center of the travel length. Always round up the value after calculating.



S: Travel length (mm)
R: Bending radius (mm)
P: Pitch = 30 mm
K: Leeway length = 150 mm or greater

Model number

TKF175R (1) + (2)L - (3) - (4)

(1) Bending radius	(2) Number of links	(3) Fixed end	(4) Moving end
185		KGAO	KGAO
250		KGAI	KGAI
350		KGB	KGB
		KGC	KGC

Notes: 1. Brackets are delivered installed.
2. The mounting holes of the A type bracket are delivered installed on the outside for the KGAO and the inside for the KGAI.

■ Bracket

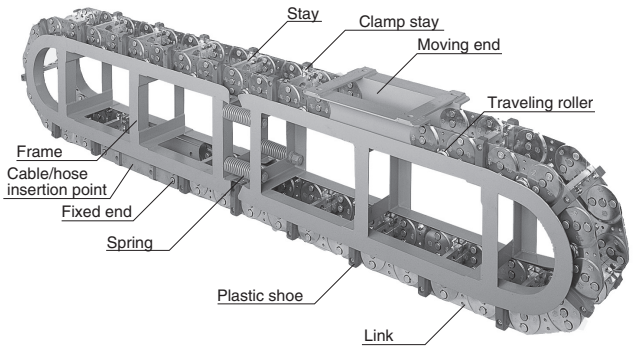
Model number	For cable carrier model number
TKF175-KGAO	TKF175R■■
TKF175-KGAI	
TKF175-KGB	
TKF175-KGC	

See page 20 for ordering information
See page 150 for product mass

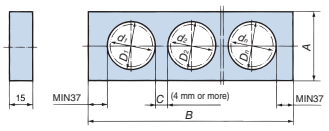
TKV130

Can be used for high speed/high frequency.

Structure



Stay dimensions

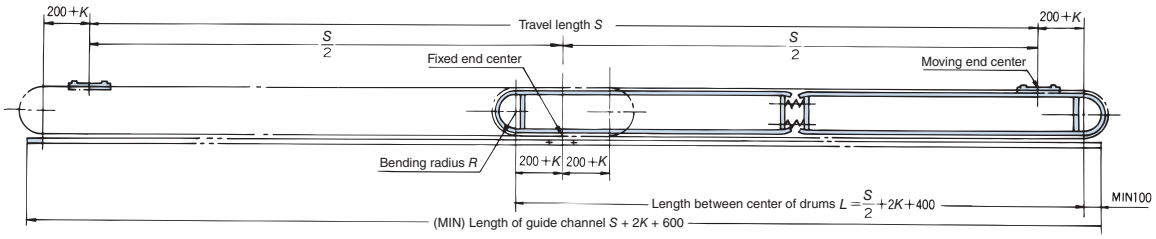


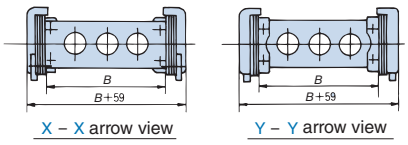
Cable/hose maximum outer diameter *d* (mm)	Stay height *A* (mm)
ϕ46	65
ϕ55	75
ϕ60	90

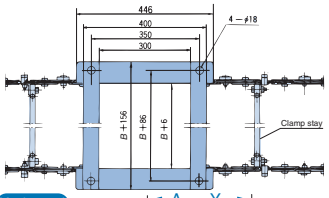
Bending radius *R* (mm)	Stay width *B* (mm)					
	150	200	250	300	350	400
200	○	○	○	○	○	○
250	-	○	○	○	○	○
300	-	-	○	○	○	○
400	-	-	-	○	○	○

Note: The *B* dimension can be also be manufactured at 400 and greater. Consult a Tsubaki representative for further information. (The stay width and height are manufactured at the ordered dimensions.)

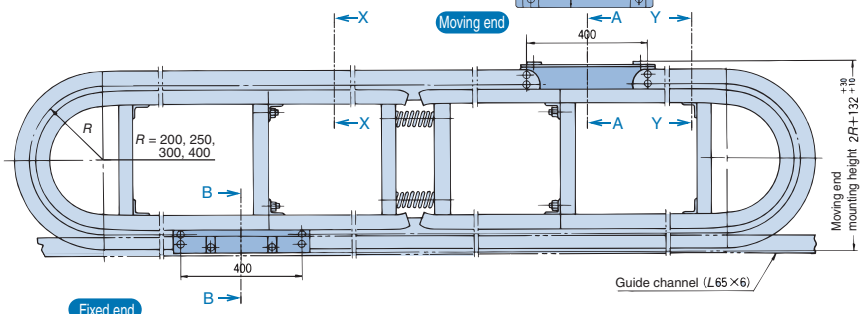
Dimension drawings

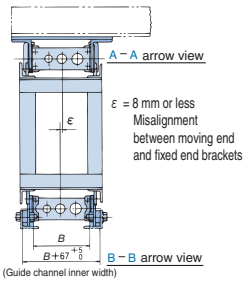


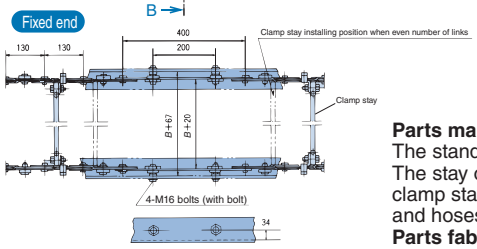




Link pitch: 130 mm
Maximum travel length: 30 m
Maximum outer diameter of cable and hose: 60 mm
Maximum cable/hose mass: 50 kg/m







Parts manufactured by Tsubaki: Frames, links, stays (connecting plates)
The standard coating color is Munsell 2.5B6/2.
The stay on the moving end and fixed end both fasten the cables and hoses as clamp stays. Notify the Tsubaki representative of the actual outer diameter of cables and hoses.
Parts fabricated by the customer: Guide channels, connecting element for moving end bracket, terminal box

Basic specifications

Maximum travel speed (m/min)		150
Operating temperature range (°C)		-10 to 80
Materials	Chain	Steel
	Stay	Aluminum

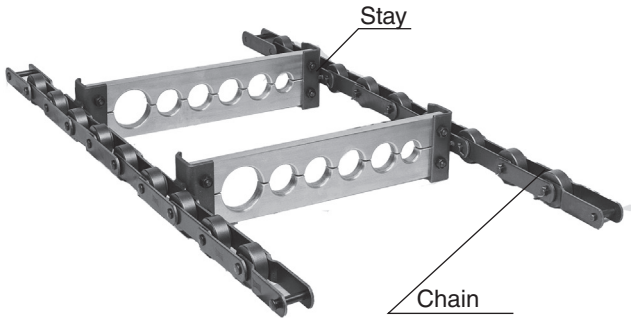
Ordering information

Notes: 1. Discussions with a Tsubaki representative are necessary to select and order to the TKV Series. Contact a Tsubaki representative for further information.
2. In the TKV Series, a lightweight type (TKV095) is also available in addition to the TKV130.

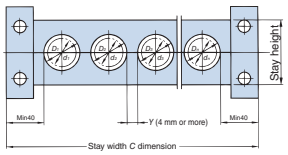
TKI Series

Suitable for high frequency/long travel length application.

Structure



Stay dimensions



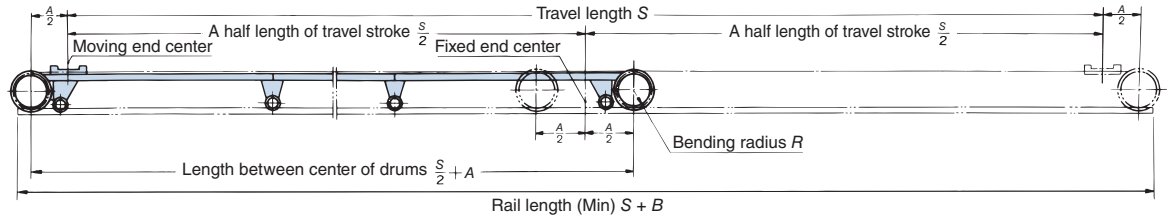
Relationship between standard stay height and cable/hose outer diameter

Stay height (mm)	Stay maximum bore diameter (mm)	Cable/hose maximum outer diameter (mm)
65	ϕ50	ϕ46
75	ϕ60	ϕ55
90	ϕ66	ϕ60
110	ϕ88	ϕ80

Relationship between standard stay width (*C*) and bending radius (*R*)

Bending radius *R* (mm)	Stay height (mm)	Standard stay width *C* (mm)
175	65 to 110	(Min 100) in increments of 50 mm to (Max 500)
200		(Min 100) in increments of 50 mm to (Max 600)
250		(Min 150) in increments of 50 mm to (Max 700)
300		(Min 150) in increments of 50 mm to (Max 900)
350		(Min 200) in increments of 50 mm to (Max 1,000)
400		(Min 200) in increments of 50 mm to (Max 1,200)
500		(Min 250) in increments of 50 mm to (Max 1,500)

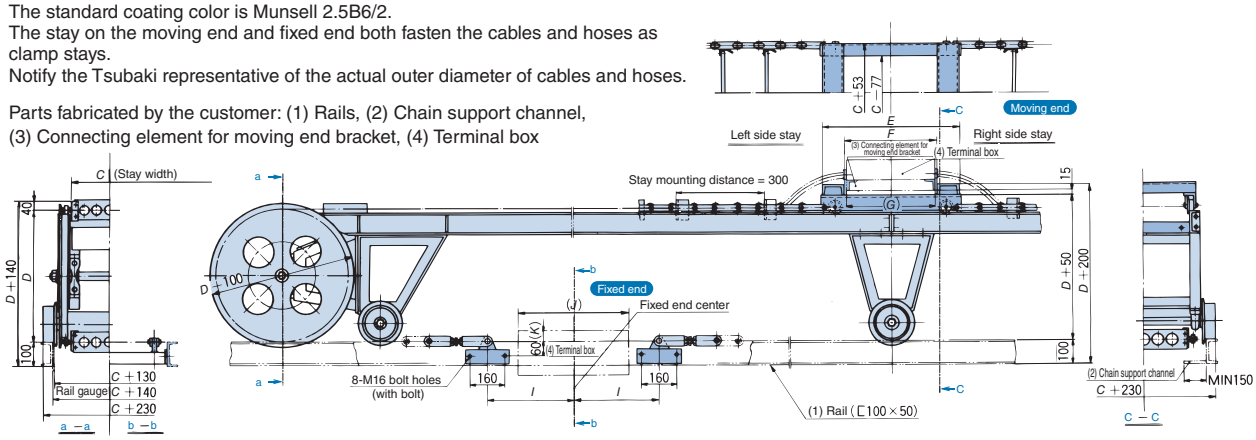
Dimension drawings/bracket dimensions



Maximum travel length: 100 m, maximum outer diameter of cable and hose: ϕ 80 mm, maximum cable/hose mass: 100 kg/m

The standard coating color is Munsell 2.5B6/2.
The stay on the moving end and fixed end both fasten the cables and hoses as clamp stays.
Notify the Tsubaki representative of the actual outer diameter of cables and hoses.

Parts fabricated by the customer: (1) Rails, (2) Chain support channel, (3) Connecting element for moving end bracket, (4) Terminal box



■ Dimensions

Bending radius *R* (mm)	Drum diameter *D* (mm)	*A* (mm)	*B* (mm)	*E* (mm)	*F* (mm)	*(G)* (mm)	*I* (mm)	*(J)* (mm)	*(K)* (mm)
175	350	1800	2000	620	420	max 410	390	max 500	max 40
200	400								
250	500								
300	600								

Bending radius *R* (mm)	Drum diameter *D* (mm)	*A* (mm)	*B* (mm)	*E* (mm)	*F* (mm)	*(G)* (mm)	*I* (mm)	*(J)* (mm)	*(K)* (mm)
350	700	1800	2000	620	420	MAX 410	390	MAX 500	MAX 40
400	800	2000	2500	820	620	MAX 610	440	MAX 600	MAX 60
500	800								

Basic specifications

Maximum travel speed (m/min)		120
Operating temperature range (°C)		−10 to 150
Materials	Chain	Steel
	Stay	Aluminum

Ordering information

Note: Discussions with a Tsubaki representative are necessary to select and order to the TKI Series.
Contact a Tsubaki representative for further information.

MEMO

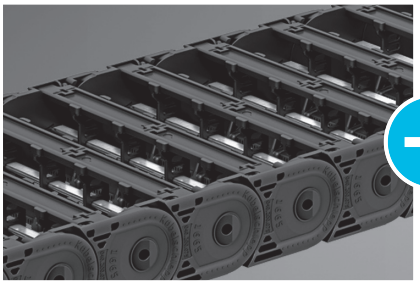
Cable Carrier TOTALTRAX

TOTALTRAX

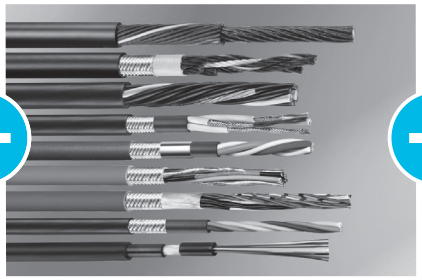
TOTALTRAX 115

TOTALTRAX

Cables and hoses with attached end connectors are delivered installed in the cable carrier as a set.
Installation on machines or equipment following delivery is quick and simple.



Cable carrier



Cable



Connector



Benefits of TOTALTRAX

Tsubaki has been supplying cable carrier products to customers worldwide for over 50 years.
As the next step, we utilizing our technical prowess cultivated over the years to offer solutions to customers for systems that combine cable carriers and cables/hoses.
Tsubaki can provide complete systems with cable carriers, cables, hoses, connectors, guide channels, etc. TOTALTRAX can contribute greatly to solving your problems.

Ordering process

1. Select the cable carrier

Review the operating environment, operating conditions, and installation method.

⇩

Decide on the cable carrier
• Open type or closed type
• Plastic or steel

2. Select cables and connectors

Nominal cross-sectional area, number of cores, connector shape, and layout

⇩

You can select your own cables, hoses, and connectors.

3. Decide on the TOTALTRAX types

Complete selecting

⇩

Provide quotation and quotation drawings and calculate price/lead time

Advantages of unifying suppliers

Order at one company + one-shot order + one-shot delivery + guaranteed quality
= Ready-to-assembled delivery service "TOTALTRAX"

Cable Carrier Accessories

Guide Channels for Gliding Arrangement



Guide Channels for Gliding Arrangement ····· 117

Support Rollers



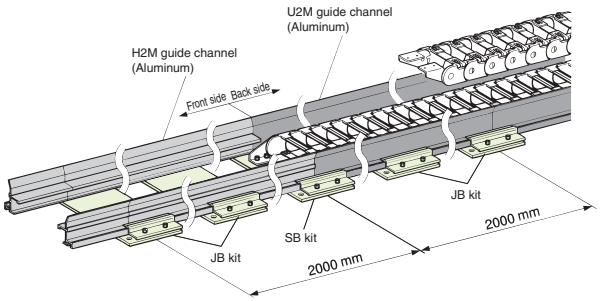
Support Rollers ····· 119

Guide Channels for Gliding Arrangement

(Applicable models: TKP45H25, TKP58H39, TKP62H34, TKC34H25, TKC47H36)

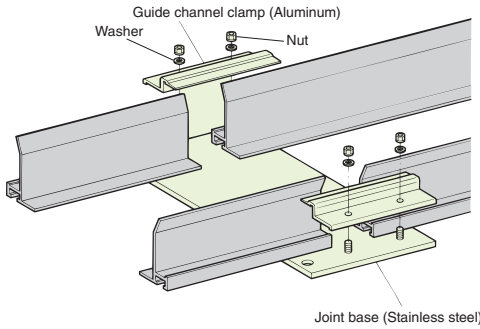
Structure

This part is composed of two types of guide channels: the H2M guide channel (front side) and U2M guide channel (back side). This part can be used alone, however, there are two fastening bases (SB kit and JB kit) that can be used to easily install guide channels to the mounting surface quickly and precisely.
Guide channel clamps (RCL06) can be used to easily align guide channel joints at connections. Guide channels and guide channel clamps can also be used alone.

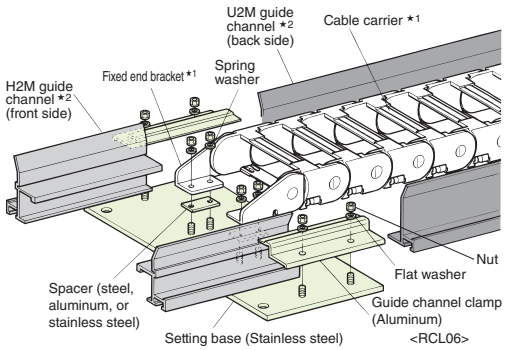


Notes: 1. Guide channels are made of aluminum, anodized, and painted silver.
2. Fasten guide channels every meter.

■ JB kit

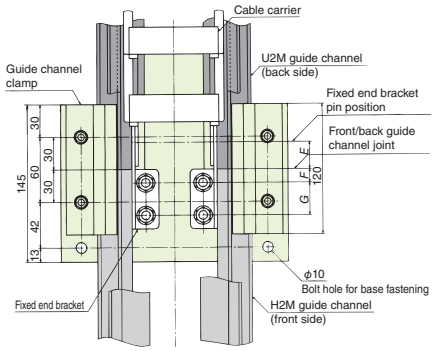


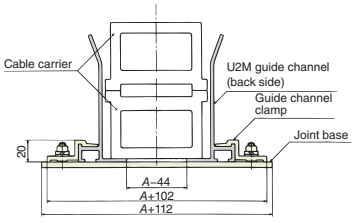
■ SB kit



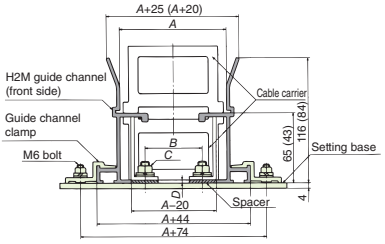
Notes: ★1. Cable carriers and fixed end brackets are sold separately.
★2. Guide channels are not included in the JB kit and SB kit.
3. The setting base has a structure to which the fixed end bracket of the cable carrier can be installed. The other dimensions are the same as the joint base.
4. The guide channels will wear down quickly when the travel speed is high. Contact a Tsubaki representative for further information.
5. The guide channels will also wear down quickly in environments where dust, debris, or other matter is allowed to accumulate.
6. Do not install and use outdoors.
7. The guide channels will shrink and expand when used in locations with large temperature differences. Allow sufficient leeway at the guide channel joints for shrinking and expansion.

Dimension drawings





JB kit cross section



SB kit cross section

Figures in ( ) are dimensions for the TKP45H25 and TKC34H25.

Cable carrier	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Guide channel model number		Fastening base model number	
								H guide channel (H2M)	U guide channel (U2M)	JB kit	SB kit
TKP45H25-30W38	62	23	M6	8	17	8	24	TKP45H25-H2M	TKP45H25-U2M	TKP45H25W38-JB	TKP45H25W38-SB
TKP45H25-30W58	84	44	M6	8	17	8	24			TKP45H25W58-JB	TKP45H25W58-SB
TKP45H25-30W78	104	64	M6	8	17	8	24			TKP45H25W78-JB	TKP45H25W78-SB
TKP45H25-30W103	129	89	M6	8	17	8	24			TKP45H25W103-JB	TKP45H25W103-SB
TKP58H39-30W50	77	37	M6	15	21	10.5	24	TKP58H39-H2M	TKP58H39-U2M	TKP58H39W50-JB	TKP58H39W50-SB
TKP58H39-30W75	102	62	M6	15	21	10.5	24			TKP58H39W75-JB	TKP58H39W75-SB
TKP58H39-30W100	127	87	M6	15	21	10.5	24			TKP58H39W100-JB	TKP58H39W100-SB
TKP58H39-30W125	152	112	M6	15	21	10.5	24			TKP58H39W125-JB	TKP58H39W125-SB
TKP58H39-30W50 with gliding shoe	81	37	M6	10	21	10.5	24	TKP58H39-H2M	TKP58H39-U2M	TKP58H39W50GS-JB	TKP58H39W50GS-SB
TKP58H39-30W75 with gliding shoe	106	62	M6	10	21	10.5	24			TKP58H39W75GS-JB	TKP58H39W75GS-SB
TKP58H39-30W100 with gliding shoe	131	87	M6	10	21	10.5	24			TKP58H39W100GS-JB	TKP58H39W100GS-SB
TKP58H39-30W125 with gliding shoe	156	112	M6	10	21	10.5	24			TKP58H39W125GS-JB	TKP58H39W125GS-SB
TKP62H34W150	178	123	M8	12	25	12.5	30	TKP62H34-H2M	TKP62H34-U2M	TKP62H34W150-JB	TKP62H34W150-SB
TKP62H34W200	228	173	M8	12	25	12.5	30			TKP62H34W200-JB	TKP62H34W200-SB
TKC34H25W50	80	30	M8	3	20	8	24	TKC34H25-H2M	TKC34H25-U2M	TKC34H25W50-JB	TKC34H25W50-SB
TKC34H25W90	120	70	M8	3	20	8	24			TKC34H25W90-JB	TKC34H25W90-SB
TKC34H25W130	160	110	M8	3	20	8	24			TKC34H25W130-JB	TKC34H25W130-SB
TKC47H36W80	116	63	M8	12	25	12.5	30	TKC47H36-H2M	TKC47H36-U2M	TKC47H36W80-JB	TKC47H36W80-SB
TKC47H36W160	196	143	M8	12	25	12.5	30			TKC47H36W160-JB	TKC47H36W160-SB

Note: The TKP45H25 and TKC34H25 guide channels are common parts. The TKP58H39, TKP62H34, and TKC47H36 guide channels are common parts.

Operating range

Operating range of aluminum guide channels

(1) Maximum travel speed: 60 m/min or less (as a countermeasure for wear)
(2) Not for outdoor use.
(3) Clearance is required between guide channels in high-temperature environments because the entire length will change due to the temperature.
Linear coefficient of expansion: 2.4×10^{-5} (20°C to 100°C)
Amount of change = Entire length (mm) × Temperature difference (°C) × 0.000024

Calculating the guide channel length

When fixed end is at the center of the length

H guide channel length $= \frac{S}{2} - E$

U guide channel length $= \frac{S}{2} + K + R + E + 100$

E: Refer to installation dimensions table, *R*: Cable carrier bending radius

S: Travel length, 100: Guide channel leeway length, *K*: Leeway length

Guide channels have a standard length of 2000 mm. Order rails in increments of 2000 mm and give the calculated result some leeway.

Model number

Example: Using the TKP45H25-30W38R50 with a travel length of 10 m

	Model number		
H2M guide channel	TKP45H25- H2M	3	[S (set)]
U2M guide channel	TKP45H25- U2M	3	[S (set)]
SB kit	TKP45H25W38- SB	1	[S (set)]
JB kit	TKP45H25W38- JB	12	[S (set)]

Notes: 1. The H2M guide channel and U2M guide channel make up one set. (* Standard length: 2000 mm/guide channel)
2. Configuration: SB kit: Setting base (SB), guide channel clamps, spacers, nuts, and washers
JB kit: Joint base (JB), guide channel clamps, nuts, and washers

Model number

■ Guide channels for gliding arrangement

Model number	For cable carrier model number
TKP45H25-H2M	TKP45H25-30W■■R■■
TKP45H25-U2M	
TKP58H39-H2M	TKP58H39-30W■■R■■
TKP58H39-U2M	
TKP62H34-H2M	TKP62H34-30W■■R■■
TKP62H34-U2M	
TKC34H25-H2M	TKC34H25W■■R■■
TKC34H25-U2M	
TKC47H36-H2M	TKC47H36W■■R■■
TKC47H36-U2M	

■ JB kit (joint base)

Model number	For cable carrier model number
TKP45H25W38-JB	TKP45H25-30W38R■■
TKP45H25W58-JB	TKP45H25-30W58R■■
TKP45H25W78-JB	TKP45H25-30W78R■■
TKP45H25W103-JB	TKP45H25-30W103R■■
TKP58H39W50-JB	TKP58H39-30W50R■■
TKP58H39W75-JB	TKP58H39-30W75R■■
TKP58H39W100-JB	TKP58H39-30W100R■■
TKP58H39W125-JB	TKP58H39-30W125R■■
TKP58H39W50GS-JB	TKP58H39-30W50R■■ with gliding shoe (R125, R150, R200)
TKP58H39W75GS-JB	TKP58H39-30W75R■■ with gliding shoe (R125, R150, R200)
TKP58H39W100GS-JB	TKP58H39-30W100R■■ with gliding shoe (R125, R150, R200)
TKP58H39W125GS-JB	TKP58H39-30W125R■■ with gliding shoe (R125, R150, R200)
TKP62H34W150-JB	TKP62H34W150R■■
TKP62H34W200-JB	TKP62H34W200R■■
TKC34H25W50-JB	TKC34H25W50R■■
TKC34H25W90-JB	TKC34H25W90R■■
TKC34H25W130-JB	TKC34H25W130R■■
TKC47H36W80-JB	TKC47H36W80R■■
TKC47H36W160-JB	TKC47H36W160R■■

■ SB kit (setting base)

Model number	For cable carrier model number
TKP45H25W38-SB	TKP45H25-30W38R■■
TKP45H25W58-SB	TKP45H25-30W58R■■
TKP45H25W78-SB	TKP45H25-30W78R■■
TKP45H25W103-SB	TKP45H25-30W103R■■
TKP58H39W50-SB	TKP58H39-30W50R■■
TKP58H39W75-SB	TKP58H39-30W75R■■
TKP58H39W100-SB	TKP58H39-30W100R■■
TKP58H39W125-SB	TKP58H39-30W125R■■
TKP58H39W50GS-SB	TKP58H39-30W50R■■ with gliding shoe (R125, R150, R200)
TKP58H39W75GS-SB	TKP58H39-30W75R■■ with gliding shoe (R125, R150, R200)
TKP58H39W100GS-SB	TKP58H39-30W100R■■ with gliding shoe (R125, R150, R200)
TKP58H39W125GS-SB	TKP58H39-30W125R■■ with gliding shoe (R125, R150, R200)
TKP62H34W150-SB	TKP62H34W150R■■
TKP62H34W200-SB	TKP62H34W200R■■
TKC34H25W50-SB	TKC34H25W50R■■
TKC34H25W90-SB	TKC34H25W90R■■
TKC34H25W130-SB	TKC34H25W130R■■
TKC47H36W80-SB	TKC47H36W80R■■
TKC47H36W160-SB	TKC47H36W160R■■

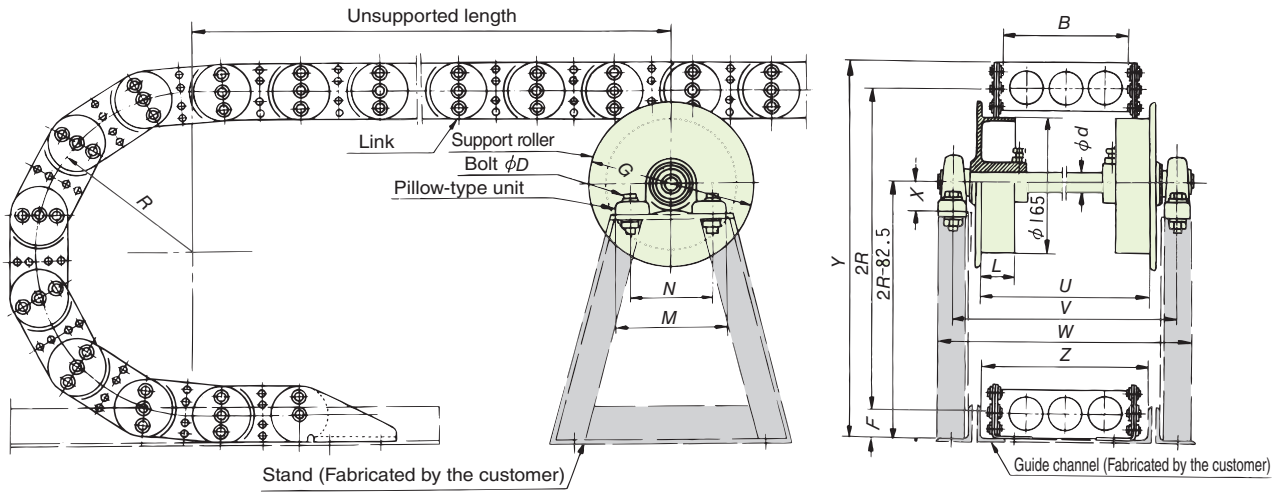
■ Guide channel clamps

Model number	Applicable bases
RCL06	Applicable to all SB and JB bases

Support Rollers (Applicable Models: TK/TKH/TKS Series)

Support roller designs for the TKC Series are in stock. Contact a Tsubaki representative for further information. Support plates are also available for the TKC Series.

Dimension drawings



Model	Min. stay dimension *B* (mm)	Min. bending radius *R* (mm)	*d* (mm)	*G* (mm)	*M* (mm)	*N* (mm)	*U* (mm)	*V* (mm)	*W* (mm)
TK070, TK095	80	125	25	205	140	105	B + 45	B + 115	B + 153
TKS070, TKS095	100								
TK130	100	200		285			B + 55	B + 125	B + 163
TK180	125	250							
TKH250	350	350	40	365	184	137	B + 75	B + 176	B + 230

Model	*L* (mm)	*F* (mm)	*X* (mm)	*Y* (mm)	*Z* (mm)	Bolt diameter *D* (mm)
TK070, TKS070	45	25	36.5	2R + 50	B + 40	M12
TK095, TKS095		35		2R + 70		
TK130		48		2R + 96	B + 50	
TK180		70		2R + 140		
TKH250	55	110	49.2	2R + 220	B + 70	M16

Notes: 1. When ordering support rollers, inform a Tsubaki representative of the cable carrier model, bending radius, and stay width (frame width).
2. Designs for support rollers for TK070 and TKS070 *R*75 and *R*90 are also in stock.
3. Stands differ depending on the installation conditions. Inform a Tsubaki representative of the mounting dimensions so that stands can be manufactured.
4. Install so the flange inner width (*U* dimension) of the support roller is parallel to the reciprocating direction of the moving end.
5. All support rollers are made to order.
6. Clearly specify if the stay has an L-shaped fixing element.
7. The stainless steel type is a special product. Contact a Tsubaki representative for further information.
8. If the moving end bracket is installed on the inside, ensure that it does not make contact with the support roller.

Model number

■ For the TK Series

Model number	For cable carrier model number
TK070-SPR	TK070R■■
TK095-SPR	TK095R■■
TK130-SPR	TK130R■■
TK180-SPR	TK180R■■

■ For the TKS Series

Model number	For cable carrier model number
TKS070-SPR	TKS070R■■
TKS095-SPR	TKS095R■■

■ For the TKH Series

Model number	For cable carrier model number
TKH250-SPR	TKH250R■■

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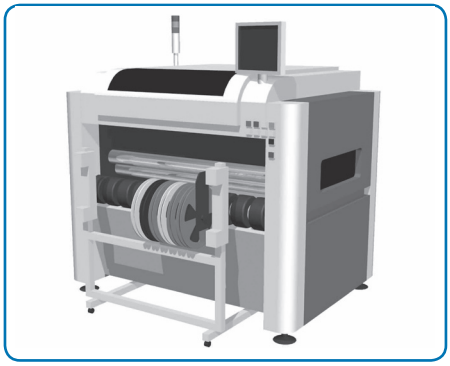
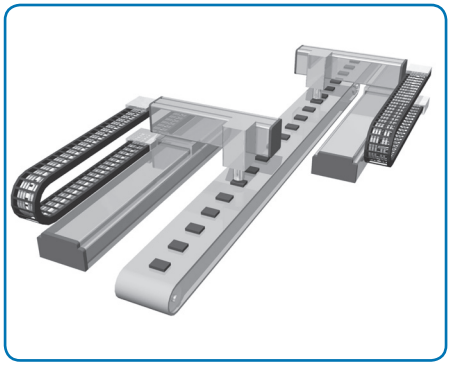
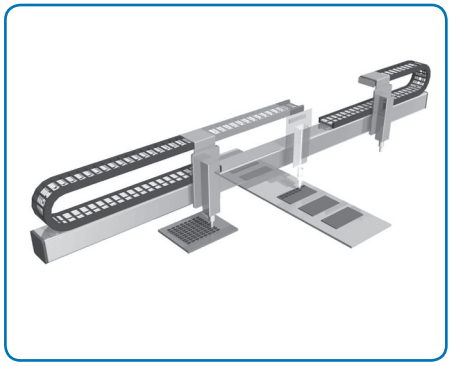
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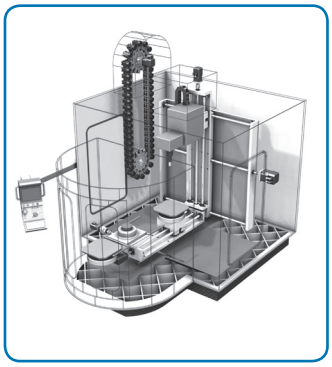
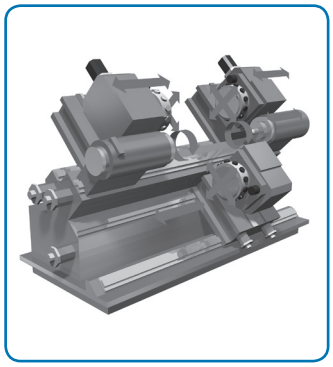
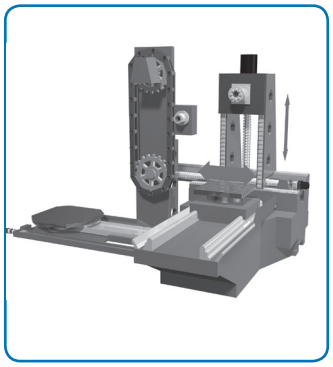
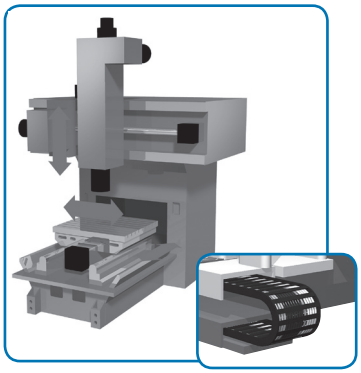
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Applications

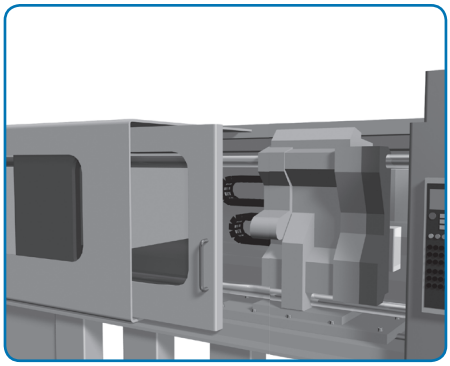
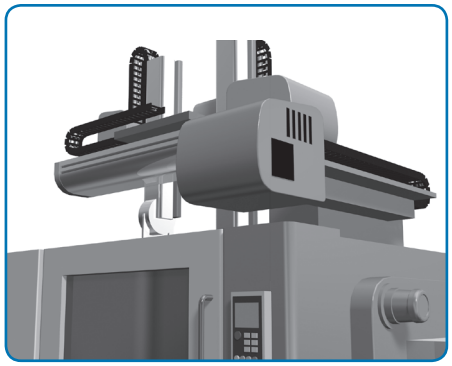
LCD/semiconductors/inspection machines

Machine tools

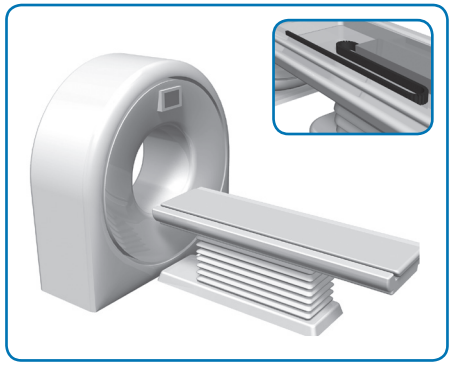
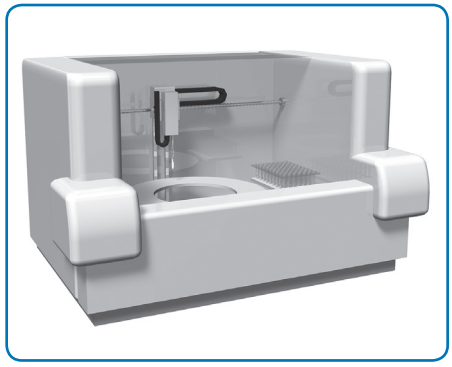
Injection molding machines

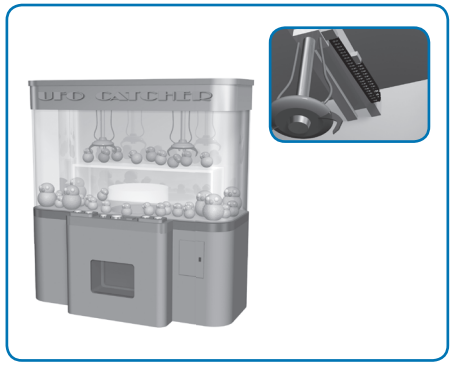
ATMs



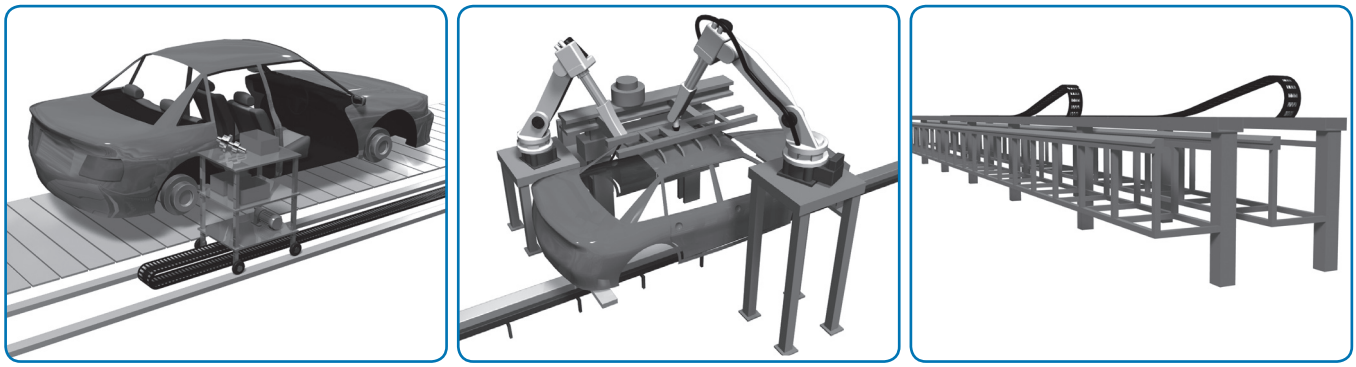
Medical equipment

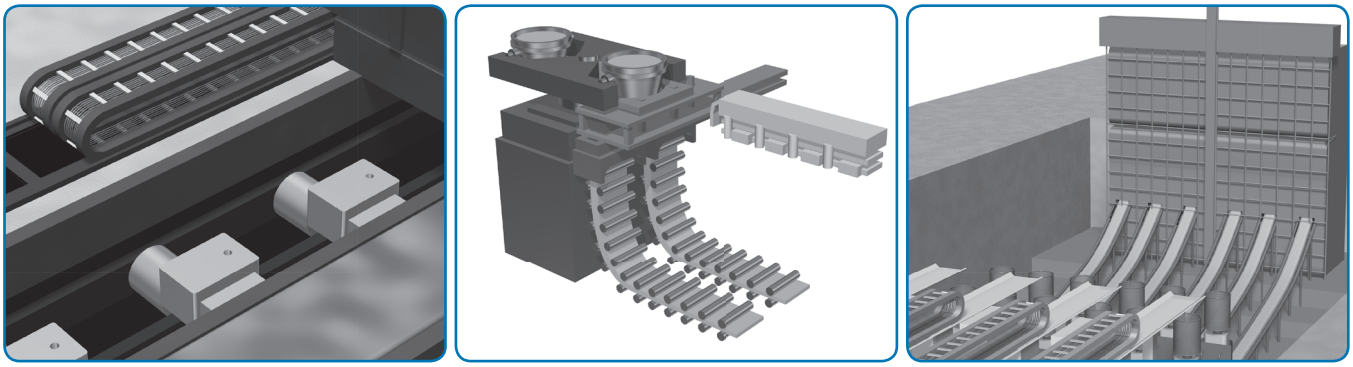
Claw crane arcade games



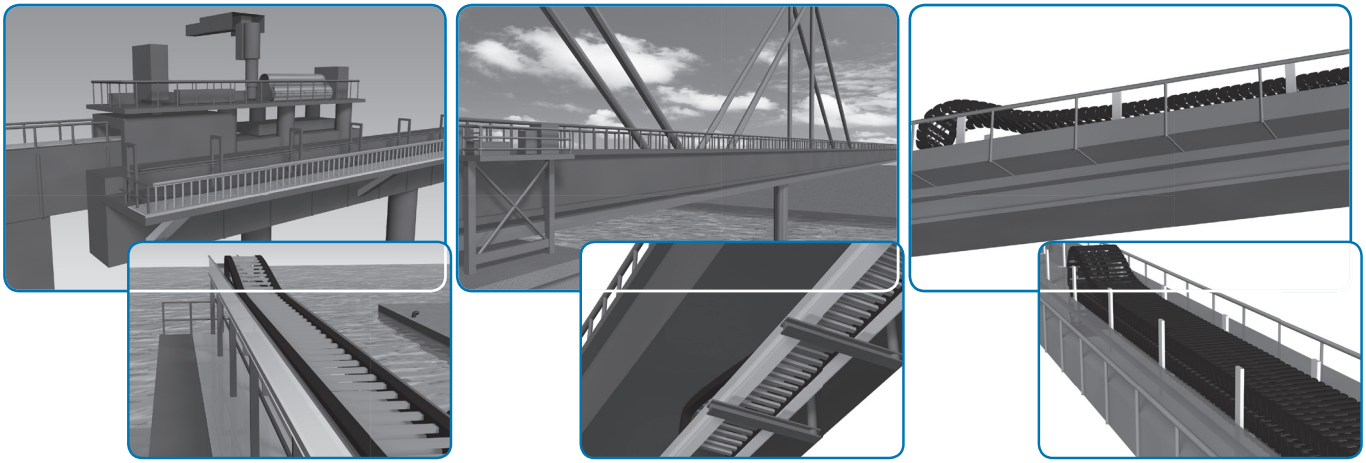
Automobile manufacturing lines



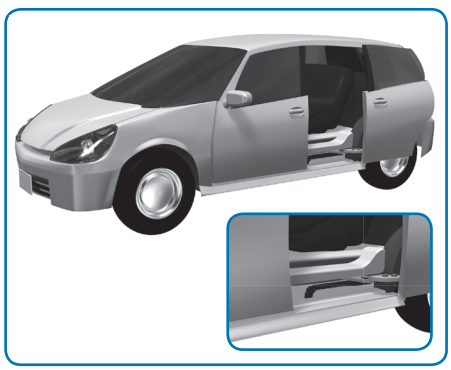
Iron and steel equipment



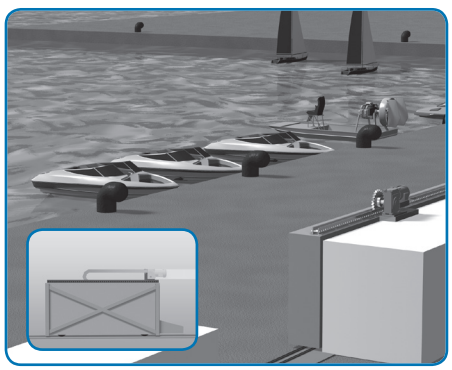
Seaport cranes



Power sliding doors



Flood-defense gates

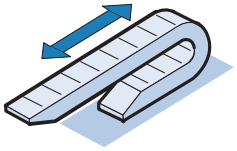


Passenger boarding bridges

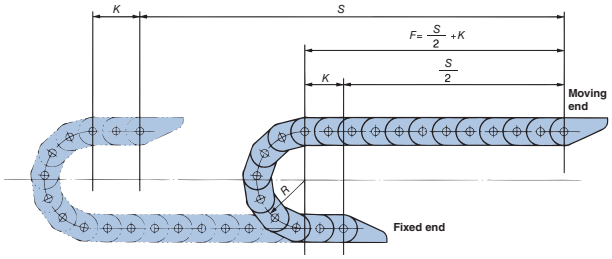


Examples of Cable Carrier Installations

1. Standard arrangement — Applicable to all models



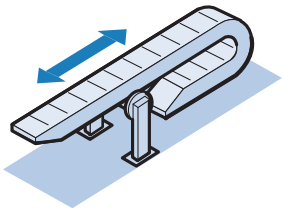
S: Travel length
K: Leeway length
F: Unsupported length
R: Bending radius

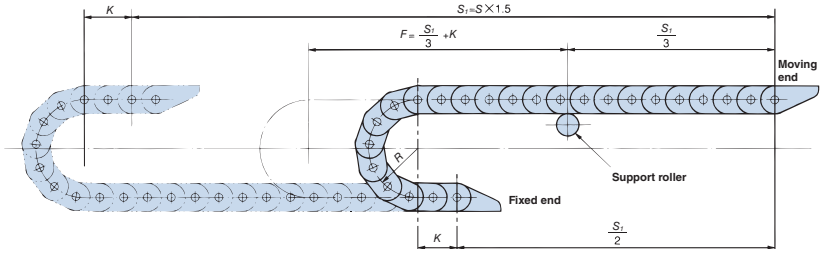


2. Support roller arrangement — Applicable to TK Series/TKH Series/TKS Series/TKP Series/TKR Series/TKC Series

Note: Not applicable to the TKF Series. (Travel speed 150 m/min or less)

♦ For a support roller in one location (S_1: travel length): The allowable travel length is 1.5-times the travel length when there is no support roller (except the TKR Series*).



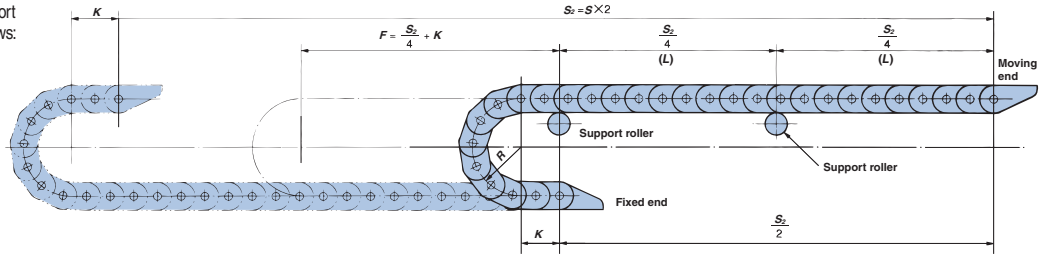


♦ For support rollers in two locations (S_2: travel length): The allowable travel length is 2-times the travel length when there is no support roller (except the TKR Series*).

* The installation distance between support rollers (L) for the TKR Series is as follows:

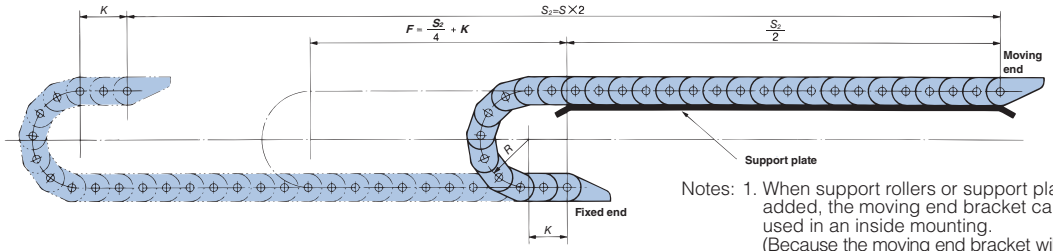
TKR15H22: L = 0.35	m or less
TKR20H28: L = 0.7	m or less
TKR26H40: L = 0.7	m or less
TKR28H52: L = 0.9	m or less
TKR37H28: L = 0.7	m or less

Note: Three or more support rollers may be required depending on the travel length.



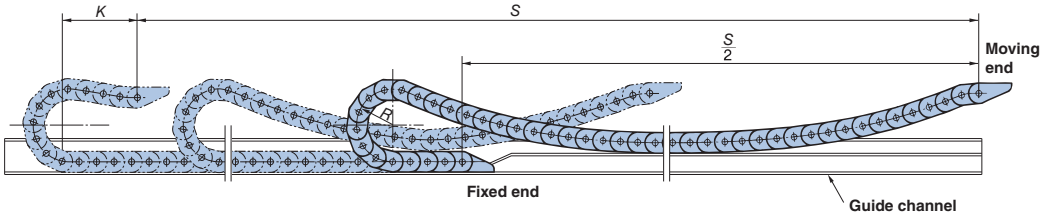
3. With support plates — Applicable to the TKC Series (Travel speed 60 m/min or less)

(S_2: travel length): The allowable travel length is 2-times the travel length when there is no support plate.



Notes: 1. When support rollers or support plates are added, the moving end bracket cannot be used in an inside mounting. (Because the moving end bracket will interfere with the rollers and plates.)
2. Contact a Tsubaki representative when considering cable carriers other than the TKC Series.

4. Gliding arrangement — Applicable to the TKP Series/TKC Series



1. Features:
- A special installation method used for a long length that exceeds the load diagram when two support rollers are installed.
- The moving end bracket is made to order and differs from the standard part in general. The mounting height of the moving end differs from the standard mounting height.

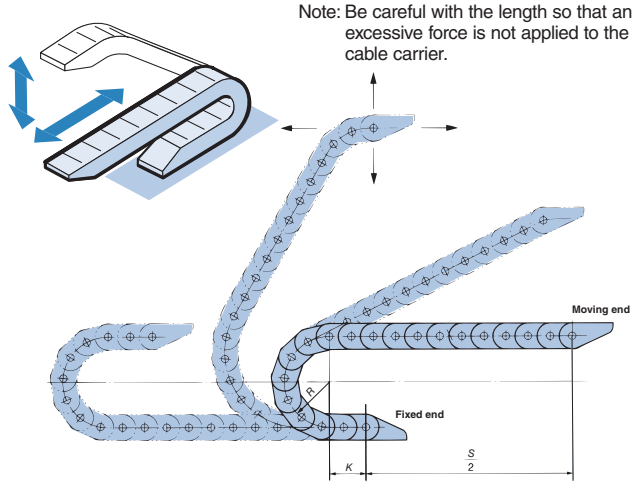
2. Applicable models:
3. Travel length:
4. Additional load:
5. Travel speed:
6. Guide method:

Refer to the gliding arrangement page. (Page 127)

- A rail with step is required to guide a cable carrier that sags when it runs.
- The gaps to the left and right of the cable carrier and guide channels must be narrower than the standard installation.

5. Horizontal-vertical combined arrangement — Applicable to all models

Note: Be careful with the length so that an excessive force is not applied to the cable carrier.



1. Features:
   - Used when the cable carrier moves in two dimensions: forward/backward and up/down.
   - Suitable for when the cable carrier moves forward/backward and the moving end height is raised higher than standard.
   - Uses the standard product.
2. Travel length: Same as standard arrangement (Support rollers cannot be used.)
3. Additional load:
4. Travel speed:
5. Guide method:

   } Same as standard arrangement

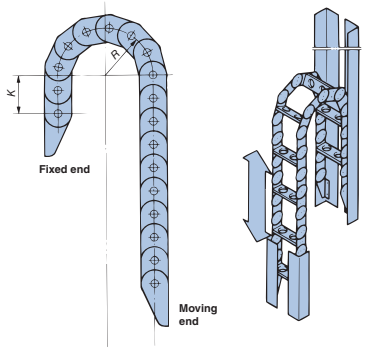
6. Notes: The length of the cable carrier is longer than the standard installation. Decide on the length by taking into consideration the sloping section. In particular, be careful of the leeway length when the cable carrier moves back.

6. Vertical arrangement — Applicable to all models except the TKS Series

◆ Use this arrangement when the cable carrier moves in the vertical (up/down) direction.

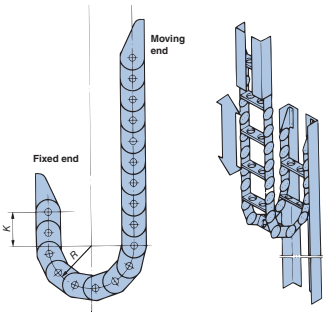
◆ Guide channels are required on both sides to prevent the cable carrier from swaying or collapsing.

6-1. Vertical arrangement (standing)



1. Features:
   - An installation method in which the cable carrier is made to stand up.
   - Not suited to long travel lengths because the mass of the cables and hoses is concentrated at the top of the bending radius.
2. Travel length: Same as standard arrangement
3. Additional load: Contact a Tsubaki representative for further information.
4. Travel speed: Same as standard arrangement
5. Guide method:
   - Both the moving and fixed sides require guide channels of a sufficient length to prevent the cable carrier from falling over. Contact a Tsubaki representative if the guide channels must be shortened.
   - If the distance between the moving end and fixed end is greater than standard mounting height, the cable carrier will have an irregular shape and not a vertical arrangement (standing). Adjust the length of cables and hoses so they fit well in the cable carrier and then clamp both ends.
   - The cable carrier has pretension to a certain degree in linear sections. Ensure sufficient space for the cable carrier because this pretension may appear after installation depending on the operating conditions.
6. Notes: The TK Series and TKH Series use made-to-order pins to lessen pretension in the unsupported length section. The stay dimension (height) may be larger than standard for the TK Series and TKH Series.

6-2. Vertical arrangement (hanging)



1. Features:
   - An installation method in which the cable carrier is hanging.
   - The load on the cable carrier becomes a tensile load so the load diagram cannot be used. Refer to the vertical arrangement (hanging) types table.
2. Travel length: Refer to the following table.
3. Additional load: Refer to the following table.
4. Travel speed: Same as standard arrangement
5. Guide method:
   - Adjust the length of cables and hoses so that the mass is not concentrated at the bottom of the bending radius and then clamp both ends. Ensure that cables and hoses are not riding up on the stays.
   - Install guide channels on both sides to prevent swaying. Make the fixed end side the same length as the standard arrangement and make the moving end side 2 or 3 links longer than standard. Contact a Tsubaki representative if the guide channels must be shortened.
   - The cable carrier has pretension to a certain degree in linear sections. Ensure sufficient space for the cable carrier because this pretension may appear after installation depending on the operating conditions.
6. Notes: The TK Series and TKH Series use made-to-order pins to lessen pretension in the unsupported length section. The stay dimension (height) may be larger than normal for the TK Series and TKH Series.

■ Vertical arrangement (hanging) types table (Contact a Tsubaki representative about models not in this table.)

Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)
TKP13H10	6.0	0.6	300
TKP17H11	7.0	0.4	300
TKP18H14 TKP18H15	7.0	1	300
TKP25H15	5.5	1	300
TKP35H22	5.0	2	300
TKP35H32	13.0	2	300
TKP45H25	14.0	4	300
TKP58H39	10.0	6	300
TKP62H34	5.0	7.5	300
TKP68H46	10.0	6	300
TKP90H50	7.0	16	300
TKP91H56	9.0	16	300
TKP91H80	11.0	40	300
TKP125H74	5.5	22	300

Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)
TKR15H22	4.0	1.5	300
TKR20H28	9.0	2	300
TKR26H40	12.0	3	300
TKR28H52	8.0	4	300
TKR37H28	9.0	2	300
TKC28H30	19.0	2	300
TKC34H25	8.5	5	300
TKC47H36	11.0	8	300
TKC64H50	9.0	16	300
TKC85H68	4.5	35	300
TKC91H56	9.0	16	300
TKC91H80	10.5	40	300

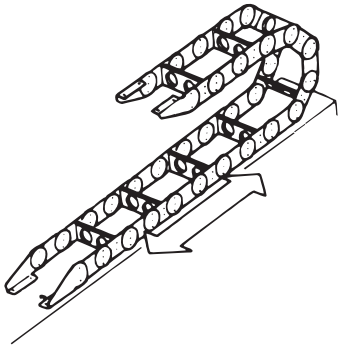
Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)	
TK070	8.0	15	60	
TK095	7.0	30	60	
TK130	9.0	50	60	
TK180	11.5	50	60	
TKH250	87.0	50	60	
TKF055	8.0	2	60	Discontinued
TKF085	9.0	4	60	
TKF115	5.0	8	60	
TKF175	3.5	11	60	

Notes: 1. When fixed end is at the center of the travel length.
2. **Excluding the MW Type.** (Contact a Tsubaki representative regarding usage with the MW Type.)

Examples of Cable Carrier Installations

7. Top-fixed arrangement (bottom movement)

Applicable to all models



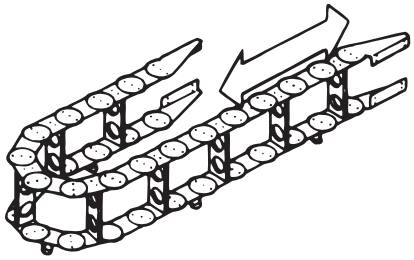
1. Features: The arrangement has the moving end on the bottom, which is the reverse of the standard arrangement.
2. Travel length:
3. Additional load:
4. Travel speed:

Same as standard arrangement

5. Guide method:
   - Moving guide channels are required that move at the same time as the moving end on the bottom.
   - Contact a Tsubaki representative if the guide channels with a sufficient length cannot be installed.
   - When the guide channels cannot move, install traveling rollers on the cable carrier or install the cable carrier on the floor.
6. Notes: The TK Series, TKS Series, and TKH Series use made-to-order pins to lessen pretension in the unsupported length section.

8. Side mount arrangement

Applicable to the TK Series/TKP Series/TKC Series



1. Features: The cable carrier is used on its side. This arrangement is suitable for when the connection surface for the steel brackets is lateral, when the travel length is long, and when there are space restrictions in the height direction.
2. Travel length:
3. Additional load:
4. Travel speed:

Refer to the following table.

5. Guide method:
   - Guide channels are required at the bottom and both sides of the cable carrier. Contact a Tsubaki representative if the guide channels cannot be installed.
   - For the TK Series and TKH Series, install side rollers to guide the guide channels on both sides.
   - For the TK Series and TKH Series, casters or shoes are required on the bottom of the chain.
     The plastic links of the TKP Series and TKC Series are made of engineering plastic and can slide as they are.
6. Notes: The TK Series and TKH Series use made-to-order pins to lessen pretension in the unsupported length section.

■ Side mount arrangement table (Contact a Tsubaki representative about models not in this table.)

Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)
TKP13H10	13	0.6	60
TKP17H11	15	0.4	60
TKP18H14 TKP18H15	15	1	60
TKP25H15	11	1	60
TKP35H22	11	2	60
TKP35H32	28	2	60
TKP45H25	48	2	60
TKP58H39	34	3	60
TKP62H34	21	3	60
TKP68H46	34	3	60
TKP90H50	42	4	60
TKP91H56	45	4	60
TKP91H80	64	8	60
TKP125H74	30	6	60

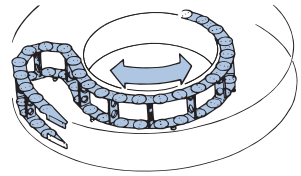
Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)
TKC28H30	41	2	60
TKC34H25	31	2	60
TKC47H36	43	3	60
TKC64H50	45	4	60
TKC85H68	31	6	60
TKC91H56	45	4	60
TKC91H80	56	8	60

Model	Maximum travel length (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)
TK070	30	14	30
TK095	30	18	30
TK130	60	24	30
TK180	80	26	30
TKH250	100	44	30

Note: **Excluding the MW Type.**
(Contact a Tsubaki representative regarding usage with the MW Type.)

9. Horizontal circular travel arrangement

Applicable to the TK Series/TKP Series/TKC Series (Partial)

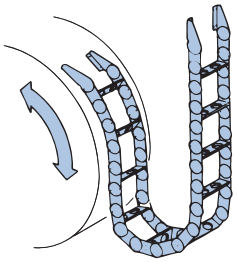


Fill in the inquiries sheet (page 165) for product selection.

1. Features:
   - Use this arrangement to guide cables and hoses that move back and forth in a circular travel on a flat channel.
   - The cable carrier is made-to-order and can bend in both directions.
     (The standard product cannot be used because it does not bend in the reverse direction.)
2. Maximum rotation angle: Approximately 360°
   (The maximum rotation angle may be larger or smaller depending on the conditions.)
3. Additional load: Refer to the side mount arrangement table above.
4. Travel speed: 30 m/min or less
5. Guide method:
   - Inside/outside guide channels and fixed guide channels, etc., are required.
   - For the TK Series, casters, guide shoes, guide rollers, and guide frames, etc., may be required.

10. Vertical circular travel arrangement

Applicable to the TK Series/TKP Series

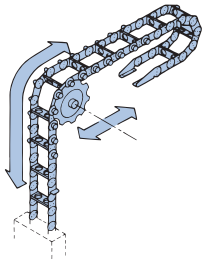


Fill in the inquiries sheet (page 165) for product selection.

1. Features:
   - Use this arrangement to guide cables and hoses that move back and forth vertically in a circular travel inside a vertical surface.
   - The cable carrier is made-to-order and can bend in both directions.
     (The standard product cannot be used because it cannot bend in the reverse direction.)
2. Maximum rotation angle: 180° to 200° (The maximum rotation angle may be greater depending on the conditions.)
3. Additional load: Refer to the vertical arrangement (hanging) types table.
4. Travel speed: 60 m/min or less
5. Guide method:
   - A drum with flange and fixed guide channels, etc., are required.
   - For the TK Series, guide rollers, etc., may be required.

11. Hanging with support bolts

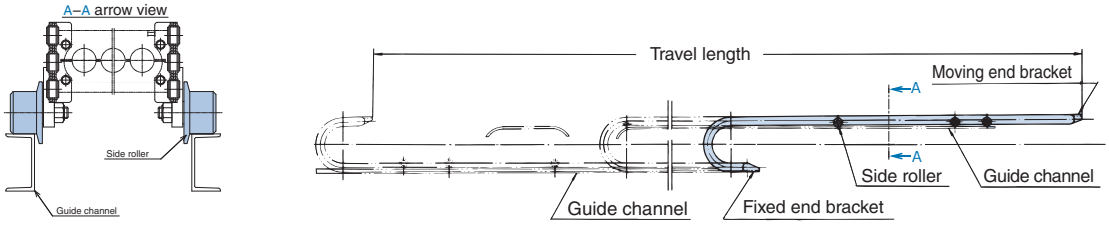
Applicable to the TK Series



1. Features:
   - Use this arrangement for a hanging switch box, etc., that must move vertically and in two dimensions (vertically and horizontally).
   - The center pin of the link plate is a made-to-order pin and driven by sprockets.
2. Travel length: The unsupported length is within the load diagram.
3. Additional load: Within the load diagram.
4. Travel speed: 60 m/min or less
5. Guide method: Sprockets are required.
6. Notes: The stay dimension (height) may need to be larger than standard.

12. Side roller type

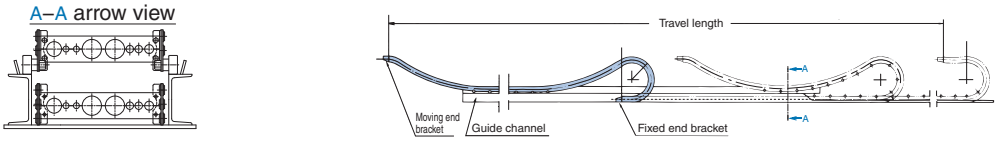
Applicable to the TK Series (Excluding the TK070)



1. Features:
   - Use this type when the travel length is long, when the additional load is large but 2 support rollers cannot be selected, and when attempting to decrease the unsupported length to improve service life.
   - Install side rollers in 1 to 5 locations on the sides of the chain.
2. Travel length: • TK180: 50 m or less • TK130: 42 m or less • TK095: 24 m or less • And approximately 4-times or less of standard
3. Additional load: Within the load diagram.
4. Travel speed: 30 m/min or less
5. Guide method: Guide channels matched to the height of the cable carrier are required. Cut out positions where the side rollers go down.

13. Traveling roller type

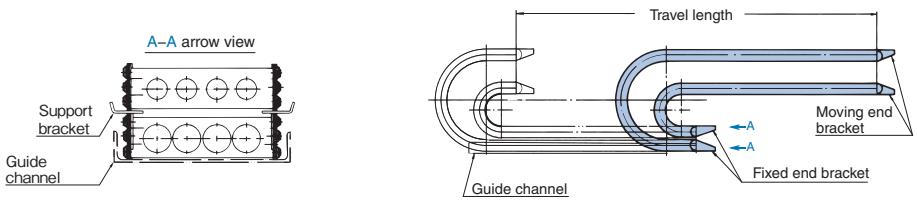
Applicable to the TK Series (TK095, TK130, TK180 (R300 and higher))



1. Features:
   - Use this type when the travel length is long but support rollers or guide channels in the side roller type cause interference and when effectively using the installation space, such as for a traversing machine.
   - Install traveling rollers to the chain.
   - The cable carrier is made-to-order and bends in both directions.
2. Travel length: Same as support rollers in 2 locations in the catalog (cannot be larger than that).
3. Additional load: Within the load diagram.
4. Travel speed: 30 m/min or less
5. Guide method: Guide channels for running are required.

14. Nested arrangement

Applicable to the TK Series/TKH Series/TKP Series/TKC Series

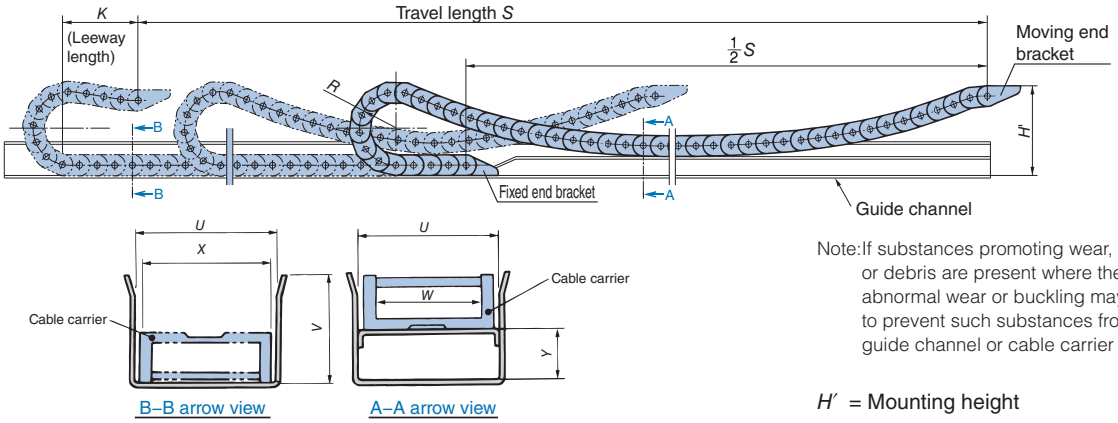


1. Features:
   - Use this arrangement when the width of the installation space is insufficient and cables/hoses cannot be arranged side by side.
   - Multiple cable carriers with different bending radiuses can be nested. The same widths should be used.
   - For the TK Series and TKH Series, install brackets to support the inner cable carrier on the inside of the outer cable carrier.
   - For the TKC Series and TKP Series, the cable carriers can be directly stacked.
2. Travel length: Same as standard arrangement. However, support rollers cannot normally be used.
3. Additional load: Within the load diagram.
4. Travel speed: Same as standard arrangement
5. Guide method:
   - TK Series and TKH Series are the same as standard.
   - TKC Series and TKP Series are the same as the gliding arrangement.
     The gap to the left and right of the cable carrier and guide channels must be narrower than the standard installation and use guide channels with higher sidewalls.
6. Notes: It is difficult to install support rollers for the outer cable carrier.

Gliding Arrangement (Applicable Models: TKP Series/TKC Series)

Gliding arrangement (gliding applications)

Gliding arrangements are designed to slide atop a guide channel when lengths exceeding the unsupported length with two support rollers shown in the load diagram are required.



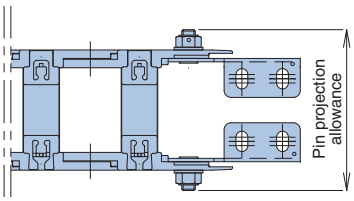
Note: If substances promoting wear, such as iron particle or debris are present where the cable carriers slide, abnormal wear or buckling may occur. Take measures to prevent such substances from accumulating on the guide channel or cable carrier itself.

H' = Mounting height

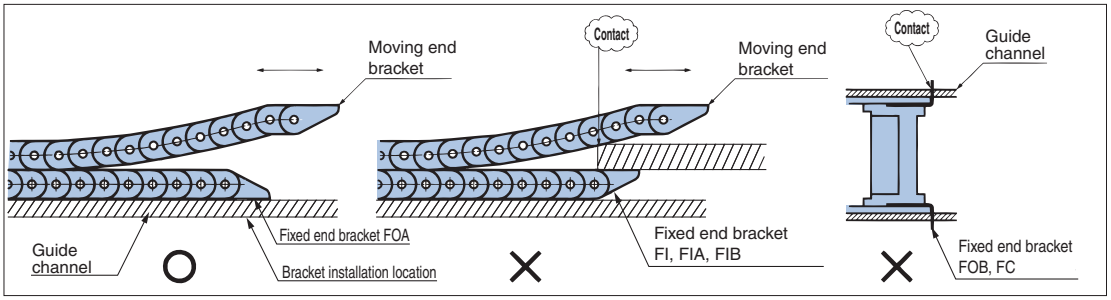
Precautions for use

1. Always install guide channels.
   The special Tsubaki guide channels on page 117 are convenient. Refer to the above figure to fabricate your own.
2. Pay attention to the dimension H' (mounting height).
   This dimension H' differs from that in the layout in the standard arrangement. Use the dimensions on pages 129 and 130 for the mounting. If this dimension is too high or too low, the cable carrier may buckle or float up causing damage the cable carrier.
3. Ensure ample leeway length (dimension K).
   The leeway length differs from that in the layout in the standard arrangement. Set the number of links to be larger than or equal to the dimensions listed pages on 129 and 130. If this dimension is small, the links will be bent excessively to the reverse side when the moving end is at the position where the unsupported length is the shortest causing damage to the cable carrier.
4. Made-to-order moving end bracket is required (except some models).
   The made-to-order moving end bracket is made to bend in both directions.
   For only the TKP45H25/TKP58H39/TKP68H46 (when using the steel brackets), the projection allowance of the pin differs from the standard model.

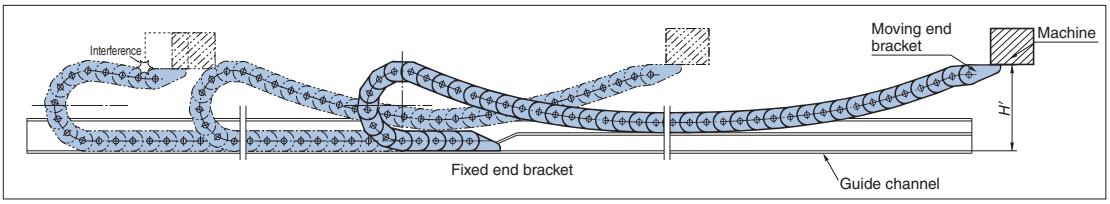
Model		Pin protrusion
TKP45H25	W38	Inner width W + 40
	Other width than the above	Inner width W + 42
TKP58H39		Inner width W + 45
TKP68H46 (When using steel brackets)		Inner width W + 46



5. Use the FOA fixed end bracket.
   If the fixed end bracket is the FI, FIA, or FIB, the mounting section of the fixed end bracket and the top of the cable carrier will make contact as shown in the following figure (middle), so these brackets cannot be used for the gliding arrangement. The FOB or FC fixed end brackets also cannot be used because the fixed end bracket and guide channel will make contact as shown in the following figure (right).

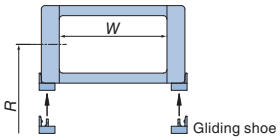


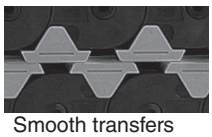
6. Be careful not to place the machine to the left of the moving end bracket.
   If the machine is placed to the left of the moving end bracket, the machine and cable carrier may interfere with each other when the cable carrier travels to the left (refer to the following figure).



Gliding arrangement/gliding shoes series (Patented)

The gliding arrangement/gliding shoes series contributes to overall reduced costs due to longer service life, power savings and lower running costs with long travel lengths and high-speed movement and a reduction in the environmental burden.



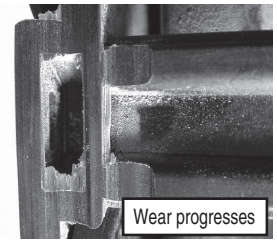

Smooth transfers

Feature 1: Long service life

Adopting plastic materials with excellent slide characteristics and wear resistance★, and the effect of increased wear allowance (amount of permissible wear), enable a longer service life for the cable carrier.

★: Flame resistance standard: Plastics equivalent to UL94HB are used.

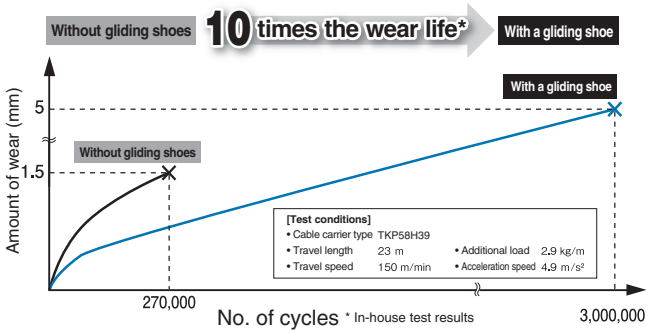
<Comparison of wear status> * After completing 130,000 cycles



Inner circumference surface on the outside of the cable carrier without gliding shoes

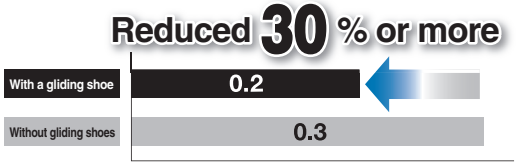


With a gliding shoe



Feature 2: Power-saving

Sliding friction of the cable carrier will be reduced; contributes to power-saving of the mechanical side drive force.



Coefficient of friction μ * The values are estimates, not guaranteed values.

Feature 3: Lower running cost

If the gliding shoes have reached their wear life but there is no damage to the cable carrier chain link, it can continue to be used simply by replacing only the gliding shoes. Compared to when no gliding shoe is mounted, the cost for parts required for replacement and the man-hours can dramatically be reduced.

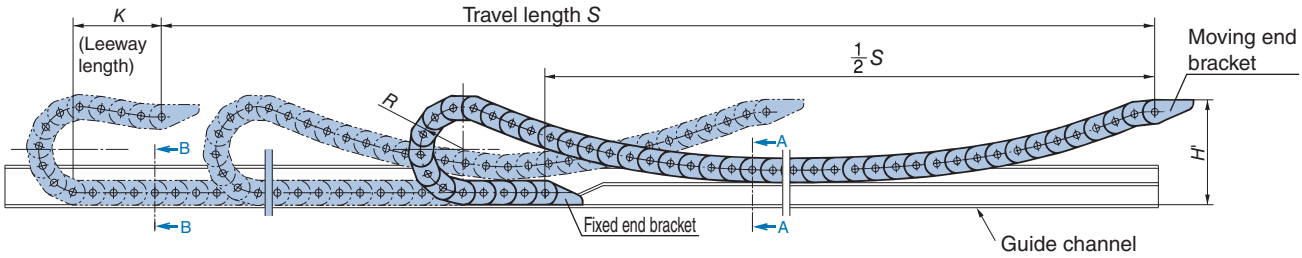
Note: See page 163 for allowable wear of gliding shoes.

Models compatible with gliding shoes

Product series	Model	Pitch (mm)	Inner height (mm)	Inner width (mm)	Bending radius (mm)	Gliding shoe installation
TKP Series	TKP58H39	58	39	50/75/100/125	75/90/125/150/200	Option
	TKP68H46	68	46	75/100/125/150/175	75/100/125/150/200/250	Option
	TKP91H56 *	91	56	150/175/200/225/250/275/300/325/350/400/450/500	200/250/300	Necessary
	TKP91H80 *	91	80	150/175/200/225/250/275/300/325/350/400/450/500	200/250/300/350/400	Necessary
TKC Series	TKC91H56 *	91	56	150/200/250/300/350/400	200/250/300	Necessary
	TKC91H80 *	91	80	150/200/250/300/350/400	200/250/300/350/400	Necessary

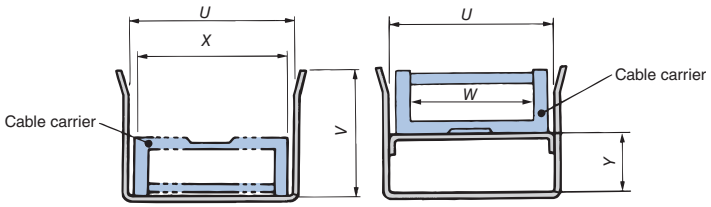
★: Fixed end brackets (plastic brackets) are made-to-order items (with gliding shoes).

Gliding Arrangement



■ Gliding arrangements table (Open type)

Model	Pitch P (mm)	Inner height H (mm)	Bending radius R (mm)	Leeway length K (mm)	Maximum travel length Smax (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)	Mounting height H' (mm)	Gliding shoe installation ●: Required △: Optional –: None	Plastic link/ gliding shoe allowable wear (mm) ( ) is gliding shoe	Moving end bracket Materials	Moving end bracket Type	Inner width W (mm)	X (mm)	U^{+2}_{-1} (mm)	V (mm)	Y (mm)
TKP35H22 *3	35	22	37	100	20 20 to 40 *1 40 and longer *2	1.0	40	150	—	1.0	Engineering plastic	Standard	25 38 50	W+12	W+18	60	30
			50					150									
			75					150				Made-to-order	63	77	83		
			100	250				150									
TKP45H25 *3	45	25	50	140	30 30 to 60 *1 60 and longer *2	2.0	120	190	—	1.5	Steel	Made-to-order	38	56	62	70	36
			75	140				230					58 78 103	W+20	W+26	70	36
			95	140				230									
			125	250				230									
			150	400				230									
			200	700				230									
TKP58H39 *3	58	39	60	190	45 45 to 75 *1 75 and longer *2	3.0	150	200	—	1.5 (5.0)	Steel	Made-to-order	50 75 100 125	W+21 With gliding shoe W+25	W+27 With gliding shoe W+31	100	52 With gliding shoe 59
			75	190				200	△								
			90	190				250	△								
			125	220				250	△								
			150	400				250	△								
			200	600				250	△								
TKP62H34	62.5	34	75	190	50 50 to 80 *1 80 and longer *2	3.0	120	200	—	1.0	Steel	Standard	150 200	W+22	W+28	108	54
			90	190				250									
			125	220				250				Made-to-order					
			150	400				250									
			200	700				250									
TKP68H46 *3	68	46	75	190	45 45 to 75 *1 75 and longer *2	3.0	150	200	△	1.5 (5.0)	Engineering plastic or Steel	Made-to-order	75 100 125 150 175	W+22 With gliding shoe W+26	W+28 With gliding shoe W+32	126	63 With gliding shoe 70
			100	190				200	△								
			125	220				250	△								
			150	400				250	△								
			200	600				250	△								
			250	750				300	△								
TKP90H50	90	50	130	270	80 80 to 120 *1 120 and longer *2	4.0	150	300	—	1.5	Steel	Made-to-order	100 150 200	W+30	W+36	156	78
			200	350				350									
			250	600				350									
TKP91H56 *6	91	56	200	300	80 80 to 120 *1 120 and longer *2	6.0	200	380	●	(7.0)	Engineering plastic + steel bush	Made-to-order *5	150 to 500 *7 (25 mm increments)	W+42	W+50	188	94
			250	600				380									
			300	750				380									
TKP91H80 *6	91	80	200	380	100 100 to 120 *1 120 and longer *2	8.0	200	400	●	(7.0)	Engineering plastic + steel bush	Made-to-order *5	150 to 500 *7 (25 mm increments)	W+56	W+64	236	118
			250	500				400									
			300	750				400									
			350	1000				400									
			400	1200				400									
TKP125H74	125	74	185	380	90 90 to 120 *1 120 and longer *2	6.0	150	400	—	1.5	Steel	Made-to-order	150 250 350	W+40	W+46	212	106
			250	600				400									
			350	1000				400									



■ Gliding arrangements table (Closed type)

Model	Pitch *P* (mm)	Inner height *H* (mm)	Bending radius *R* (mm)	Leeway length *K* (mm)	Maximum travel length *Smax* (m)	Maximum additional load (kg/m)	Maximum travel speed (m/min)	Mounting height *H'* (mm)	Gliding shoe installation ●: Required –: None	Plastic link/ gliding shoe allowable wear (mm) ( ) is gliding shoe	Moving end bracket		Inner width *W* (mm)	*X* (mm)	U^{+2}_{-1} (mm)	*V* (mm)	*Y* (mm)
											Materials	Type					
TKC34H25	34	25	70	110	50	2.0	150	200	—	1.0	Steel	Standard	50	*W*+20	*W*+30	80	40
			100	110	50 to 70 *1			200				Made-to-order	90				
			150	200	70 and longer *2			250					130				
TKC47H36	47	36	100	150	70	3.0	200	250	—	1.0	Steel	Standard	80	*W*+26	*W*+36	110	55
			150	150	70 to 80 *1			300				Made-to-order	160				
			200	400	80 and longer *2			300									
			250	600				300									
TKC64H50	64	50	135	200	80	4.0	200	300	—	1.5	Steel	Made-to-order	110	*W*+30	*W*+40	150	75
			200	300	80 to 120 *1			350					220				
			250	500	120 and longer *2			350									
			300	750				350									
TKC85H68	85	68	180	260	90	6.0	200	400	—	1.5	Steel	Made-to-order	150	*W*+36	*W*+46	200	100
			250	500	90 to 120 *1			400					200				
			350	1000	120 and longer *2			400					300				
													350				
TKC91H56 *6	91	56	200	300	80	6.0	200	380	●	(7.0)	Engineering plastic + steel bush	Made-to-order*5	150 to 400 *8 (50 mm increments)	*W*+42	*W*+50	188	94
			250	600	80 to 120 *1			380									
			300	750	120 and longer *2			380									
TKC91H80 *6	91	80	200	380	100	8.0	200	400	●	(7.0)	Engineering plastic + steel bush	Made-to-order*5	150 to 400 *8 (50 mm increments)	*W*+56	*W*+64	236	118
			250	500	100 to 120 *1			400									
			300	750	120 and longer *2			400									
			350	1000				400									
			400	1200				400									

★1. Differs depending on the additional load. Contact a Tsubaki representative for further information.
★2. May be used depending on installation conditions. Contact a Tsubaki representative for further information.
★3. The inside openable stay type of the TKP35H22, TKP45H25, TKP58H39, and TKP68H46 cannot be used.
★4. TKP Series MW Type (low friction/anti-wear series) is not recommended.
★5. Fixed end brackets (plastic brackets) are made-to-order items with gliding shoes.
★6. Use fixed end brackets covered by guide channel for TKP91 and TKC91.
★7. Inner width: 150/175/200/225/250/275/300/325/350/400/450/500 mm
★8. Inner width: 150/200/250/300/350/400 mm

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

When fixed end is at the center of the travel length. Always round up the value after calculating.

Calculation example: **Using the TKP45H25-30W58R50 with a travel length of 10 m**

P = 45, ***R*** = 50, ***K*** = 140, ***S*** = 10000

$$\text{Number of links} = \frac{\frac{10000}{2} + \pi \times 50 + 2 \times 140}{45} = 120.8 \Rightarrow 121$$

Gliding Arrangement

Model number

TKP Series

TKP45H25-30W58R125+120L-FOA-MOAGA

(1) Product name | Number of links | (2) Fixed end | (3) Moving end

(1) Product name	(2) Fixed end	(3) Moving end
TKP35H22-30W■■R37	FO	MO/MI
TKP35H22-30W■■R50		
TKP35H22-30W■■R75		MOGA/MIGA
TKP35H22-30W■■R100		
TKP45H25-30W■■R■■	FO/FOA	MOAGA/MIAGA/MOBGA/MIBGA/MCGA
TKP58H39-30W■■R■■	FO/FOA	MOAGA/MIAGA/MOBGA/MIBGA/MCGA
TKP62H34W■■R75	FOA	MOA/MIA
TKP62H34W■■R90		
TKP62H34W■■R125		MOAGA/MIAGA
TKP62H34W■■R150		
TKP62H34W■■R200		
TKP68H46-30W■■R■■	FU/FOA	MUGA/MOAGA/MIAGA
TKP90H50W■■R■■	FOA	MOAGA/MIAGA
TKP91H56W■■R■■-GA ★	FUGA/FUCRGA	MUGA/MUCRGA
TKP91H80W■■R■■-GA ★	FUGA/FUCRGA	MUGA/MUCRGA
TKP125H74W■■R■■	FOA	MOAGA/MIAGA

★: The TKP91H56 and TKP91H80 cable carrier is delivered with gliding shoes installed.

■ Fixed end bracket/fitting

Model number	For cable carrier model number
TKP35H22W■■-FO	TKP35H22-30W■■R■■
TKP45H25W■■-FO	TKP45H25-30W■■R■■
TKP45H25-FOA	
TKP58H39W■■-FO	TKP58H39-30W■■R■■
TKP58H39-FOA	
TKP62H34-FOA	TKP62H34W■■R■■
TKP68H46W■■-FU	TKP68H46-30W■■R■■
TKP68H46-FOA	
TKP90H50-FOA	TKP90H50W■■R■■
TKP91H56W■■-FUGA	TKP91H56W■■R■■-GA
TKP91H56W■■-FUCRGA	
TKP91H80W■■-FUGA	TKP91H80W■■R■■-GA
TKP91H80W■■-FUCRGA	
TKP125H74-FOA	TKP125H74W■■R■■

■ Gliding shoe

Model number	For cable carrier model number
TKP58H39-GS	TKP58H39-30W■■R■■ (R125, R150, R200)
TKP58H39-GSR75	TKP58H39-30W■■R75
TKP58H39-GSR90	TKP58H39-30W■■R90
TKP68H46-GS	TKP68H46-30W■■R■■ (R125, R150, R200, R250)
TKP68H46-GSR75	TKP68H46-30W■■R75
TKP68H46-GSR100	TKP68H46-30W■■R100
TKP91H56-GS	TKP91H56W■■R■■-GA
TKP91H80-GS	TKP91H80W■■R■■-GA

Note: 2 gliding shoes are required per link.

■ Gliding shoe install

Model number	For cable carrier model number
TKP58-GS-ASSY	TKP58H39-30W■■R■■
TKP68-GS-ASSY	TKP68H46-30W■■R■■

Notes: 1. The model number for work to install gliding shoes on the chain links.
2. The same quantity is required as the number of gliding shoes to install on the chain links.

■ Moving end bracket/fitting

Model number	For cable carrier model number
TKP35H22W■■-MO	TKP35H22W■■R■■ (R37, R50)
TKP35H22W■■-MI	
TKP35H22W■■-MOGA	TKP35H22W■■R■■ (R75, R100)
TKP35H22W■■-MIGA	
TKP45H25-MOAGA	TKP45H25-30W■■R■■
TKP45H25-MIAGA	
TKP45H25-MOBGA	
TKP45H25-MIBGA	
TKP45H25-MCGA	
TKP58H39-MOAGA	TKP58H39-30W■■R■■
TKP58H39-MIAGA	
TKP58H39-MOBGA	
TKP58H39-MIBGA	
TKP58H39-MCGA	
TKP62H34-MOA	TKP62H34W■■R■■ (R75, R90)
TKP62H34-MIA	
TKP62H34-MOAGA	TKP62H34W■■R■■ (R125, R150, R200)
TKP62H34-MIAGA	
TKP68H46W■■-MUGA	TKP68H46-30W■■R■■
TKP68H46-MOAGA	
TKP68H46-MIAGA	
TKP90H50-MOAGA	TKP90H50W■■R■■
TKP90H50-MIAGA	
TKP91H56W■■-MUGA	TKP91H56W■■R■■-GA
TKP91H56W■■-MUCRGA	
TKP91H80W■■-MUGA	TKP91H80W■■R■■-GA
TKP91H80W■■-MUCRGA	
TKP125H74-MOAGA	TKP125H74W■■R■■
TKP125H74-MIAGA	

See page 19 for ordering information
See pages 143 to 145 for product mass

Model number

TKC Series

TKC47H36W80R150+120L-FOA-MOAGA

(1) Product name | Number of links | (2) Fixed end | (3) Moving end

(1) Product name	(2) Fixed end	(3) Moving end
TKC34H25W■■R70	FOA	MOA/MIA/MC
TKC34H25W■■R100		MOAGA/MIAGA/MCGA
TKC34H25W■■R150		
TKC47H36W■■R100	FOA	MOA/MIA/MC
TKC47H36W■■R150		MOAGA/MIAGA/MCGA
TKC47H36W■■R200		
TKC47H36W■■R250		
TKC64H50W■■R■■	FOA	MOAGA/MIAGA/MCGA
TKC85H68W■■R■■	FOA	MOAGA/MIAGA/MCGA
TKC91H56W■■R■■-GA ★	FUGA/FUCRGA	MUGA/MUCRGA
TKC91H80W■■R■■-GA ★	FUGA/FUCRGA	MUGA/MUCRGA

★: The TKC91H56 and TKC91H80 cable carrier is delivered with gliding shoes installed.

■ Fixed end bracket/fitting

Model number	For cable carrier model number
TKC34H25-FOA	TKC34H25W■■R■■
TKC47H36-FOA	TKC47H36W■■R■■
TKC64H50-FOA	TKC64H50W■■R■■
TKC85H68-FOA	TKC85H68W■■R■■
TKC91H56W■■-FUGA	TKC91H56W■■R■■-GA
TKC91H56W■■-FUCRGA	
TKC91H80W■■-FUGA	TKC91H80W■■R■■-GA
TKC91H80W■■-FUCRGA	

■ Moving end bracket/fitting

Model number	For cable carrier model number
TKC34H25-MOA	TKC34H25W■■R70
TKC34H25-MIA	
TKC34H25-MC	
TKC34H25-MOAGA	TKC34H25W■■R■■ (R100, R150)
TKC34H25-MIAGA	
TKC34H25-MCGA	
TKC47H36-MOA	TKC47H36W■■R100
TKC47H36-MIA	
TKC47H36-MC	
TKC47H36-MOAGA	TKC47H36W■■R■■ (R150, R200, R250)
TKC47H36-MIAGA	
TKC47H36-MCGA	
TKC64H50-MOAGA	TKC64H50W■■R■■
TKC64H50-MIAGA	
TKC64H50-MCGA	
TKC85H68-MOAGA	TKC85H68W■■R■■
TKC85H68-MIAGA	
TKC85H68-MCGA	
TKC91H56W■■-MUGA	TKC91H56W■■R■■-GA
TKC91H56W■■-MUCRGA	
TKC91H80W■■-MUGA	TKC91H80W■■R■■-GA
TKC91H80W■■-MUCRGA	

■ Gliding shoe

Model number	For cable carrier model number
TKC91H56-GS	TKC91H56W■■R■■-GA
TKC91H80-GS	TKC91H80W■■R■■-GA

Note: 2 gliding shoes are required per link.

See page 19 for ordering information
See page 149 for product mass

Circular Travel Arrangements (Applicable Models: TKP Series/TKC Series/TK Series) (Patented)

Circular travel arrangements

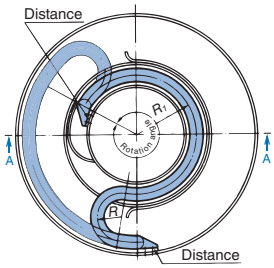
Circular travel arrangements can be used to connect cables and hoses to the rotating section of robots and other devices.
Part of the structure of plastic cable carriers in circular travel arrangements differs from standard products.
The external dimensions are the same as those of standard products.
Contact a Tsubaki representative when using them.

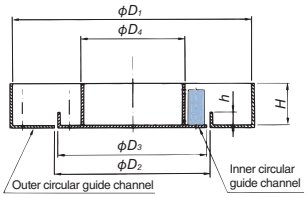
◆ Chain links
Modifications are made to standard parts to allow them to bend in both directions.

◆ Brackets/steel brackets
For either the moving end bracket or the fixed end bracket, modifications are made to standard parts to allow them to bend in both directions.
However, standard parts may also be usable as is depending on the installation layout and model.

Parts manufactured by Tsubaki: Cable carrier (chain links, steel brackets, etc.)

Parts fabricated by the customer: Guide channels (inner circumference, outer circumference), distance





A–A arrow view

Types/dimensions

■ If the inner circular drum diameter (ϕD_4) has been determined

	Reverse bending radius R_1 (mm)	Outer circular drum diameter D_1 (mm)	D_2 (mm)	D_3 (mm)	Outer circular wall height H (mm)	Guide height h (mm)	Maximum travel speed (m/min)
TKP35H22 special type	$D_4/2+25$	$D_4+4R+100$	D_4+106	D_4+100	$W+25$	20	
TKP45H25 special type	$D_4/2+30$	$D_4+4R+120$	D_4+126	D_4+120	$W+40$	30	
TKP58H39 special type	$D_4/2+35$	$D_4+4R+140$	D_4+146	D_4+140	$W+50$	50	
TKP68H46 special type	$D_4/2+40$	$D_4+4R+160$	D_4+166	D_4+160	$W+55$	50	30
TKP62H34 special type	$D_4/2+40$	$D_4+4R+160$	D_4+166	D_4+160	$W+55$	50	
TKP90H50 special type	$D_4/2+50$	$D_4+4R+200$	D_4+206	D_4+200	$W+60$	50	
TKP125H74 special type	$D_4/2+65$	$D_4+4R+260$	D_4+266	D_4+260	$W+70$	50	

■ If the outer circular drum diameter (ϕD_1) has been determined

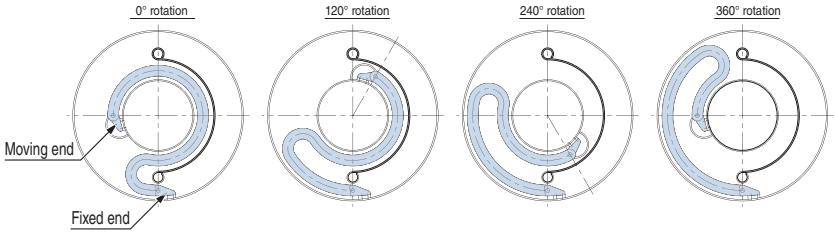
	Reverse bending radius R_1 (mm)	Inner circular drum diameter D_4 (mm)	D_2 (mm)	D_3 (mm)	Outer circular wall height H (mm)	Guide height h (mm)	Maximum travel speed (m/min)
TKP35H22 special type	$D_1/2-2R-25$	$D_1-4R-100$	D_1-4R+6	D_1-4R	$W+25$	20	
TKP45H25 special type	$D_1/2-2R-30$	$D_1-4R-120$	D_1-4R+6	D_1-4R	$W+40$	30	
TKP58H39 special type	$D_1/2-2R-35$	$D_1-4R-140$	D_1-4R+6	D_1-4R	$W+50$	50	
TKP68H46 special type	$D_1/2-2R-40$	$D_1-4R-160$	D_1-4R+6	D_1-4R	$W+55$	50	30
TKP62H34 special type	$D_1/2-2R-40$	$D_1-4R-160$	D_1-4R+6	D_1-4R	$W+55$	50	
TKP90H50 special type	$D_1/2-2R-50$	$D_1-4R-200$	D_1-4R+6	D_1-4R	$W+60$	50	
TKP125H74 special type	$D_1/2-2R-65$	$D_1-4R-260$	D_1-4R+6	D_1-4R	$W+70$	50	

■ TKC34H25W130R70 sub-standard product

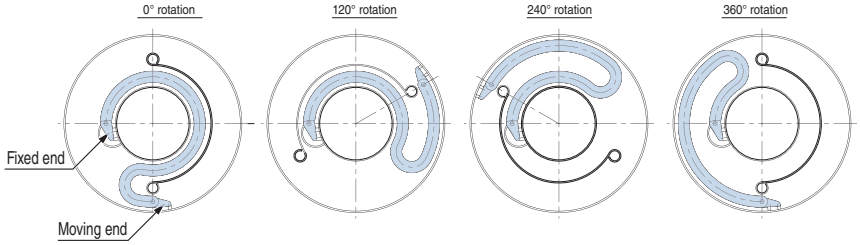
	Reverse bending radius R_1 (mm)	Outer circular drum diameter D_1 (mm)	D_2 (mm)	D_3 (mm)	D_4 (mm)	Outer circular wall height H (mm)	Guide height h (mm)	Maximum travel speed (m/min)
TKC34H25W130R70 special type	170	690	400	394	290	160	40	40
	140	630	340	334	230	160	40	
	205	750	470	464	350	160	40	

Reference

Track of inner circular travel



Track of outer circular travel



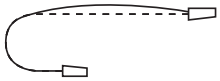
Other Special Types

In addition to the gliding arrangement and circular travel arrangements, Tsubaki also manufacturers cable carriers with special specifications to meet the needs of our customers. Contact a Tsubaki representative for further information.

Straight type

Applicable to the TKP Series (Some models are excluded)

Standard cable carriers are manufactured so that the unsupported length section has pretension slightly when there is no load to take into consideration the additional load. The straight type is a special type that eliminates this pretension in the unsupported length section.
This is effective for when the pretension of the cable carrier is a problem in the installation space or when it negatively affects the appearance of the cable carrier.
Contact a Tsubaki representative about using the straight type.



Standard cable carrier



Straight type (made-to-order)

Remark: Sagging will occur in the standard and straight types depending on the unsupported length and additional load.

Aramid cover type (Patented)

Applicable to the Plastic Series / TKF Series (Some models are excluded)

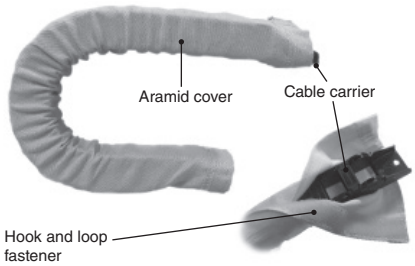
This type protects the cable carrier, cables, and hoses from chips (cutting debris) produced by machine tools and metal fabrication tools.

Advantages of aramid covers

1. Excellent heat resistance
2. Good resistance to cutting
3. Resistance to various chemicals and solvents
   (Contact a Tsubaki representative for the types of chemicals.)
4. High strength
5. Easy installation

Aramid cover type

1. Temperature range: 200°C maximum
   (Chain 400°C/hook and loop fastener 200°C)
2. Fabric color: Yellow (aluminum vapor deposition also supported)
3. Fabric ends: Aramid stitching
4. Cover closing: Hook and loop fastener
   (A more robust fastener type is also available.)



Contact a Tsubaki representative about using the aramid cover type.

Antistatic type

Applicable to the TKP Series/TKC Series (Some models are excluded)

An antistatic type can be manufactured as a static electricity countermeasure for the Cable Carrier Plastic Series.
Contact a Tsubaki representative about using the antistatic type.

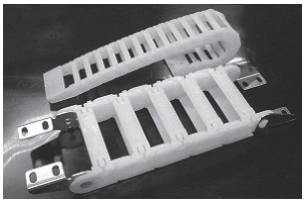
■ Volume resistivity (estimate)

Antistatic type	$1\times10^{8\text{ to }10}$ Ω•cm
Standard type (estimate)	$1\times10^{13\text{ to }15}$ Ω•cm

PVDF type

Applicable to the TKP Series/TKC Series (Some models are excluded)

The PVDF type that uses special fluoroplastics as a countermeasure for outgassing is manufactured for situations, such as in a vacuum, where the production of gas from the Cable Carrier Plastic Series is not desired.
This type also has excellent chemical resistance. Contact a Tsubaki representative about using and selecting this type.



Special color type

Applicable to the TKP Series/TKC Series (Some models are excluded)

The chain link color (black) of the Cable Carrier Plastic Series can be changed.
This is effective for the food industry where black is not desirable, when black would ruin the exterior of the product, and as a safety measure for a moving cable carrier.
Contact a Tsubaki representative about using the special color type.

Flame-resistant type

Applicable to the TKP Series (Some models are excluded)

The Tsubaki Cable Carrier Plastic Series uses UL standard: UL 94HB equivalent plastics based on the UL standard for the flame-resistant safety inspection of plastic products.
However, **UL standard: UL 94V-O** equivalent flame-resistant type products are also manufactured to meet requirements for higher flame resistance.
Contact a Tsubaki representative about using the flame-resistant type.

Other Special Types

Contact a Tsubaki representative about using special types.

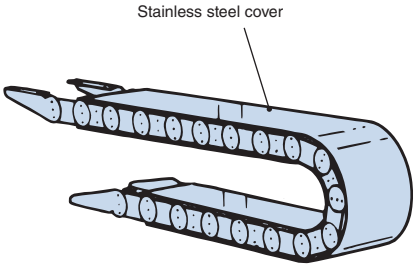
Note: It may not be possible to manufacture some special types depending on the cable carrier model.

Stainless steel cover type

Applicable to the TK Series/TKH Series/TKS Series

This type adds stainless steel covers to the inner circumference and the outer circumference of cable carriers to prevent cables and hoses from being exposed to chips and dust.

- As a general rule, install a cover for the entire space when large chips and scraps will fall on the stainless steel covers because the covers will be scratched.
- There are gaps at both sides of the covers and between link plates.
- The center section cannot be fixed because the cover and link plates must slide. Install cover retainers to links without stays and ensure the stainless steel cover can move in length direction without coming off the chain.
- Always fix the stainless steel cover at both ends. Stainless steel covers are delivered without mounting holes. Drill holes according to the steel brackets and terminal box and fix appropriately. (Fabricated by the customer)



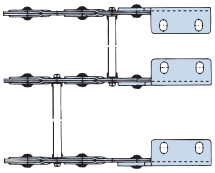
Multiple chain type

Applicable to the TK Series/TKH Series/TKS Series

This type provides 2 strands of links as 3 or more strands.

- Use this type when there are many cables and hoses and the standard stay width is exceeded or the selection conditions are exceeded with a large mass. (However, the 3-row type is the same as the standard.)
- This type can also be used to separate and install types of cables and hoses. (Ex: Signal cables and power cables)

If support rollers are required, the center links must also be supported by the support rollers.



Stainless steel type

Applicable to the TKP Series/TK Series/TKC Series/TKH Series

The steel parts used in the cable carrier can be changed to stainless steel parts when the cable carrier will be used in a corrosive atmosphere.

Applicable models:

TK Series and TKH Series: Chains, stays, steel brackets

TKP Series and TKC Series: Steel brackets

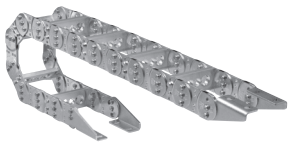
Used materials	
Chain plates, Steel brackets	: SUS304
Pins	: SUS630
Stays	: Aluminum or SUS304

Anti-dust series

Applicable to the TK Series/TKH Series

This series prevents clogging due to debris and chips, poor articulation due to the adherence of debris, and flopping during operation by widening the space between the 2 link plates that make up the cable carrier. Even in environments with flying and accumulating debris, this type can deliver smooth operation and improve durability in optimal conditions.

Note: Load is the same as the standard type.



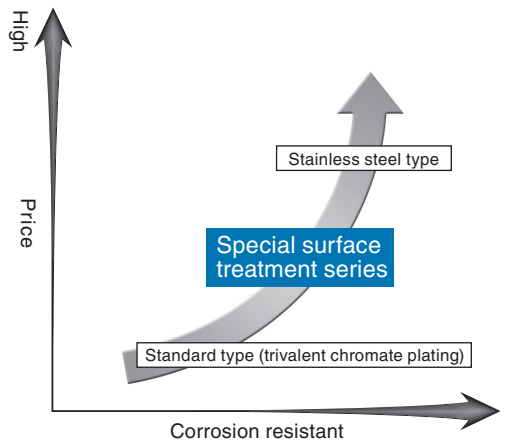
Special surface treatment series

Applicable to the TK Series/TKH Series/TKS Series

This series features excellent corrosion resistance due to a special surface treatment applied to the link plates and connecting pins of the cable carrier.

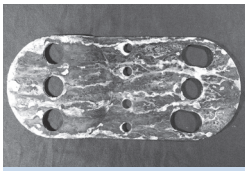
This special surface treatment contributes to preventing the progression of corrosion in factories filled with fumes and steam, improving durability, and reducing the replacement frequency.

Note: Dimensions and load diagram are the same as the standard type. The cable carrier can be replaced without modifying the installation of existing products.

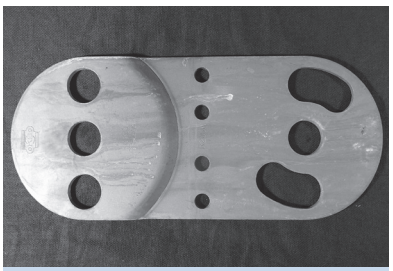


Salt spray test result

Time until corrosion progresses is 3-times or longer than that of the standard type



Standard type link plate



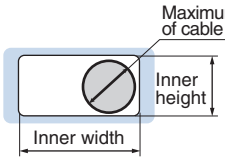
Special surface treatment series link plate

* Example of in-house test results

Note: Full stainless steel cable carriers can also be manufactured for environments that demand a higher degree of corrosion resistance. (Excluding the frame of the TKS Series)

Cable Carrier Internal Cross-Section Dimensions

Cable carrier internal cross-section dimensions



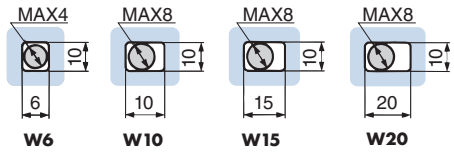
The maximum outer diameter of cable and hose does not take into consideration the allowable bending radius of cables and hoses. Select cable carriers by taking into account the allowable bending radius of the cables and hoses that will actually be installed.
When installing a horizontal divider, always install 2 or more vertical dividers.

TKP Series Internal Cross-Section Dimensions

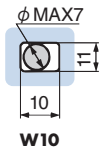
TKP13H10 to TKP25H15 internal cross-section dimensions

Pages 35 to 44

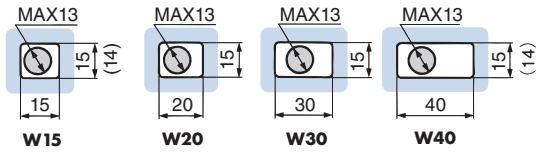
TKP13H10



TKP17H11



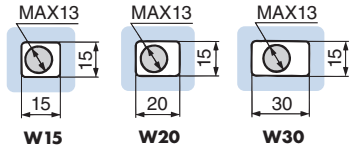
TKP18H14/TKP18H15



Inner height (14) = MAX12

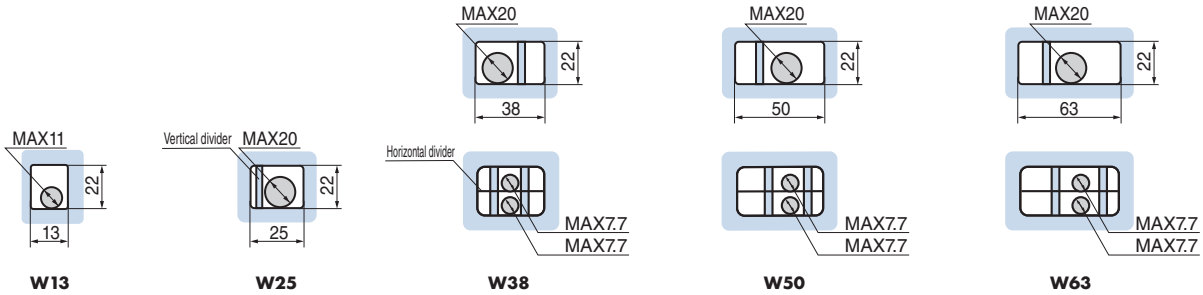
Inner height (14) = MAX12

TKP25H15



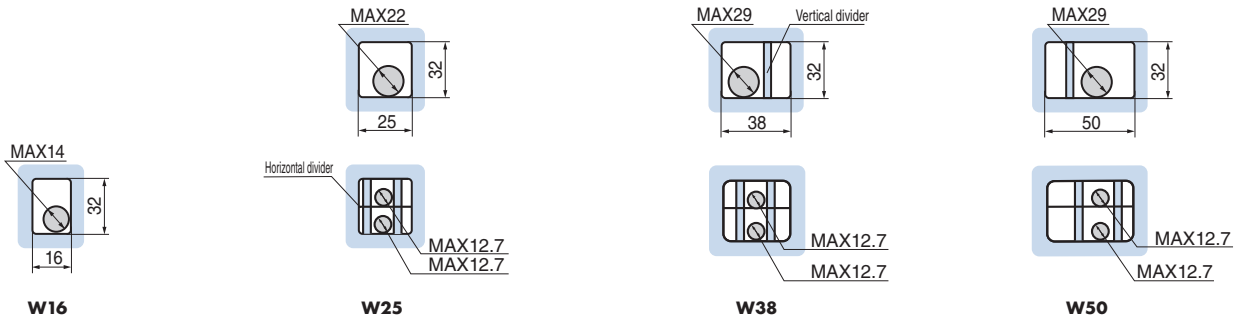
TKP35H22 internal cross-section dimensions

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TKP35H32 internal cross-section dimensions

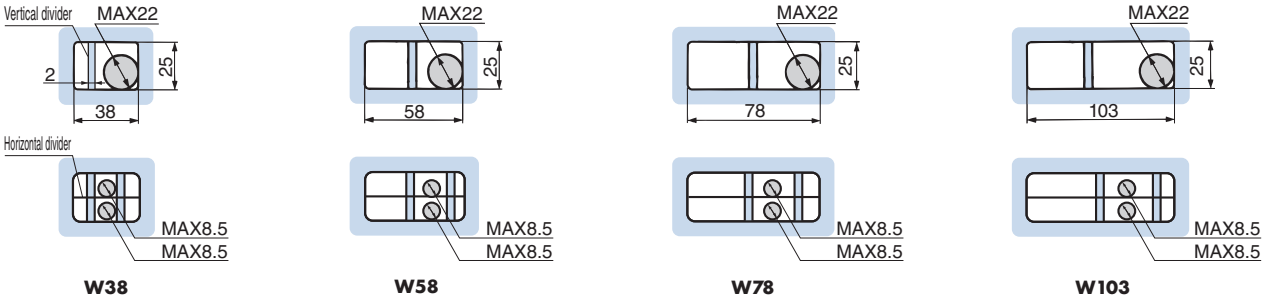
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Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 47 for further information.

TKP45H25 internal cross-section dimensions

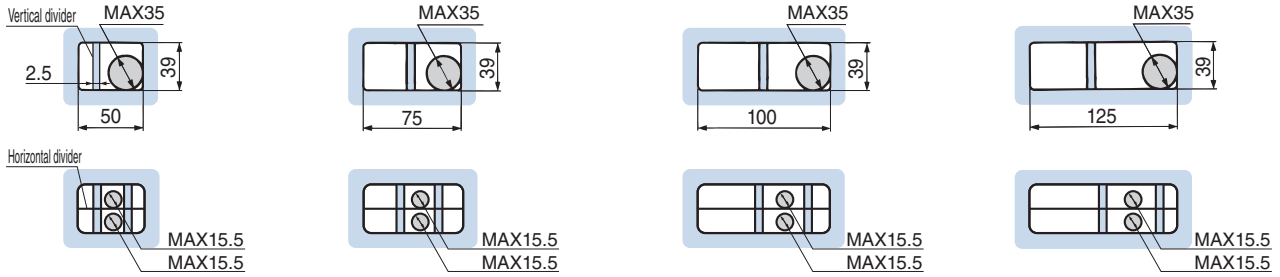
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Cable Carrier Internal Cross-Section Dimensions

TKP58H39 internal cross-section dimensions

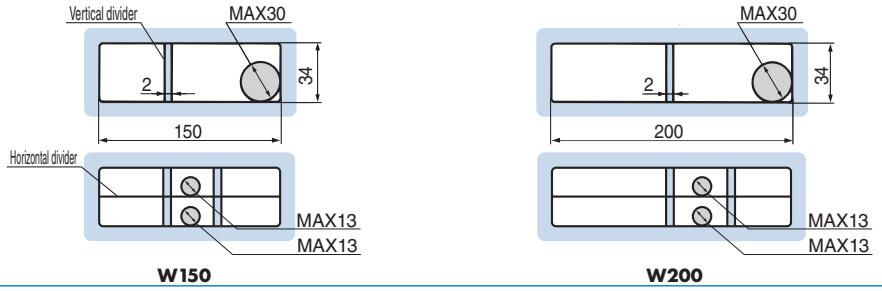
Page 51



Note: 3-layered separation is also possible. Refer to page 51 for further information.

TKP62H34 internal cross-section dimensions

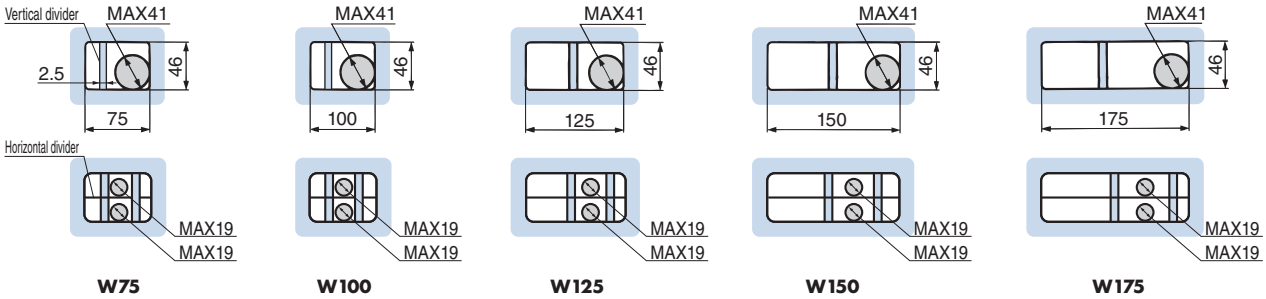
Page 53



Note: 3-layered separation is also possible.
Refer to page 53 for further information.

TKP68H46 internal cross-section dimensions

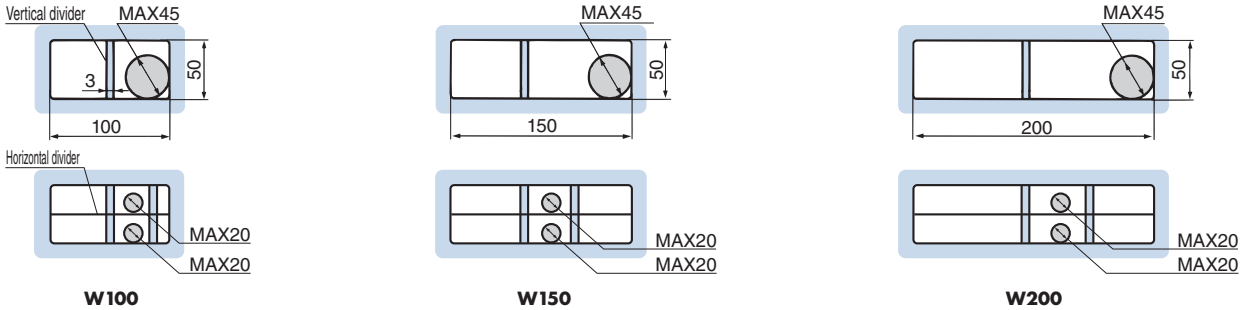
Page 55



Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 55 for further information.

TKP90H50 internal cross-section dimensions

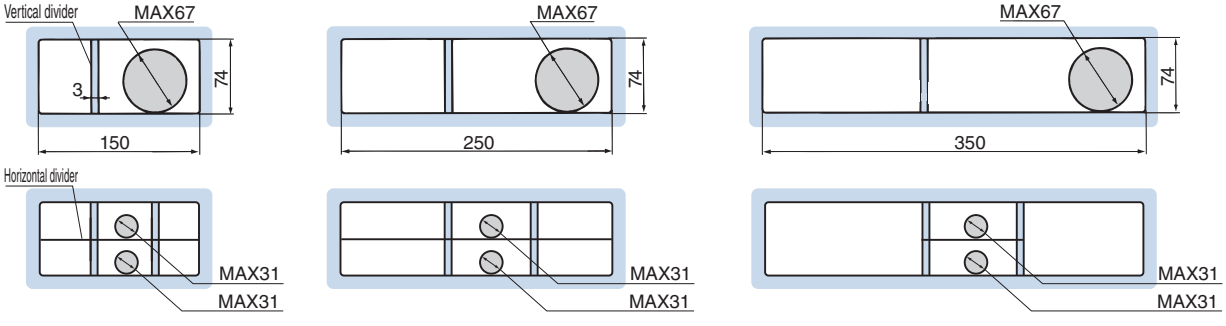
Page 57



Note: 3-layered separation is also possible. Refer to page 57 for further information.

TKP125H74 internal cross-section dimensions

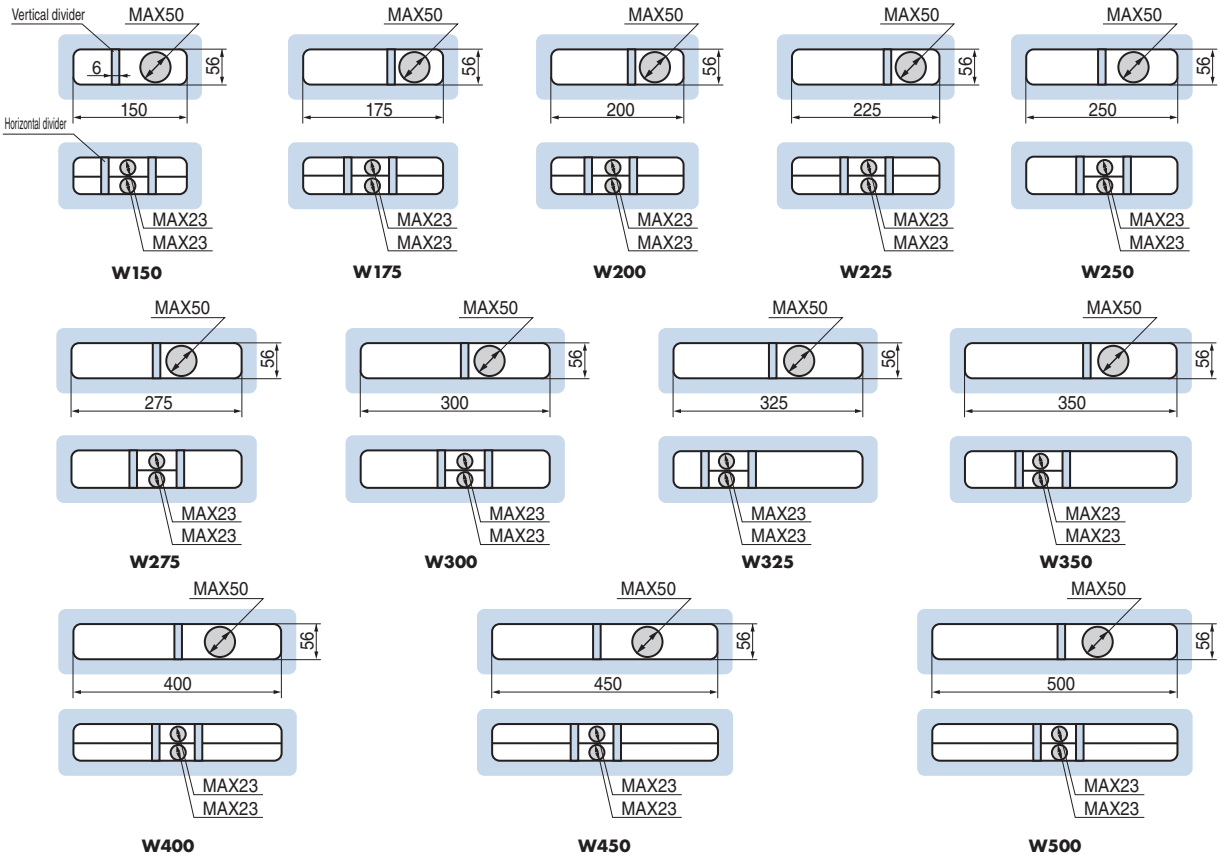
Page 63



Note: 3-layered separation is also possible. Refer to page 63 for further information.

TKP91H56 internal cross-section dimensions

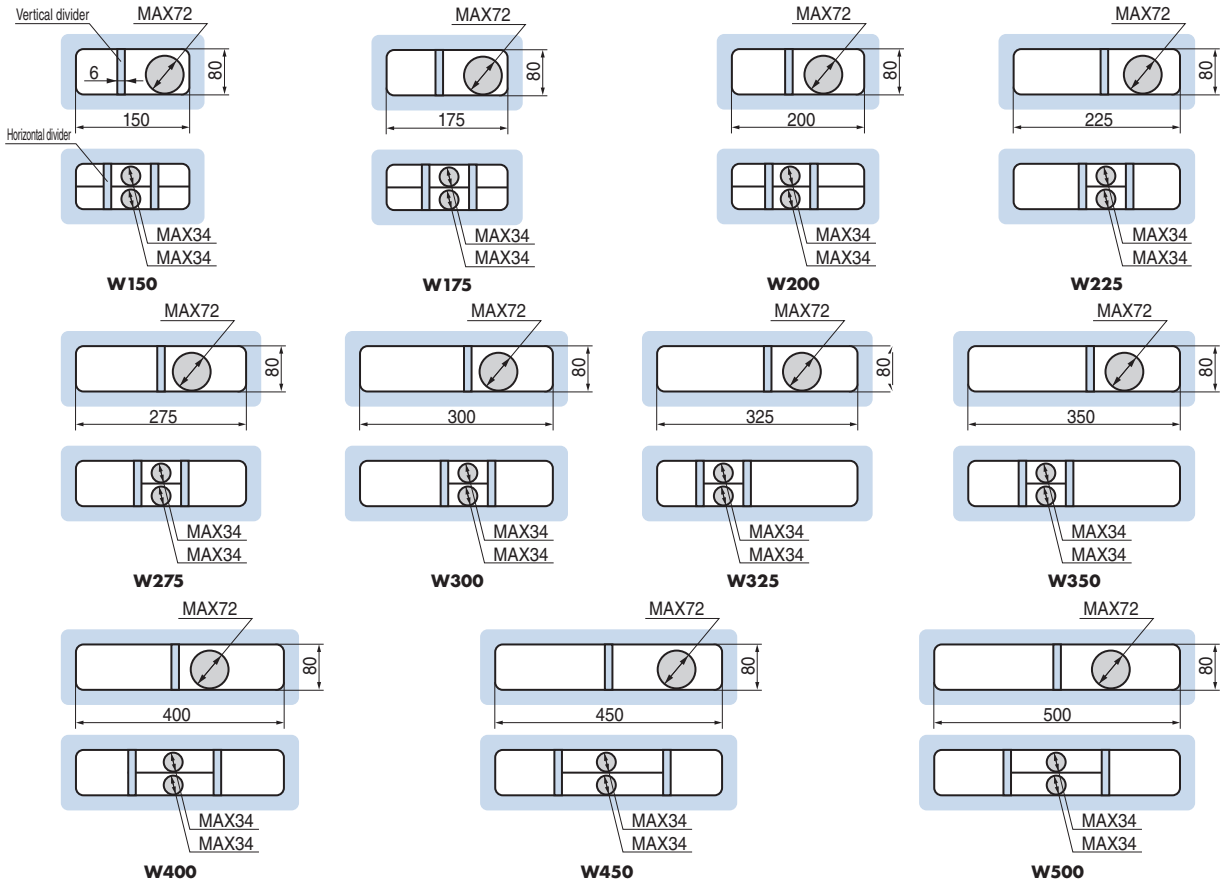
Page 59



Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 59 for further information.

TKP91H80 internal cross-section dimensions

Page 61



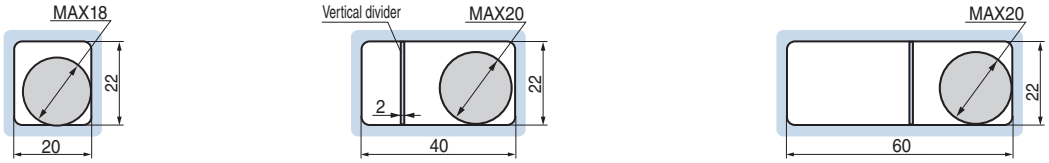
Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 61 for further information.

Cable Carrier Internal Cross-Section Dimensions

TKR Series Internal Cross-Section Dimensions

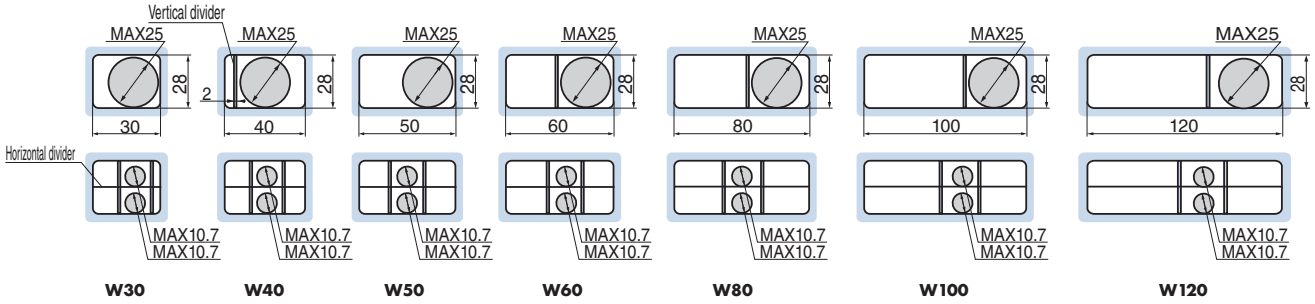
TKR15H22 internal cross-section dimensions

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TKR20H28 internal cross-section dimensions

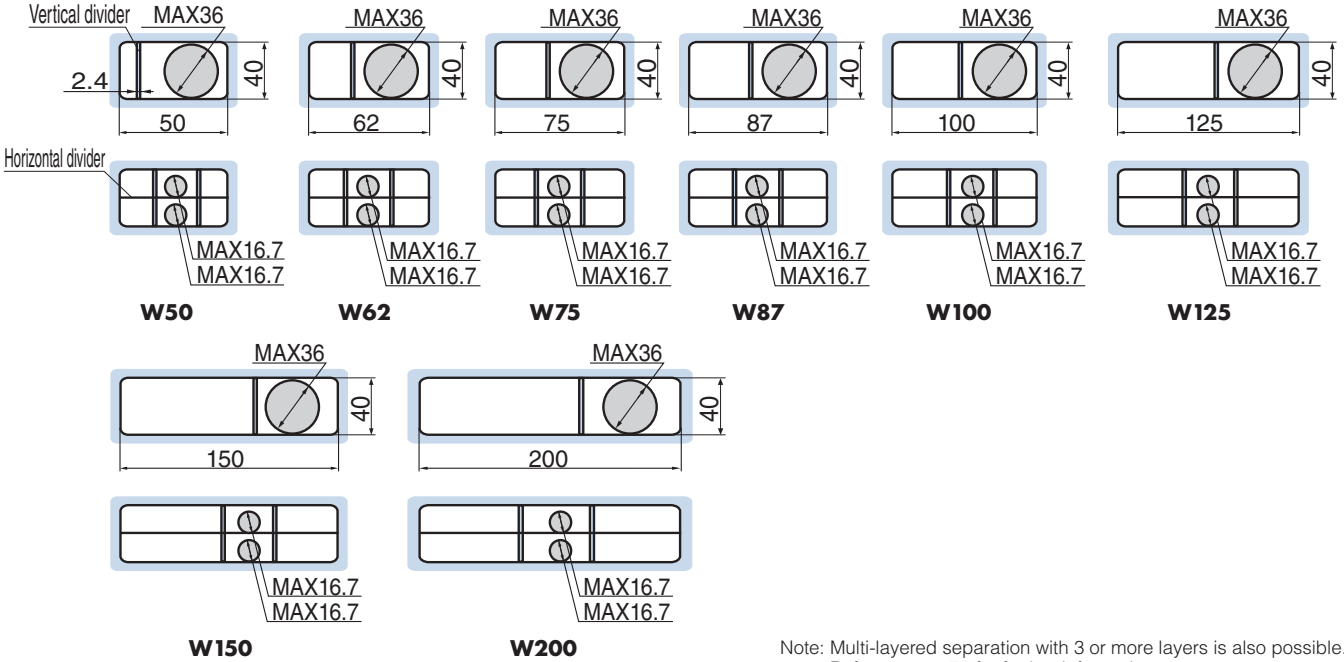
Page 69



Note: 3-layered separation is also possible. Refer to page 69 for further information.

TKR26H40 internal cross-section dimensions

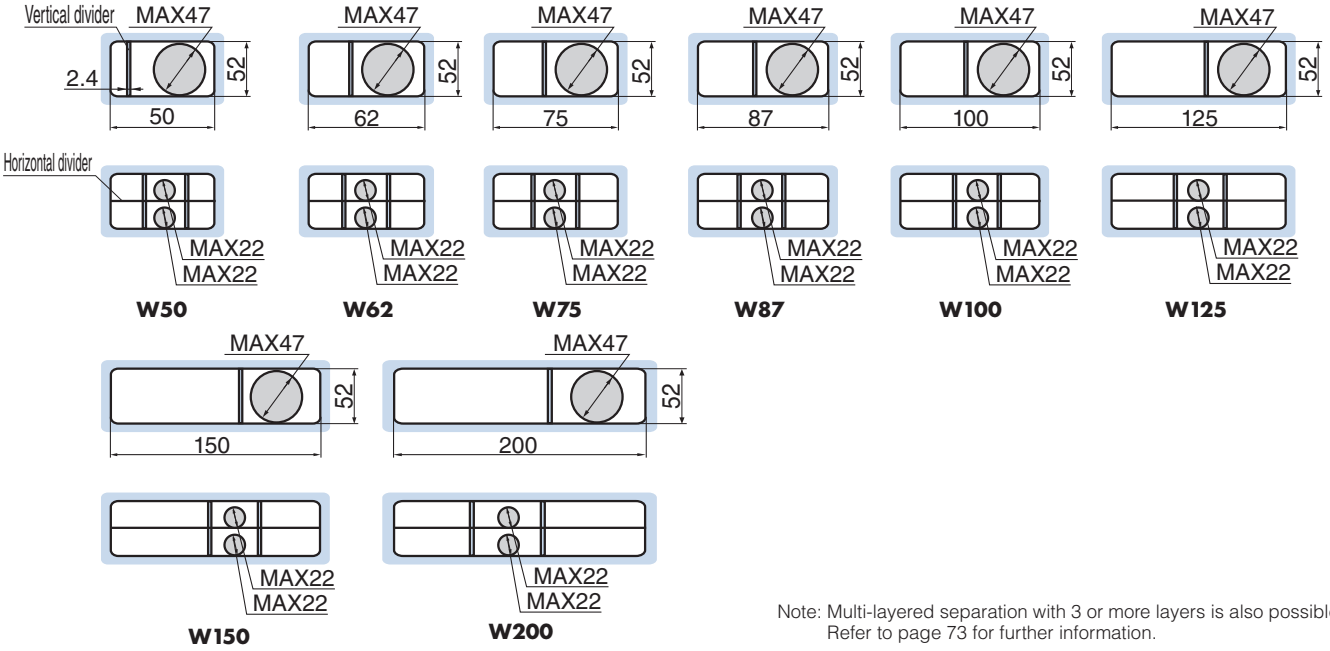
Page 71



Note: Multi-layered separation with 3 or more layers is also possible.
Refer to page 71 for further information.

TKR28H52 internal cross-section dimensions

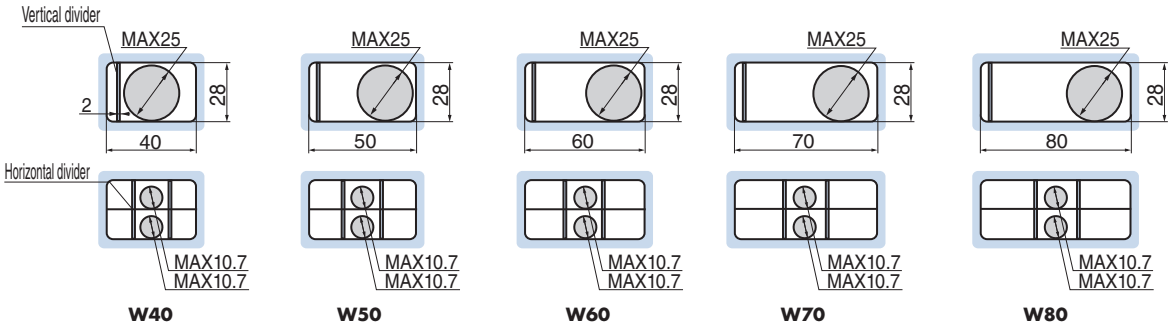
Page 73



Note: Multi-layered separation with 3 or more layers is also possible.
Refer to page 73 for further information.

TKR37H28 internal cross-section dimensions

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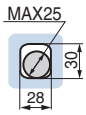
Note: 3-layered separation is also possible. Refer to page 75 for further information.

Cable Carrier Internal Cross-Section Dimensions

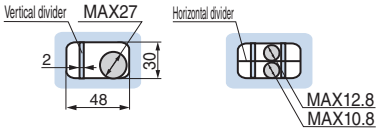
TKC Series Internal Cross-Section Dimensions

TKC28H30 internal cross-section dimensions

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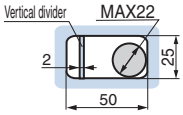
W28



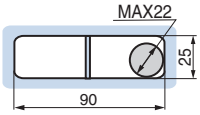
W48

TKC34H25 internal cross-section dimensions

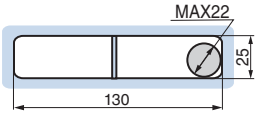
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W50



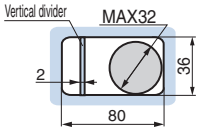
W90



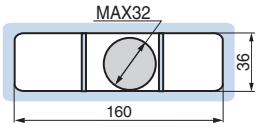
W130

TKC47H36 internal cross-section dimensions

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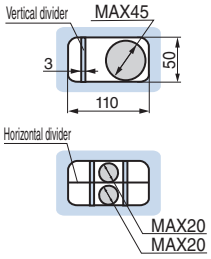
W80



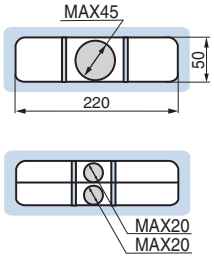
W160

TKC64H50 internal cross-section dimensions

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W110

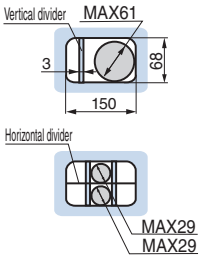


W220

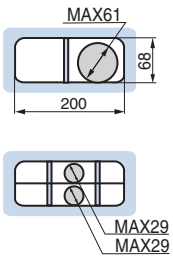
Note: 3-layered separation is also possible. Refer to page 85 for further information.

TKC85H68 internal cross-section dimensions

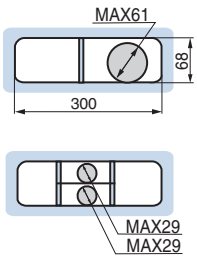
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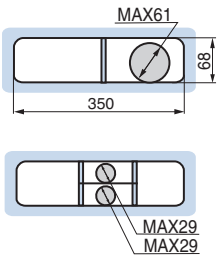
W150



W200



W300

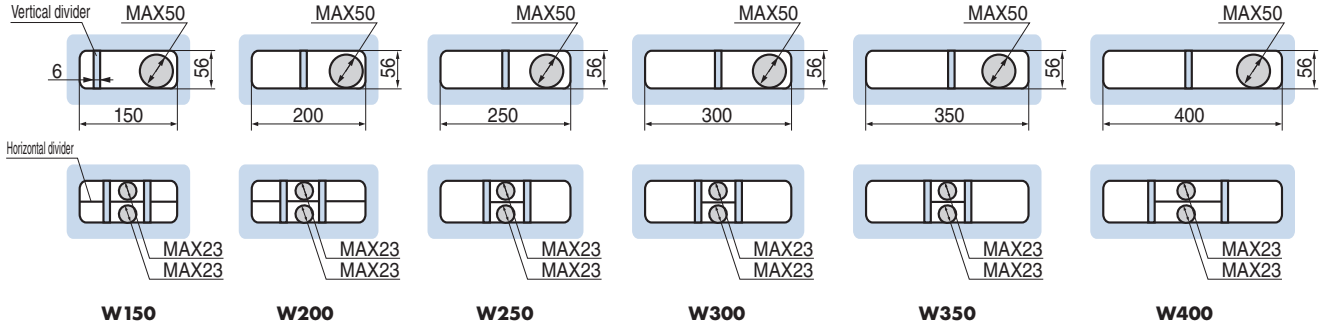


W350

Note: 3-layered separation is also possible. Refer to page 87 for further information.

TKC91H56 internal cross-section dimensions

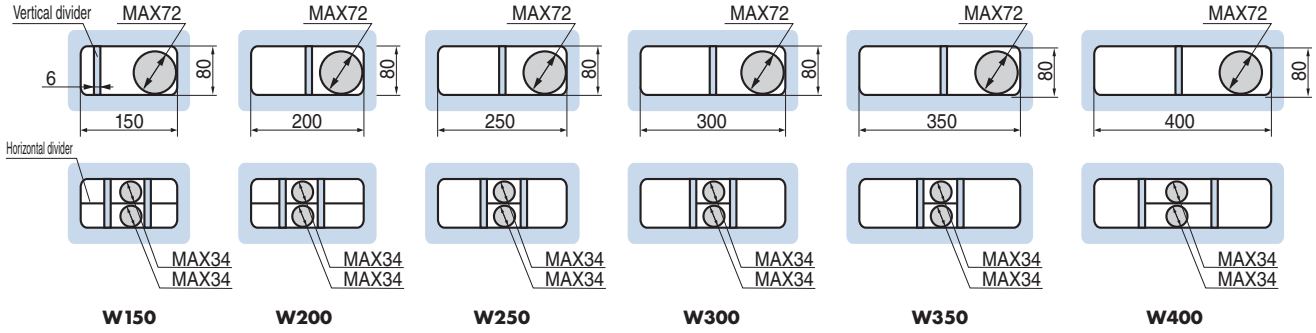
Page 89



Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 89 for further information.

TKC91H80 internal cross-section dimensions

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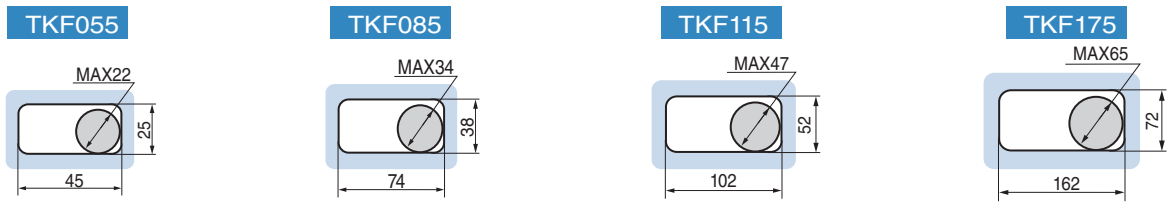


Note: Multi-layered separation with 3 or more layers is also possible. Refer to page 91 for further information.

TKF Series Internal Cross-Section Dimensions

TKF055 to TKF175 internal cross-section dimensions

Pages 107 to 110



Discontinued

Table of Product Masses

TKP Series

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP13H10-30W6R■■	0.2	—
TKP13H10-30W10R■■TC		—
TKP13H10-30W15R■■		—
TKP13H10-30W20R■■TC		—
TKP13H10W6-MO	—	1
TKP13H10W6-MI	—	
TKP13H10W6-FO	—	
TKP13H10W6-FI	—	
TKP13H10W10TC-MO	—	2
TKP13H10W10TC-MI	—	
TKP13H10W10TC-FO	—	
TKP13H10W10TC-FI	—	
TKP13H10W15-MO	—	3
TKP13H10W15-MI	—	
TKP13H10W15-FO	—	
TKP13H10W15-FI	—	
TKP13H10W20TC-MO	—	3
TKP13H10W20TC-MI	—	
TKP13H10W20TC-FO	—	
TKP13H10W20TC-FI	—	
TKP13H10-20W6R■■	0.2	—
TKP13H10-20W10R■■		—
TKP13H10-20W15R■■		—
TKP13H10-20W20R■■		—
TKP13H10W6-MO	—	1
TKP13H10W6-MI	—	
TKP13H10W6-FO	—	
TKP13H10W6-FI	—	
TKP13H10W10-MO	—	2
TKP13H10W10-MI	—	
TKP13H10W10-FO	—	
TKP13H10W10-FI	—	
TKP13H10W15-MO	—	3
TKP13H10W15-MI	—	
TKP13H10W15-FO	—	
TKP13H10W15-FI	—	
TKP13H10W20-MO	—	3
TKP13H10W20-MI	—	
TKP13H10W20-FO	—	
TKP13H10W20-FI	—	
TKP17H11-30W10R17	0.1	—
TKP17H11W10-MO	—	2
TKP17H11W10-MI	—	
TKP17H11W10-FO	—	
TKP17H11W10-FI	—	
TKP18H14-30W15R■■TC	0.3	—
TKP18H15-30W20R■■		—
TKP18H15-30W30R■■		—
TKP18H14-30W40R■■TC		—
TKP18H14W15TC-MO	—	7
TKP18H14W15TC-MI	—	
TKP18H14W15TC-FO	—	
TKP18H14W15TC-FI	—	
TKP18H15W20-MO	—	5
TKP18H15W20-MI	—	
TKP18H15W20-FO	—	
TKP18H15W20-FI	—	
TKP18H15W30-MO	—	6
TKP18H15W30-MI	—	
TKP18H15W30-FO	—	
TKP18H15W30-FI	—	
TKP18H14W40TC-MO	—	6
TKP18H14W40TC-MI	—	
TKP18H14W40TC-FO	—	
TKP18H14W40TC-FI	—	
TKP18H15-20W15R■■	0.3	—
TKP18H15-20W20R■■		—
TKP18H15-20W30R■■		—
TKP18H15-20W40R■■		—
TKP18H15W15-MO	—	5
TKP18H15W15-MI	—	
TKP18H15W15-FO	—	
TKP18H15W15-FI	—	
TKP18H15W20-MO	—	5
TKP18H15W20-MI	—	
TKP18H15W20-FO	—	
TKP18H15W20-FI	—	
TKP18H15W30-MO	—	6
TKP18H15W30-MI	—	
TKP18H15W30-FO	—	
TKP18H15W30-FI	—	
TKP18H15W40-MO	—	6
TKP18H15W40-MI	—	
TKP18H15W40-FO	—	
TKP18H15W40-FI	—	

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP25H15-30W15R■■	0.3	—
TKP25H15-30W20R■■		—
TKP25H15-30W30R■■		—
TKP25H15W15-MO	—	6
TKP25H15W15-MI	—	
TKP25H15W15-FO	—	
TKP25H15W15-FI	—	
TKP25H15W20-MO	—	8
TKP25H15W20-MI	—	
TKP25H15W20-FO	—	
TKP25H15W20-FI	—	
TKP25H15W30-MO	—	15
TKP25H15W30-MI	—	
TKP25H15W30-FO	—	
TKP25H15W30-FI	—	
TKP35H22-30W13R■■	0.4	—
TKP35H22-40W13R■■		—
TKP35H22-30W25R■■	0.4	—
TKP35H22-40W25R■■		—
TKP35H22-30W38R■■	0.5	—
TKP35H22-40W38R■■		—
TKP35H22-30W50R■■	0.6	—
TKP35H22-40W50R■■		—
TKP35H22-30W63R■■	0.7	—
TKP35H22-40W63R■■		—
TKP35H22W13-MO	—	13
TKP35H22W13-MI	—	
TKP35H22W13-FO	—	
TKP35H22W13-FI	—	
TKP35H22W25-MO	—	15
TKP35H22W25-MI	—	
TKP35H22W25-FO	—	
TKP35H22W25-FI	—	
TKP35H22W38-MO	—	18
TKP35H22W38-MI	—	
TKP35H22W38-FO	—	
TKP35H22W38-FI	—	
TKP35H22W50-MO	—	20
TKP35H22W50-MI	—	
TKP35H22W50-FO	—	
TKP35H22W50-FI	—	
TKP35H22W63-MO	—	24
TKP35H22W63-MI	—	
TKP35H22W63-FO	—	
TKP35H22W63-FI	—	
TKP35H22-ST	—	1
TKP35H22-HS38	—	3
TKP35H22-HS50	—	3
TKP35H22-HS63	—	4
TKP35H32-30W16R■■	0.2	—
TKP35H32-30W25R■■	0.6	—
TKP35H32-40W25R■■		—
TKP35H32-30W38R■■	0.7	—
TKP35H32-40W38R■■		—
TKP35H32-30W50R■■	0.8	—
TKP35H32-40W50R■■		—
TKP35H32W16-MO	—	18
TKP35H32W16-MI	—	
TKP35H32W16-FO	—	14
TKP35H32W25-MO	—	24
TKP35H32W25-MI	—	
TKP35H32W25-FO	—	26
TKP35H32W25-FI	—	
TKP35H32W25-MOCL	—	28
TKP35H32W25-MICL	—	
TKP35H32W25-FOCL	—	30
TKP35H32W25-FICL	—	
TKP35H32W38-MO	—	25
TKP35H32W38-MI	—	
TKP35H32W38-FO	—	27
TKP35H32W38-FI	—	
TKP35H32W38-MOCL	—	30
TKP35H32W38-MICL	—	
TKP35H32W38-FOCL	—	32
TKP35H32W38-FICL	—	
TKP35H32W50-MO	—	28
TKP35H32W50-MI	—	
TKP35H32W50-FO	—	30
TKP35H32W50-FI	—	
TKP35H32W50-MOCL	—	36
TKP35H32W50-MICL	—	
TKP35H32W50-FOCL	—	38
TKP35H32W50-FICL	—	
TKP35H32-ST	—	2
TKP35H32-HS25	—	1
TKP35H32-HS38	—	2
TKP35H32-HS50	—	4
TKP35H32W25-CL-P	—	4
TKP35H32W38-CL-P	—	5
TKP35H32W50-CL-P	—	8

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP45H25-30W38R■■	0.9	—
TKP45H25-40W38R■■		—
TKP45H25-30W58R■■	1.1	—
TKP45H25-40W58R■■		—
TKP45H25-30W78R■■	1.3	—
TKP45H25-40W78R■■		—
TKP45H25-30W103R■■	1.5	—
TKP45H25-40W103R■■		—
TKP45H25-MOA	—	82
TKP45H25-MIA	—	
TKP45H25-MOB	—	
TKP45H25-MIB	—	
TKP45H25-MC	—	76
TKP45H25-FOA	—	68
TKP45H25-FIA	—	
TKP45H25-FOB	—	
TKP45H25-FIB	—	
TKP45H25-FC	—	54
TKP45H25-MOAGA	—	91
TKP45H25-MIAGA	—	
TKP45H25-MOBGA	—	
TKP45H25-MIBGA	—	
TKP45H25-MCGA	—	82
TKP45H25W38-MO	—	59
TKP45H25W38-MI	—	
TKP45H25W38-FO	—	49
TKP45H25W38-FI	—	
TKP45H25W58-MO	—	67
TKP45H25W58-MI	—	
TKP45H25W58-FO	—	57
TKP45H25W58-FI	—	
TKP45H25W78-MO	—	75
TKP45H25W78-MI	—	
TKP45H25W78-FO	—	75
TKP45H25W78-FI	—	
TKP45H25W103-MO	—	85
TKP45H25W103-MI	—	
TKP45H25W103-FO	—	85
TKP45H25W103-FI	—	
TKP45H25-ST	—	2
TKP45H25-HS38	—	3
TKP45H25-HS58	—	4
TKP45H25-HS78	—	6
TKP45H25-HS103	—	8
TKP58H39-30W50R■■	1.6	—
TKP58H39-40W50R■■		—
TKP58H39-30W75R■■	1.7	—
TKP58H39-40W75R■■		—
TKP58H39-30W100R■■	1.8	—
TKP58H39-40W100R■■		—
TKP58H39-30W125R■■	1.9	—
TKP58H39-40W125R■■		—
TKP58H39-MOA	—	127
TKP58H39-MIA	—	
TKP58H39-MOB	—	
TKP58H39-MIB	—	
TKP58H39-MC	—	128
TKP58H39-FOA	—	104
TKP58H39-FIA	—	
TKP58H39-FOB	—	
TKP58H39-FIB	—	
TKP58H39-FC	—	96
TKP58H39-MOAGA	—	127
TKP58H39-MIAGA	—	
TKP58H39-MOBGA	—	
TKP58H39-MIBGA	—	
TKP58H39-MCGA	—	115
TKP58H39W50-MO	—	115
TKP58H39W50-MI	—	
TKP58H39W50-FO	—	95
TKP58H39W50-FI	—	
TKP58H39W75-MO	—	130
TKP58H39W75-MI	—	
TKP58H39W75-FO	—	110
TKP58H39W75-FI	—	
TKP58H39W100-MO	—	145
TKP58H39W100-MI	—	
TKP58H39W100-FO	—	125
TKP58H39W100-FI	—	
TKP58H39W125-MO	—	160
TKP58H39W125-MI	—	
TKP58H39W125-FO	—	140
TKP58H39W125-FI	—	
TKP58H39-ST	—	4
TKP58H39-HS50	—	4
TKP58H39-HS75	—	6
TKP58H39-HS100	—	8
TKP58H39-HS125	—	10

TKP Series

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP62H34W150R■■	1.8	—
TKP62H34W200R■■	2.1	—
TKP62H34-MOA	—	210
TKP62H34-MIA	—	
TKP62H34-FOA	—	202
TKP62H34-FIA	—	
TKP62H34-MOAGA	—	210
TKP62H34-MIAGA	—	
TKP62H34-ST	—	4
TKP62H34-HS150	—	12
TKP62H34-HS200	—	14
TKP68H46-30W75R■■	1.9	—
TKP68H46-40W75R■■		—
TKP68H46-30W100R■■	2.0	—
TKP68H46-40W100R■■		—
TKP68H46-30W125R■■	2.1	—
TKP68H46-40W125R■■		—
TKP68H46-30W150R■■	2.2	—
TKP68H46-40W150R■■		—
TKP68H46-30W175R■■	2.4	—
TKP68H46-40W175R■■		—
TKP68H46W75-MU	—	133
TKP68H46W75-FU	—	127
TKP68H46W75-MUGA	—	133
TKP68H46W100-MU	—	143
TKP68H46W100-FU	—	137
TKP68H46W100-MUGA	—	143
TKP68H46W125-MU	—	154
TKP68H46W125-FU	—	147
TKP68H46W125-MUGA	—	154
TKP68H46W150-MU	—	163
TKP68H46W150-FU	—	157
TKP68H46W150-MUGA	—	163
TKP68H46W175-MU	—	174
TKP68H46W175-FU	—	167
TKP68H46W175-MUGA	—	174
TKP68H46-MOA	—	200
TKP68H46-MIA	—	
TKP68H46-MC	—	206
TKP68H46-FOA	—	174
TKP68H46-FIA	—	
TKP68H46-FC	—	182
TKP68H46-MOAGA	—	209
TKP68H46-MIAGA	—	
TKP68H46-STAS	—	4
TKP68H46-STAL	—	4
TKP68H46-STBL	—	7
TKP68H46-STBE	—	7
TKP68H46-HS75	—	5
TKP68H46-HS100	—	7
TKP68H46-HS125	—	9
TKP68H46-HS150	—	11
TKP68H46-HS175	—	13
TKP68H46-EHS22	—	2
TKP68H46-EHS29	—	3
TKP68H46-EHS36	—	3
TKP68H46-EHS43	—	4
TKP68H46-EHS50	—	4
TKP68H46-EHS21.5	—	2
TKP68H46-EHS28.5	—	3
TKP68H46-EHS35.5	—	3
TKP68H46-EHS42.5	—	4
TKP68H46-EHS49.5	—	4
TKP68H46-EHS23.5	—	2
TKP68H46-EHS30.5	—	3
TKP68H46-EHS37.5	—	4
TKP68H46-EHS44.5	—	4
TKP68H46-EHS51.5	—	5
TKP68H46-EHS24	—	3
TKP68H46-EHS31	—	3
TKP68H46-EHS38	—	4
TKP68H46-EHS45	—	4
TKP68H46-EHS52	—	5
TKP68H46-EHS22.5	—	2
TKP68H46-EHS29.5	—	3
TKP68H46-EHS36.5	—	3
TKP68H46-EHS43.5	—	4
TKP68H46-EHS50.5	—	4
TKP90H50W100R■■	2.6	—
TKP90H50W150R■■	2.9	—
TKP90H50W200R■■	3.1	—
TKP90H50-MOA	—	408
TKP90H50-MIA	—	
TKP90H50-FOA	—	374
TKP90H50-FIA	—	
TKP90H50-MOAGA	—	403
TKP90H50-MIAGA	—	
TKP90H50-ST	—	7
TKP90H50-HS100	—	10
TKP90H50-HS150	—	12
TKP90H50-HS200	—	14

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP91H56W150R■■	4.3	—
TKP91H56W175R■■	4.5	—
TKP91H56W200R■■	4.6	—
TKP91H56W225R■■	4.8	—
TKP91H56W250R■■	5.0	—
TKP91H56W275R■■	5.2	—
TKP91H56W300R■■	5.4	—
TKP91H56W325R■■	5.6	—
TKP91H56W350R■■	5.7	—
TKP91H56W400R■■	6.1	—
TKP91H56W450R■■	6.5	—
TKP91H56W500R■■	6.8	—
TKP91H56W150R■■-GA	4.6	—
TKP91H56W175R■■-GA	4.8	—
TKP91H56W200R■■-GA	5.0	—
TKP91H56W225R■■-GA	5.2	—
TKP91H56W250R■■-GA	5.4	—
TKP91H56W275R■■-GA	5.5	—
TKP91H56W300R■■-GA	5.7	—
TKP91H56W325R■■-GA	5.9	—
TKP91H56W350R■■-GA	6.1	—
TKP91H56W400R■■-GA	6.4	—
TKP91H56W450R■■-GA	6.8	—
TKP91H56W500R■■-GA	7.2	—
TKP91H56W150-MU	—	494
TKP91H56W150-FU	—	456
TKP91H56W150-MUCR	—	584
TKP91H56W150-FUCR	—	546
TKP91H56W150-MUGA	—	494
TKP91H56W150-FUGA	—	488
TKP91H56W150-MUCRGA	—	587
TKP91H56W150-FUCRGA	—	581
TKP91H56W175-MU	—	510
TKP91H56W175-FU	—	472
TKP91H56W175-MUCR	—	615
TKP91H56W175-FUCR	—	577
TKP91H56W175-MUGA	—	510
TKP91H56W175-FUGA	—	504
TKP91H56W175-MUCRGA	—	618
TKP91H56W175-FUCRGA	—	612
TKP91H56W200-MU	—	526
TKP91H56W200-FU	—	488
TKP91H56W200-MUCR	—	646
TKP91H56W200-FUCR	—	608
TKP91H56W200-MUGA	—	526
TKP91H56W200-FUGA	—	520
TKP91H56W200-MUCRGA	—	649
TKP91H56W200-FUCRGA	—	643
TKP91H56W225-MU	—	542
TKP91H56W225-FU	—	504
TKP91H56W225-MUCR	—	677
TKP91H56W225-FUCR	—	639
TKP91H56W225-MUGA	—	542
TKP91H56W225-FUGA	—	536
TKP91H56W225-MUCRGA	—	680
TKP91H56W225-FUCRGA	—	674
TKP91H56W250-MU	—	560
TKP91H56W250-FU	—	522
TKP91H56W250-MUCR	—	710
TKP91H56W250-FUCR	—	672
TKP91H56W250-MUGA	—	560
TKP91H56W250-FUGA	—	554
TKP91H56W250-MUCRGA	—	713
TKP91H56W250-FUCRGA	—	707
TKP91H56W275-MU	—	576
TKP91H56W275-FU	—	538
TKP91H56W275-MUCR	—	741
TKP91H56W275-FUCR	—	703
TKP91H56W275-MUGA	—	576
TKP91H56W275-FUGA	—	570
TKP91H56W275-MUCRGA	—	744
TKP91H56W275-FUCRGA	—	738
TKP91H56W300-MU	—	592
TKP91H56W300-FU	—	554
TKP91H56W300-MUCR	—	772
TKP91H56W300-FUCR	—	724
TKP91H56W300-MUGA	—	592
TKP91H56W300-FUGA	—	586
TKP91H56W300-MUCRGA	—	775
TKP91H56W300-FUCRGA	—	769
TKP91H56W325-MU	—	608
TKP91H56W325-FU	—	570
TKP91H56W325-MUCR	—	803
TKP91H56W325-FUCR	—	765
TKP91H56W325-MUGA	—	608
TKP91H56W325-FUGA	—	602
TKP91H56W325-MUCRGA	—	806
TKP91H56W325-FUCRGA	—	800

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP91H56W350-MU	—	626
TKP91H56W350-FU	—	588
TKP91H56W350-MUCR	—	836
TKP91H56W350-FUCR	—	798
TKP91H56W350-MUGA	—	626
TKP91H56W350-FUGA	—	620
TKP91H56W350-MUCRGA	—	839
TKP91H56W350-FUCRGA	—	833
TKP91H56W400-MU	—	658
TKP91H56W400-FU	—	620
TKP91H56W400-MUCR	—	898
TKP91H56W400-FUCR	—	860
TKP91H56W400-MUGA	—	658
TKP91H56W400-FUGA	—	652
TKP91H56W400-MUCRGA	—	901
TKP91H56W400-FUCRGA	—	895
TKP91H56W450-MU	—	692
TKP91H56W450-FU	—	654
TKP91H56W450-MUCR	—	962
TKP91H56W450-FUCR	—	924
TKP91H56W450-MUGA	—	692
TKP91H56W450-FUGA	—	686
TKP91H56W450-MUCRGA	—	965
TKP91H56W450-FUCRGA	—	959
TKP91H56W500-MU	—	724
TKP91H56W500-FU	—	686
TKP91H56W500-MUCR	—	1,024
TKP91H56W500-FUCR	—	996
TKP91H56W500-MUGA	—	724
TKP91H56W500-FUGA	—	718
TKP91H56W500-MUCRGA	—	1,027
TKP91H56W500-FUCRGA	—	1,021
TKP91H56-STS	—	15
TKP91H56-STL	—	15
TKP91H56-STE	—	12
TKP91H56-HS150	—	7
TKP91H56-HS175	—	8
TKP91H56-HS200	—	9
TKP91H56-EHS24	—	2
TKP91H56-EHS30	—	3
TKP91H56-EHS36	—	4
TKP91H56-EHS42	—	4
TKP91H56-EHS48	—	5
TKP91H56-EHS54	—	5
TKP91H56-EHS24.5	—	2
TKP91H56-EHS30.5	—	3
TKP91H56-EHS36.5	—	4
TKP91H56-EHS42.5	—	4
TKP91H56-EHS48.5	—	5
TKP91H56-EHS54.5	—	5
TKP91H56-EHS22	—	2
TKP91H56-EHS28	—	3
TKP91H56-EHS34	—	3
TKP91H56-EHS40	—	4
TKP91H56-EHS46	—	4
TKP91H56-EHS52	—	5
TKP91H56-EHS22.5	—	2
TKP91H56-EHS28.5	—	3
TKP91H56-EHS34.5	—	3
TKP91H56-EHS40.5	—	4
TKP91H56-EHS46.5	—	4
TKP91H56-EHS52.5	—	5
TKP91H56-EHS23	—	2
TKP91H56-EHS29	—	3
TKP91H56-EHS35	—	4
TKP91H56-EHS41	—	4
TKP91H56-EHS47	—	5
TKP91H56-EHS53	—	5
TKP91H56-EHS23.5	—	2
TKP91H56-EHS29.5	—	3
TKP91H56-EHS35.5	—	4
TKP91H56-EHS41.5	—	4
TKP91H56-EHS47.5	—	5
TKP91H56-EHS53.5	—	5

Table of Product Masses

TKP Series

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP91H80W150R■■	6.7	—
TKP91H80W175R■■	6.8	—
TKP91H80W200R■■	7.0	—
TKP91H80W225R■■	7.2	—
TKP91H80W250R■■	7.4	—
TKP91H80W275R■■	7.5	—
TKP91H80W300R■■	7.7	—
TKP91H80W325R■■	7.9	—
TKP91H80W350R■■	8.1	—
TKP91H80W400R■■	8.5	—
TKP91H80W450R■■	8.8	—
TKP91H80W500R■■	9.2	—
TKP91H80W150R■■-GA	7.0	—
TKP91H80W175R■■-GA	7.1	—
TKP91H80W200R■■-GA	7.3	—
TKP91H80W225R■■-GA	7.5	—
TKP91H80W250R■■-GA	7.7	—
TKP91H80W275R■■-GA	7.9	—
TKP91H80W300R■■-GA	8.0	—
TKP91H80W325R■■-GA	8.2	—
TKP91H80W350R■■-GA	8.4	—
TKP91H80W400R■■-GA	8.8	—
TKP91H80W450R■■-GA	9.1	—
TKP91H80W500R■■-GA	9.5	—
TKP91H80W150-MU	—	705
TKP91H80W150-FU	—	705
TKP91H80W150-MUCR	—	795
TKP91H80W150-FUCR	—	795
TKP91H80W150-MUGA	—	796
TKP91H80W150-FUGA	—	828
TKP91H80W150-MUCRGA	—	889
TKP91H80W150-FUCRGA	—	921
TKP91H80W175-MU	—	720
TKP91H80W175-FU	—	720
TKP91H80W175-MUCR	—	825
TKP91H80W175-FUCR	—	825
TKP91H80W175-MUGA	—	812
TKP91H80W175-FUGA	—	844
TKP91H80W175-MUCRGA	—	920
TKP91H80W175-FUCRGA	—	952
TKP91H80W200-MU	—	735
TKP91H80W200-FU	—	735
TKP91H80W200-MUCR	—	855
TKP91H80W200-FUCR	—	855
TKP91H80W200-MUGA	—	828
TKP91H80W200-FUGA	—	860
TKP91H80W200-MUCRGA	—	951
TKP91H80W200-FUCRGA	—	983
TKP91H80W225-MU	—	750
TKP91H80W225-FU	—	750
TKP91H80W225-MUCR	—	885
TKP91H80W225-FUCR	—	885
TKP91H80W225-MUGA	—	844
TKP91H80W225-FUGA	—	876
TKP91H80W225-MUCRGA	—	982
TKP91H80W225-FUCRGA	—	1,014
TKP91H80W250-MU	—	765
TKP91H80W250-FU	—	765
TKP91H80W250-MUCR	—	915
TKP91H80W250-FUCR	—	915
TKP91H80W250-MUGA	—	862
TKP91H80W250-FUGA	—	894
TKP91H80W250-MUCRGA	—	1,015
TKP91H80W250-FUCRGA	—	1,047
TKP91H80W275-MU	—	780
TKP91H80W275-FU	—	780
TKP91H80W275-MUCR	—	945
TKP91H80W275-FUCR	—	945
TKP91H80W275-MUGA	—	878
TKP91H80W275-FUGA	—	910
TKP91H80W275-MUCRGA	—	1,046
TKP91H80W275-FUCRGA	—	1,078
TKP91H80W300-MU	—	795
TKP91H80W300-FU	—	795
TKP91H80W300-MUCR	—	975
TKP91H80W300-FUCR	—	975
TKP91H80W300-MUGA	—	894
TKP91H80W300-FUGA	—	926
TKP91H80W300-MUCRGA	—	1,077
TKP91H80W300-FUCRGA	—	1,109
TKP91H80W325-MU	—	910
TKP91H80W325-FU	—	910
TKP91H80W325-MUCR	—	1,005
TKP91H80W325-FUCR	—	1,005
TKP91H80W325-MUGA	—	910
TKP91H80W325-FUGA	—	942
TKP91H80W325-MUCRGA	—	1,108
TKP91H80W325-FUCRGA	—	1,140

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP91H80W350-MU	—	825
TKP91H80W350-FU	—	825
TKP91H80W350-MUCR	—	1,035
TKP91H80W350-FUCR	—	1,035
TKP91H80W350-MUGA	—	928
TKP91H80W350-FUGA	—	960
TKP91H80W350-MUCRGA	—	1,141
TKP91H80W350-FUCRGA	—	1,173
TKP91H80W400-MU	—	855
TKP91H80W400-FU	—	855
TKP91H80W400-MUCR	—	1,095
TKP91H80W400-FUCR	—	1,095
TKP91H80W400-MUGA	—	960
TKP91H80W400-FUGA	—	992
TKP91H80W400-MUCRGA	—	1,203
TKP91H80W400-FUCRGA	—	1,235
TKP91H80W450-MU	—	885
TKP91H80W450-FU	—	885
TKP91H80W450-MUCR	—	1,155
TKP91H80W450-FUCR	—	1,155
TKP91H80W450-MUGA	—	994
TKP91H80W450-FUGA	—	1,026
TKP91H80W450-MUCRGA	—	1,267
TKP91H80W450-FUCRGA	—	1,299
TKP91H80W500-MU	—	915
TKP91H80W500-FU	—	915
TKP91H80W500-MUCR	—	1,215
TKP91H80W500-FUCR	—	1,215
TKP91H80W500-MUGA	—	1,026
TKP91H80W500-FUGA	—	1,058
TKP91H80W500-MUCRGA	—	1,329
TKP91H80W500-FUCRGA	—	1,361
TKP91H80-STS	—	20
TKP91H80-STL	—	20
TKP91H80-STE	—	17
TKP91H80-HS150	—	7
TKP91H80-HS175	—	8
TKP91H80-HS200	—	9
TKP91H80-EHS24	—	2
TKP91H80-EHS30	—	3
TKP91H80-EHS36	—	4
TKP91H80-EHS42	—	4
TKP91H80-EHS48	—	5
TKP91H80-EHS54	—	5
TKP91H80-EHS24.5	—	2
TKP91H80-EHS30.5	—	3
TKP91H80-EHS36.5	—	4
TKP91H80-EHS42.5	—	4
TKP91H80-EHS48.5	—	5
TKP91H80-EHS54.5	—	5
TKP91H80-EHS22	—	2
TKP91H80-EHS28	—	3
TKP91H80-EHS34	—	3
TKP91H80-EHS40	—	4
TKP91H80-EHS46	—	4
TKP91H80-EHS52	—	5
TKP91H80-EHS22.5	—	2
TKP91H80-EHS28.5	—	3
TKP91H80-EHS34.5	—	3
TKP91H80-EHS40.5	—	4
TKP91H80-EHS46.5	—	4
TKP91H80-EHS52.5	—	5
TKP91H80-EHS23	—	2
TKP91H80-EHS29	—	3
TKP91H80-EHS35	—	4
TKP91H80-EHS41	—	4
TKP91H80-EHS47	—	5
TKP91H80-EHS53	—	5
TKP91H80-EHS23.5	—	2
TKP91H80-EHS29.5	—	3
TKP91H80-EHS35.5	—	4
TKP91H80-EHS41.5	—	4
TKP91H80-EHS47.5	—	5
TKP91H80-EHS53.5	—	5
TKP125H74W150R■■	4.5	—
TKP125H74W250R■■	5.1	—
TKP125H74W350R■■	5.7	—
TKP125H74-MOA	—	966
TKP125H74-MIA	—	966
TKP125H74-FOA	—	864
TKP125H74-FIA	—	864
TKP125H74-MOAGA	—	925
TKP125H74-MIAGA	—	925
TKP125H74-ST	—	15
TKP125H74-HS150	—	12
TKP125H74-HS250	—	16

TKP Series, MW Type

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP13H10-30W10R■■M	0.2	—
TKP13H10-30W20R■■M	0.2	—
TKP13H10W10M-MO	—	2
TKP13H10W10M-MI	—	
TKP13H10W10M-FO	—	2
TKP13H10W10M-FI	—	
TKP13H10W20M-MO	—	3
TKP13H10W20M-MI	—	
TKP13H10W20M-FO	—	3
TKP13H10W20M-FI	—	
TKP18H14-30W15R■■M	0.3	—
TKP18H14-30W40R■■M	0.3	—
TKP18H14W15M-MO	—	7
TKP18H14W15M-MI	—	
TKP18H14W15M-FO	—	7
TKP18H14W15M-FI	—	
TKP18H14W40M-MO	—	10
TKP18H14W40M-MI	—	
TKP18H14W40M-FO	—	10
TKP18H14W40M-FI	—	
TKP25H15-30W15R■■M	0.3	—
TKP25H15-30W20R■■M	0.3	—
TKP25H15-30W30R■■M	0.3	—
TKP25H15W15M-MO	—	6
TKP25H15W15M-MI	—	
TKP25H15W15M-FO	—	6
TKP25H15W15M-FI	—	
TKP25H15W20M-MO	—	15
TKP25H15W20M-MI	—	
TKP25H15W20M-FO	—	15
TKP25H15W20M-FI	—	
TKP25H15W30M-MO	—	8
TKP25H15W30M-MI	—	
TKP25H15W30M-FO	—	7
TKP25H15W30M-FI	—	
TKP35H22-30W13R■■M	0.4	—
TKP35H22-40W13R■■M		—
TKP35H22-30W25R■■M	0.4	—
TKP35H22-40W25R■■M		—
TKP35H22-30W38R■■M	0.5	—
TKP35H22-40W38R■■M		—
TKP35H22-30W50R■■M	0.6	—
TKP35H22-40W50R■■M		—
TKP35H22-30W63R■■M	0.7	—
TKP35H22-40W63R■■M		—
TKP35H22W13M-MO	—	13
TKP35H22W13M-MI	—	
TKP35H22W13M-FO	—	13
TKP35H22W13M-FI	—	
TKP35H22W25M-MO	—	15
TKP35H22W25M-MI	—	
TKP35H22W25M-FO	—	15
TKP35H22W25M-FI	—	
TKP35H22W38M-MO	—	18
TKP35H22W38M-MI	—	
TKP35H22W38M-FO	—	18
TKP35H22W38M-FI	—	
TKP35H22W50M-MO	—	20
TKP35H22W50M-MI	—	
TKP35H22W50M-FO	—	20
TKP35H22W50M-FI	—	
TKP35H22W63M-MO	—	24
TKP35H22W63M-MI	—	
TKP35H22W63M-FO	—	24
TKP35H22W63M-FI	—	
TKP35H22M-ST	—	2
TKP35H22M-HS38	—	3
TKP35H22M-HS50	—	3
TKP35H22M-HS63	—	4
TKP35H32-30W16R■■M	0.2	—
TKP35H32W16M-MO	—	18
TKP35H32W16M-MI	—	
TKP35H32W16M-FO	—	14

Model number/ product name	Mass (kg/m)	Mass (g/each)
TKP45H25-30W38R■■M	0.9	—
TKP45H25-40W38R■■M		—
TKP45H25-30W58R■■M	1.1	—
TKP45H25-40W58R■■M		—
TKP45H25-30W78R■■M	1.3	—
TKP45H25-40W78R■■M		—
TKP45H25-30W103R■■M	1.5	—
TKP45H25-40W103R■■M		—
TKP45H25-MOA	—	82
TKP45H25-MIA	—	
TKP45H25-MOB	—	
TKP45H25-MIB	—	
TKP45H25-MC	—	76
TKP45H25-FOA	—	68
TKP45H25-FIA	—	
TKP45H25-FOB	—	
TKP45H25-FIB	—	
TKP45H25-FC	—	54
TKP45H25M-ST	—	2
TKP45H25M-HS38	—	3
TKP45H25M-HS58	—	4
TKP45H25M-HS78	—	6
TKP45H25M-HS103	—	8

Table of Product Masses

TKR Series

Model number/product name	Mass (kg/m)	Mass (g/each)
TKR15H22-30W20R■■	0.3	—
TKR15H22-30W20R■■ETL		—
TKR15H22-30W40R■■	0.4	—
TKR15H22-30W40R■■ETL		—
TKR15H22-30W60R■■	0.5	—
TKR15H22-30W60R■■ETL		—
TKR15H22W20-MO	—	11
TKR15H22W20-MI	—	
TKR15H22W20-FO	—	11
TKR15H22W20-FI	—	
TKR15H22W40-MO	—	12
TKR15H22W40-MI	—	
TKR15H22W40-FO	—	12
TKR15H22W40-FI	—	
TKR15H22W60-MO	—	14
TKR15H22W60-MI	—	
TKR15H22W60-FO	—	14
TKR15H22W60-FI	—	
TKR15H22-ST	—	1
TKR15H22-HS20	—	1
TKR15H22-HS40	—	2
TKR15H22-HS60	—	3
TKR20H28W30R■■	0.7	—
TKR20H28W40R■■	0.7	—
TKR20H28W50R■■	0.8	—
TKR20H28W60R■■	0.8	—
TKR20H28W80R■■	0.9	—
TKR20H28W100R■■	1.0	—
TKR20H28W120R■■	1.1	—
TKR20H28W30-MU	—	36
TKR20H28W30-MO	—	34
TKR20H28W30-MI	—	
TKR20H28W30-FU	—	37
TKR20H28W30-FO	—	35
TKR20H28W30-FI	—	
TKR20H28W40-MU	—	36
TKR20H28W40-MO	—	34
TKR20H28W40-MI	—	
TKR20H28W40-FU	—	38
TKR20H28W40-FO	—	36
TKR20H28W40-FI	—	
TKR20H28W50-MU	—	37
TKR20H28W50-MO	—	35
TKR20H28W50-MI	—	
TKR20H28W50-FU	—	38
TKR20H28W50-FO	—	36
TKR20H28W50-FI	—	
TKR20H28W60-MU	—	37
TKR20H28W60-MO	—	35
TKR20H28W60-MI	—	
TKR20H28W60-FU	—	39
TKR20H28W60-FO	—	37
TKR20H28W60-FI	—	
TKR20H28W80-MU	—	38
TKR20H28W80-MO	—	36
TKR20H28W80-MI	—	
TKR20H28W80-FU	—	40
TKR20H28W80-FO	—	38
TKR20H28W80-FI	—	
TKR20H28W100-MU	—	39
TKR20H28W100-MO	—	37
TKR20H28W100-MI	—	
TKR20H28W100-FU	—	41
TKR20H28W100-FO	—	39
TKR20H28W100-FI	—	
TKR20H28W120-MU	—	39
TKR20H28W120-MO	—	37
TKR20H28W120-MI	—	
TKR20H28W120-FU	—	41
TKR20H28W120-FO	—	39
TKR20H28W120-FI	—	
TKR20H28-STAS	—	1
TKR20H28-STAL	—	1
TKR20H28-HS30	—	2
TKR20H28-HS40	—	2
TKR20H28-HS50	—	3
TKR20H28-HS60	—	4
TKR20H28-HS80	—	4
TKR20H28-HS100	—	5
TKR20H28-HS120	—	5

Model number/product name	Mass (kg/m)	Mass (g/each)
TKR26H40W50R■■	1.5	—
TKR26H40W62R■■	1.6	—
TKR26H40W75R■■	1.7	—
TKR26H40W87R■■	1.8	—
TKR26H40W100R■■	1.9	—
TKR26H40W125R■■	2.1	—
TKR26H40W150R■■	2.3	—
TKR26H40W200R■■	2.7	—
TKR26H40W50-MU	—	65
TKR26H40W50-FU	—	61
TKR26H40W50-MUCL	—	74
TKR26H40W50-FUCL	—	70
TKR26H40W50-MUCR	—	92
TKR26H40W50-FUCR	—	88
TKR26H40W62-MU	—	69
TKR26H40W62-FU	—	65
TKR26H40W62-MUCR	—	103
TKR26H40W62-FUCR	—	99
TKR26H40W75-MU	—	71
TKR26H40W75-FU	—	67
TKR26H40W75-MUCL	—	84
TKR26H40W75-FUCL	—	80
TKR26H40W75-MUCR	—	111
TKR26H40W75-FUCR	—	107
TKR26H40W87-MU	—	74
TKR26H40W87-FU	—	70
TKR26H40W87-MUCR	—	118
TKR26H40W87-FUCR	—	114
TKR26H40W100-MU	—	77
TKR26H40W100-FU	—	73
TKR26H40W100-MUCL	—	94
TKR26H40W100-FUCL	—	90
TKR26H40W100-MUCR	—	130
TKR26H40W100-FUCR	—	126
TKR26H40W125-MU	—	83
TKR26H40W125-FU	—	79
TKR26H40W125-MUCL	—	104
TKR26H40W125-FUCL	—	100
TKR26H40W125-MUCR	—	148
TKR26H40W125-FUCR	—	144
TKR26H40W150-MU	—	88
TKR26H40W150-FU	—	84
TKR26H40W150-MUCL	—	113
TKR26H40W150-FUCL	—	109
TKR26H40W150-MUCR	—	166
TKR26H40W150-FUCR	—	162
TKR26H40W200-MU	—	100
TKR26H40W200-FU	—	90
TKR26H40W200-MUCR	—	189
TKR26H40W200-FUCR	—	190
TKR26H40-STAS	—	3
TKR26H40-STAL	—	3
TKR26H40-STBS	—	5
TKR26H40-STBL	—	5
TKR26H40-HS50	—	3
TKR26H40-HS62	—	4
TKR26H40-HS75	—	5
TKR26H40-HS87	—	6
TKR26H40-HS100	—	7
TKR26H40-HS125	—	9
TKR26H40-HS150	—	11
TKR26H40-HS200	—	15
TKR26H40W50-CL-U	—	9
TKR26H40W50-CRA	—	27
TKR26H40W62-CRA	—	33
TKR26H40W75-CL-U	—	13
TKR26H40W75-CRA	—	40
TKR26H40W87-CRA	—	47
TKR26H40W100-CL-U	—	17
TKR26H40W100-CRA	—	53
TKR26H40W125-CL-U	—	21
TKR26H40W125-CRA	—	65
TKR26H40W150-CL-U	—	25
TKR26H40W150-CRA	—	78
TKR26H40W200-CRA	—	104

Model number/product name	Mass (kg/m)	Mass (g/each)
TKR28H52W50R■■	2.0	—
TKR28H52W62R■■	2.1	—
TKR28H52W75R■■	2.2	—
TKR28H52W87R■■	2.3	—
TKR28H52W100R■■	2.4	—
TKR28H52W125R■■	2.6	—
TKR28H52W150R■■	2.8	—
TKR28H52W200R■■	3.2	—
TKR28H52W50-MU	—	88
TKR28H52W50-FU	—	84
TKR28H52W50-MUCL	—	97
TKR28H52W50-FUCL	—	93
TKR28H52W50-MUCR	—	115
TKR28H52W50-FUCR	—	111
TKR28H52W62-MU	—	92
TKR28H52W62-FU	—	87
TKR28H52W62-MUCR	—	126
TKR28H52W62-FUCR	—	121
TKR28H52W75-MU	—	94
TKR28H52W75-FU	—	90
TKR28H52W75-MUCL	—	107
TKR28H52W75-FUCL	—	103
TKR28H52W75-MUCR	—	134
TKR28H52W75-FUCR	—	130
TKR28H52W87-MU	—	97
TKR28H52W87-FU	—	93
TKR28H52W87-MUCR	—	141
TKR28H52W87-FUCR	—	137
TKR28H52W100-MU	—	100
TKR28H52W100-FU	—	96
TKR28H52W100-MUCL	—	117
TKR28H52W100-FUCL	—	113
TKR28H52W100-MUCR	—	153
TKR28H52W100-FUCR	—	149
TKR28H52W125-MU	—	106
TKR28H52W125-FU	—	102
TKR28H52W125-MUCL	—	127
TKR28H52W125-FUCL	—	123
TKR28H52W125-MUCR	—	171
TKR28H52W125-FUCR	—	167
TKR28H52W150-MU	—	111
TKR28H52W150-FU	—	107
TKR28H52W150-MUCL	—	136
TKR28H52W150-FUCL	—	132
TKR28H52W150-MUCR	—	189
TKR28H52W150-FUCR	—	185
TKR28H52W200-MU	—	135
TKR28H52W200-FU	—	119
TKR28H52W200-MUCR	—	239
TKR28H52W200-FUCR	—	223
TKR28H52-STAS	—	4
TKR28H52-STAL	—	4
TKR28H52-STBS	—	7
TKR28H52-STBL	—	7
TKR28H52-HS50	—	3
TKR28H52-HS62	—	4
TKR28H52-HS75	—	5
TKR28H52-HS87	—	6
TKR28H52-HS100	—	7
TKR28H52-HS125	—	9
TKR28H52-HS150	—	11
TKR28H52-HS200	—	15
TKR28H52W50-CL-U	—	9
TKR28H52W50-CRA	—	27
TKR28H52W62-CRA	—	34
TKR28H52W75-CL-U	—	13
TKR28H52W75-CRA	—	40
TKR28H52W87-CRA	—	47
TKR28H52W100-CL-U	—	17
TKR28H52W100-CRA	—	53
TKR28H52W125-CL-U	—	21
TKR28H52W125-CRA	—	65
TKR28H52W150-CL-U	—	25
TKR28H52W150-CRA	—	78
TKR28H52W200-CRA	—	104

TKR Series

Model number/product name	Mass (kg/m)	Mass (g/each)
TKR37H28W40R■■	0.53	—
TKR37H28W50R■■	0.55	—
TKR37H28W60R■■	0.57	—
TKR37H28W70R■■	0.59	—
TKR37H28W80R■■	0.61	—
TKR37H28W40-MU	—	21
TKR37H28W40-FU	—	21
TKR37H28W40-MUCLO	—	25
TKR37H28W40-MUCLI	—	
TKR37H28W40-MUCLB	—	30
TKR37H28W40-FUCLO	—	25
TKR37H28W40-FUCLI	—	
TKR37H28W40-FUCLB	—	30
TKR37H28W50-MU	—	21
TKR37H28W50-FU	—	21
TKR37H28W50-MUCLO	—	27
TKR37H28W50-MUCLI	—	
TKR37H28W50-MUCLB	—	33
TKR37H28W50-FUCLO	—	27
TKR37H28W50-FUCLI	—	
TKR37H28W50-FUCLB	—	33
TKR37H28W60-MU	—	22
TKR37H28W60-FU	—	22
TKR37H28W60-MUCLO	—	29
TKR37H28W60-MUCLI	—	
TKR37H28W60-MUCLB	—	36
TKR37H28W60-FUCLO	—	29
TKR37H28W60-FUCLI	—	
TKR37H28W60-FUCLB	—	36
TKR37H28W70-MU	—	23
TKR37H28W70-FU	—	23
TKR37H28W70-MUCLO	—	31
TKR37H28W70-MUCLI	—	
TKR37H28W70-MUCLB	—	40
TKR37H28W70-FUCLO	—	31
TKR37H28W70-FUCLI	—	
TKR37H28W70-FUCLB	—	40
TKR37H28W80-MU	—	23
TKR37H28W80-FU	—	23
TKR37H28W80-MUCLO	—	33
TKR37H28W80-MUCLI	—	
TKR37H28W80-MUCLB	—	43
TKR37H28W80-FUCLO	—	33
TKR37H28W80-FUCLI	—	
TKR37H28W80-FUCLB	—	43
TKR37H28-STAS	—	1
TKR37H28-STAL	—	1
TKR37H28-HS40	—	2
TKR37H28-HS50	—	3
TKR37H28-HS60	—	3
TKR37H28-HS70	—	4
TKR37H28-HS80	—	4
TKR37H28W40-CL-U	—	5
TKR37H28W50-CL-U	—	6
TKR37H28W60-CL-U	—	7
TKR37H28W70-CL-U	—	9
TKR37H28W80-CL-U	—	10

TKZP Series

Model number/product name	Mass (kg/m)	Mass (g/each)
TKZP10H13-40W10	0.06	—
TKZP10H13-40W15	0.07	—
TKZP10H13-40W20	0.08	—
TKZP10H13-40W25	0.09	—
TKZP10H13W10-MO	—	3
TKZP10H13W10-MI	—	
TKZP10H13W10-FO	—	3
TKZP10H13W10-FI	—	
TKZP10H13W15-MO	—	4
TKZP10H13W15-MI	—	
TKZP10H13W15-FO	—	4
TKZP10H13W15-FI	—	
TKZP10H13W20-MO	—	4
TKZP10H13W20-MI	—	
TKZP10H13W20-FO	—	4
TKZP10H13W20-FI	—	
TKZP10H13W25-MO	—	5
TKZP10H13W25-MI	—	
TKZP10H13W25-FO	—	5
TKZP10H13W25-FI	—	

Table of Product Masses

TKC Series

Model number/product name	Mass (kg/m)	Mass (g/each)
TKC28H30-30W28R■■	0.8	—
TKC28H30-30W48R■■	0.9	—
TKC28H30W28-MO	—	16
TKC28H30W28-FO	—	16
TKC28H30W28-FI	—	
TKC28H30W48-MO	—	20
TKC28H30W48-FO	—	20
TKC28H30W48-FI	—	
TKC28H30-ST	—	1
TKC28H30-HS48	—	4
TKC34H25W50R■■	1.5	—
TKC34H25W90R■■	1.9	—
TKC34H25W130R■■	2.1	—
TKC34H25-MOA	—	113
TKC34H25-MIA	—	
TKC34H25-MC	—	90
TKC34H25-FOA	—	83
TKC34H25-FIA	—	
TKC34H25-FC	—	138
TKC34H25-MOAGA	—	112
TKC34H25-MIAGA	—	
TKC34H25-MCGA	—	91
TKC34H25W50-MD	—	196
TKC34H25W50-FD	—	186
TKC34H25W90-MD	—	220
TKC34H25W90-FD	—	210
TKC34H25W130-MD	—	268
TKC34H25W130-FD	—	258
TKC34H25-ST	—	2
TKC47H36W80R■■■	2.5	—
TKC47H36W160R■■■	3.5	—
TKC47H36-MOA	—	202
TKC47H36-MIA	—	
TKC47H36-MC	—	180
TKC47H36-FOA	—	142
TKC47H36-FIA	—	
TKC47H36-FC	—	138
TKC47H36-MOAGA	—	208
TKC47H36-MIAGA	—	
TKC47H36-MCGA	—	176
TKC47H36W80-MD	—	406
TKC47H36W80-FD	—	364
TKC47H36W130-MD	—	522
TKC47H36W130-FD	—	480
TKC47H36-ST	—	3
TKC64H50W110R■■■	4.0	—
TKC64H50W220R■■■	5.0	—
TKC64H50-MOA	—	388
TKC64H50-MIA	—	
TKC64H50-MC	—	320
TKC64H50-FOA	—	264
TKC64H50-FIA	—	
TKC64H50-FC	—	234
TKC64H50-MOAGA	—	397
TKC64H50-MIAGA	—	
TKC64H50-MCGA	—	333
TKC64H50W110-MD	—	716
TKC64H50W110-FD	—	716
TKC64H50W220-MD	—	816
TKC64H50W220-FD	—	816
TKC64H50-ST	—	8
TKC64H50-HS110	—	9
TKC64H50-HS220	—	18
TKC85H68W150R■■■	5.7	—
TKC85H68W200R■■■	6.5	—
TKC85H68W300R■■■	8.0	—
TKC85H68W350R■■■	9.0	—
TKC85H68-MOA	—	966
TKC85H68-MIA	—	
TKC85H68-MC	—	786
TKC85H68-FOA	—	636
TKC85H68-FIA	—	
TKC85H68-FC	—	560
TKC85H68-MOAGA	—	944
TKC85H68-MIAGA	—	
TKC85H68-MCGA	—	795
TKC85H68W150-MD	—	1,754
TKC85H68W150-FD	—	1,528
TKC85H68W200-MD	—	1,922
TKC85H68W200-FD	—	1,696
TKC85H68W300-MD	—	2,272
TKC85H68W300-FD	—	2,046
TKC85H68-ST	—	10
TKC85H68-HS150	—	12
TKC85H68-HS200	—	16

Model number/product name	Mass (kg/m)	Mass (g/each)
TKC91H56W150R■■	5.4	—
TKC91H56W200R■■	6.2	—
TKC91H56W250R■■	7.0	—
TKC91H56W300R■■	7.7	—
TKC91H56W350R■■	8.5	—
TKC91H56W400R■■	9.2	—
TKC91H56W150R■■-GA	5.8	—
TKC91H56W200R■■-GA	6.5	—
TKC91H56W250R■■-GA	7.3	—
TKC91H56W300R■■-GA	8.0	—
TKC91H56W350R■■-GA	8.8	—
TKC91H56W400R■■-GA	9.6	—
TKC91H56W150-MU	—	598
TKC91H56W150-FU	—	560
TKC91H56W150-MUCR	—	691
TKC91H56W150-FUCR	—	653
TKC91H56W150-MUGA	—	598
TKC91H56W150-FUGA	—	592
TKC91H56W150-MUCRGA	—	691
TKC91H56W150-FUCRGA	—	685
TKC91H56W200-MU	—	666
TKC91H56W200-FU	—	628
TKC91H56W200-MUCR	—	789
TKC91H56W200-FUCR	—	751
TKC91H56W200-MUGA	—	666
TKC91H56W200-FUGA	—	660
TKC91H56W200-MUCRGA	—	789
TKC91H56W200-FUCRGA	—	783
TKC91H56W250-MU	—	736
TKC91H56W250-FU	—	698
TKC91H56W250-MUCR	—	889
TKC91H56W250-FUCR	—	851
TKC91H56W250-MUGA	—	736
TKC91H56W250-FUGA	—	730
TKC91H56W250-MUCRGA	—	889
TKC91H56W250-FUCRGA	—	883
TKC91H56W300-MU	—	804
TKC91H56W300-FU	—	766
TKC91H56W300-MUCR	—	987
TKC91H56W300-FUCR	—	949
TKC91H56W300-MUGA	—	804
TKC91H56W300-FUGA	—	798
TKC91H56W300-MUCRGA	—	987
TKC91H56W300-FUCRGA	—	981
TKC91H56W350-MU	—	874
TKC91H56W350-FU	—	836
TKC91H56W350-MUCR	—	1,087
TKC91H56W350-FUCR	—	1,049
TKC91H56W350-MUGA	—	874
TKC91H56W350-FUGA	—	868
TKC91H56W350-MUCRGA	—	1,087
TKC91H56W350-FUCRGA	—	1,081
TKC91H56W400-MU	—	942
TKC91H56W400-FU	—	904
TKC91H56W400-MUCR	—	1,185
TKC91H56W400-FUCR	—	1,147
TKC91H56W400-MUGA	—	942
TKC91H56W400-FUGA	—	936
TKC91H56W400-MUCRGA	—	1,185
TKC91H56W400-FUCRGA	—	1,179
TKC91H56-STS	—	15
TKC91H56-STL	—	15
TKC91H56-STE	—	12
TKC91H56-HS150	—	7
TKC91H56-HS200	—	9
TKC91H56-EHS24	—	2
TKC91H56-EHS30	—	3
TKC91H56-EHS36	—	4
TKC91H56-EHS42	—	4
TKC91H56-EHS48	—	5
TKC91H56-EHS54	—	5
TKC91H56-EHS22	—	2
TKC91H56-EHS28	—	3
TKC91H56-EHS34	—	3
TKC91H56-EHS40	—	4
TKC91H56-EHS46	—	4
TKC91H56-EHS52	—	5
TKC91H56-EHS23	—	2
TKC91H56-EHS29	—	3
TKC91H56-EHS35	—	4
TKC91H56-EHS41	—	4
TKC91H56-EHS47	—	5
TKC91H56-EHS53	—	5
TKC91H56-EHS21	—	2
TKC91H56-EHS27	—	3
TKC91H56-EHS33	—	3
TKC91H56-EHS39	—	4
TKC91H56-EHS45	—	4
TKC91H56-EHS51	—	5

Model number/product name	Mass (kg/m)	Mass (g/each)
TKC91H80W150R■■	7.8	—
TKC91H80W200R■■	8.6	—
TKC91H80W250R■■	9.3	—
TKC91H80W300R■■	10.1	—
TKC91H80W350R■■	10.8	—
TKC91H80W400R■■	11.6	—
TKC91H80W150R■■-GA	8.1	—
TKC91H80W200R■■-GA	8.9	—
TKC91H80W250R■■-GA	9.6	—
TKC91H80W300R■■-GA	10.4	—
TKC91H80W350R■■-GA	11.1	—
TKC91H80W400R■■-GA	11.9	—
TKC91H80W150-MU	—	900
TKC91H80W150-FU	—	900
TKC91H80W150-MUCR	—	993
TKC91H80W150-FUCR	—	993
TKC91H80W150-MUGA	—	900
TKC91H80W150-FUGA	—	932
TKC91H80W150-MUCRGA	—	993
TKC91H80W150-FUCRGA	—	1,025
TKC91H80W200-MU	—	968
TKC91H80W200-FU	—	968
TKC91H80W200-MUCR	—	1,091
TKC91H80W200-FUCR	—	1,091
TKC91H80W200-MUGA	—	968
TKC91H80W200-FUGA	—	1,000
TKC91H80W200-MUCRGA	—	1,091
TKC91H80W200-FUCRGA	—	1,123
TKC91H80W250-MU	—	1,038
TKC91H80W250-FU	—	1,038
TKC91H80W250-MUCR	—	1,191
TKC91H80W250-FUCR	—	1,191
TKC91H80W250-MUGA	—	1,038
TKC91H80W250-FUGA	—	1,070
TKC91H80W250-MUCRGA	—	1,191
TKC91H80W250-FUCRGA	—	1,223
TKC91H80W300-MU	—	1,106
TKC91H80W300-FU	—	1,106
TKC91H80W300-MUCR	—	1,289
TKC91H80W300-FUCR	—	1,289
TKC91H80W300-MUGA	—	1,106
TKC91H80W300-FUGA	—	1,138
TKC91H80W300-MUCRGA	—	1,289
TKC91H80W300-FUCRGA	—	1,321
TKC91H80W350-MU	—	1,176
TKC91H80W350-FU	—	1,176
TKC91H80W350-MUCR	—	1,389
TKC91H80W350-FUCR	—	1,389
TKC91H80W350-MUGA	—	1,176
TKC91H80W350-FUGA	—	1,208
TKC91H80W350-MUCRGA	—	1,389
TKC91H80W350-FUCRGA	—	1,421
TKC91H80W400-MU	—	1,244
TKC91H80W400-FU	—	1,244
TKC91H80W400-MUCR	—	1,487
TKC91H80W400-FUCR	—	1,487
TKC91H80W400-MUGA	—	1,244
TKC91H80W400-FUGA	—	1,276
TKC91H80W400-MUCRGA	—	1,487
TKC91H80W400-FUCRGA	—	1,519
TKC91H80-STS	—	20
TKC91H80-STL	—	20
TKC91H80-STE	—	17
TKC91H80-HS150	—	7
TKC91H80-HS200	—	9
TKC91H80-EHS24	—	2
TKC91H80-EHS30	—	3
TKC91H80-EHS36	—	4
TKC91H80-EHS42	—	4
TKC91H80-EHS48	—	5
TKC91H80-EHS54	—	5
TKC91H80-EHS22	—	2
TKC91H80-EHS28	—	3
TKC91H80-EHS34	—	3
TKC91H80-EHS40	—	4
TKC91H80-EHS46	—	4
TKC91H80-EHS52	—	5
TKC91H80-EHS23	—	2
TKC91H80-EHS29	—	3
TKC91H80-EHS35	—	4
TKC91H80-EHS41	—	4
TKC91H80-EHS47	—	5
TKC91H80-EHS53	—	5
TKC91H80-EHS21	—	2
TKC91H80-EHS27	—	3
TKC91H80-EHS33	—	3
TKC91H80-EHS39	—	4
TKC91H80-EHS45	—	4
TKC91H80-EHS51	—	5

TK/TKH/TKS/TKF Series

Model number/product name	Mass (kg/m)	Mass (g/each)
TK070R■■	6.0	—
TK070-MOA	—	400
TK070-MIA	—	
TK070-MOB	—	
TK070-MIB	—	
TK070-FOA	—	400
TK070-FIA	—	
TK070-FOB	—	
TK070-FIB	—	
TK095R■■	8.0	—
TK095-MOA	—	716
TK095-MIA	—	
TK095-MOB	—	
TK095-MIB	—	
TK095-FOA	—	716
TK095-FIA	—	
TK095-FOB	—	
TK095-FIB	—	
TK130R■■	17.0	—
TK180R■■	21.0	—
TKH250R■■	40.0	—
TKS070SP100R■■	6.4	—
TKS070SP150R■■	6.6	—
TKS070SP200R■■	6.7	—
TKS070-MOA	—	400
TKS070-MIA	—	
TKS070-MOB	—	
TKS070-MIB	—	
TKS070-FOA	—	400
TKS070-FIA	—	
TKS070-FOB	—	
TKS070-FIB	—	
TKS070-ST	—	4.2
TKS095SP100R■■	8.4	—
TKS095SP150R■■	8.5	—
TKS095SP200R■■	8.6	—
TKS095-MOA	—	716
TKS095-MIA	—	
TKS095-MOB	—	
TKS095-MIB	—	
TKS095-FOA	—	716
TKS095-FIA	—	
TKS095-FOB	—	
TKS095-FIB	—	
TKS095-ST	—	6.3
TKF055R■■	1.4	—
TKF055-KGAO	—	63
TKF055-KGAI	—	
TKF055-KGB	—	49
TKF055-KGC	—	53
TKF085R■■	2.0	—
TKF085-KGAO	—	66
TKF085-KGAI	—	
TKF085-KGB	—	82
TKF085-KGC	—	93
TKF115R■■	3.0	—
TKF115-KGAO	—	121
TKF115-KGAI	—	
TKF115-KGB	—	155
TKF115-KGC	—	188
TKF175R■■	5.0	—
TKF175-KGAO	—	309
TKF175-KGAI	—	
TKF175-KGB	—	375
TKF175-KGC	—	452

Discontinued

Cable Carrier Selection

Important Points to Consider Before Selecting a Cable Carrier

Cables/hoses

1. Cable/hose types

Use highly flexible cables/hoses for movement offering excellent flexibility, wear resistance, and continuous bending.
When using wire-braiding coated cables/hoses, the sliding of the cable will cause damage to both the cable carrier and the wire-braiding coated cables. Do not use such cables/hoses under any circumstances.

2. Allowable cable/hose bending radius

The allowable bending radius of the cable/hose should be a value that applies when the cable/hose is movable (continuous bending). Contact the cable/hose manufacturer for details.

Reference: Use the following as a guideline.

For cables

Allowable cable bending radius r ≥ Outer diameter of cable × 7.5* (* Varies depending on cable type)

For hoses

Allowable hose bending radius r ≥ Outer diameter of hose × 9* (* Varies depending on hose type)

This will need to be increased even further with more frequent use, high-rigidity cables/hoses, or hydraulic hoses.

Cable carrier bending radius

The bending radius of the cable carrier should be larger than the allowable bending radius of the cable or hose.
Ensuring a cable carrier bending radius larger than the allowable bending radius of the cable or hose contributes to reduced wear of the cable or hose, allowing for a longer service life for the cable carrier. As such, be sure to select as large a bending radius as possible.

Various environmental resistances of cable carriers

1. Temperature

Refer to the individual product pages for the operating temperature ranges. However, note that the service life may be shortened depending on the operating conditions. In addition, the cable carrier may not bend smoothly in freezing in environments with low temperatures and high moisture. Forced operation under such conditions may damage the cable carrier. Be sure to remove any moisture from frozen sections before operating.

2. Moisture and humidity

Cable carriers can be used under normal atmospheric conditions (including outdoor environments). However, if the system will be exposed to environments with high humidity or high moisture content, or exposed to the elements, it is recommended that steel components be made of stainless steel.

3. Outdoor installation (effects of UV rays)

Cable carriers can be used in outdoor environments. However, Cable Carrier Plastic Series products will undergo increased deterioration, resulting in a shortened service life under some operating conditions.

4. Chemical resistance of cable carriers to various solvents

When selecting a cable carrier, check if the chemical resistance of the materials in the below table are sufficient. This table shows the approximate material characteristics at 20°C, but the information in this table is not guaranteed. Conduct a overall review of the temperature, humidity, and operating conditions for actual usage.

○: Sufficient chemical resistance, △: Chemical resistance under some operating conditions, ×: No chemical resistance, -: Unknown

Materials \ Solvent		Acetone	Oil (plant-based/mineral-based)	Alcohol	Ammonia	Calcium chloride aqueous solution	Sodium chloride	Hydrochloric acid (2%)	Seawater	Hydrogen peroxide	Sodium hydroxide (10%)	Formic acid (10%)	Citric acid (10%)	Chromic acid (1%)	Acetic acid (5%)	Carbon tetrachloride	Sodium hypochlorite (10%)	Nitric acid (5%)	Lubrication oil	Potassium hydroxide	Soapy water	Petroleum	Diesel fuel	Toluene	Paraffin	Benzene	Iodine	Vitriol oil	Phosphoric acid (10%)	Petroleum jelly
Steel		△	○	○	△	×	×	×	×	×	×	×	×	×	×	△	×	×	○	△	△	○	○	○	○	○	×	×	×	○
Stainless steel		○	○	○	○	△	○	×	△	○	○	○	○	○	○	○	×	○	○	○	○	○	○	○	○	○	×	×	△	○
Engineering plastic	Standard products other than those listed below	○	○	○	○	○	○	×	○	×	○	△	○	×	○	○	×	×	○	○	○	○	○	○	○	○	×	×	×	○
	TKP-MW Type/ TKR Series	○	○	○	○	—	○	×	△	×	○	×	△	×	○	○	×	×	—	○	—	—	—	○	○	×	×	×	—	—
	TKZP Series	△	△	○	△	△	○	△	△	△	○	×	×	—	×	△	△	△	△	○	△	×	×	△	—	×	×	△	—	—

Note: Engineering plastic refers to the engineering plastics used in our cable carriers.

5. Contact a Tsubaki representative regarding whether a product contains substances restricted for use in specific industries and applications.

Cable Carrier Plastic Series flame resistance standard

The Tsubaki Cable Carrier Plastic Series uses UL standard: UL 94HB equivalent plastics based on the Underwriters Laboratories standard for the flame-resistant safety inspection of plastic products.

Selection of Cable Carrier Plastic Series

This selection is applicable to the TKP Series, TKC Series, and TKR Series.

Step 1: Check operating environment	Check whether temperature, humidity, water and chemicals can be used.	Classification and features: Page 11 Environmental resistance, chemical resistance: Page 151, each product page
Step 2: Check operating conditions	Check the operating conditions required for cable carrier selection.	Item: 1. Travel length 2. Travel speed, acceleration 3. Additional load 4. Outer diameter and number of cables/hoses 5. Installation method 6. Operating environment Each product page, pages 11 and 156
Step 3: Study installation method (arrangement)	Check the features for each installation method to determine the installation method.	Installation instructions: Page 123
Step 4: Study installation of cables and hoses	Consider cable/hose installation (placement).	Determine model by cable/hose installing space: Page 153
Step 5: Determine the bending radius	Determine the bending radius to determine the model.	Cable/hose bending radius: Page 156 See detailed dimensions and notes on the pages for each model.
Step 6: Determine the model of cable carriers according to the capability	Check whether the travel length and additional load are within capability range.	Load diagram: Each product page Installation instructions: Page 123
Step 7: Determine number of links	Calculate the required number of links.	Calculating number of links: Each product page
Step 8: Study mounting method	Consider the mounting and installation dimensions, and guide method.	Installation and maintenance: Page 157
Step 9: Ordering	Check the ordering information.	Detail on the model number and ordering information: Pages 17–19

Precautions when selecting Cable Carrier Plastic Series

When the travel length is long

Review a cable carrier with the following specifications when the travel length exceeds the allowable value on the load diagram.

◆Gliding arrangement
Suitable for extremely long lengths. ..... Page 127

◆Side mount arrangement
Suitable for use a low speeds (60 m/min or less). ... Page 125

◆Support roller arrangement
Use the load diagram. ..... Page 123

◆With support plates
Applicable to the TKC Series. Use the load diagram. ... Page 123

Note: The Cable Carrier Steel Series allows for longer travel lengths in the standard arrangement than the Cable Carrier Plastic Series.

When the cable/hose mass is large

Review the following when the cable/hose mass is larger than the load diagram.

◆Nested arrangement
Applicable to the TKP Series and TKC Series. ..... Page 126
(Not applicable to the TKR Series.)

◆Split into multiple cable carriers.

When the amount of space to install cables and hoses is low

◆ Increase the size of the cable carrier.
◆ Split into multiple cable carriers.

High frequency/low noise

◆ Select the TKR Series or Tsubaki Kabelschlepp Quantum Series when high speeds, high acceleration, high frequencies, and low noise are required. Contact a Tsubaki representative for further information.
..... Page 67

Low debris generation

To lessen the amount of debris generated from the cable carrier, select the TKR Series or TKP Series MW Type. ... Pages 65 and 67

Atmosphere

Consider the following special types when using the cable carrier in a special operating environment.

◆ Chemical-resistant type
The TKP Series and TKC Series can be manufactured using materials with superior chemical resistance.

◆ Antistatic type
The TKP Series and TKC Series can be manufactured using materials with superior electrical conductivity.
Contact a Tsubaki representative when considering cable carriers with the above types.

When a lateral load is applied

Install guides to prevent collapse when lateral loads are applied such as during ceiling crane running.

When exposed to vibrations

Take care to prevent vibrations from the machine being transmitted to the cable carrier if external vibrations from manipulators, rock drills, or other equipment are a concern.

Cable Carrier Selection

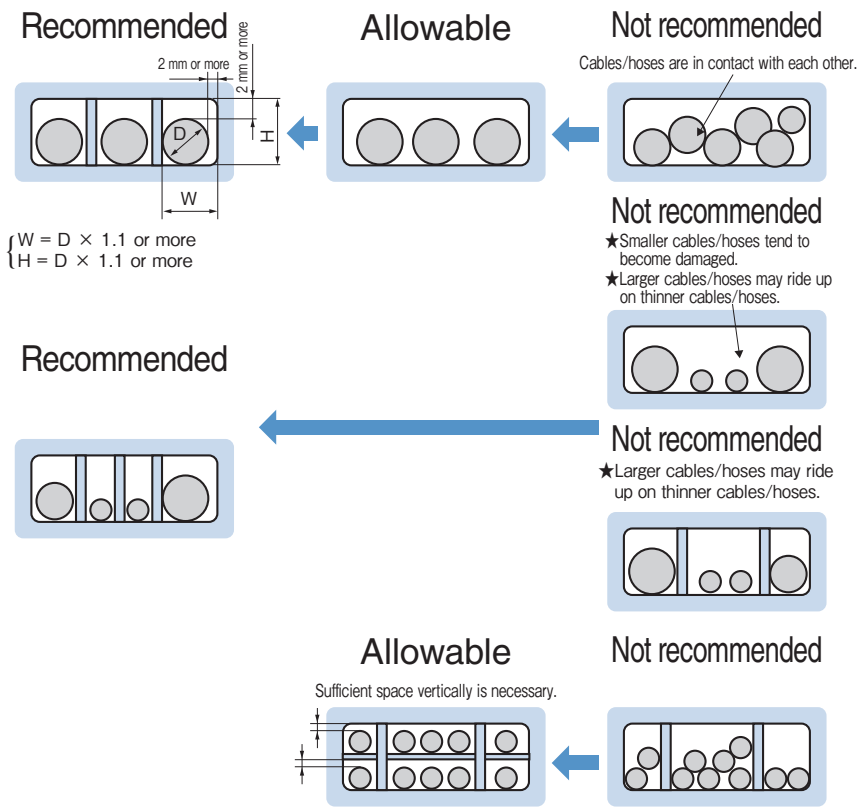
Determine cable carrier model by cable/hose installing space (TKP Series/TKC Series/TKR Series/TKF Series)

The cable/hose installing section is determined by checking the space of the cross section based on the outer diameter/number of cables and hoses.

1. Determine the inner height — Check the inner height of the cable carrier by the maximum outer diameter of cables and hoses. (See pages 11, 13, and 136.)

2. Determine the inner width — Check the inner width of the cable carrier by the outer diameter/number of cables and hoses.
Cable carrier inner width ≥ Σ (outer diameter × 1.1) + Divider thickness × Number of dividers
Note: The installation dimensions of dividers depend on whether they slide or lock.

Reference: Correct arrangement for cables and hoses



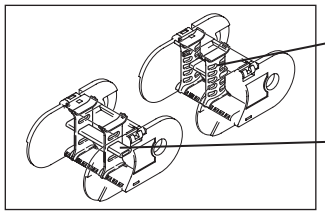
Notes on arrangement

1. Provide clearance between the outer diameter and the inner width of the cable/hose.
2. Lay out the cables/hoses in a row horizontally.
3. Do not arrange the cables/hoses in a way that causes them to interfere with each other.
4. Do not use so many cables/hoses that excessive force is applied to the cable/hose.
5. Use dividers for series that allow for the use of dividers. Use a divider that allows only one cable/hose to be used in any one compartment.

Dividers

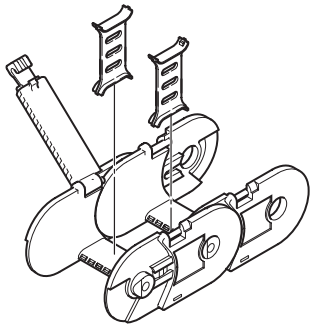
Dividers are important parts that protect cables and hoses. Separate cables and hoses and install them into the cable carrier by using dividers when possible.

Function of dividers:
1. To prevent cables and hoses from sliding against each other
2. To prevent cables and hoses twisting and becoming kinked
3. To reduce noise for signal wires



Vertical divider: Divides the inner width of the internal cross section of the cable carrier. (Not available for the TKP13H10, TKP17H11, TKP18H14, TKP18H15, or TKP25H15.)
Horizontal divider: Divides the internal height of the internal cross section of the cable carrier.

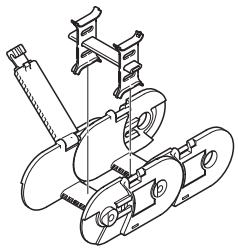
Vertical divider



- Material: Engineering plastic
- There is a type that can slide in the horizontal direction and a type that can be fixed. (Refer to the pages that list the models.)
- Normally installed every 2 links.
- Normally delivered uninstalled.
- Case for fixing vertical dividers: Dividers may move when cables and hoses move violently. This may cause damage the cables and hoses.
- For the side mount and horizontal circular travel arrangements with sliding divider types, the dividers may move down due to the weight of the cables and hoses and cause damage to the cables and hoses.

* For the TKP45H25 and TKP58H39, fixed spacers are offered as an option. Contact a Tsubaki representative for further information.

Horizontal divider



- Material: Engineering plastic or aluminum
- Installed on vertical dividers.
  *** 2 or more vertical dividers are required.**
- The installation method depends on the shape of the vertical dividers.
- Normally installed every 2 links.
- Normally delivered uninstalled.

Selection of Cable Carrier Steel Series

This selection is applicable to the TK Series, TKS Series, and TKH Series.

Step 1: Check operating environment
Check whether temperature, humidity, water and chemicals can be used.
→ Classification and features: Page 13
Environmental resistance, chemical resistance: Page 151, each product page

Step 2: Check operating conditions
Check the operating conditions required for cable carrier selection.
→ Items: 1. Travel length 2. Travel speed, acceleration 3. Additional load 4. Outer diameter and number of cables/hoses 5. Installation method 6. Operating environment
Pages 13 and 156

Step 3: Study installation method (arrangement)
Check the features for each installation method to determine the installation method.
→ Installation instructions: Page 123

Step 4: Determine the model of cable carriers according to the capability
Determine the model according to the load diagram.
→ Load diagram: Each product page
Installation instructions: Page 123

Step 5: Study installation of cables and hoses
Consider cable/hose installation (placement).
→ Determine model by cable/hose installing space: Page 155

Step 6: Determine number of links
Calculate the required number of links.
→ Calculating number of links: Each product page

Step 7: Study mounting method
Consider the mounting and installation dimensions, and guide method.
→ Installation and maintenance: Page 157

Step 8: Ordering
Check the ordering information.
→ Detail on the model number and ordering information: Page 20

Precautions when selecting Cable Carrier Steel Series products

When the travel length is long
Review a cable carrier with the following specifications when the travel length is longer than the load diagram.
- ◆ TKV Series/TKI Series
  Suitable for extremely long lengths. .....Pages 111 and 112
- ◆ Side mount arrangement
  Use the cable carrier by installing casters or shoes on the bottom of the chain. Applicable to the TK Series and TKH Series. .....Page 125
- ◆ Side roller type
  Install side rollers to the chain. Applicable to the TK Series. .....Page 126
- ◆ Support roller arrangement
  Applicable to the TK Series, TKS Series, and TKH Series. Use the load diagram. .....Page 123

When the cable/hose mass is large
Review the following when the cable/hose mass is larger than the load diagram.
- ◆ Nested arrangement
  Applicable to the TK Series and TKH Series. .....Page 126
- ◆ Multiple chain type
  Applicable to the TK Series, TKS Series, and TKH Series. .....Page 135
- ◆ TKV Series/TKI Series
  Suitable for high loads. .....Pages 111 and 112

When the amount of space to install cables and hoses is low
- ◆ Nested arrangement
  Applicable to the TK Series and TKH Series. .....Page 126
- ◆ Multiple chain type
  Applicable to the TK Series, TKS Series, and TKH Series. .....Page 135
- ◆ 3-partition split stay type
  Applicable to the TK Series and TKH Series.

High-frequency operation
Select the TKV Series and TKI Series for high-frequency operation.....Pages 111 and 112

Atmosphere
When using the cable carrier in a special operating environment:
- ◆ For dusty environments
  Anti-dust series.....Page 135
- ◆ For corrosive atmospheres (e.g., outdoor environments)
  Stainless steel type.....Page 135

* Contact a Tsubaki representative about selecting the TKV Series/TKI Series.

Cable Carrier Selection

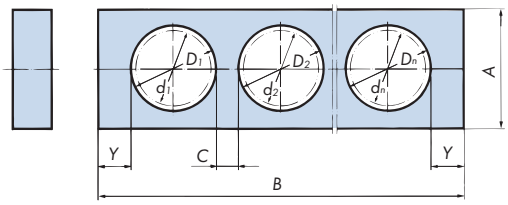
Determine cable carrier model by cable/hose installing space (TK Series/TKH Series/TKS Series)

TK Series/TKH Series

For the TK Series and TKH Series, the stay holes (D) are drilled to the specified dimensions.

1. Calculate the minimum required width B' of the stay based on the outer diameter/number of cables and hoses, and select a stay with a stay width $B \geq B'$.

◆ Stay dimensions



1.1 Calculate stay bore diameter

$D = d \times 1.1$ Minimum clearance 2 mm

D: Stay bore diameter (ϕ 8 or larger integer value)

d: Cable/hose outer diameter

1.2 Calculate minimum required stay width

$$B' = Y + D_1 + C + D_2 + C + \ldots\ldots + D_n + Y$$

B': Minimum required stay width

C: 4 mm or larger

Y: Table on the upper right

Note: Refer to the product pages for stay dimensions.

Model	Minimum value of Y	Model	Minimum value of Y
TK070	10	TK180	18
TK095	15	TKH250	25
TK130	18	–	–

1.3 Select stay

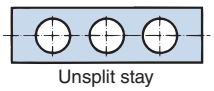
Select dimensions A and B from the results calculated by 1.1 and 1.2 and the stay dimensions in the models (listed on the pages for models).

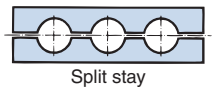
2. Install the stays every 2 links starting from the second link on the moving end side.

$$\text{Number of stays (n)} = \frac{\text{Number of links } (\ell)}{2} \quad \text{Round down decimals}$$

Unsplit and split stays

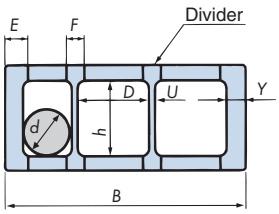
The TK Series and TKH Series cable carriers have two types of stays: unsplit stays and split stays. Split stays have one end that can be easily removed so that supported materials can be easily added and removed. Split stays are convenient for when there are hoses with sleeves and the movement distance is long and also when there are many supported materials.


Unsplit stay


Split stay

TKS Series

◆ Frame



Decide the number of dividers by the minimum required or more and by ensuring that one cable or hose goes through one opening if possible. Lay out the cables and hoses by also taking into consideration the distribution of mass across the cable carrier.

1. Calculate the minimum required width B' of the frame based on the outer diameter/number of cables and hoses, and select a frame with a stay width $B \geq B'$.

1.1 Calculate the required inner width

$D = d \times 1.1$ Minimum clearance 2 mm

D : Required inner width (Round up decimals)

d : Cable/hose outer diameter

1.2 Calculate minimum required frame width

$$B' = \Sigma D + \Sigma U + 2Y$$

B' : Minimum required frame width

U : Divider thickness

Y : Link thickness

1.3 Select the frame

Select the frame from the results calculated by 1.1 and 1.2 and frame dimension B in the models (table on the upper right and listed on the pages for models).

2. Number of frames and dividers

Install frames every 2 links.

$$\text{Number of frames (n)} = \frac{\text{Number of links } (\ell)}{2} \quad \text{Round down decimals}$$

Number of dividers (m) = n × (number of dividers installed in 1 location)

■ Frame dimensions

Model	B (mm)	h (mm)	Y (mm)	U (mm)	E (mm)	F (mm)	Cable/hose maximum diameter d (mm)
TKS070	100 150 200	31	10	3	15	13	27
TKS095		46	12	4	17	14	42

■ Minimum required number of dividers

Model	Minimum required number of dividers		
	B = 100 mm	B = 150 mm	B = 200 mm
TKS070	0 (5)	1 (8)	2 (12)
TKS095	0 (4)	1 (7)	2 (11)

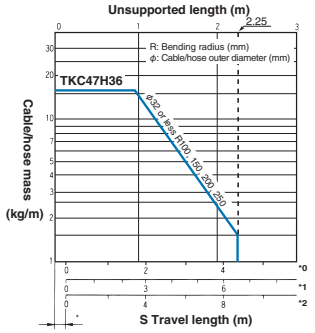
Figure in ( ) is the maximum number installable.

Bending radius *R*/strength selection

Select using the load diagram

1. The travel length *S* on the load diagram is applicable when the fixed end of the cable carrier is installed in the center position (middle) of the travel length.
2. Based on the models on the load diagram, select the strength from the travel length, cable/hose mass, cable/hose outer diameter, and cable/hose allowable bending radius.
3. Selection example: Selecting the TKC Series

Operating conditions
Travel length: 3 m
Cable/hose mass: 4 kg/m
Cable/hose outer diameter: ϕ 20 mm (x1)
Cable/hose allowable bending radius: 160 mm



In the table to the left, find the intersection of horizontal axis 3 m and vertical axis 4 kg/m.
Select the TKC47H36 as the product that satisfies this point.

Cable/hose allowable bending radius (*r*)	≤	Cable carrier bending radius (*R*)

Decide on *R* = 200 that satisfies these conditions.

Therefore,
TKC47H36W80R200 is the product from the above conditions.

Confirm speed and acceleration

The allowable travel speeds for each model and installation method are shown below.
Confirm that the operating conditions do not exceed the allowable values. (Contact a Tsubaki representative if the allowable values are accidentally exceeded.)

■ Table of allowable speeds

Unit: m/min

	TKP Series	TKC Series	TKR Series	TKF Series (Discontinued)	TK Series	TKH Series	TKS Series	TKI Series	TKV Series
Standard	300	300	300	60	60	60	60	120	150
Support roller	150	150	150	—	60	60	60	—	—
Support plate	—	60	—	—	—	—	—	—	—
Horizontal	60	60	—	60	30	30	30	—	—
Vertical arrangement (hanging)	300	300	300	60	60	60	—	—	—
Vertical arrangement (standing)	300	300	300	60	60	60	—	—	—
Bottom movement	300	300	300	60	60	60	60	—	—
Combination	300	300	300	60	60	60	60	—	—
Gliding arrangement	★	★	—	—	—	—	—	—	—
Traveling roller	—	—	—	—	30	—	—	—	—
Horizontal rotation	30	30	—	—	30	—	—	—	—
Vertical rotation	60	—	—	—	60	—	—	—	—

★: Refer to page 129 for the gliding arrangement. – means not applicable.

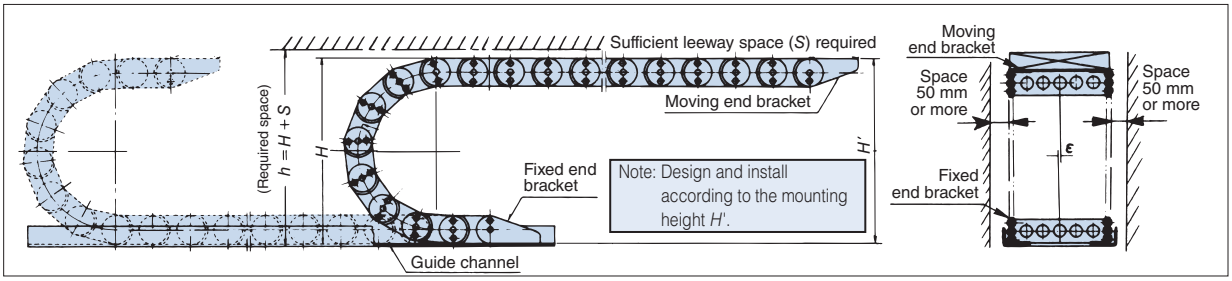
■ Table of allowable acceleration

If acceleration is extremely large, the service life may be reduced in a very short amount of time. Confirm that the operating conditions do not exceed the values in the following table.
(Contact a Tsubaki representative if the allowable values are accidentally exceeded.)

TKP Series	TKC Series	TKR Series	TK Series	TKS Series	TKH Series	TKI Series/TKV Series
2G	3G	2G	1 m/sec^2	1 m/sec^2	1 m/sec^2	Contact a Tsubaki representative.

Cable Carrier Handling

Installation and maintenance



◆ Required space

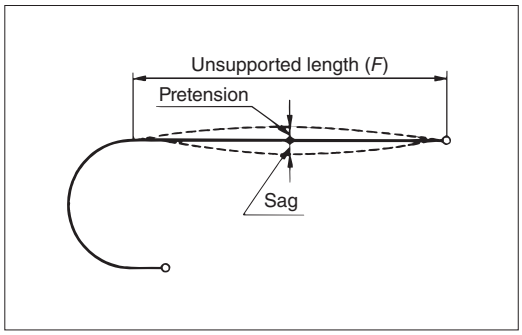
To compensate for sag caused by cable carrier and cable mass, cable carriers will have pretension. However, the product should be installed at the mounting height *H'* and not the total cable carrier height *H*. Pretension and sagging will occur in the unsupported length portion depending on operating and environmental conditions. Be sure to ensure the required space referring to the figure above. Problems will not generally arise in the absence of interfering objects. Vibration may occur with increased operation speeds. If operation speeds exceed 70% of the max. allowable speed, double the *S* dimension.

Moreover, be sure to provide space on the inside of the cable carrier to account for sag that occurs in the unsupported length portion during use.

Model	ε or less	*S* (mm)	*H'* (mm)
TKP13H10, TKP17H11, TKP18H14/15, TKP25H15	3	50	*H* + (10 to 30)
TKP35H22, TKP45H25	4	100	
TKP Series other than above	6	100	
TKC Series	6	100	
TKR15H22	6	100	
TKR20H28, TKR26H40, TKR28H52, TKR37H28	6	100	*H* + (30 to 50)
TK070, TKS070	4	100	*H* + 10
TK095, TKS095	6		
TK130	8		
TK180	10		
TKH250	15	100	*H* + 30
TKF055, TKF085	8	100	*H* + (20 to 30)
TKF115 **Discontinued**	10		
TKF175	10		

Misalignment (ε):
Moving end bracket and fixed end bracket mounting position differences

H': Mounting height
H: Total cable carrier height
h: Height of required space

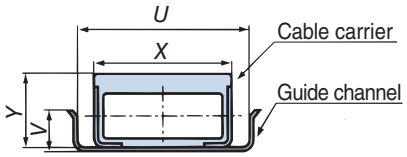


Straight types (special type) that have no pretension are also available.

◆ Cable carrier guide

A guide channel is required for use with cable carriers. Referring to the table below, construct a guide using steel plates or steel angles.

To ensure smooth operation, chamfer and grade the sections where the cable carrier moves in and out of.



X = Cable carrier outer width
Y = Cable carrier outer height

Model	*U* (mm)	*V* (mm)
TKP13H10, TKP17H11, TKP18H14/15, TKP25H15	*X* + 10	$\frac{Y}{2}$ or more
TKP35H22, TKP45H25	*X* + 15	
TKP Series other than above	*X* + 20	
TKC Series		
TKR Series		
TK Series/TKS Series/TKH Series		
TKF Series **Discontinued**	*X* + 20	$\frac{Y}{3}$

◆ Lubrication

In principle, the cable carrier does not need to be lubricated. However, when using TK Series, TKS Series, TKH Series, or TKV Series in environments prone to rusting, protect against rust by applying grease to link portions or through some other means.

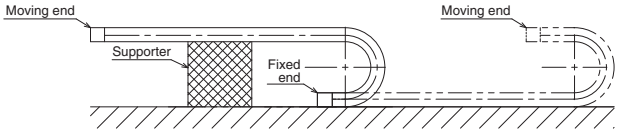
Please note that lubrication is required for TKI Series.

◆ Precautions for special applications

1. Install support rollers or side guides to prevent collapse when lateral loads are applied such as during ceiling crane running.
2. Take care to prevent vibrations from the machine being transmitted to the cable carrier if external vibrations from manipulators, rock drills, or other equipment are a concern. (Shock absorbers, etc.)

◆ Storage following device installation

If the equipment will be stored following installation, fix the moving end of the cable carrier so that it is at the end of its reverse stroke to prevent sag in the unsupported length portion due to creeping. Moreover, use supports or some other means to hold the center unsupported length portion if not possible given the system structure.



Precautions when fabricating glide channels

Observe the following precautions when you fabricate glide channels. Convenient, easy to install glide channels are also available. (Page 117)

Description of terms

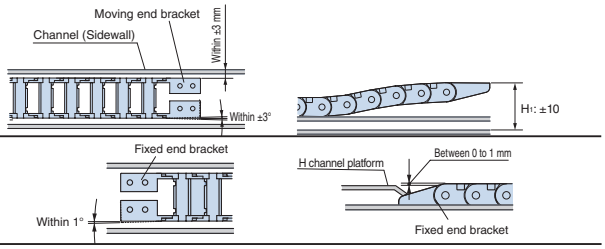
Push type : The cable carrier is moved by applying a force that pushes the moving end bracket in the direction of the bending radius.
Pull type : The cable carrier is moved in the direction opposite of that described above (the cable carrier is extended).
Buckling : A section of the channel on which the cable carrier slides that bulges out in the middle of push-type cable carrier movement.
H channel : A channel equipped with a platform installed in front of the fixed end bracket that the cable carrier is lifted onto and slides along.
U channel : A channel installed behind the fixed end bracket that supports the cable carrier at floor level.

1. Materials
Guide channels restrict the lateral deviation in the moving direction of cable carriers, so use smooth steel sheet to reduce wear in particular. If the channels are painted for rust-proofing, the paint may peel off due to sliding and cause the cable carrier to become worn. Galvanized steel sheet or SUS304 is recommended as the material to use to fabricate channels. Use SUS304 when the channels will be used in an outdoor environment. Do not use the aluminum channels manufactured by Tsubaki in an outdoor environment.

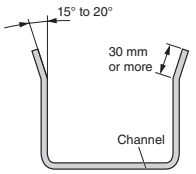
2. Channel installation precision
Vertical deviation is within 5 mm either up or down per 5 m. The channels run in one direction without following a linear gradient. Deviation in the horizontal direction is within 3 mm either to the left or right per 5 m. The channels run in one direction without following a linear curve.

3. Bracket installation precision on both ends

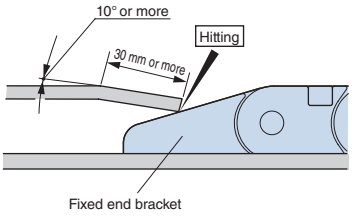
Moving end side	Mounting height	: Within ±10 mm in relation to the full channel area
	Lateral deviation in the moving direction of cable carriers	: Within ±3 mm in the full area in relation to the channel sidewalls
	Parallelism	: Within ±3° in the full area in relation to the channel sidewalls
Fixed end side	Mounting height	: Top surface of fixed end bracket is 0 to 1 mm in relation to the platform of the H channel
	Parallelism	: Within 1° in relation to the channel sidewalls



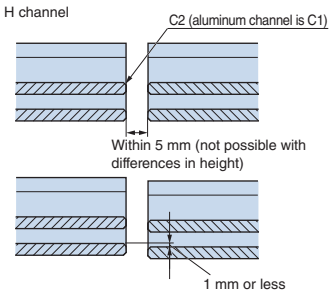
4. Taper angle of upper channel surface
Fabricate the channels by giving the opening on the top of the channels a slope to the outside so that the cable carrier can be smoothly inserted into the channels. The bending angle is approximately 15° to 20° and the length is 30 mm or greater.



5. Structure of the transfer section for the fixed end bracket and channel
Give the transfer section of the H channel a slope so that the cable carrier transfers smoothly. The slope should be 10° or larger with a length of 30 mm or longer, and install the channel so the end touches the fixed end bracket. When using the Tsubaki dedicated aluminum channels, machine a 2-mm chamfer for the channel before installation.



6. Fabricating channel joints
◆ H channel
At both ends, bend the end section of the joint outward so the cable carrier does not catch. For the platform the cable carrier slides on, fit the channels tightly so there is no unevenness. When creating an opening at joints, make that opening within 5 mm and eliminate unevenness with a 2-mm chamfer. When using the Tsubaki dedicated aluminum channels, machine a 1-mm chamfer for sliding surface.
◆ U channel
At both ends, bend the end section of the joint outward so the cable carrier does not catch. Install the channel so unevenness is within 1 mm. Chamfering and other machining is not required. However, ensure the surface is smooth without burrs and cuts are clean.



7. Full length of cables and hoses
If there is clearance between the joints (between link pins and pin holes) of the cable carrier and tension is generated, the length will become longer than the basic length. For the full length of cables and hoses, prepare those items with a certain amount of leeway and adjust the length in the actual cable carrier.
The amount of stretching may be approximately 0.2 to 0.6% of the total length at maximum, so use appropriate caution with long lengths.

8. Examples of problems due to poorly fabricated channels
◆ Unevenness in the joints of sidewalls: The unevenness interferes with the bending section of the cable carrier. This causes damage to the cable carrier and wear due to buckling and sliding.
◆ Unevenness in joints at the bottom of channels: Abnormal wear will occur if there is unevenness between H channels. Buckling and localized wear will also occur if there is a large amount of unevenness between U channels.
◆ The platform of the H channel is higher than the top of the fixed end bracket: The cable carrier rides up on the channel when used as the pull type, so noise and abnormal wear may occur.
◆ Channels not level after installation: Buckling and increasing in sliding friction may occur.
◆ No clearance at the channel joint: The channel may be deformed and damaged due to thermal expansion if the temperature difference is large.

Cable Carrier Handling

Cable wiring and hose connections

1. Use highly flexible cables/hoses for movement offering excellent flexibility and durability over continuous operation.

   > Use of cables with wire-braided coating is prohibited. The sliding of the cable will cause damage to both the cable carrier and the wire-braiding coated cables. Do not use such cables under any circumstances.

2. Lay out the cables/hoses in a way that does not allow twisting to occur. Do not pull cables/hoses from a drum or spiral coil as doing so will cause the cable/hose to become twisted. (See Figure 1.)
   Make sure the cables/hoses are straight when inserted into the cable carrier. (See Figure 2.)
3. Required cable/hose length
   Normally, a cable length of

   > (Pitch × No. of links) + Mounting area length = Required cable length

   is appropriate.
   The length of a hose will change due to pressure during use, so

   > {(Pitch × No. of links) + Mounting area length} × 1.015
   > = Required hose length

   is appropriate. Please note that a coefficient of 1.015 allows for hose shrinkage, but because this will depend on the type of hose, be sure to check with the hose manufacturer.
4. To prevent tension where cables/hoses bend from being pressed against the outer surface of the cable carrier, arrange the cables/hoses loosely (with enough space to "float" above the inner circumference surface inside the cable carrier) to allow freedom of movement. (See Figure 3 and Figure 4.)
5. To prevent unnecessary tension from being applied to the cable/hose, and to maintain the length within the cable carrier, use clamps for fixing at the moving end and the fixed end. (See Figure 5.)
   Note that cables and hoses should not be fixed within the cable carrier.
6. Lay out the cables/hoses in a row horizontally so that they do not overlap. For models that allow dividers to be installed, use dividers when arranging the cables/hoses.
7. When using stayed systems for cables/hoses, note that the inner and outer circumferences are not the same. Ensure the required length along the center line for each of the cables/hoses is provided.
   However, when using dividers to separate cables/hoses into stayed systems, the sliding of the cables/hoses will cause wear to occur more quickly. As such, it is recommended that the cables/hoses be arranged in a row horizontally.

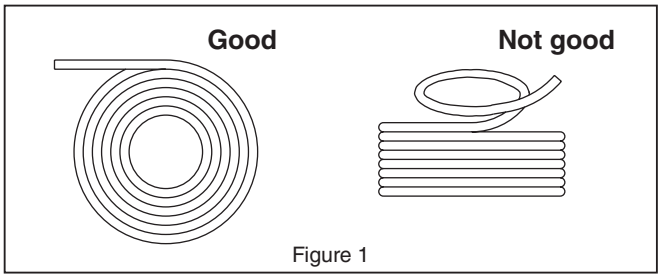


Figure 1

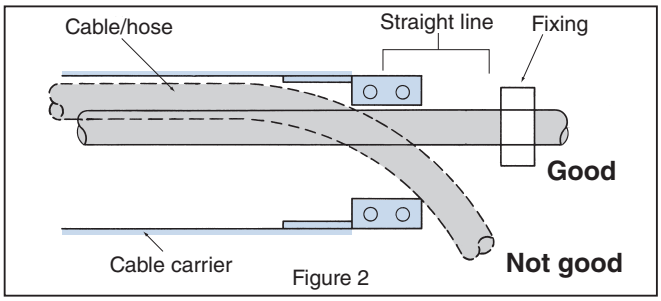


Figure 2

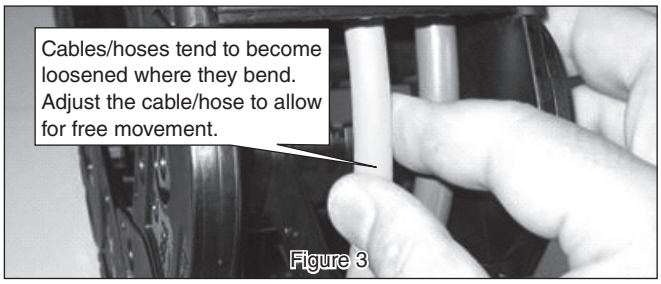
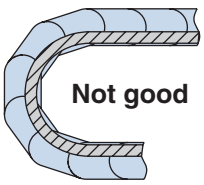
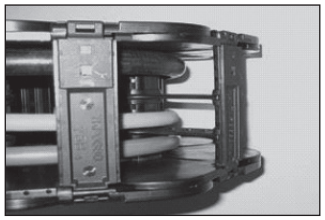


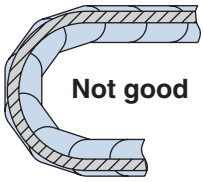
Figure 3

◆ No tension





◆ Pushed to the outer surface



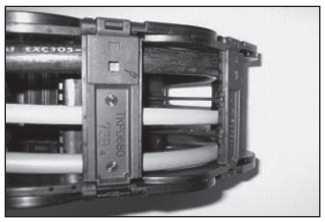


Figure 4

Maintenance

(1) The link or stay bolts may come loose due to vibrations during transportation or operation. Check these bolts regularly following operation. (TK Series/TKS Series/TKH Series)
(2) Take care to prevent obstructions from falling onto or from adhering to the guide channel.
(3) Check regularly for smooth back-and-forth operation of the cable carrier. Also check whether the cable/hose is being forcibly pulled or if continuous bending of the cable has caused the length to change within the cable carrier.

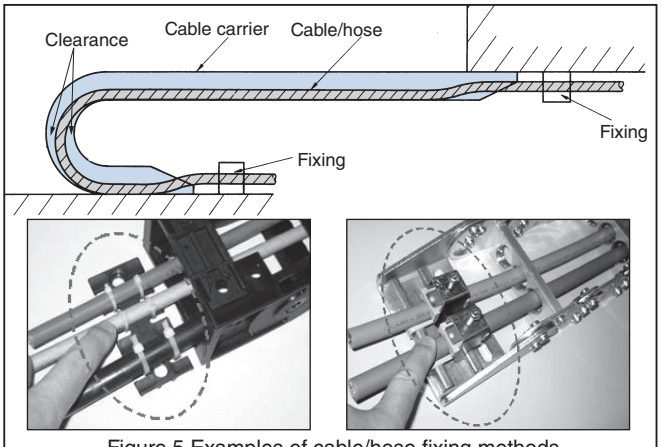
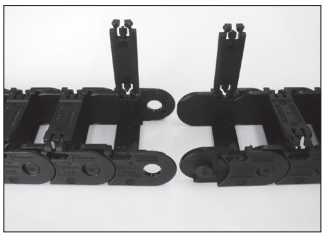


Figure 5 Examples of cable/hose fixing methods

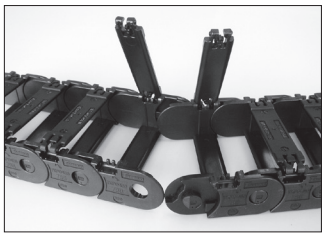
Cable Carrier Connecting/Assembly

TKP Series

1. Connecting

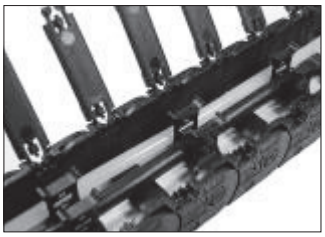


1.1 Arrange the stays in the disconnected direction.



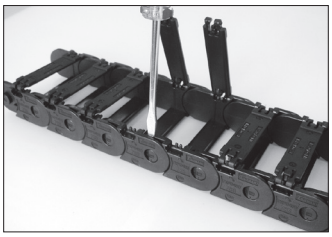
1.2 Align pins and holes and push together.

2. Installing cables/hoses



Close the stays after the setting the cables and hoses.

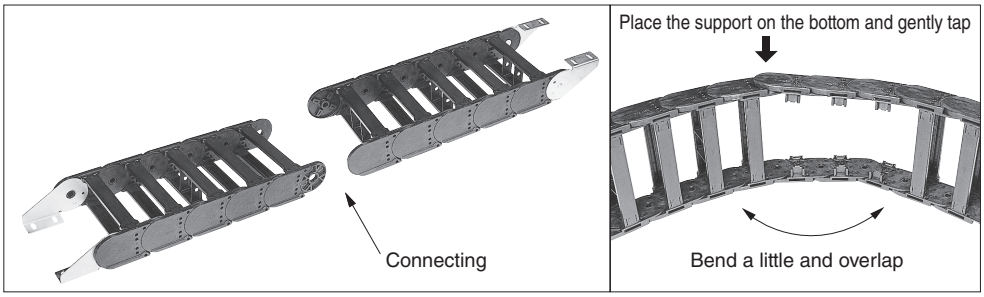
3. Separating



Insert a flathead screwdriver and turn 90° or raise and pry open.

TKP62H42/TKP90H50/TKP125H74

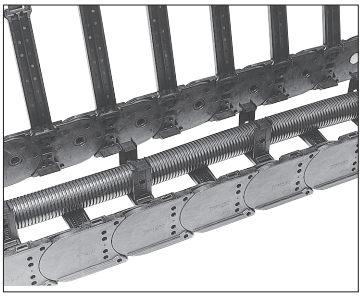
1. Connecting



1.1 Remove 3 or 4 outside stays and lock stays at the connection.

1.2 After connecting the links, install the lock stays.

2. Installing cables/hoses

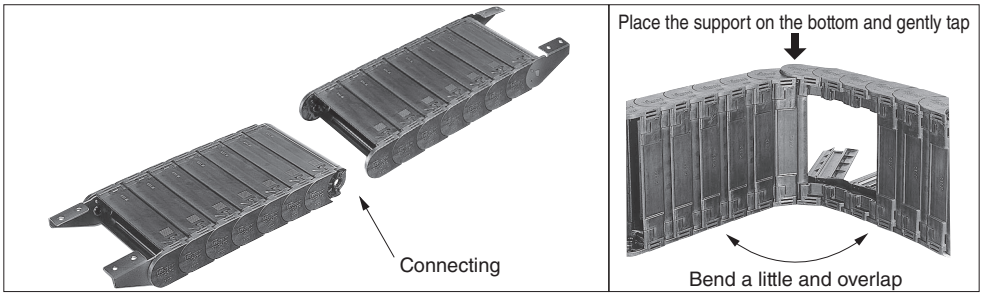


Close the outside stays after the setting the cables and hoses.

* Connecting and assembling the TKP Series depends on the structure. Refer to the appropriate instruction manual.

TKC Series

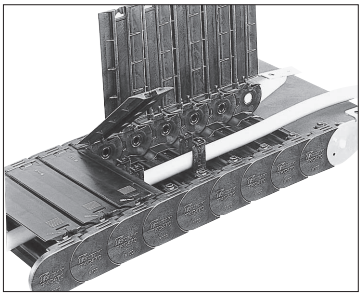
1. Connecting



1.1 Remove 3 or 4 outside stays and lock stays at the connection.

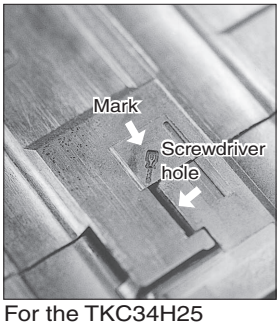
1.2 After connecting the links, install the lock stays.

2. Installing cables/hoses

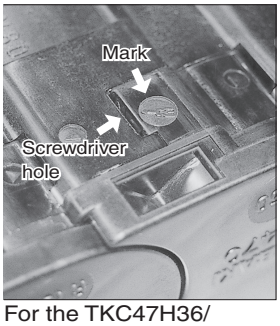


Close the outside stays after the setting the cables and hoses.

* Lock stay removal guide mark (screwdriver mark)

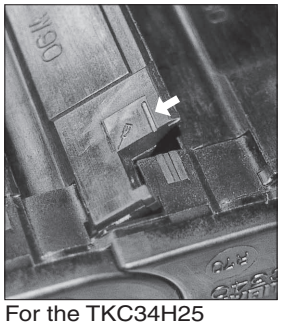


For the TKC34H25

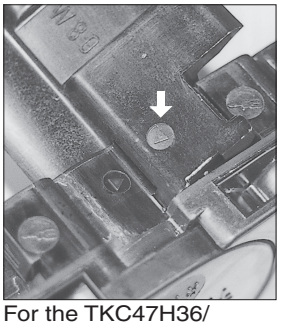


For the TKC47H36/ TKC64H50/TKC85H68

* Lock stay installing guide mark (mark to match to link)



For the TKC34H25

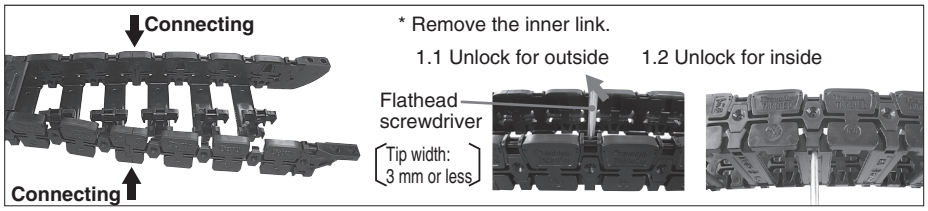


For the TKC47H36/ TKC64H50/TKC85H68

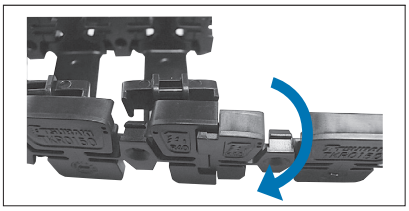
Cable Carrier Connecting/Assembly

TKR15H22

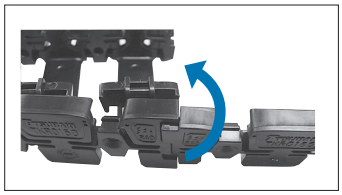
Connecting (Use the same procedure to install brackets)



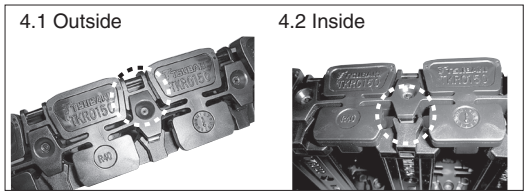
1. Remove the stays and inner links.
* Remove 2 more from the bracket on the side to extend to the connector for the outer links.



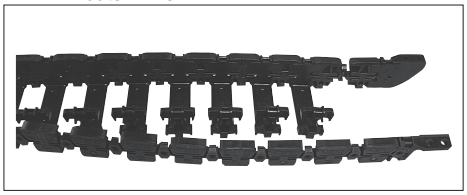
2. Separate the cable carrier between the outer links up to the connector for the outer links.



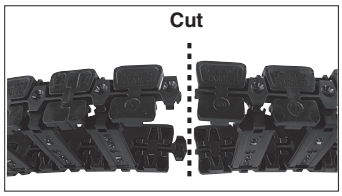
3. Connect the extension outer links.



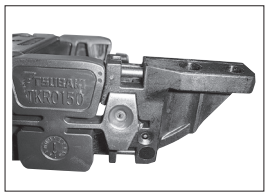
4. Install the inner links to the outer link.
* Push the hook of the outer link into the gap on the inner links. (Outside → inside order)



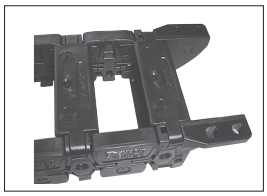
5. Install all inner links to one side of the outer link, and then install the inner links to the opposite side of the outer link.



6. Separate the outer link at the specified number of links.



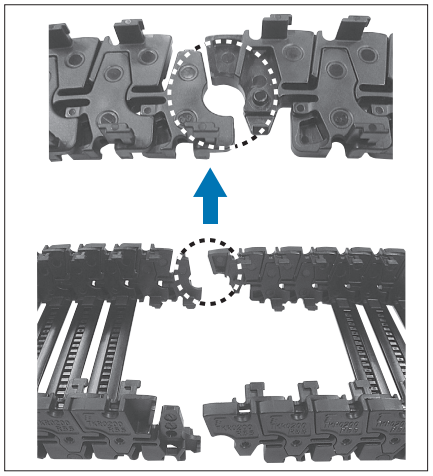
7. Install the bracket to the cut portion of the outer link.



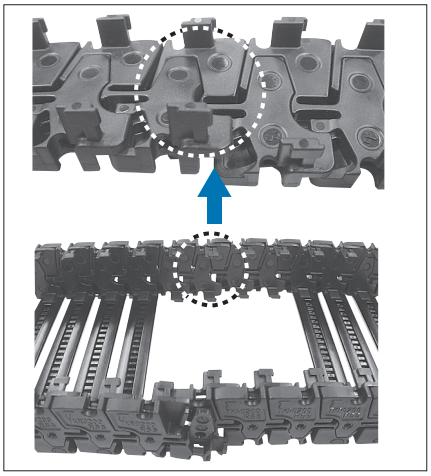
8. Install stays to the plastic link section and bracket.

TKR20H28/TKR26H40/TKR28H52

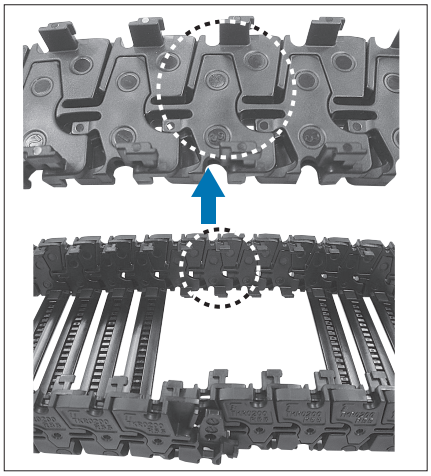
1. Connecting (Use the same procedure to install brackets)



1.1 Remove 2 links worth of outside stays and lock stays from the end of the connection and adjust the direction.

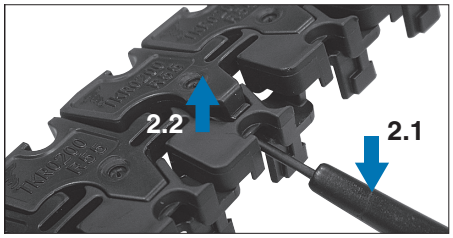


1.2 Fit the protrusion on the outside of the links into the depression on the links.



1.3 Fit the inside of the links in the same manner.

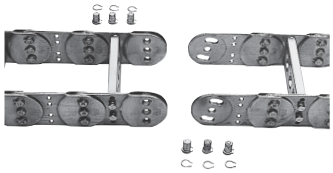
2. Separating



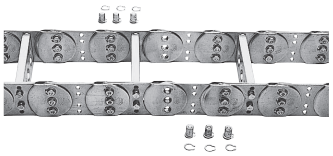
2.1 Insert a flathead screwdriver (tip width: 3.5 mm or lower) into the hold on the inside of the link, and pry open in the direction of the arrows.
2.2 The links are unlocked and can be removed.

TK Series/TKH Series/TKS Series

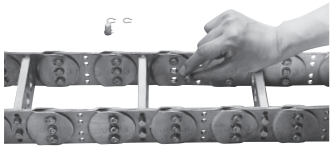
1. Connecting



1.1 Place the cable carrier on the floor with the outside down.



1.2 Align the pins.



1.3 Install the pins and lock with circlips.

Note:
The cable carrier has pretension, so both ends lift up when the outside is placed down on the floor. In this case, place blocks under both ends and align the pins.

2. Installing cables/hoses

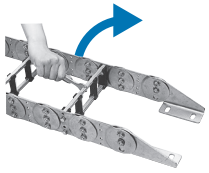
◆ For the TK Series/TKH Series (split stay)



2.1 Remove the inside stay. (If it is difficult to remove or install the stay, loosen the other bolt.)
2.2 Place the cables and hoses in the prescribed indentations on the stay.
2.3 Install and temporarily fasten the inside stay. Always install the one end of the removed stay in its original position (match the symbols).
◆ For an unsplit stay, install the cables and hoses through the stay holes from one end of the cable carrier.
◆ The stay has a mark inscribed on its outside.

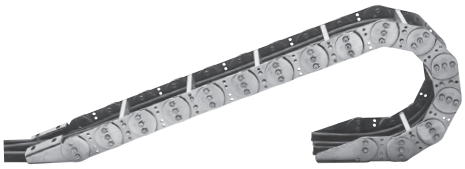
◆ For the TKS Series

Twist the inside bar 90° to remove.



3. Adjustments and tightening

When finished installing the cables and hoses and temporarily fastening the stays, place the cable carrier down on a level floor as shown in the following photo, and tighten the stay installing bolts.





⚠ Be careful so that twisting does not occur between links in step 2.
If the cables and hoses are not installed while the cable carrier is flat, the cable carrier may twist or meander when installed in the equipment.

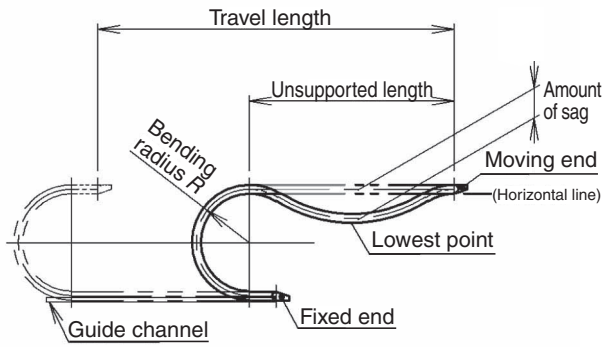
Cable Carrier Usage Limitations

Cable carrier service life

1. As the cable carrier moves (cycles), the pins and holes in the link connections will wear or the no-back-bend limiting portion will wear, causing sag in the unsupported length portion (see the figure to the right). This will result in the product being determined as having reached the end of its service life when it is no longer possible to guarantee protection of the cables/hoses and stable operation of the cable carrier. This determination is made when the smaller of 1.1or 1.2 below is reached.

Unsupported length sag limits (guideline)

1.1 10% of unsupported length
1.2 Cable carrier bending radius (*R*) amount



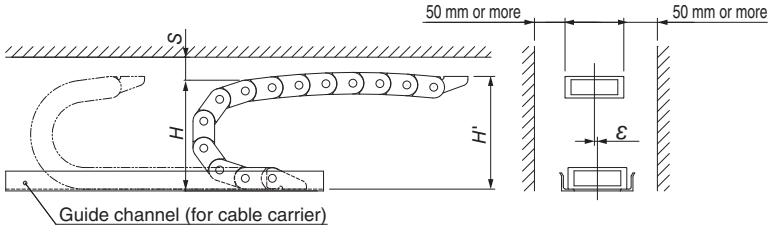
(Ex.) Unsupported length: 500 mm (⇒ 500 mm × 10% = 50 mm)
Cable carrier bending radius: R55
} Sag amount limit (guideline): 50 mm

2. Should the cable carrier become broken, cracked, or otherwise damaged due to deterioration caused by age, the cable carrier is determined to have reached the end of its service life.

Factors that affect service life

A cable carrier may reach the end of its service life relatively quickly in the following cases:

1. High acceleration/deceleration or operating frequency.
2. Presence of wear caused by abrasives such as dust.
3. External vibrations.
4. Poor installation.
5. Temperature and humidity of the cable carrier installation environment (hot and/or humid).



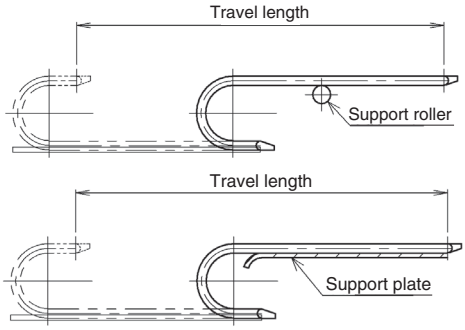
◆ Cable carrier installation accuracy guidelines (recommended)

- Misalignment (ε) of moving end and fixed end positions is smaller than the allowable value
- Mounting height (*H'*) is within the recommended value range (Note: Do not install at the total height (*H*).)
- Leeway space (*S*) is larger than the recommended value
- Provide a guide channel (for cable carrier)

Prolonging cable carrier service life

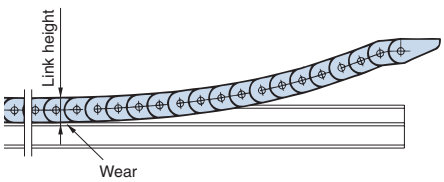
To prolong the service life of cable carrier components, installation of support rollers or support plates from the start of operation is recommended to limit sag.

Note: When adding support rollers or support plates if the sag amount in the unsupported length portion is increasing, the installation position (height) or—for support plates—the shape (where the unsupported length portion transfers to the channel) must be set with consideration for the amount of sag in the unsupported length portion at that time.



Guideline for the service life of the gliding arrangement

With the gliding arrangement, the inside of the link wears down with usage. The guideline for replacement is when the amount of link height wear (amount of gliding shoe wear for gliding shoes) reaches the allowable value (table to right). For the TKP58H39 with gliding shoes, TKP68H46 with gliding shoes, TKP91 (H56, H80), and TKC91 (H56, H80), only the gliding shoes can be replaced.
For the effect of prolonging the service life of gliding shoes, refer to page 128.

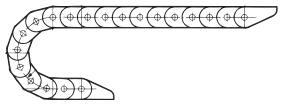


Model	Allowable wear (mm)	
	No gliding shoes	With a gliding shoe
TKP35H22	1.0	–
TKP45H25	1.5	–
TKP58H39	1.5	5.0
TKP62H34	1.0	–
TKP68H46	1.5	5.0
TKP90H50	1.5	–
TKP91H56	–	7.0
TKP91H80	–	7.0
TKP125H74	1.5	–
TKC34H25	1.0	–
TKC47H36	1.0	–
TKC64H50	1.5	–
TKC85H68	1.5	–
TKC91H56	–	7.0
TKC91H80	–	7.0

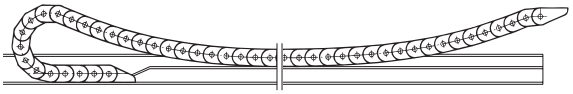
Note: Types with even larger values (different gliding shoe thickness) are also available. Contact a Tsubaki representative for further information.

Cable Carrier Inquiries Sheet

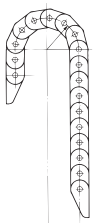
◆ Installation method (arrangement)



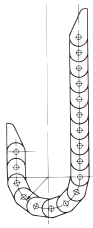
☐ Standard arrangement



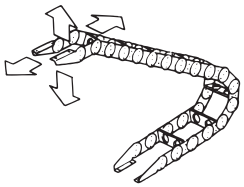
☐ Gliding arrangement



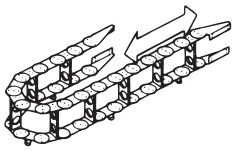
☐ Vertical arrangement (standing)



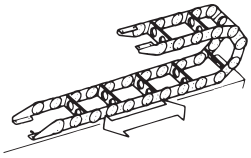
☐ Vertical arrangement (hanging)



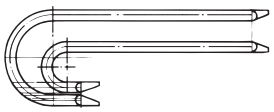
☐ Horizontal-vertical combined arrangement



☐ Side mount arrangement

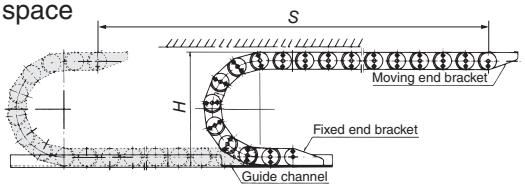


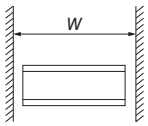
☐ Top-fixed arrangement (bottom movement)



☐ Nested arrangement

◆ Mounting space





1. Max. travel length *S* _____ mm (For horizontal-vertical combined arrangement →
2. Allowable mounting height *H* _____ mm Max. multi-axis travel length _____ mm)
3. Allowable mounting width *W* _____ mm
4. Machine/Application _____
5. Operating environment
   - Temperature _____ °C
   - Humidity _____ %
   - Circle all relevant items.

   Dirt/Dust/Chips/Sand/Outdoors/Corrosive environment (acidic or alkaline)/Paint
6. Max. acceleration speed _____ m/s^2
7. Travel speed _____ m/min
8. Frequency of use _____ times/day
9. Special remarks _____

■ Cable/hose types

	Types	Outer diameter	Mass (kg/m)	Number	Allowable bending radius
1	Cable/hose				
2	Cable/hose				
3	Cable/hose				
4	Cable/hose				
5	Cable/hose				
6	Cable/hose				
7	Cable/hose				

* Separately write the types for the top and bottom cables/hoses for nested arrangement.

◆ Desired types

1. Material Plastic / Steel
2. Structure Open type / Closed type
3. Dividers Required / Not required

◆ Special remarks

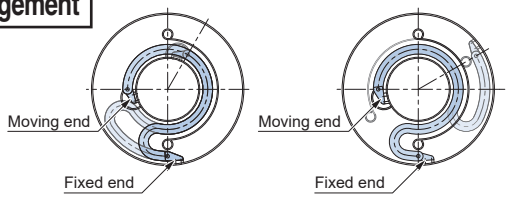
Company name	Department
Name	Tel.
Date of submission	E-mail

Cable Carrier Inquiries Sheet

Horizontal circular travel arrangement

◆ Rotation angle

_____ ° (degrees)

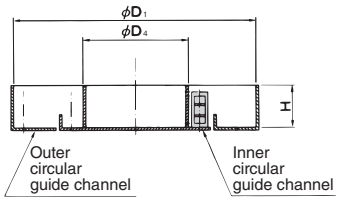


Track of inner circular travel

Track of outer circular travel

* To specify the fixed end position, draw that position on the diagram above.
* Even if the rotation angle is the same, the number of links depends on the installation position of the moving and fixed ends.

◆ Moving end direction Inner circular travel side / Outer circular travel side
◆ Moving bracket Installed to guide channel wall / Moves by bracket only
◆ Guide channel floor Movable / Fixed
◆ Mounting space

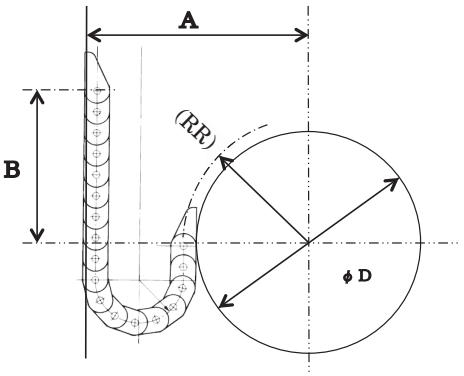


1. Outer circumference drum diameter D_1 _____ mm
2. Inner circumference drum diameter D_4 _____ mm
3. Guide channel height H _____ mm
4. Machine/Application _____
5. Operating environment
   • Temperature _____ °C
   • Humidity _____ %
   • Circle all relevant items.
   Dirt/Dust/Chips/Sand/Outdoors/Corrosive environment (acidic or alkaline)/Paint
6. Max. acceleration speed _____ m/s^2
7. Travel speed _____ m/min
8. Frequency of use _____ times/day
9. Special remarks _____

Vertical circular travel arrangement

◆ Rotation angle

_____ ° (degrees)



1. Drum diameter D _____ mm
2. Mounting width A _____ mm
3. Mounting height B _____ mm

■ Cable/hose types

	Types	Outer diameter	Mass (kg/m)	Number	Allowable bending radius
1	Cable/hose				
2	Cable/hose				
3	Cable/hose				
4	Cable/hose				
5	Cable/hose				
6	Cable/hose				
7	Cable/hose				

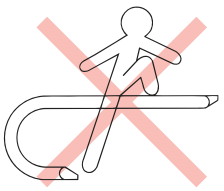
◆ Desired types
1. Material Plastic / Steel
2. Structure Open type
3. Dividers Required / Not required

◆ Special remarks

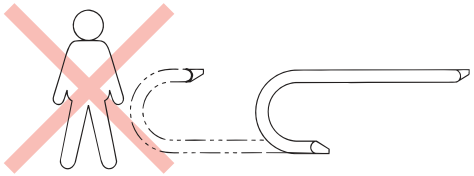
Company name	Department
Name	Tel.
Date of submission	E-mail

For Safe Use

Warning Observe the following points in order to prevent hazardous situations.



- Do not use the cable carrier and its accessories (including CLEANVEYOR and FLATVEYOR) for anything other than their original purpose.
- Do not stand or ride on the cable carrier. There is a risk of damage and falls.
- Never perform additional work on the cable carrier or the accessories (except fitting connectors on CLEANVEYOR or FLATVEYOR).
  - Do not clean the cable carrier or the accessories with acids or alkalis, as they may cause cracking.
  - Never electroplate the cable carrier or the accessories, as this may cause cracking due to hydrogen embrittlement.
  - Do not weld the cable carrier or the accessories, as the heat may cause cracking or a reduction in strength.
- Observe all appropriate labor safety codes and standards for your region or area.
- When there is a need to replace a damaged (fractured) portion of a cable carrier or an accessory, always replace the whole cable carrier or the accessory with a new product rather than replacing only the damaged or fractured portion.
- Immediately stop using the cable carrier or the accessories if they come into contact with a substance that can cause embrittlement cracking (acid, strong alkali, battery fluid, etc.) and replace with a new cable carrier or accessory.
- Observe the following when connecting, installing, removing, servicing, and inspecting the cable carrier or the accessories.
  - Perform the procedure as specified in the instruction manual, catalog, or documentation specially provided to the customer.
  - Secure the cable carrier and the accessories so they do not move freely.
    The cable carrier may move on its own or collapse under its own weight.
  - Be careful not to pinch, crush, or entangle hands in the bending section of the cable carrier.
  - Wear suitable clothing and protective equipment for the work (such as safety goggles, gloves, and safety shoes).
  - Always turn off the source power supply beforehand, and take care not to accidentally operate switches.
  - Only experienced personnel should handle the cable carrier.



Caution Observe the following points to prevent accidents.

- Carefully understand the construction and specifications of the cable carrier or the accessories before handling.
- Inspect the cable carrier or the accessories for damage during transport before installation.
- The cable carrier or the accessories should be periodically serviced and inspected.
- Cable carrier capacity varies according to manufacturer. When selecting a chain based on a Tsubaki catalog or similar, always use the corresponding Tsubaki product.
- Always ensure that the final customer receives the instruction manual.
  - If you do not have the instruction manual, contact a Tsubaki representative with the product name, series name, and chain/model number to receive the appropriate manual.
- The product information given in this catalog is mainly for selection purposes. Thoroughly read the instruction manual before actually using the product, and use it properly.

Warranty

1. Warranty period without charge

Tsubakimoto Chain Co. (hereinafter referred to as “Company”) provides a warranty without charge valid for either 18 months after the shipment of the purchased product (hereinafter referred to as “Goods”) from the factory, or 12 months after the first use of Goods, whichever comes first. First use of Goods is considered to be the complete incorporation of Goods into the equipment of the purchasing party (hereinafter referred to as “Customer”). This warranty may be provided with charge in certain circumstances.

2. Warranty coverage

Should any malfunction in Goods arise during the warranty period, given that Goods were properly installed, operated, and maintained as instructed in the catalog, instruction manual, or similar, Company shall promptly deliver or repair Goods at no charge once Company has confirmed such failure. This warranty covers delivered Goods only and therefore does not include the following: (“Instruction manual or similar” includes documentation specially provided to Customer.)

(1) Any costs required for the removal or installing of Goods from or into Customer’s equipment for repair or replacement.
(2) Costs required for transporting Customer’s equipment to repair shop, etc.
(3) Profits lost due to a malfunction or repair, or any other consequential loss.

3. Warranty with charge

Company will charge for any investigation, repair, and/or manufacturing of a malfunction in Goods (even during the warranty period) if caused by:

(1) Improper location, installation (including cutting and connecting), lubrication, or maintenance by Customer’s failing to follow the catalog, instruction manual, or similar.
(“Instruction manual or similar” includes documentation specially provided to Customer.)
(2) Operation methods (including operating conditions, operating environment, and allowable values) resulting from Customer’s failure to follow operation described in the catalog, instruction manual, or similar. (“Instruction manual or similar” includes documentation specially provided to Customer.)
(3) Inappropriate disassembly, modification, alteration, or processing by Customer.
(4) Use of Goods by Customer in conjunction with damaged or worn parts not made by Company. (e.g., use of Goods with sprocket, drum, rail, etc., that has a worn chain.)
(5) Failure of operational life under operating conditions use as determined by Company to satisfy operational life covered by Warranty.
(6) Use by Customer under conditions other than those discussed.
(7) Consumption, wear, or deterioration of bearings, oil seals, oil, and other consumable parts incorporated into Goods.
(8) Secondary failure or malfunction in Goods resulting from malfunctioning of Customer’s equipment.
(9) Malfunction of Goods resulting from a force majeure such as an act of God.
(10) Malfunction of Goods resulting from a wrongful act committed by a third party.
(11) Any other reason that is not attributable to Company.

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Global Group Companies

AMERICAS

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Philippines	Tsubakimoto Philippines Corporation	https://en.tsubaki.ph/
Thailand	Tsubakimoto (Thailand) Co., Ltd.	https://tsubaki.co.th/
Vietnam	Tsubakimoto Vietnam Co., Ltd.	https://tsubaki.net.vn/

EAST ASIA

Republic of Korea	Tsubakimoto Korea Co., Ltd.	https://tsubakimoto-tck.co.kr/
Taiwan	Taiwan Tsubakimoto Trading Co., Ltd.	https://tsubakimoto.tw/

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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