

TSUBAKI **Screw Lock Link™** Connecting Links for Large Size Conveyor Chain



Reduce chain maintenance time.

Screw Lock Link™ allows

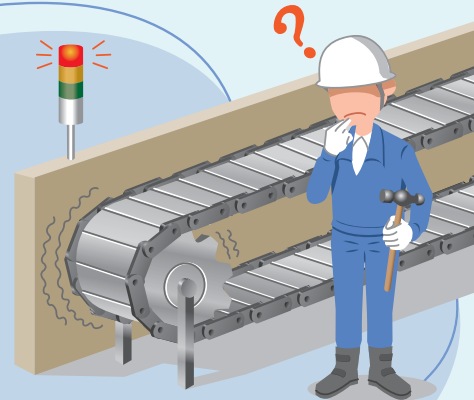


Clang clang!



Using a hammer is dangerous.

The outer plate pushing in too far results in poor articulation.



Connection/disconnection on large size conveyor chains requires significant labor.



Chain can't be repaired quickly if there's a problem.

Requires a lot of tools and jigs.



Screw Lock Link™ can solve these issues.

Makes work safe

No hammering required.

Reduces production loss

As long as you have spare parts on hand, restoration is fast.



Prevents improper installation

Avoid problems such as poor articulation due to the outer plate pushing in too far.

Easy installation

Reduces labor: the only tool needed is a torque wrench.

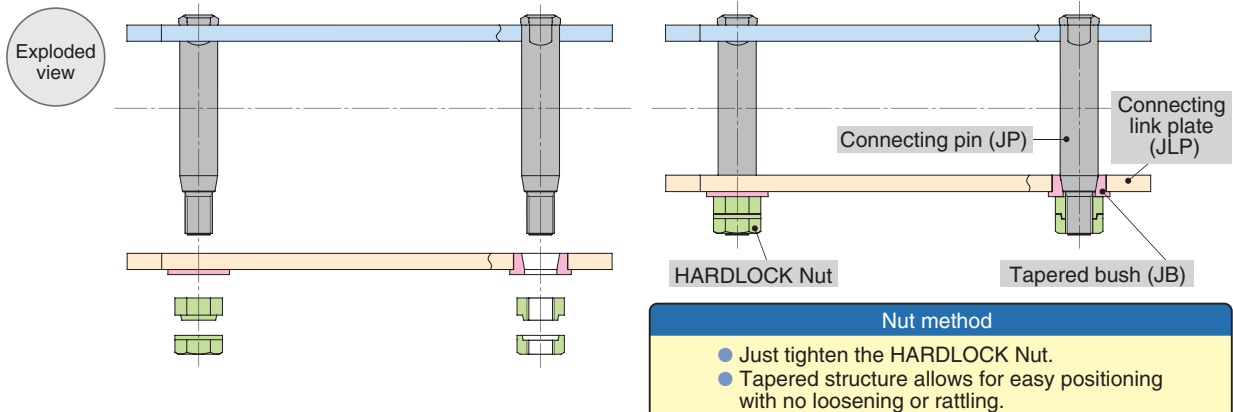
Same maximum allowable load as the
base chain links.

No reduction in strength.

safe and fast replacement.

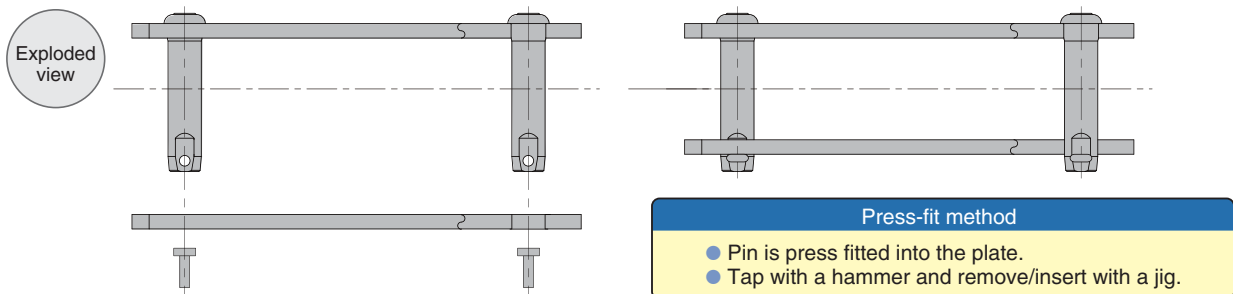
Structural comparison

Screw Lock Link



The nut method uses longer pins. Make sure there is no contact with equipment.

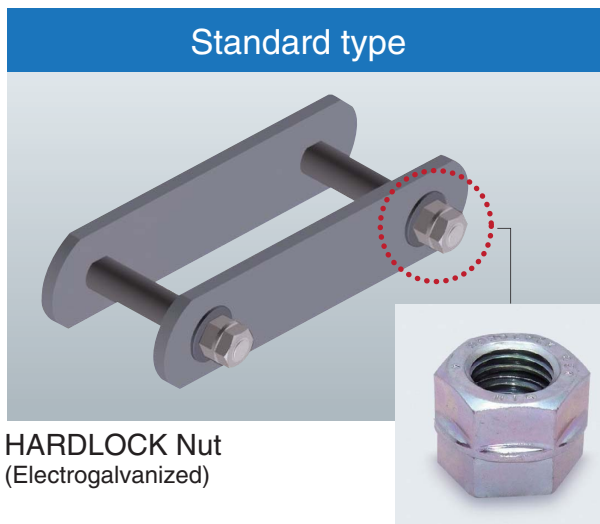
Standard outer link



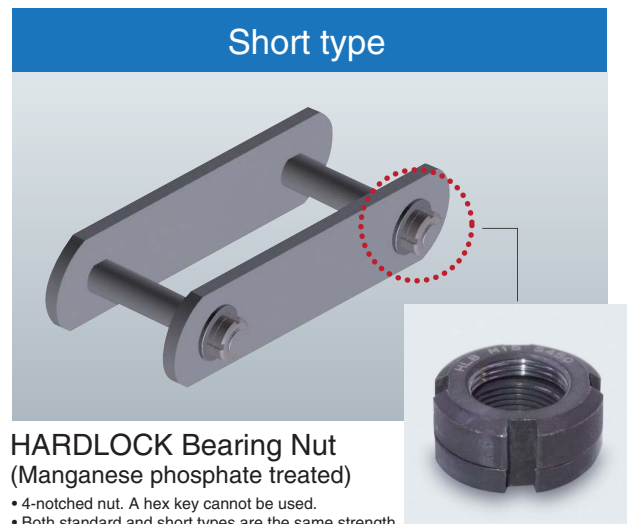
2 types of nuts available

A short type with a minimized pin length is also available.

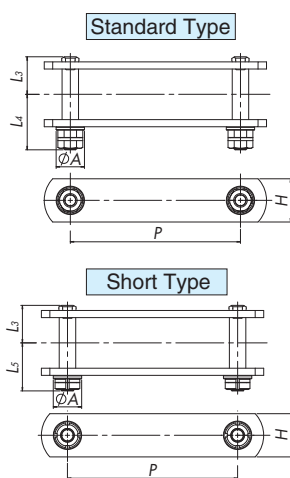
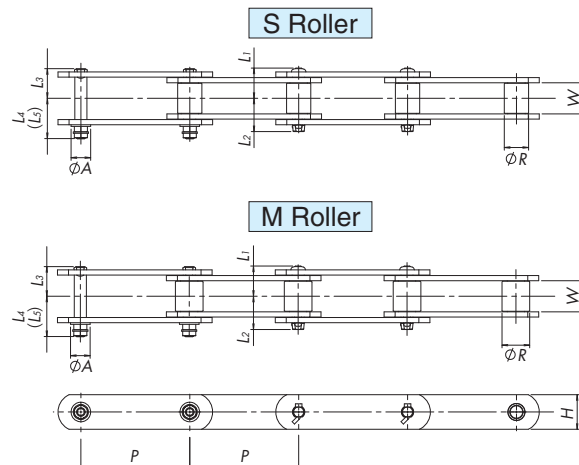
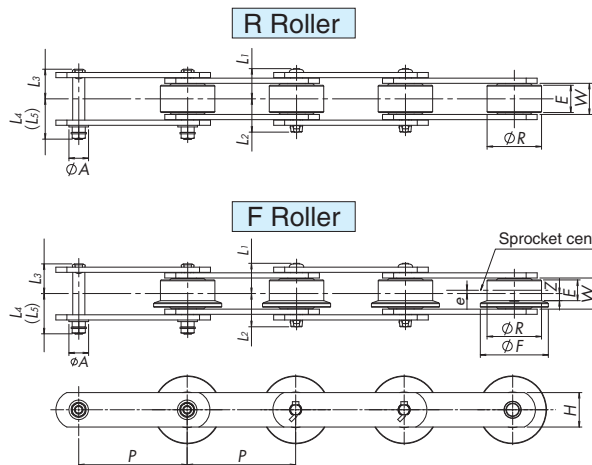
Standard type



Short type



Note: Hardlock is a trademark of Hardlock Industry Co., Ltd.



Connecting Link Dimensions

Size	Max. Allowable Load		Min. Tensile Strength		Pitch P	Pin			Nut Size		Connecting Bush Flange Dia.	Approx. Additional Mass	
	DT kN(kgf)	AT kN(kgf)	DT kN(kgf)	AT kN(kgf)		Connecting Pin						A	Standard Type
						L ₃	Standard Type L ₄	Short Type L ₅					
RF10100					100	33	48.5	42	M12	M12	25	0.13	0.08
RF10125	17.6 {1790}	32.3 {3290}	107 {11000}	169 {17000}	125								
RF10150					150								
RF12200	26.6 {2710}	39.9 {4060}	160 {16500}	249 {25500}	200	40.5	55.5	49	M12	M12	28	0.17	0.11
RF12250					250								
RF17200	35.0 {3570}	55.3 {5640}	213 {22000}	336 {34000}	200	51.5	69.5	61.5	M14	M15	32	0.25	0.14
RF17250					250								
RF17300					300								
RF26200					200	55.5	74	64	M16	M17	36	0.33	0.17
RF26250	44.9 {4570}	74.3 {7580}	285 {29000}	448 {45500}	250								
RF26300					300								
RF26450					450								

Base Chain Dimensions

Size	Roller Type	Inner Link Inner Width W	Plate Width H	Pin		Roller								
				Cotter Pin		R Roller		F Roller					S Roller Dia. R	M Roller Dia. R
				L ₁	L ₂	Dia. R	Contact Width E	Dia. R	Flange Dia. F	Contact Width E	Off-center e	Z		
RF10100	R/S/M	30	38.1	33	36	50.8	27	50.8	65	—		29	31.8	
RF10125	R/F/S/M									20	3			7
RF10150														
RF12200	R/F/S/M	37.1	44.5	40.5	43	65	32	65	80	24	4	8	34.9	38.1
RF12250														
RF17200														
RF17250	R/F/S/M	51.4	50.8	51.5	58	80	44	80	100	34	5	12	40.1	44.5
RF17300														
RF26200	S/M													
RF26250														
RF26300	R/F/S/M	57.2	63.5	55.5	61	100	50	100	125	38	6	13	44.5	50.8
RF26450														

Note: 1. Operating temperature range is -20°C to 150°C. Contact a Tsubaki representative for use outside this range.

2. L₄ and L₅ are longer pin lengths than L₂. Make sure there is no contact with equipment.

3. Regarding selection and usage, see Screw Lock Link Handling Instructions on page 5, and the Tsubaki Large Size Conveyor Chains & Sprockets catalog.

4. To tighten the short-type nut, use a hook spanner or socket wrench.

5. For attachment type, see the Tsubaki Large Size Conveyor Chains & Sprockets catalog.

6. Sizes (e.g. in inches) and specifications (e.g. stainless steel) other than those in the table above may also be manufactured. Contact a Tsubaki representative.

Model Numbering Example

Connecting Link

RF12200 - DT - A2 - LNJL 8K

Size Series Attachment type Part name Quantity/unit (piece)

LNJL: Standard type
LSJL: Short type

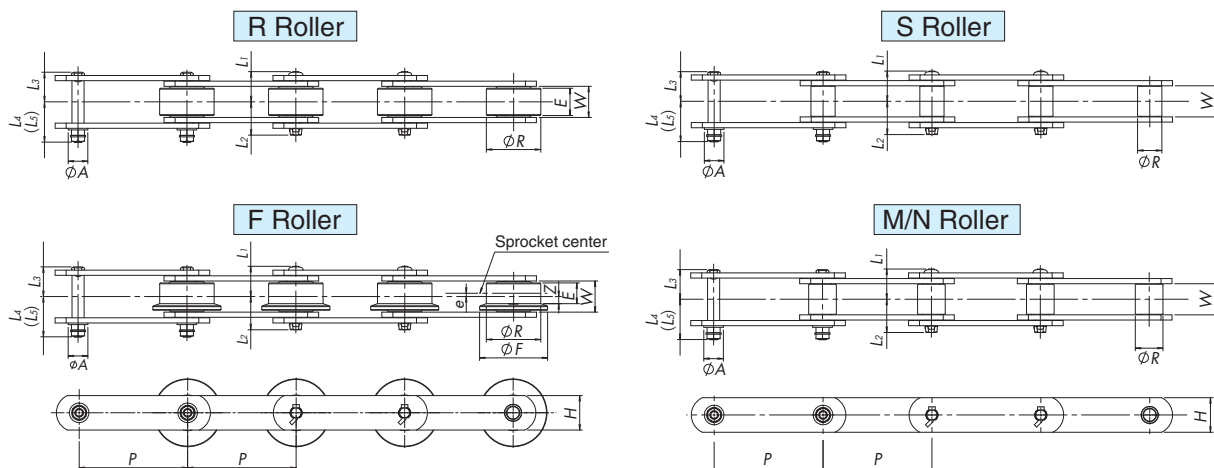
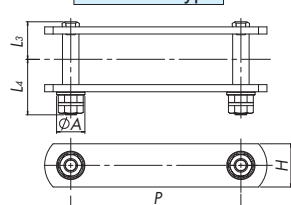
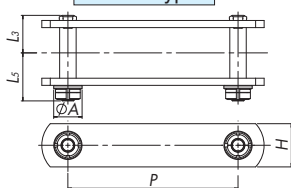
Assembly Chain

RF12200 R - AT - 2LK2 + 140L - LNJR 2H

Size Roller type Series Attachment spacing/type No. of links End link Quantity/unit (strand)

Packing ▶ 14L (link) × 20H (strand) Total 140L (link) × 2H (strand)

Note: A Screw Lock Link is attached to one end of the 14th link.


Standard Type

Short Type

■ Connecting Link Dimensions

Size	Max. Allowable Load		Min. Tensile Strength		Pitch P	Pin			Nut Size		Connecting Bush Flange Dia.	Approx. Additional Mass (kg/each)	
						Connecting Pin							
	DT kN(kgf)	AT kN(kgf)	DT kN(kgf)	AT kN(kgf)		L ₃	Standard Type L ₄	Short Type L ₅	Standard Type	Short Type	A	Standard Type	Short Type
RF36250					250	66	91.5	78.5	M20	M20	42	0.55	0.26
RF36300	68.0 {6930}	97.4 {9930}	457 {46500}	614 {62500}	300								
RF36450					450								
RF36600					600								
RF52300					300	79	110	93.5	M24	M25	48	0.85	0.39
RF52450	71.4 {7280}	147 {15000}	481 {49000}	953 {97000}	450								
RF52600					600								
RF60300					300	72.5	104	86.5	M27	M30	55	1.18	0.53
RF60350	71.4 {7280}	149 {15200}	479 {49000}	1010 {103000}	350								
RF60400					400								
RF90350					350	85.5	120.5	102	M30	M35	65	1.85	0.88
RF90400	113 {11500}	233 {23700}	754 {77000}	1600 {163000}	400								
RF90500					500								

■ Base Chain Dimensions

Size	Roller Type	Inner Link Inner Width W	Plate Width H	Pin		Roller								S Roller Dia. R	M Roller Dia. R
				Cotter Pin		R Roller		F Roller							
				L ₁	L ₂	Dia. R	Contact Width E	Dia. R	Flange Dia. F	Contact Width E	Off-center e	Z			
RF36250	S/M	66.7	76.2	68	78	125	56	125	150	42	7	14	50.8	57.2	
RF36300	R/F/S/M														
RF36450															
RF36600															
RF52300	R/F/S	77	76.2	82	90	140	65	140	170	49	8	16.5	57.2	—	
RF52450															
RF52600															
RF60300															
RF60350	R/F/N	77	90	77	83.5	140	65	140	170	49	8	16.5	—	70	
RF60400															
RF90350	N	88	110	89.5	95.5	—							—	85	
RF90400	R/F/N														
RF90500															

Note: 1. Operating temperature range is -20°C to 150°C. Contact a Tsubaki representative for use outside this range.

2. L4 and L5 are longer pin lengths than L2. Make sure there is no contact with equipment.

3. Regarding selection and usage, see Screw Lock Link Handling Instructions on page 5, and the Tsubaki Large Size Conveyor Chains & Sprockets catalog.

4. To tighten the short-type nut, use a hook spanner or socket wrench.

5. For attachment type, see the Tsubaki Large Size Conveyor Chains & Sprockets catalog.

6. Sizes (e.g. in inches) and specifications (e.g. stainless steel) other than those in the table above may also be manufactured. Contact a Tsubaki representative.

End Links

End Link Code	One End	Other End
LNJ R	Screw Lock Link standard type	Inner link
LSJ R	Screw Lock Link short type	Inner link
LNJ LNJ	Screw Lock Link standard type	Screw Lock Link standard type
LSJ LSJ	Screw Lock Link short type	Screw Lock Link short type

Note: The Screw Lock Link (connecting link) is shipped with its lower nut tightened at the prescribed torque and its upper nut lightly tightened to prevent it from getting lost.

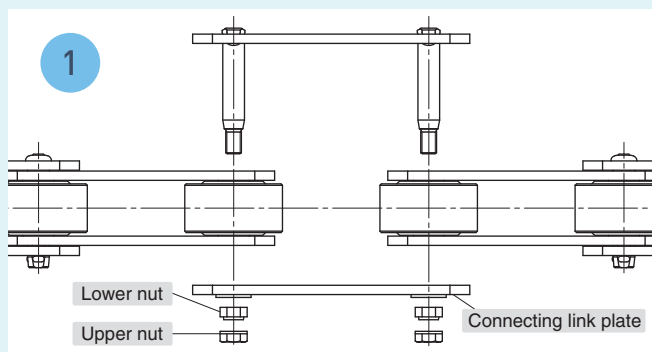
Screw Lock Link Handling Instructions



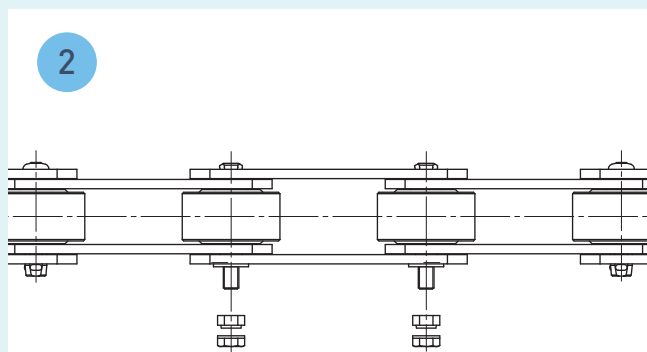
Caution

Whether the conveyor is parallel, slanted, or vertical, always attach a chain block or piano wire to the area to be connected/disconnected to ensure there is no tension on the chain.

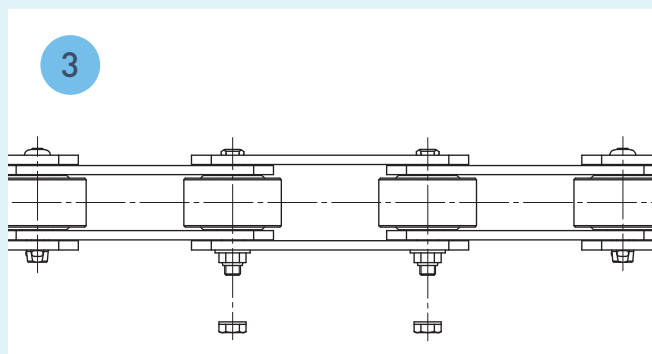
■ Connecting



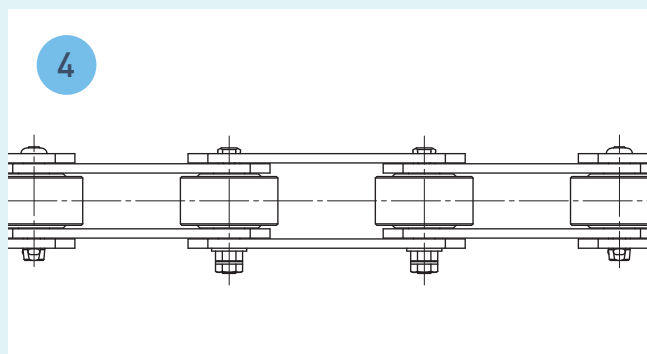
Remove the nuts and the connecting link plate.



Pull both ends of the chain together, insert the connecting link into the joints of the inner link, and place the connecting link plate over the pin ends.



Tighten the lower nut at the torque prescribed below. Before tightening the nut, remove oil and other substances from the screw threads using a cloth.



Tighten the upper nut at the torque prescribed below to complete connection.

■ Disconnecting

1 Remove the upper nut, then the lower nut.

2 Remove the connecting link plate, then remove the connecting link from the inner link.

Note: Nuts may be difficult to remove due to things like residue from conveyed items or corrosion.

Maintenance and Inspection

Nuts may come loose or fall off depending on usage environment and conditions. Periodically check for loosening of the nuts.
(Making matchmarks on the nuts makes it easier to check them.)

Refer to the *Tsubaki Large Size Conveyor Chains & Sprockets* catalogue for maintenance and inspection.

■ Nut Tightening Torque (N·m)*1

		RF10	RF12	RF17	RF26	RF36	RF52	RF60	RF90
Standard Type	Nut Size	M12×P1.75	M12×P1.75	M14×P2.0	M16×P2.0	M20×P2.5	M24×P3.0	M27×P3.0	M30×P3.5
	Lower Nut	27–32	28–33	46–55	72–82	120–130	218–228	250–260	367–377
	Upper Nut	27–32	28–33	46–55	72–82	120–130	218–228	250–260	367–377
Short Type*2	Nut Size	M12×P1.0	M12×P1.0	M15×P1.0	M17×P1.0	M20×P1.0	M25×P1.5	M30×P1.5	M35×P1.5
	Lower Nut	23–27	28–33	49–58	76–86	117–127	227–237	254–264	428–438
	Upper Nut	16–19	16–19	28–33	37–44	55–65	80–90	115–125	130–140

*1 The tightening torque in the above table is for steel nuts. Contact a Tsubaki representative regarding stainless steel nuts.

*2 The short type is a 4-notched nut. Use a hook spanner or socket wrench.

For Safe Use



Warning

Observe the following points to prevent hazardous situations.

- Do not use chains or accessories (peripheral devices and parts) for anything other than their original purpose.
- Never perform additional work on the chain.
 - Do not anneal the various parts of the chain.
 - Do not clean the chain with acids or alkalis, as they may cause cracking.
 - Never electroplate the chain or its parts, as this may cause cracking due to hydrogen embrittlement.
 - Do not weld the chain, as the heat may cause cracking or a reduction in strength.
 - When heating or cutting the chain with a torch, remove the links immediately adjacent and do not use them again.
- When there is a need to replace a damaged (fractured) portion of a chain, always replace the whole chain with a new product rather than replacing only the damaged or fractured portion.
- Immediately stop using the chain if it comes into contact with a substance that can cause embrittlement cracking (acid, strong alkali, battery fluid, etc.) and replace with a new chain.
- When using the chain on suspension equipment, establish a safety fence and strictly prevent entry to the area directly below the suspended object.
- Always install hazard protection devices (safety covers, etc.) for the chain and sprocket.
- Strictly observe the rules and regulations concerning occupational safety and health in your region/country.
- When installing, removing, inspecting, maintaining, and lubricating the chain:
 - Perform the work as instructed in the manual, catalog, or other documentation that was provided with the product.
 - Always turn off the power switch to the equipment beforehand and make sure that it cannot be turned on accidentally.
 - Secure the chain and parts so that they cannot move freely.
 - Use a press or other special tool to cut and connect chain, and cut and connect using the proper procedures.
 - Remove and insert pins and rivets in the correct direction.
 - Wear clothing and protective gear (safety glasses, gloves, safety shoes, etc.) that are appropriate for the work.
 - Only experienced personnel should replace chains and sprockets.



Caution

Observe the following points to prevent accidents.

- Only handle chains and sprockets after thoroughly understanding their structure and specifications.
- When installing chains and sprockets, inspect them in advance to confirm that they have not been damaged in transport.
- Always regularly inspect and maintain your chains and sprockets.
- Chain strength varies according to manufacturer. When selecting a chain based on a Tsubaki catalog always use the corresponding Tsubaki product.
- Minimum tensile strength refers to the failure point when a load is applied to the chain once and does not refer to the allowable operational load.

Warranty

1. Warranty Period

Products manufactured by Tsubakimoto Chain Co. ("Products") are warranted against defects in materials and workmanship for eighteen (18) months from the date of shipment from the factory or twelve (12) months from the date the Products are first placed into operation (calculated from the date the Products have been installed on the customer's equipment), whichever comes first.

2. Scope of Warranty

During the warranty period, if defects arise in the Products when installed, used, and maintained correctly in accordance to Tsubakimoto Chain's catalogs, installation manuals (including any documents specially prepared and provided to the customer) and the like, Tsubakimoto Chain will repair or replace such defective Products thereof free of charge upon confirmation of said defect by Tsubakimoto Chain. This warranty shall only apply to Products received, and Tsubakimoto Chain shall not be liable for the following costs and/or damages (including installation manuals or other documents specially prepared and provided to the customer):

- (1) Costs required for removing the defective Products from or re-installing the replacement Products on the customer's equipment for replacement or repair of the defective Product, as well as any associated installation costs.
- (2) Costs required to transport the customer's equipment, if needed, to a repair shop or the like.
- (3) Any consequential or indirect damages or loss of profits or benefits the customer may incur due to the defects or repair of the Products.

3. Out of Warranty Service and Repair

Regardless of the warranty period, Tsubakimoto Chain will provide investigation, repair, and/or manufacture of the Products for a fee should the Products experience problems or anomalies under the following situations.

- (1) Placement, installation (including connecting and disconnecting), lubrication, or maintenance of the Products not in accordance with Tsubakimoto Chain's catalogs, installation manuals (including documents specially prepared and provided to the customer), or the like.
- (2) Use of the Products (including operating conditions, environment, and allowances) not in accordance with Tsubakimoto Chain's catalogs, installation manuals (including documents specially prepared and provided to the customer), or the like.
- (3) Inappropriate disassembly, modification, or processing of the Products by the customer.
- (4) Use of the Products with damaged or worn products.
(Example: Use of the Products with a worn sprocket, drum, rail, or the like.)
- (5) When the operating conditions exceed the performance of the Products as selected using the Tsubakimoto Chain selection method.
- (6) Use of the Products in conditions other than what have been discussed.
- (7) When consumables such as bearings, oil seals, and lubricant in the Products deplete, wear, or degrade.
- (8) When secondary damage occurs to the Products due to initial or primary damage or failure to the customer's equipment.
- (9) Damage or failure of the Products due to forces majeure such as natural disasters.
- (10) Damage or failure of the Products due to unlawful conduct by third parties.
- (11) Damage or failure of the Products due to causes not attributable to Tsubakimoto Chain

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