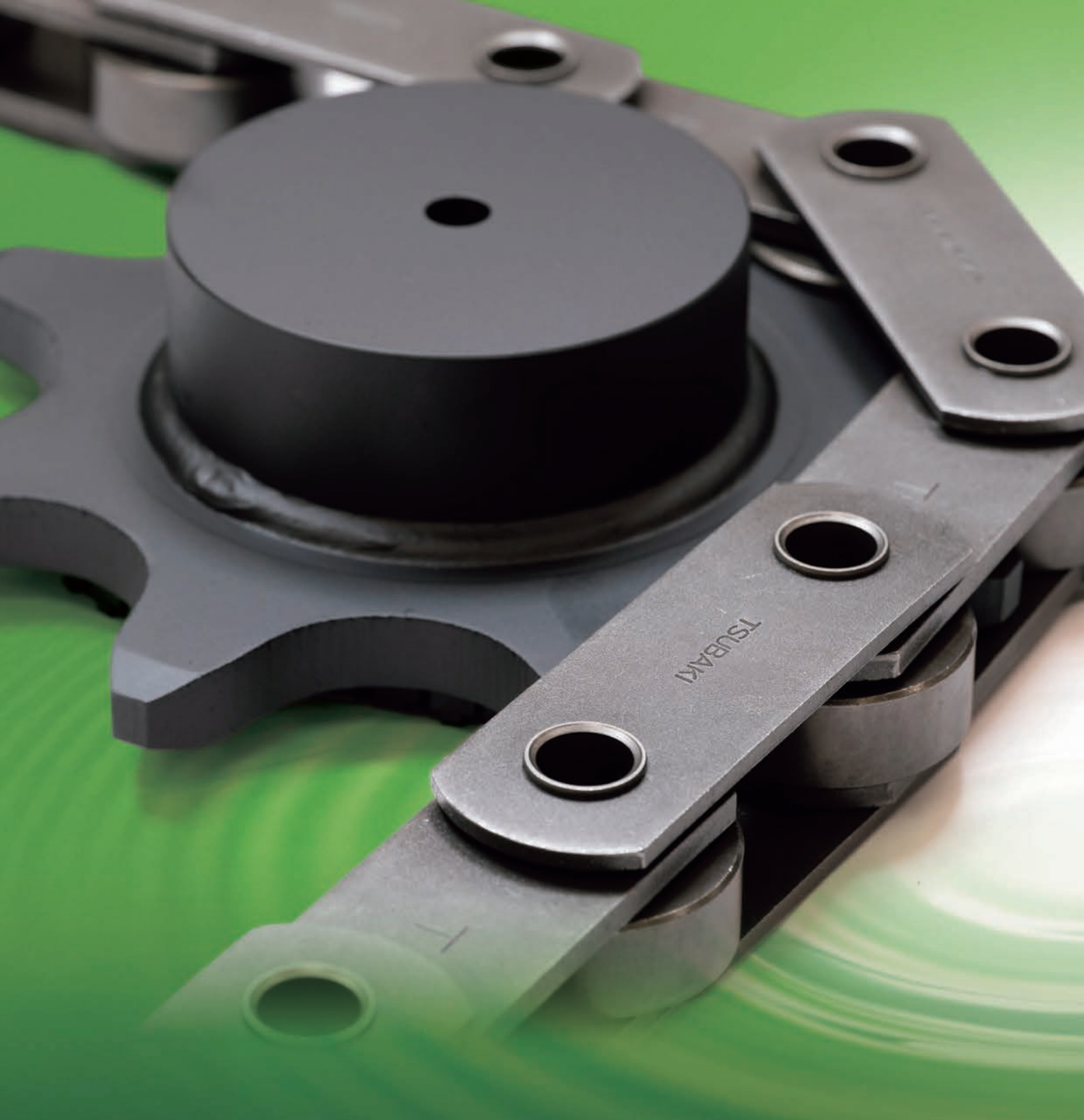


TSUBAKI British Standard Conveyor Chain





100+ YEARS.
80+ LOCATIONS.
1 MISSION.

For more than 100 years, Tsubaki has developed and manufactured the highest quality products for power transmission, material handling and motion control.

An intense focus on innovation and an unwavering commitment to quality has helped us consistently meet the evolving needs of our customers since 1917.

Today, we have more than 26 manufacturing sites globally and our products are sold in more than 80 countries. Our international presence affords us access to the brightest minds in engineering, many of whom have contributed to the development of our industry leading products and services.

Power to the World!



Ecology and Economy (ECO & ECO) – Driving the Future

Tsubaki Large Size Conveyor Chains combine TSUBAKI quality with proven conveying power to support your ECO & ECO needs.

Tsubakimoto Chain's Plant Concepts

Kind consideration towards the global environment

Harmony and coexistence with the global environment

Pursuit of high efficiency and high quality

Courage to look to the future

Tsubakimoto Chain's Plant is a state-of-the-art facility outfitted with the latest environmental systems to produce environmentally friendly products that meet the needs of the times and our customers.

Internationally Accredited Plant

Tsubakimoto Chain aims to make products that are people-friendly, environmentally friendly, and reliable. The Chain Division acquired ISO9001 accreditation in 1995 and ISO14001 accreditation in 2003.



Quality features built into the product, means real benefits for performance and reliability

Our British Standard Conveyor Chain is manufactured to Tsubaki's exacting specifications at our quality ISO certified facility.

This assurance of quality, exceeding industry standards, ensures a superior product throughout the entire design and manufacturing process.



A D V A N T A G E

Quality of shear surface



General Press Processing



Press Processing Utilizing
TSUBAKI Expertise

Heat treatment is applied in accordance with the chain specifications.



Batch furnace

The overall length of completed chains can be measured.



Chain Overall Length Measuring Machine

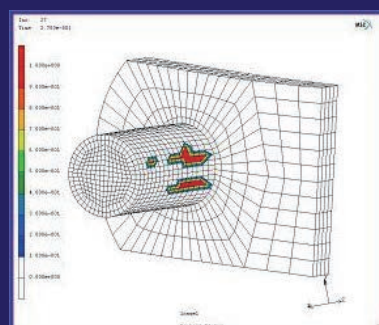
Confident in our quality control.

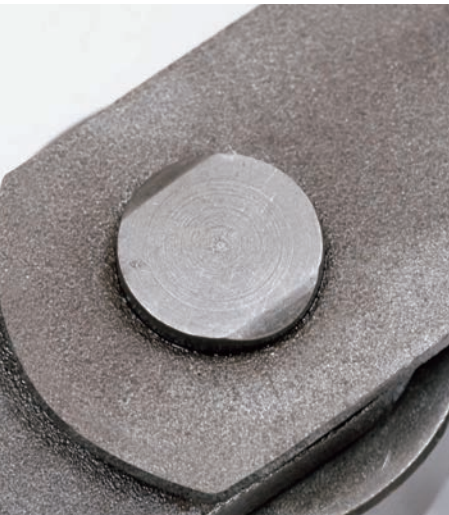
Rigorous in-house inspections are conducted.



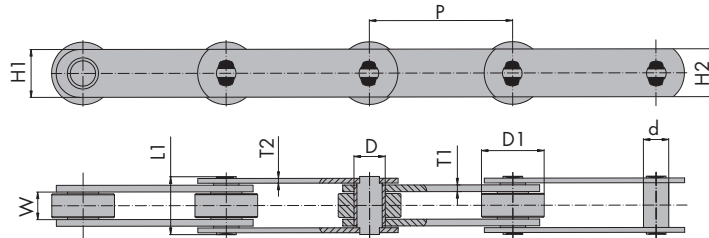
Inspection device

Design utilizing stress analysis.





British Standard Solid Pin Conveyor Chain

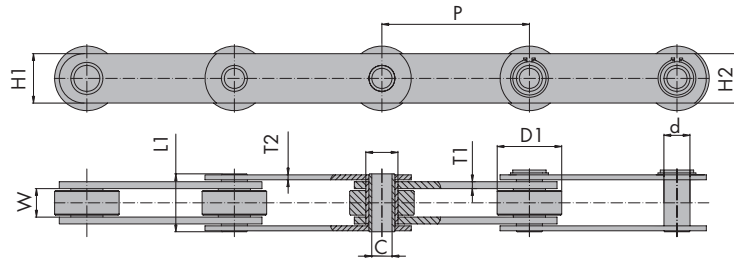


Minimum tensile strength in lbs	Pitch ('P')		Width between Inner Plates (Min) ('W')	Roller Dia ('D1')	Bush Dia ('D')	Solid pin Dia ('d')	Solid pin length (Max) ('L1')	Inner Plate Height ('H1')	Outer Plate Height ('H2')	Inner Plate Thickness ('T1')	Outer Plate Thickness ('T2')	Avg. Wt/Mtr in (Kg)
	INCH	METRIC										
7500	2.0	50.80	15	31.8	18.08	14	39	25.4	25.4	4	4	4.2
	2.5	63.50										3.5
	3.0	76.20										3.3
	4.0	101.60										2.9
	5.0	127.00										2.6
	6.0	152.40										2.5
15000	2.0	50.80	19	47.6	23.68	19	47	38.1	38.1	5	4	10.4
	3.0	76.20										7.4
	4.0	101.60										6.2
	5.0	127.00										5.7
	6.0	152.40										5.0
	7.0	177.80										4.9
	8.0	203.20										4.7
	9.0	228.60										4.4
30000	4.0	101.60	25.4	66.67	33.3	26.9	62	51	51	7	5	14.0
	5.0	127.00										12.4
	6.0	152.40										10.9
	7.0	177.80										10.3
	8.0	203.20										9.7
	9.0	228.60										9.2
	12.0	304.80										8.1
45000	5.0	127.00	38.1	88.9	38.2	31.8	83	61	61	8	7	27.3
	6.0	152.40										24.2
	7.0	177.80										21.9
	8.0	203.20										20.2
	9.0	228.60										18.8
	12.0	304.80										16.2
60000	6.0	152.40	38.1	88.9	38.2	23	83	61	61	10	7	23.4
	7.0	177.80										21.6
	8.0	203.20										20.0
	9.0	228.60										18.7
	12.0	304.80										16.0
90000	6.0	152.40	38.1	88.9	38.2	29.4	95	63.5	63.5	12	10	29.1
	9.0	228.60										23.4
	12.0	304.80										20.5

All 10ft packs supplied with riveted connecting links. Bolted connectors available on request. Integral and welded attachments available upon request. All chains available in stainless steel and coated materials.

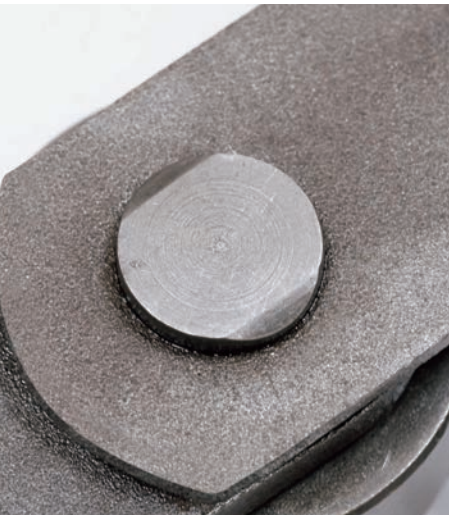


British Standard Hollow Pin Conveyor Chain

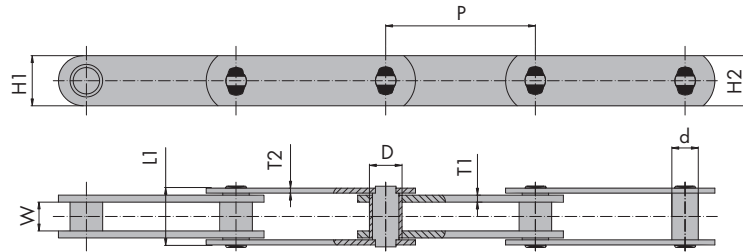


Minimum tensile strength in lbs	Pitch ('P')		Width between Inner Plates (Min) ('W')	Roller Dia ('D1')	Bush Dia ('D')	Hollow pin bore Dia (Min) ('C')	Hollow pin Dia ('d')	Hollow pin length (Max) ('L1')	Inner Plate Height ('H1')	Outer Plate Height ('H2')	Inner Plate Thickness ('T1')	Outer Plate Thickness ('T2')	Avg. Wt/Mtr in (Kg)
	INCH	METRIC											
6000	2.0	50.80	15	31.8	18.08	10.1	14	38	25.4	25.4	4	4	3.7
	2.5	63.50											3.3
	3.0	76.20											3.0
	4.0	101.60											2.6
	5.0	127.00											2.4
	6.0	152.40											2.3
12000	2.0	50.80	19	47.6	23.68	13.2	19	45	38.1	38.1	5	4	8.7
	3.0	76.20											6.7
	4.0	101.60											5.7
	5.0	127.00											5.3
	6.0	152.40											4.7
	7.0	177.80											4.6
	8.0	203.20											4.4
	9.0	228.60											4.2
24000	4.0	101.60	25.4	66.67	33.3	20.1	26.9	59	51	51	7	5	12.4
	5.0	127.00											11.2
	6.0	152.40											9.4
	7.0	177.80											8.7
	8.0	203.20											8.2
	9.0	228.60											7.8
	12.0	304.80											7.1
36000	5.0	127.00	38.1	88.9	38.2	23.1	31.8	84	61	61	10	8	25.0
	6.0	152.40											22.2
	7.0	177.80											20.2
	8.0	203.20											18.7
	9.0	228.60											17.5
	12.0	304.80											15.2

All 10ft packs supplied with riveted connecting links. Circlip connectors available on request.
Integral and welded attachments available upon request. All chains available in stainless steel and coated materials.



British Standard Solid Pin Bush Chain

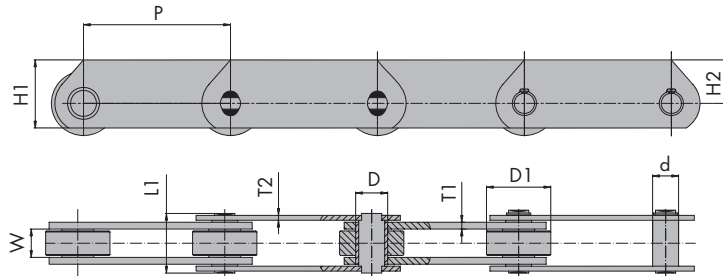


Minimum tensile strength in lbs	Pitch ('P')		Width between Inner Plates (Min) ('W')	Bush Dia ('D')	Solid pin Dia ('d')	Solid pin length (Max) ('L1')	Inner Plate Height ('H1')	Outer Plate Height ('H2')	Inner Plate Thickness ('T1')	Outer Plate Thickness ('T2')	Avg. Wt/Mtr in (Kg)
	INCH	METRIC									
7500	2.0	50.80	15	18.08	14	39	25.4	25.4	4	4	3.1
	2.5	63.50									2.8
	3.0	76.20									2.6
	4.0	101.60									2.4
	5.0	127.00									2.2
	6.0	152.40									2.1
15000	2.0	50.80	19	23.68	19	47	38.1	38.1	5	4	6.9
	3.0	76.20									5.1
	4.0	101.60									4.5
	5.0	127.00									4.3
	6.0	152.40									3.9
	7.0	177.80									3.5
	8.0	203.20									3.3
	9.0	228.60									3.1
30000	4.0	101.60	25.4	33.3	26.9	62	51	51	7	5	9.3
	5.0	127.00									8.6
	6.0	152.40									7.8
	7.0	177.80									7.6
	8.0	203.20									7.3
	9.0	228.60									7.1
	12.0	304.80									6.5
45000	5.0	127.00	38.1	38.2	31.8	83	61	61	8	7	15.6
	6.0	152.40									14.4
	7.0	177.80									13.5
	8.0	203.20									12.9
	9.0	228.60									12.3
	12.0	304.80									11.3
60000	6.0	152.40	38.1	38.2	23	83	61	61	10	7	13.6
	7.0	177.80									13.2
	8.0	203.20									12.7
	9.0	228.60									12.2
	12.0	304.80									11.1
90000	6.0	152.40	38.1	38.2	29.4	95	63.5	63.5	12	10	19.3
	9.0	228.60									16.9
	12.0	304.80									15.6

All 10ft packs supplied with riveted connecting links. Bolted connectors available on request. Integral and welded attachments available upon request. All chains available in stainless steel and coated materials.



British Standard Deep Side Plate Conveyor Chain



Minimum tensile strength in lbs	Pitch ('P')		Width between Inner Plates (Min) ('W')	Roller Dia ('D1')	Bush Dia ('D')	Solid pin Dia ('d')	Solid pin length (Max) ('L1')	Inner Plate Height ('H1')	Pin Center to Top edge ('H2')	Inner Plate thickness ('T1')	Outer Plate Thickness ('T2')	Avg. Wt/Mtr in (Kg)
	INCH	METRIC										
7500	2.0	50.80	15	31.8	18.08	14	39	38.7	26	4	4	5.3
	2.5	63.50										4.5
	3.0	76.20										4.3
	4.0	101.60										3.8
	5.0	127.00										3.5
	6.0	152.40										3.4
15000	2.0	50.80	19	47.6	23.68	19	47	51.05	32	5	4	11.1
	3.0	76.20										8.6
	4.0	101.60										7.4
	5.0	127.00										6.6
	6.0	152.40										6.1
	7.0	177.80										5.8
	8.0	203.20										5.5
	9.0	228.60										5.3
30000	4.0	101.60	25.4	66.67	33.3	26.9	62	70.5	45	7	5	16.4
	5.0	127.00										14.5
	6.0	152.40										13.1
	7.0	177.80										12.3
	8.0	203.20										11.6
	9.0	228.60										11.1
	12.0	304.80										10.0
45000	5.0	127.00	38.1	88.9	38.2	31.8	83	75.5	45	8	7	45.4
	6.0	152.40										39.3
	7.0	177.80										34.9
	8.0	203.20										31.7
	9.0	228.60										29.2
	12.0	304.80										24.1

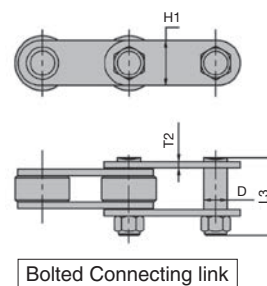
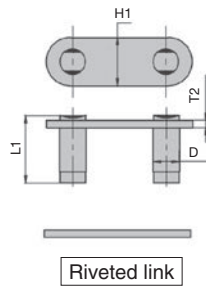
All 10ft packs supplied with riveted connecting links. Bolted connectors available on request.
Integral and welded attachments available upon request. All chains available in stainless steel and coated materials.

Connecting Link Type

Solid Pin Chain (Step Pin Type)

Breaking Load in LBS	D	L1	L3	H1	T2
7500	14	39	49.5	25.4	4
15000	19	47	59.5	38.1	4
30000	26.9	62	77	51	5
45000	31.8	83	103.5	61	8
60000	23	83	97.5	61	10
90000	29.4	95	115.5	63.5	12

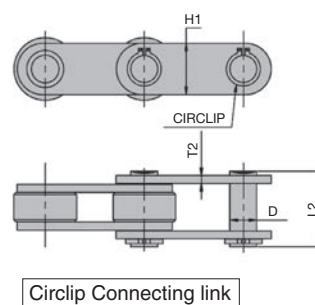
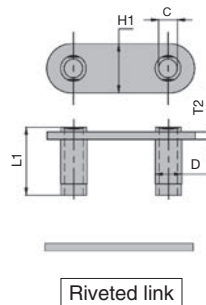
Connecting Links



Hollow Pin Chain (Step Pin Type)

Breaking Load in LBS	D	C min.	L1	L2	H1	T2
6000	14	10.1	38	41	25.4	4
12000	19	13.2	45	47.5	38.1	4
24000	26.9	20.1	59	61	51	5
36000	31.8	23.1	84	86	61	8

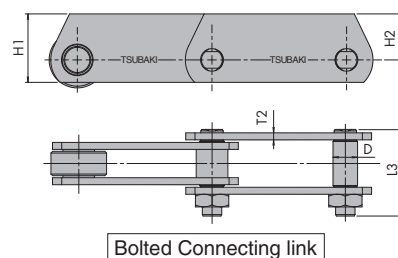
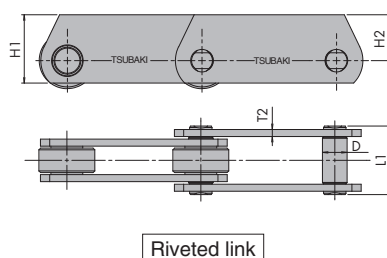
Connecting Links



Deep Side Plate Chain





Breaking Load in LBS	D	L1	L3	H1	H2	T2	M
7500	14.0	39.0	49.5	38.7	26.0	4.0	7/16"-20 UNF
15000	19.0	47.0	59.5	51.05	32.0	4.0	5/8"-18 UNF
30000	26.9	62.0	77.0	70.5	45.0	5.0	7/8"-14 UNF
45000	31.8	83.0	103.5	75.5	45.0	7.0	1"-12 UNF

Connecting Links



1 Zinc Thermal Diffusion Plating

An advanced Zinc Thermal Diffusion process engineered to outperform traditional zinc plating and exceed the performance of standard industry coatings.

	After 24 hours	After 72 hours	After 120 hours
Company A		Test cancelled	Test cancelled
TSUBAKI			

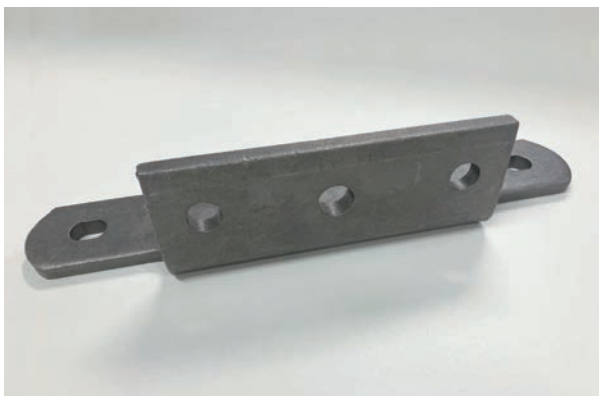
Chemical resistance testing is also available. Please contact us for further details.

2 Zinc Plated

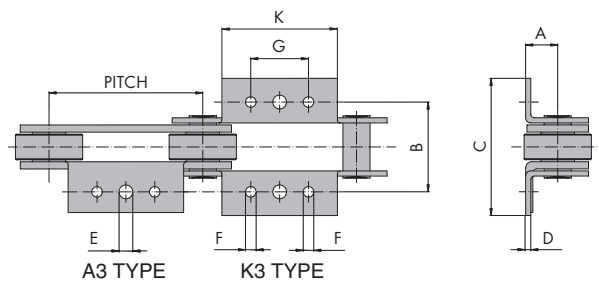
*Some sizes are not supported.



Corrosion protection treatment may vary depending on the size.

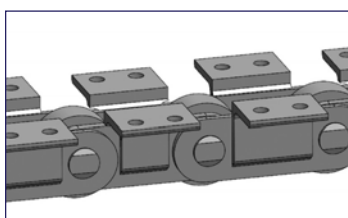


British Standard Attachment Type



Minimum tensile strength in lbs	Pitch ('P')		Attachment Type Inner/Outer ('A3 & K3')	A	B	C	D	E	F	G	K
	INCH	METRIC									
6000 / 7500	3.0	76.20	A3 & K3	19.00	76.20	106 / 115	3.8	10.50	9.20	22.20	43.00
	4.0	101.60	A3 & K3	19.00	76.20	106 / 115	3.8	10.50	9.20	31.80	64.00
	6.0	152.40	A3 & K3	19.00	76.20	106 / 115	3.8	10.50	9.20	57.20	114.00
12000 / 15000	3.0	76.20	A3 & K3	31.80	89.00	130 / 136	5.1 / 3.8	13.70	10.50	31.80	63.50
	4.0	101.60	A3 & K3	31.80	89.00	130 / 136	5.1 / 3.8	13.70	10.50	31.80	63.50
	6.0	152.40	A3 & K3	31.80	89.00	130 / 136	5.1 / 3.8	13.70	10.50	57.20	114.50
24000 / 30000	6.0	152.40	A3 & K3	38.00	108.00	146 / 157	7.1 / 5.7	15.30	12.20	57.20	107.00

Note: For 2" pitch conveyor chain attachment styles A1, K1, A2 and K2 will be provided.



Welding

*Contact TSUBAKI for details.

Integral and welded attachments available upon request. All chains available in stainless steel and coated materials.

Chain Selection

Multiply calculated tension T_{MAX} by Safety Factors in Table 1 for required tensile strength, and then select a chain which satisfies the strength.

$$\boxed{\begin{array}{c} \text{Chain Tension} \\ T_{MAX}: \text{kN(kgf)} \end{array}} \times \boxed{\frac{1}{\text{No. of Strands}}} \times \boxed{\begin{array}{c} \text{Chain Speed-Temperature} \\ \text{Safety Factor (Kv) (Table1)} \end{array}} \times \boxed{\begin{array}{c} \text{Operation Time} \\ \text{Factor (Ks) (Table2)} \end{array}} \equiv \boxed{\begin{array}{c} \text{Average Tensile} \\ \text{Strength kN(kgf)} \end{array}}$$

Notes:

- 1) When there are any regulations, guidelines, etc. affecting chain selection, select chain based on the regulations and the Safety Factor Selection explained below. Then take the larger or stronger chain.
- 2) When a conveyor consists of multiple strands of chain, correct the number of strands in the above formula to allow for uneven loading of the chain.
- 3) In the following applications, chain life may be reduced by 1/2 to 1/10.
 1. Short distance conveyance of heavy loads
 2. Exposure of chain to abrasive, adhesive, and corrosive material
 3. High temperature environments
 4. High humidity
 5. No lubrication

Chain Speed-Temperature Safety Factor Kv conditions: Clean environment and well lubricated

Table1

Chain Series Temperature °C	Standard Series	
	Under 100	100 to 200
Over 50-Under 60 (incl.)	10	
Over 40-Under 50 (incl.)	9	
Over 30-Under 40 (incl.)	8	10
Over 20-Under 30 (incl.)	7	9
Under 20 (incl.)	7	8

Operation Time Factor Ks

Table2

Operation Time h/day	Ks
Less than 10 hours	1.0
10 to 24 hours	1.2

Limits of Conveyor Chain Use

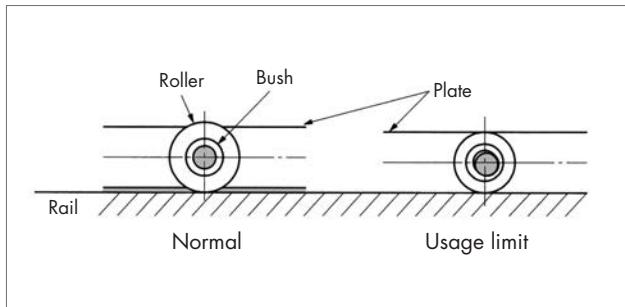
The following details the limits of conveyor chain parts. Check regularly for part wear.

Part Usage Limit

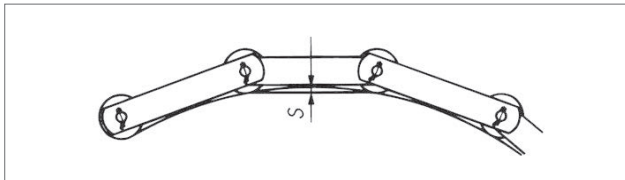
Roller

The roller has reached its limit when the bottom of the plate begins to touch the rail due to wear on the contact surface or the sliding area with the bush.

Roller limits



If there is a curve in the rail then there will be less wear allowance for the corresponding S dimension only as per the diagram below. Special care is needed in compared to flat conveyance.



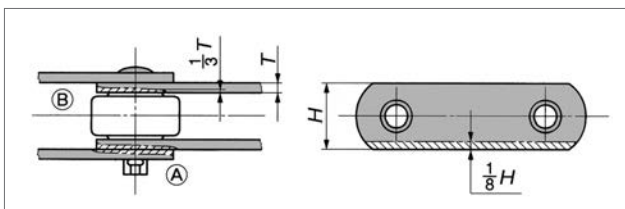
Bush

When bush thickness wears to 40%.

Measuring Plate Width or Height Wear

Wear will develop from abrasion between plates and roller and plate contact at (A) and (B) below. Chain strength will be insufficient when wear exceeds 1/3 of the plate's normal thickness. If items are conveyed directly on the plate as with flow conveyors, or if they slide on top of steel plates, then chain life will have been reached when plate height is worn by 1/8 as per the diagram below.

Plate wear

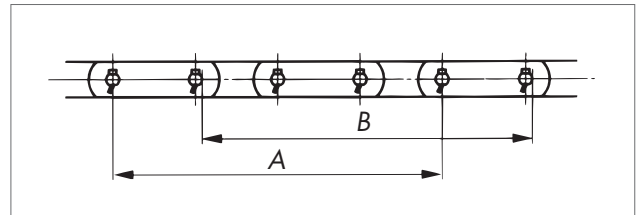


Measuring Chain Wear Elongation

A chain articulates when it engages the sprocket or along the curved portion of a rail, at which time a chain will elongate due to sliding wear between the bush and pin. The chain elongation limit is 2% (2mm of elongation on one link if pitch is 100mm) of a standard basic length (pitch × no. of links).

1) Measuring chain length (measured dimensions)

Measuring dimensions



Measure as many links as possible (at least four links) as per the diagram above. Measure from:

- (A) center of pin to center of pin
- (B) end of pin to end of pin

2) Chain elongation (%)

Measure chain using one of the above methods, compare to standard length, and determine chain elongation (%).

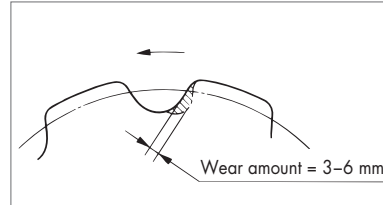
$$\text{Chain Elongation} = \frac{\text{Measuring method} - \text{Standard length}}{\text{Standard length}} \times 100(\%)$$

Wear on Sprocket Teeth Face or Sides

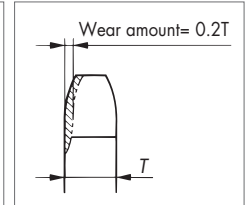
Worn sprocket teeth may accelerate chain wear during engagement. Regularly inspect both sprockets and chains.

2) Wear limits for sprocket teeth surfaces are roughly shown in the diagram below.

Tooth surface wear



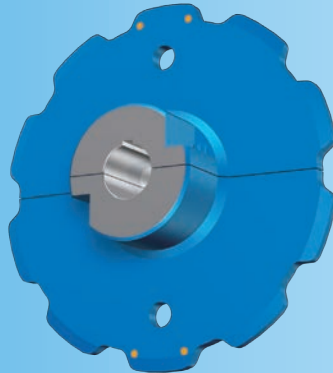
Tooth side surface wear



2) Tsubaki recommends replacing the sprocket when teeth are worn. Avoid flipping the sprocket over and continuing to use sprockets with worn teeth bottoms. When performing welding repairs, use a tooth gauge to check the tooth profile.

Large Size Conveyor Chain Sprockets

Split Type



Features

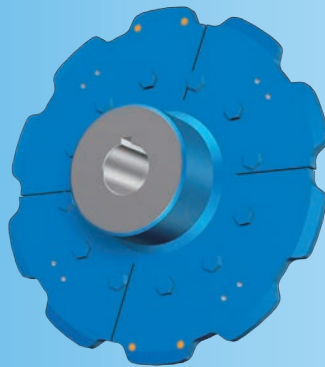
Sprockets divided into halves without any gaps around the shaft bore.

Can be mounted by fastening hub bolts.

Split Sprockets can be replaced without having to remove other parts.

Available for all types of rollers.

Segmented Type



Features

Segmented type replaceable teeth with bolts/nuts onto the mounting base.

Just the teeth can be replaced without having to remove the mounting base from the shaft.

Available for all types of rollers.

Tooth Insert Type



Features

Tooth insert type replaceable teeth, inserted and secured to the mounting base with bolts and nuts.

The block-type replaceable teeth can be replaced without removing the mounting base from the shaft.

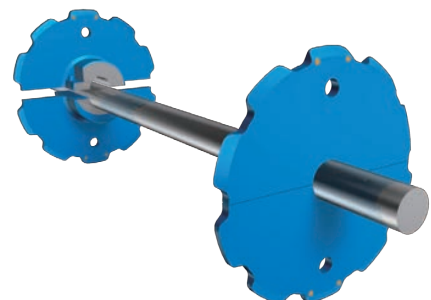
The lightest mass per replaceable tooth, with easy handling.

Shaft assembly service

Tsubaki manufactures the shafts and delivers them assembled together with the sprocket.

No need to mount the sprocket to the shaft, which can reduce equipment mounting labor.

For the sprockets especially, with your next replacement you can generally replace just the split sprocket or teeth.

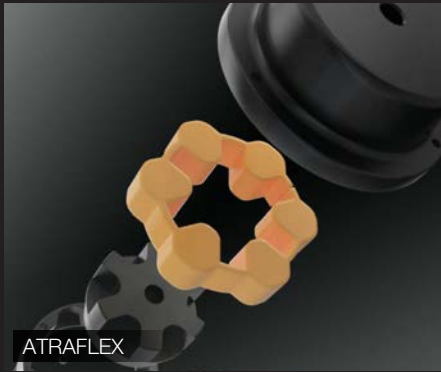




Epsilon Chain



NAB-R Aprovor



ATRAFLEX



Zip Chain Actuator



TKHP

TSUBAKI Product Range

Chain Products

- Metric Conveyor Chain
- RS Roller Chain
- RS Roller Chain BS/DIN standard
- Smart Size Conveyor Chain
- Large Size Conveyor Chain
- Plastic Modular Chain
- Top Chain
- Plastic Block Chain

Motion Control Products

- Reducers
- Linear Actuator
- High-speed Lifters
- Locking device
- Coupling
- Clutches
- Electrical Controllers
- Mechanical Protectors

Others

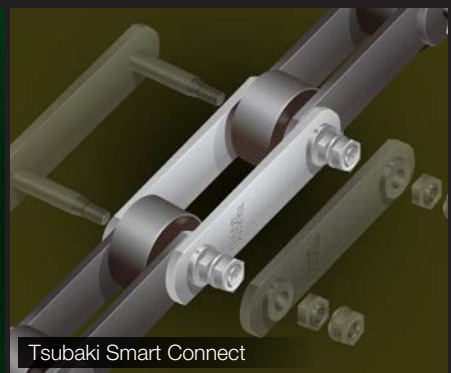
- Sprocket
- Pin gear drive
- Cable Carriers
- Synchronous Belts/Belt Sprocket
- Bulk Handling Systems
- Metal Working Chips Handling



Pin gear drive



Linipower Jack



Tsubaki Smart Connect



Synchronous belt / Belt sprocket



Shuffle Conveyor



Smart Tooth Sprocket



TSUBAKIMOTO CHAIN CO.

Japan	Tsubakimoto Chain Co.	https://tsubakimoto.com/
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Global Group Companies

AMERICAS

United States	U.S. Tsubaki Power Transmission, LLC	https://www.ustsubaki.com/
Brazil	Tsubaki Brasil Equipamentos Industriais Ltda.	https://tsubaki.ind.br/
Canada	Tsubaki of Canada Limited	https://tsubaki.ca/

EUROPE

Netherlands	Tsubakimoto Europe B.V.	https://tsubaki.eu/
France	Kabelschlepp France S.A.R.L.	https://tsubaki-kabelschlepp.com/fr-fr/
Germany	Tsubaki Deutschland GmbH	https://tsubaki.de/
	Tsubaki Kabelschlepp GmbH	https://tsubaki-kabelschlepp.com/de-de/
Italy	Kabelschlepp Italia S.R.L.	https://tsubaki-kabelschlepp.com/it-it/
Spain	Tsubaki Ibérica Power Transmission S.L.	https://tsubaki.es/
United Kingdom	Tsubakimoto UK Ltd.	https://tsubaki.eu/
Slovakia	Kabelschlepp-Systemtechnik, spol. s.r.o.	https://tsubaki-kabelschlepp.com/sk-sk/
Poland	Kabelschlepp Sp. z o.o.	https://kabelschlepp.pl/

INDIAN OCEAN RIM

Singapore	Tsubakimoto Singapore Pte. Ltd.	https://tsubaki.sg/
Australia	Tsubaki Australia Pty. Limited	https://tsubaki.com.au/
India	Tsubaki India Power Transmission Private Limited	https://en.tsubaki.in/
Indonesia	PT. Tsubaki Indonesia Trading	https://tsubaki.id/
Malaysia	Tsubaki Power Transmission (Malaysia) Sdn. Bhd.	https://en.tsubaki.my/
New Zealand	Tsubaki Australia Pty. Limited - New Zealand Branch	https://tsubaki.com.au/
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/
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