

GENERAL PRODUCT CATALOG

# ROLLER CHAIN & POWER TRANSMISSION COMPONENTS



 **TSUBAKI**<sup>®</sup>

LEADING THE MOVEMENT

# Powering Your Every Need

Tsubaki's wide range of power transmission and motion control products are here for your various operational needs. From the simplest to the most complicated applications, we have the right product for you. Quality is guaranteed. Expect to get maximum performance from any of our products.

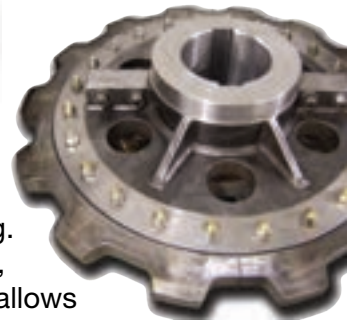
## Engineering Class Chains

With experienced engineers who understand the changing demands of the market, Tsubaki proudly features heavy-duty engineered chain designed to withstand rigorous operating conditions across a range of applications. Tsubaki offers a full lineup of engineering class chain, from Drive, Roller Conveyor, Steel Bushed, Welded Steel, Drop Forged, Bar to Pin and service programs such as the ProService® Life Cycle Field Service Package.



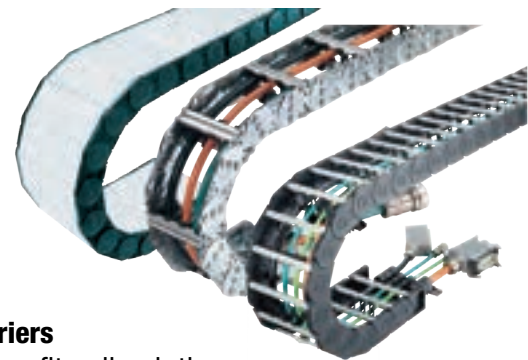
## Sprockets

It has to be precise and strong. Extensive design, engineering, and manufacturing capability allows us to produce a wide variety of Made-To-Order (MTO) sprocket products for a multitude of applications. From one-off custom to high volume OEM sprocket requirements, Tsubaki has you covered.



## Power Transmission Components and Backstops

Quality designs and features are key when it comes to clutches and backstops. From preventing reverse rotations to overheating, Tsubaki clutches and backstops are designed to outperform the competition. With a variety of innovative power transmission solutions from overload protection to keyless shaft mounting devices to custom zip chain lifters, Tsubaki has your solution.



## Cable & Hose Carriers

It is not a one-size-fits all solution. Not all applications can be solved by one type of carrier. Tsubaki KabelSchlepp's cable & hose carriers can come in nylon, steel and hybrid materials. Whether you have an extremely heavy cable package or an ultra long travel length, we have got the perfect carrier for you.



# 100 YEARS. 70 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 70 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.



Don't see what you need? Call us at 800-323-7790 and we will make it!

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## ANSI Roller Chains

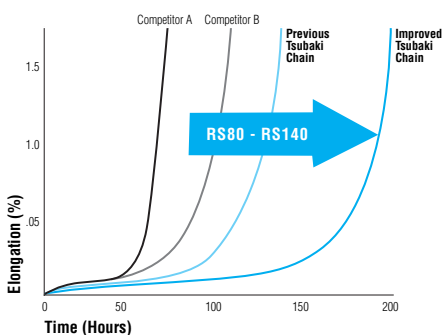
# Why Tsubaki Chain?



### Longer Wear Life

Tsubaki roller chains last up to twice as long as previously manufactured chains due to the reliability and durability of the solid bushing and patented lube groove design. This technology covers sizes 80-140 in carbon steel chains. The solid bushings are precisely round while the grooves on the inner wall of the bushing holds lubricant where the chain needs it most. The result is a longer lasting chain.

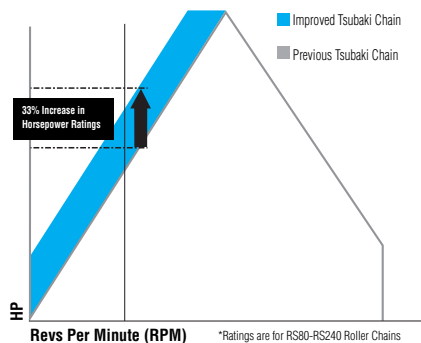
Wear Elongation Curve



### Higher Horsepower Ratings

Tsubaki ANSI roller chains can handle up to 33-percent more horsepower allowing your application to increase drive performance without increasing chain size. Tsubaki chains may also allow your application to transmit the same horsepower with a smaller pitch chain. The improvement comes from a ring-coining process for slip-fit style connecting links.

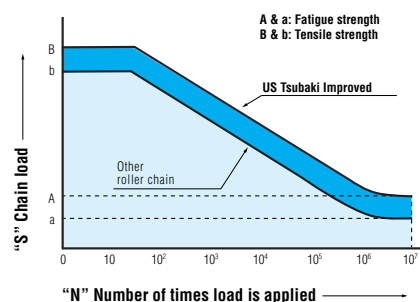
Horsepower Ratings



### Greater Fatigue Strength

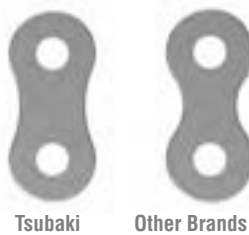
Tsubaki chains are designed to have greater fatigue strength. The wider-waist of the link plates puts more metal where it's needed most. This means less downtime, reduced operating costs, and better application efficiency. These benefits impact your application in one major way - the bottom line.

S-N Curve



### Assurance of Greater Fatigue Strength:

The wider waist of the Tsubaki link plates ensures greater fatigue strength for all chain sizes and styles. Fatigue strength (Maximum Allowable Load) of each chain size can be found in the ANSI Chain section of this catalog.



Tsubaki

Other Brands

### Longer Wear Life & Less Set-up time:

- Tsubaki has decreased initial wear elongation to .01% and increased the life by up to 2x as long in many applications. When there isn't time to adjust and readjust a chain during installation, Tsubaki roller chains are the very best solution.
- Tsubaki uses a special pre-lubrication process that vastly increases chain wear life.
- Improved Tsubaki roller chain sizes 80-140 have the patented Performax™ solid lube groove bushings. By retaining the lube in the grooves of the bushing, it allows lubrication to stay in the key pin and bushing friction point.


 Perfectly Cylindrical  
Inside Bushing Wall

 Patented Performax™  
solid lube groove bushing

### Shot Peened Parts:

Link plates and rollers are shot peened for greater fatigue strength.



### Factory Preloading:

Tsubaki roller chains are preloaded using a process that involves the chain, under tension running through a loading table (see below). This allows all key components to seat properly thus eliminating initial set up elongation.

This process is commonly referred to as prestressing the chain.



### Heat Treatment:

Chain durability depends heavily on the proper heat treatment of the wear components. The use of advanced heat-treatment methods allows for Tsubaki roller chains to maintain a high level of durability.



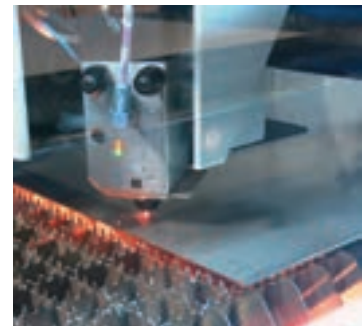
### Prelubrication:

A special lubrication is applied by hot-dipping the chain in an oil bath prior to packaging. This will help to ensure that the lube penetrates the key friction wear points of the chain.



### Laser-Express™ – Custom Capabilities:

No specialty attachment for roller chain is too complex for Tsubaki. With its Laser-Express™ production line, even the most unique attachments are simple. No special tooling or lengthy lead times are needed. Parts can be directly created from even the most complex CAD and SolidWorks® drawings.



### A Completely Automated Manufacturing Process:

The manufacturing of Tsubaki roller chains employs advanced automated techniques. The specialized equipment used in each process ensures that all parts are uniform and of the highest quality. The adjacent image shows an assembled solid bushing placed in the roller link.

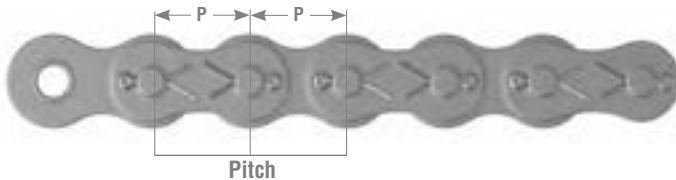


The below information provides information on the basics of roller chain construction:

## Basics of Roller Chain

### 1. Chain Pitch:

Chain pitch, otherwise known as chain size, is the distance from pin center to pin center. Pitch is always measured in inch increments.

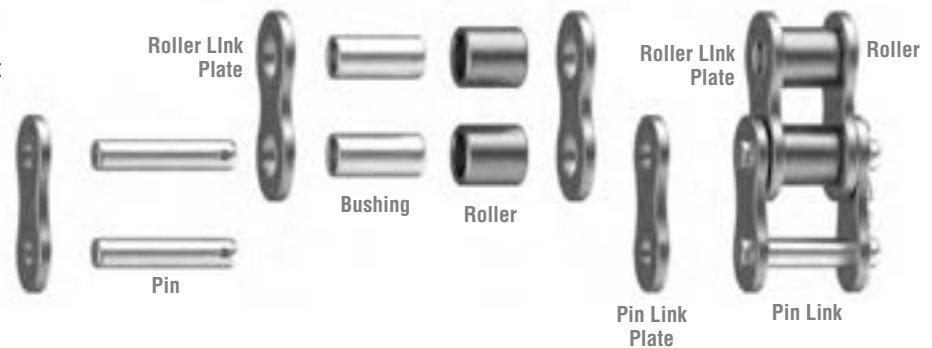


ANSI Standard Chain Pitch Sizes

Pitch#	Pitch in Inches	Pitch #	Pitch in Inches
25	1/4"	100	1 1/4"
35	3/8"	120	1 1/2"
40	1/2"	140	1 3/4"
41	1/2"	160	2"
50	5/8"	180	2 1/4"
60	3/4"	200	2 1/2"
80	1"	240	3"

### 2. Chain Construction:

Roller chain is constructed of four components: pins, plates, rollers and bushings.



### 3. Connecting Links:

In most applications, roller chain is used in a continuous loop. This loop is often times connected with a connecting link. In normal conditions, spring clip (size 60 and smaller) or cotter-pin style links (80 through 240) are used. For more severe applications, press-fit links are used.



Cottered Connecting Link



Spring Clip Connecting Link

### 4. Offset Links:

When a continuous length of chain has an odd number of pitches, an offset link (often referred to as half-links) is used. Offset links are available in one-pitch and two-pitch styles. One-pitch offsets are weaker than plain chain and are not recommended in high-impact load, and high-speed applications.



One-Pitch Offset



Two-Pitch Offset



### 5. Chain Cut-To-Length:

One of the unique offerings from Tsubaki is the ability to cut any chain in our offering to the desired length needed for your application. This eliminates unnecessary waste and unnecessary down time.

Chain Size	R = Riveted C = Cottered	Cut = Cut to length
40	R	CUT

### 6. Chain Reel and Box Stock:

Roller chains are also available on 50-foot and 100-foot reels. Sizes 25-60 are available in 100-foot reels. Size 80 is available on 50-foot reels. All standard stock Tsubaki roller chains are available in 10-foot boxes.

**RB = Riveted 10-foot box**  
(each box includes one connecting link)

**CB = Cottered 10-foot box**  
(each box includes one connecting link)

**R50 = 50-foot reel**  
(Includes 5 connecting links)

**R100 = 100-foot reel**  
(Includes 10 connecting links)

### 7. Heavy-Duty Series Chains:

For applications where roller chains are exposed to higher loads, greater shock loads, or severe duty high-torque style applications, Tsubaki manufactures a complete line of Heavy Duty series roller chains.

**H = Heavy Series**

**T = Thru-hardened pin series**

**HT = Heavy with thru-hardened pin**

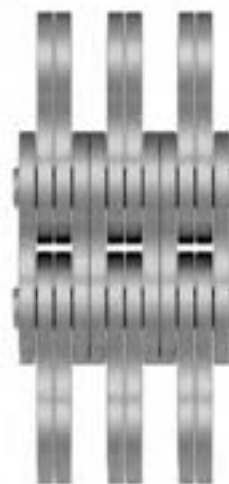
**Super = Super Series**

**HSuper = Super Heavy Series**

**ULTRASUPER = Ultra Super Series**

### 8. Leaf Chains:

Tsubaki manufactures a complete line of leaf chains. There are two series that Tsubaki manufactures – AL series and BL series. BL series chains are a heavier version of the AL series and come with a larger pin and plate. Chains are identified by lacing and can be cut to specified lengths.



**BL – 6x6 Lacing**



**AL 4x4 Lacing**

### 9. British Standard Chains (BS/DIN)

Along with a complete line of ANSI series roller chains, Tsubaki also manufactures a line of British Standard roller chains. These chains are made to the BS 228/DIN8187 specification. These chains are made from the same materials as the standard ANSI chains – perfect for replacement on imported equipment or newly manufactured equipment that will be exported.



**British Standard Chain**

### 10. Lube-Free Chains

Tsubaki is the market innovator in lube-free roller chain technology with its Lambda<sup>®</sup> and Xceeder<sup>®</sup> lube-free chain options. What makes these chains unique is the ability to run without any external lubrication. Lambda<sup>®</sup> chains come in two styles: Drive (LAM) and conveyor (L designation). Xceeder<sup>®</sup> is made with a felt seal and extra-wide bushing to keep contaminants out and the lubrication in.



**Lambda<sup>®</sup>**



**Xceeder<sup>®</sup>**

### 11. Harsh Environment Chains:

Not every operating environment is a perfect one for roller chain. From heat to heavy levels of dirt and contamination, a chain like Tsubaki Titan<sup>®</sup> is needed. Titan<sup>®</sup> provides a harder surface, low friction pin which greatly reduces the wear in the pin and bushing area.



**Titan<sup>®</sup> Chain**

### 12. Corrosion Resistant Chains:

Tsubaki offers a complete line of roller chains to handle situations where the chain will come into contact with chemicals for washdown or clean-room environments that require more than carbon steel. From the Tsubaki Neptune<sup>®</sup> (NEP) and Nickel Plated (NP) chains to a complete line of stock stainless steel – 304 (SS), 600 (AS), 316 (NS) and our new Super Stainless<sup>™</sup> product line.



**Neptune<sup>®</sup>**



**Nickel Plated**



**Stainless Steel**



**Super Stainless<sup>™</sup>**

## Common Roller Chain Applications

Tsubaki manufactures a complete line of roller chains for a wide variety of applications. From very basic drive applications, to conveying applications – Tsubaki has you covered.

Roller chains with attachments, chains for harsh environments, applications that require lube-free chains, situations where heavy duty and high shock load capable chains are required, and applications in the most corrosive environments – Tsubaki has a chain to fit that and many more applications.



**Heavy-duty, Multi-Wide Drives**



**Accumulation Systems**



**Lube-Free Drive applications**



**Matched Strand Conveyor**



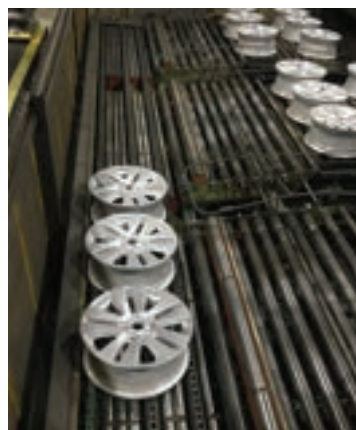
**Chain drives for outdoor applications**



**Customized Packing**



**Harsh Environment Drives**



**Accumulating Conveyor**



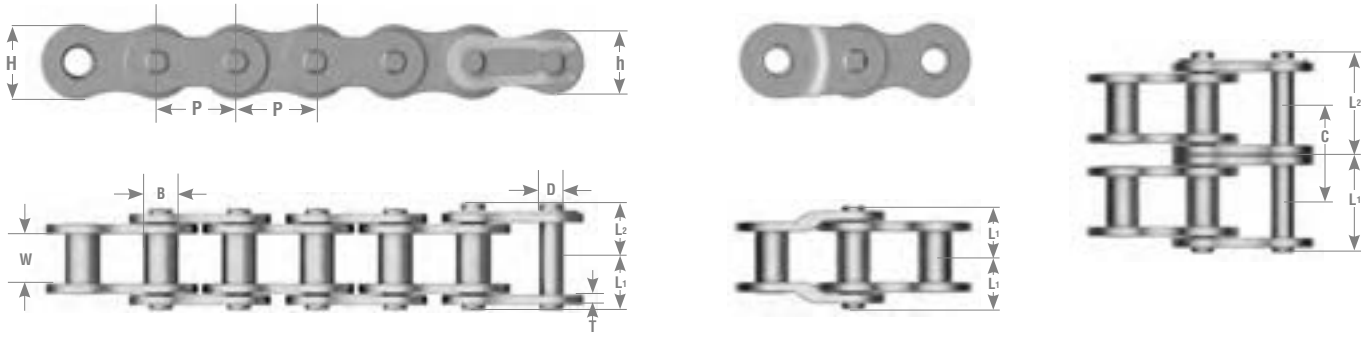
**Multi-Strand Conveying**



# ANSI CHAINS

ANSI chains from Tsubaki provide the strength, reliability and durability that is required in the toughest environments. With the Tsubaki Performax™ Bushing in sizes 80-140 – single and multi-wide strands. Tsubaki ANSI chains help reduce downtime and improve reliability while decreasing equipment repair costs.





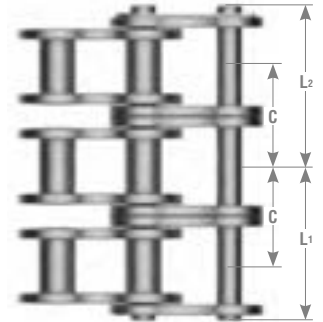
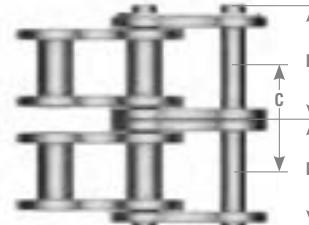
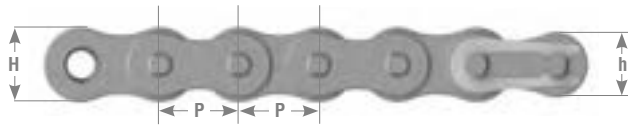
	P	Bush dia.	W	t	T	h	H	D
25	0.250	0.130	0.125	0.030	0.030	0.199	0.230	0.091
25H	0.250	0.130	0.125	0.030	0.040	0.230	0.230	0.091

TSUBAKI Chain Number	Number of Strands	Pin Length L1+L2	Dimensions L1	Dimensions L2	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength (lb)	Maximum Allowable Load (lb)	Approximate Mass lb/ft
25RB	1	0.327	0.150	0.177	-	Riveted	780	1,050	140	0.094
25-2RB	2	0.579	0.276	0.303	0.252		1,560	2,100	240	0.181
25-3RB	3	0.831	0.402	0.429	0.252		2,340	3,150	350	0.282
25HRB	1	0.347	0.158	0.189	-		-	1,320	170	0.114

- Notes:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Offset links for RS25 are only available in two-pitch offset links. The maximum allowable load is the same as shown in the table above.
  - No offset links are available for BF25H.
  - RS25 and BF25H are bushed chains.
- \*Maximum allowable load when using an M-type connecting link is 80% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
	Lubrication System A										Lubrication System B														
11	0.03	0.05	0.15	0.23	0.31	0.38	0.50	0.60	0.71	0.82	0.95	1.13	1.29	1.38	1.15	0.99	0.86	0.75	0.67	0.59	0.54	0.48	0.44	0.40	0.35
12	0.03	0.05	0.16	0.24	0.34	0.42	0.54	0.66	0.78	0.90	1.05	1.23	1.42	1.57	1.31	1.13	0.98	0.86	0.76	0.68	0.62	0.55	0.51	0.47	0.40
13	0.04	0.07	0.17	0.27	0.36	0.46	0.59	0.72	0.84	0.98	1.14	1.34	1.54	1.74	1.49	1.27	1.10	0.97	0.86	0.76	0.70	0.63	0.58	0.52	0.44
14	0.04	0.07	0.19	0.30	0.39	0.50	0.64	0.78	0.93	1.06	1.23	1.46	1.68	1.89	1.66	1.42	1.23	1.07	0.95	0.86	0.78	0.70	0.64	0.59	0.50
15	0.04	0.07	0.20	0.31	0.43	0.54	0.68	0.84	0.99	1.14	1.33	1.57	1.81	2.04	1.84	1.57	1.37	1.19	1.06	0.95	0.86	0.78	0.71	0.66	0.55
16	0.04	0.08	0.21	0.34	0.46	0.58	0.74	0.90	1.06	1.22	1.43	1.69	1.93	2.19	2.02	1.73	1.50	1.31	1.17	1.05	0.94	0.86	0.78	0.72	0.62
17	0.04	0.08	0.23	0.36	0.48	0.60	0.79	0.97	1.14	1.30	1.53	1.80	2.07	2.33	2.23	1.90	1.65	1.45	1.27	1.14	1.03	0.94	0.86	0.79	0.67
18	0.05	0.09	0.24	0.38	0.52	0.64	0.84	1.02	1.21	1.39	1.62	1.92	2.20	2.48	2.43	2.07	1.80	1.57	1.39	1.25	1.13	1.02	0.94	0.86	0.74
19	0.05	0.09	0.25	0.40	0.55	0.68	0.89	1.09	1.29	1.48	1.72	2.02	2.33	2.63	2.63	2.24	1.94	1.70	1.52	1.35	1.22	1.11	1.01	0.93	0.79
20	0.05	0.09	0.27	0.43	0.58	0.72	0.94	1.15	1.35	1.56	1.82	2.15	2.47	2.78	2.83	2.43	2.11	1.84	1.64	1.46	1.31	1.19	1.09	1.01	0.86
21	0.05	0.11	0.28	0.46	0.60	0.76	0.99	1.21	1.42	1.64	1.92	2.27	2.60	2.92	3.06	2.60	2.25	1.98	1.76	1.57	1.42	1.29	1.18	1.07	0.93
22	0.05	0.11	0.30	0.47	0.64	0.80	1.05	1.27	1.50	1.73	2.01	2.37	2.74	3.08	3.27	2.79	2.43	2.12	1.89	1.69	1.52	1.38	1.26	1.15	0.99
23	0.07	0.12	0.31	0.50	0.67	0.84	1.10	1.34	1.57	1.81	2.12	2.49	2.87	3.23	3.50	2.99	2.59	2.27	2.01	1.80	1.62	1.48	1.34	1.23	1.06
24	0.07	0.12	0.34	0.52	0.71	0.89	1.14	1.39	1.65	1.89	2.21	2.61	3.00	3.38	3.73	3.18	2.76	2.43	2.15	1.92	1.73	1.57	1.43	1.31	1.13
25	0.07	0.13	0.35	0.55	0.74	0.93	1.19	1.46	1.72	1.98	2.32	2.72	3.14	3.54	3.93	3.38	2.94	2.57	2.28	2.04	1.84	1.68	1.53	1.39	1.19
26	0.07	0.13	0.36	0.56	0.76	0.97	1.25	1.53	1.80	2.07	2.41	2.84	3.27	3.69	4.10	3.59	3.11	2.74	2.43	2.17	1.96	1.77	1.62	1.49	1.27
28	0.08	0.15	0.39	0.62	0.83	1.05	1.35	1.65	1.94	2.24	2.61	3.08	3.54	4.00	4.44	4.01	3.47	3.06	2.71	2.43	2.19	1.98	1.81	1.66	1.42
30	0.08	0.16	0.42	0.66	0.90	1.13	1.46	1.78	2.09	2.41	2.82	3.33	3.82	4.30	4.79	4.45	3.86	3.38	3.00	2.68	2.43	2.20	2.01	1.84	1.57
32	0.09	0.16	0.44	0.71	0.97	1.21	1.56	1.90	2.25	2.59	3.02	3.57	4.09	4.61	5.14	4.89	4.25	3.73	3.31	2.96	2.67	2.43	2.21	2.02	1.73
35	0.09	0.19	0.50	0.78	1.06	1.33	1.72	2.11	2.48	2.84	3.33	3.93	4.51	5.08	5.65	5.61	4.85	4.26	3.78	3.38	3.06	2.78	2.53	2.32	1.98
40	0.11	0.21	0.58	0.90	1.22	1.53	1.98	2.43	2.86	3.29	3.85	4.53	5.20	5.87	6.53	6.85	5.94	5.22	4.63	4.13	3.73	3.38	3.08	2.83	2.43
45	0.13	0.24	0.64	1.03	1.39	1.74	2.25	2.76	3.25	3.73	4.37	5.15	5.91	6.66	7.42	8.15	7.08	6.22	5.51	4.93	4.45	4.04	3.69	3.38	2.88

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



Chain No.	P	B	W	T	H	h	D
35	0.375	0.200	0.188	0.050	0.354	0.307	0.141

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
35RB	1	0.500	0.230	0.270	0.531	0.399	Riveted	1,760	2,530	480	0.22
35-2RB	2	0.898	0.429	0.469	0.965		Riveted	3,520	5,070	810	0.46
35-3RB	3	1.295	0.630	0.665	1.362		Riveted	7,590	7,600	1210	0.70

**Notes:**

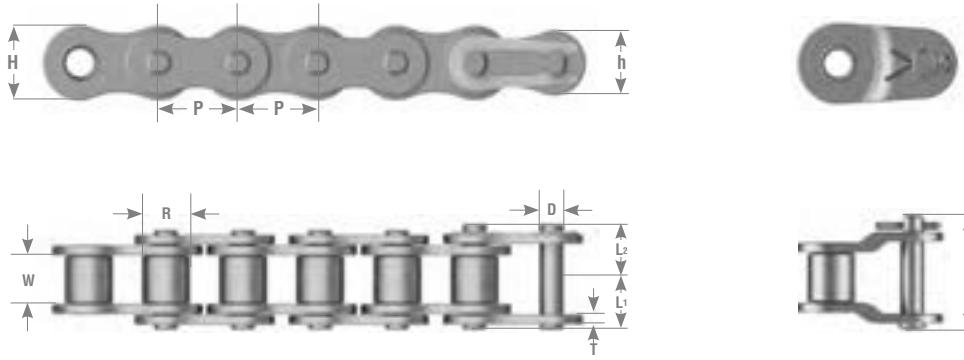
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
- Offset links for RS25 are only available in two-pitch offset links. The maximum allowable load is the same as shown in the table above.
- No offset links are available for BF25H.
- RS25 and BF25H are bushed chains.

\*Maximum allowable load when using an M-type connecting link is 80% of the above.

No. Of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
	A											B										C			
11	0.16	0.30	0.78	1.23	1.66	2.09	2.71	3.31	3.90	4.48	3.86	2.94	2.33	1.90	1.60	1.37	1.18	1.03	0.93	0.82	0.74	0.67	0.62	0.56	0.48
12	0.17	0.32	0.86	1.35	1.84	2.29	2.98	3.63	4.29	4.92	4.40	3.35	2.66	2.17	1.82	1.56	1.35	1.18	1.05	0.94	0.84	0.76	0.70	0.64	0.55
13	0.19	0.35	0.94	1.48	2.00	2.51	3.25	3.97	4.68	5.38	4.96	3.78	2.99	2.45	2.05	1.76	1.52	1.34	1.18	1.06	0.95	0.87	0.79	0.72	0.62
14	0.20	0.38	1.01	1.60	2.16	2.71	3.51	4.30	5.07	5.82	5.55	4.22	3.35	2.74	2.29	1.96	1.70	1.49	1.33	1.18	1.07	0.97	0.89	0.82	0.70
15	0.21	0.40	1.09	1.73	2.33	2.92	3.80	4.63	5.46	6.28	6.16	4.68	3.71	3.04	2.55	2.17	1.89	1.65	1.46	1.31	1.18	1.07	0.98	0.90	0.76
16	0.23	0.43	1.17	1.85	2.51	3.14	4.06	4.96	5.85	6.72	6.77	5.16	4.09	3.35	2.80	2.40	2.08	1.82	1.62	1.45	1.30	1.18	1.09	0.99	0.84
17	0.25	0.47	1.25	1.97	2.67	3.35	4.33	5.30	6.25	7.17	7.43	5.65	4.48	3.67	3.07	2.63	2.28	2.00	1.77	1.58	1.43	1.30	1.18	1.09	0.93
18	0.27	0.50	1.33	2.09	2.84	3.57	4.61	5.65	6.65	7.63	8.09	6.16	4.88	4.00	3.35	2.86	2.48	2.17	1.93	1.73	1.56	1.41	1.29	1.18	1.01
19	0.28	0.52	1.41	2.23	3.02	3.78	4.89	5.98	7.04	8.10	8.77	6.68	5.30	4.33	3.63	3.10	2.68	2.36	2.09	1.88	1.69	1.53	1.39	1.29	1.10
20	0.30	0.55	1.49	2.35	3.18	4.00	5.18	6.32	7.44	8.56	9.47	7.20	5.71	4.68	3.93	3.35	2.90	2.55	2.27	2.02	1.82	1.65	1.52	1.38	1.18
21	0.31	0.58	1.57	2.48	3.35	4.21	5.44	6.66	7.84	9.01	10.2	7.75	6.16	5.04	4.22	3.61	3.12	2.74	2.43	2.17	1.96	1.78	1.62	1.49	1.27
22	0.32	0.62	1.65	2.60	3.53	4.43	5.73	7.00	8.26	9.48	10.9	8.31	6.60	5.40	4.52	3.86	3.35	2.94	2.60	2.33	2.11	1.90	1.74	1.60	1.37
23	0.35	0.64	1.73	2.74	3.70	4.64	6.01	7.35	8.66	9.95	11.6	8.89	7.05	5.77	4.84	4.13	3.58	3.14	2.79	2.49	2.25	2.04	1.86	1.72	1.46
24	0.36	0.67	1.81	2.86	3.88	4.85	6.29	7.70	9.07	10.4	12.2	9.47	7.52	6.16	5.16	4.40	3.82	3.35	2.96	2.66	2.40	2.17	1.98	1.82	1.56
25	0.38	0.70	1.89	2.99	4.05	5.08	6.58	8.05	9.48	10.9	12.7	10.1	7.99	6.54	5.48	4.68	4.06	3.57	3.15	2.83	2.55	2.31	2.11	1.94	1.65
26	0.39	0.74	1.97	3.12	4.22	5.30	6.87	8.39	9.88	11.4	13.3	10.7	8.48	6.93	5.82	4.96	4.30	3.78	3.35	2.99	2.71	2.45	2.24	2.05	1.76
28	0.43	0.79	2.13	3.38	4.57	5.74	7.43	9.09	10.7	12.3	14.3	11.9	9.47	7.75	6.50	5.55	4.81	4.22	3.74	3.35	3.02	2.74	2.51	2.29	1.96
30	0.46	0.86	2.31	3.65	4.93	6.18	8.01	9.79	11.5	13.3	15.6	13.2	10.5	8.60	7.20	6.16	5.34	4.68	4.16	3.71	3.35	3.04	2.78	2.55	2.17
32	0.50	0.91	2.47	3.90	5.28	6.62	8.58	10.5	12.4	14.2	16.6	14.6	11.6	9.47	7.94	6.77	5.87	5.16	4.57	4.09	3.69	3.35	3.06	2.80	-
35	0.54	1.01	2.72	4.30	5.82	7.31	9.47	11.6	13.7	15.7	18.4	16.6	13.2	10.8	9.08	7.75	6.72	5.90	5.23	4.68	4.22	3.84	3.50	3.21	-
40	0.63	1.17	3.14	4.98	6.73	8.44	10.9	13.4	15.7	18.1	21.2	20.4	16.2	13.2	11.1	9.47	8.21	7.20	6.40	5.71	5.16	4.68	-	-	-
45	0.71	1.33	3.57	5.65	7.64	9.57	12.4	15.2	17.8	20.5	24.0	24.3	19.3	15.8	13.2	11.3	9.80	8.60	7.63	6.83	-	-	-	-	-

**Note:**

- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
- Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
- For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
- Refer to page 251, "Procedures for Selecting Roller Chain."



	P	Roll dia.	W	T	t1 Conn plate	H	h	D
<b>37</b>	0.500	0.307	0.134	0.039	0.047	0.386	0.331	0.143
<b>38</b>	0.500	0.307	0.189	0.043	0.047	0.386	0.331	0.143
<b>41</b>	0.500	0.306	0.251	0.049	0.049	0.386	0.331	0.141

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>43RB</b>	1	0.433	0.201	0.490	1,508	2,116	309	0.19
<b>42RB</b>	1	0.516	0.236	0.555		2,116	309	0.24
<b>41RB</b>	1	0.579	0.266	0.594		2,646	507	0.28

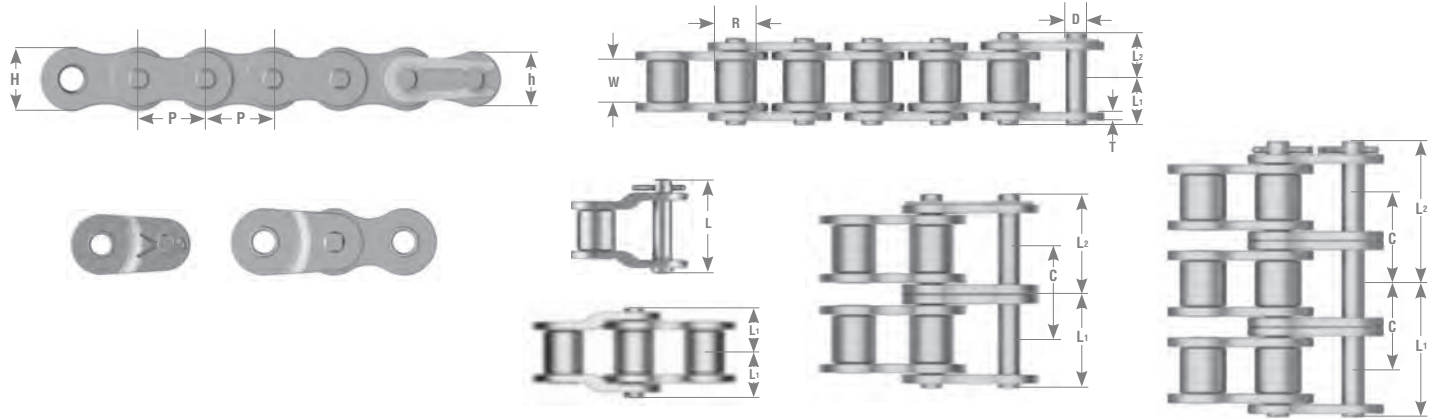
**Notes:**

1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.
2. Maximum allowable load when using an M-type connecting link is 80% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM) - 41 Roller Chain																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6000	7000	8000
	Lubrication System																								
	A									B										C					
<b>11</b>	0.04	0.09	0.16	0.31	0.56	0.82	1.06	1.29	1.76	2.20	2.25	1.72	1.35	1.11	0.94	0.74	0.60	0.51	0.43	0.35	0.28	0.20	0.15	0.12	0.09
<b>12</b>	0.04	0.09	0.17	0.34	0.62	0.90	1.17	1.42	1.92	2.41	2.56	1.96	1.56	1.27	1.06	0.84	0.70	0.58	0.50	0.39	0.32	0.23	0.17	0.13	0.11
<b>13</b>	0.04	0.11	0.20	0.36	0.68	0.98	1.27	1.56	2.09	2.63	2.90	2.20	1.74	1.43	1.19	0.95	0.78	0.66	0.56	0.44	0.36	0.25	0.20	0.16	0.13
<b>14</b>	0.05	0.11	0.21	0.39	0.74	1.06	1.37	1.68	2.27	2.84	3.14	2.47	1.96	1.60	1.34	1.06	0.87	0.72	0.62	0.50	0.40	0.30	0.21	0.17	0.15
<b>15</b>	0.05	0.12	0.23	0.43	0.79	1.14	1.48	1.81	2.45	3.07	3.38	2.74	2.17	1.77	1.49	1.18	0.97	0.80	0.70	0.55	0.44	0.32	0.24	0.19	0.16
<b>16</b>	0.05	0.13	0.24	0.46	0.84	1.22	1.58	1.94	2.63	3.29	3.62	3.00	2.39	1.96	1.64	1.30	1.06	0.89	0.76	0.60	0.50	0.35	0.27	0.21	0.17
<b>17</b>	0.07	0.13	0.25	0.48	0.91	1.30	1.69	2.07	2.80	3.51	3.86	3.30	2.61	2.15	1.80	1.42	1.17	0.98	0.83	0.66	0.54	0.39	0.30	0.23	0.19
<b>18</b>	0.07	0.15	0.28	0.52	0.97	1.39	1.80	2.20	2.98	3.74	4.10	3.59	2.84	2.33	1.96	1.56	1.27	1.06	0.91	0.72	0.59	0.42	0.32	0.25	-
<b>19</b>	0.07	0.16	0.30	0.55	1.02	1.48	1.90	2.33	3.16	3.96	4.36	3.89	3.08	2.53	2.12	1.68	1.38	1.15	0.98	0.78	0.64	0.46	0.35	0.28	-
<b>20</b>	0.07	0.16	0.31	0.58	1.09	1.56	2.02	2.47	3.34	4.18	4.60	4.20	3.34	2.74	2.29	1.81	1.49	1.25	1.06	0.84	0.70	0.50	0.38	0.30	-
<b>21</b>	0.08	0.17	0.32	0.62	1.14	1.64	2.13	2.60	3.53	4.41	4.85	4.52	3.59	2.94	2.47	1.96	1.60	1.34	1.14	0.91	0.74	0.54	0.40	0.32	-
<b>22</b>	0.08	0.19	0.35	0.64	1.19	1.73	2.24	2.74	3.70	4.64	5.11	4.85	3.85	3.15	2.64	2.09	1.72	1.43	1.22	0.98	0.79	0.58	0.43	0.35	-
<b>23</b>	0.08	0.19	0.36	0.67	1.26	1.81	2.35	2.87	3.89	4.87	5.35	5.19	4.12	3.37	2.82	2.24	1.84	1.54	1.31	1.05	0.86	0.60	0.47	0.36	-
<b>24</b>	0.09	0.20	0.38	0.71	1.31	1.89	2.45	3.00	4.06	5.10	5.61	5.53	4.39	3.59	3.00	2.39	1.96	1.64	1.39	1.11	0.91	0.64	0.50	0.39	-
<b>25</b>	0.09	0.21	0.39	0.74	1.38	1.98	2.57	3.14	4.25	5.32	5.86	5.87	4.67	3.82	3.19	2.53	2.08	1.74	1.49	1.18	0.97	0.70	0.52	-	-
<b>26</b>	0.09	0.21	0.42	0.76	1.43	2.07	2.68	3.27	4.44	5.57	6.12	6.24	4.95	4.05	3.39	2.70	2.20	1.85	1.58	1.25	1.02	0.74	0.56	-	-
<b>28</b>	0.11	0.24	0.44	0.83	1.56	2.24	2.90	3.55	4.80	6.02	6.62	6.96	5.53	4.52	3.80	3.00	2.47	2.07	1.76	1.39	1.14	0.82	0.62	-	-
<b>30</b>	0.11	0.25	0.48	0.90	1.68	2.41	3.12	3.82	5.18	6.49	7.13	7.72	6.13	5.02	4.20	3.34	2.74	2.29	1.96	1.56	1.27	0.91	0.70	-	-
<b>32</b>	0.12	0.28	0.51	0.97	1.80	2.59	3.35	4.10	5.55	6.96	7.64	8.50	6.75	5.53	4.63	3.67	3.00	2.52	2.15	1.70	1.39	1.01	-	-	-
<b>35</b>	0.13	0.31	0.56	1.06	1.98	2.86	3.69	4.52	6.12	7.67	8.42	9.74	7.72	6.32	5.30	4.20	3.45	2.88	2.47	1.96	1.60	1.14	-	-	-
<b>40</b>	0.16	0.35	0.66	1.22	2.29	3.30	4.26	5.22	7.07	8.85	9.74	11.47	9.44	7.72	6.48	5.14	4.20	3.53	3.00	2.39	1.96	1.39	-	-	-
<b>45</b>	0.17	0.40	0.75	1.39	2.60	3.74	4.84	5.93	8.02	10.06	11.05	13.02	11.25	9.21	7.72	6.13	5.02	4.20	3.59	2.84	2.33	-	-	-	-

**Note:**

1. When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
2. Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
3. For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
4. Refer to page 251, "Procedures for Selecting Roller Chain."



	P	Roll dia.	W	T	H	h	D
<b>40</b>	0.500	0.312	0.312	0.060	0.472	0.409	0.156

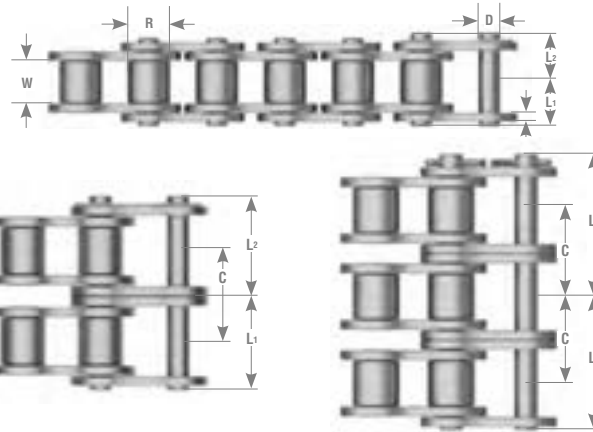
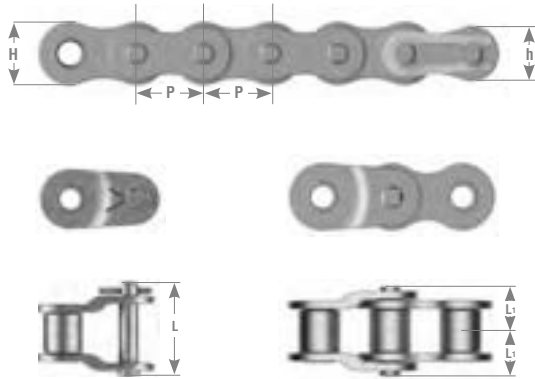
TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>40RB</b>	1	0.717	0.325	0.392	0.717	0.566	Riveted	3,125	4,290	810	0.43
<b>40-2RB</b>	2	1.283	0.608	0.675	1.319		Riveted	6,250	8,580	1370	0.85
<b>40-3RB</b>	3	1.843	0.892	0.951	1.886		Riveted	9,376	12,870	2020	1.28
<b>40-4RB</b>	4	2.409	1.177	1.232	2.453		Riveted	12,500	17,160	2670	1.7
<b>40-5RB</b>	5	2.980	1.461	1.520	3.024		Riveted	15,625	21,450	3150	2.12
<b>40-6RB</b>	6	3.547	1.744	1.803	3.591		Riveted	18,750	25,740	3720	2.55

- Note:
- "RB" designation indicates 10° box riveted. Coated, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6000	7000	8000
	Lubrication System																								
	A										B										C				
<b>11</b>	0.08	0.19	0.35	0.64	1.21	1.73	2.24	2.74	3.70	4.65	5.11	6.02	6.81	5.58	4.67	3.70	3.03	2.55	2.15	1.72	1.41	1.01	0.76	0.62	0.50
<b>12</b>	0.09	0.20	0.38	0.71	1.31	1.90	2.47	3.00	4.08	5.11	5.62	6.61	7.60	6.36	5.31	4.22	3.45	2.90	2.47	1.96	1.60	1.14	0.87	0.68	0.58
<b>13</b>	0.09	0.23	0.42	0.76	1.43	2.07	2.68	3.29	4.44	5.57	6.13	7.21	8.29	7.16	5.99	4.76	3.89	3.26	2.79	2.21	1.81	1.29	0.98	0.78	0.64
<b>14</b>	0.11	0.24	0.44	0.83	1.56	2.24	2.91	3.55	4.81	6.03	6.64	7.82	8.97	8.01	6.71	5.31	4.36	3.65	3.11	2.47	2.02	1.45	1.10	0.87	0.71
<b>15</b>	0.11	0.25	0.48	0.90	1.68	2.41	3.14	3.84	5.19	6.50	7.15	8.42	9.67	8.88	7.43	5.89	4.83	4.04	3.45	2.74	2.24	1.60	1.22	0.97	0.79
<b>16</b>	0.12	0.28	0.52	0.97	1.80	2.59	3.35	4.10	5.55	6.97	7.66	9.03	10.4	9.79	8.18	6.49	5.31	4.45	3.81	3.02	2.47	1.77	1.34	1.07	0.87
<b>17</b>	0.13	0.30	0.55	1.03	1.92	2.76	3.58	4.39	5.93	7.44	8.18	9.64	11.1	10.7	8.97	7.11	5.82	4.88	4.17	3.31	2.71	1.94	1.48	1.17	0.97
<b>18</b>	0.13	0.31	0.59	1.10	2.04	2.95	3.81	4.67	6.32	7.91	8.70	10.2	11.8	11.7	9.76	7.75	6.34	5.31	4.55	3.61	2.96	2.11	1.60	1.27	-
<b>19</b>	0.15	0.34	0.62	1.17	2.17	3.12	4.05	4.95	6.69	8.39	9.23	10.9	12.5	12.7	10.5	8.41	6.88	5.77	4.92	3.92	3.21	2.29	1.74	1.38	-
<b>20</b>	0.16	0.35	0.66	1.23	2.29	3.30	4.28	5.23	7.07	8.86	9.75	11.5	13.2	13.7	11.1	9.08	7.43	6.22	5.31	4.22	3.45	2.47	1.88	1.49	-
<b>21</b>	0.16	0.38	0.70	1.29	2.41	3.47	4.51	5.51	7.46	9.35	10.3	12.1	13.9	14.8	12.4	9.76	7.99	6.71	5.73	4.55	3.71	2.66	2.02	1.60	-
<b>22</b>	0.17	0.39	0.72	1.35	2.53	3.66	4.73	5.79	7.84	9.83	10.8	12.7	14.6	15.8	13.2	10.5	8.57	7.19	6.13	4.87	3.98	2.86	2.17	1.72	-
<b>23</b>	0.17	0.42	0.76	1.42	2.67	3.84	4.98	6.07	8.22	10.3	11.3	13.4	15.3	16.9	14.1	11.2	9.16	7.68	6.56	5.20	4.26	3.06	2.32	1.84	-
<b>24</b>	0.19	0.43	0.80	1.49	2.79	4.02	5.20	6.36	8.61	10.8	11.9	13.9	16.1	18.0	15.0	11.9	9.76	8.18	7.00	5.54	4.55	3.25	2.47	1.96	-
<b>25</b>	0.20	0.44	0.83	1.56	2.91	4.20	5.44	6.65	9.00	11.3	12.4	14.6	16.8	18.9	16.0	12.7	10.4	8.70	7.43	5.89	4.83	3.45	2.63	-	-
<b>26</b>	0.20	0.47	0.87	1.62	3.04	4.39	5.67	6.93	9.39	11.8	12.9	15.3	17.6	19.7	17.0	13.5	11.0	9.24	7.89	6.25	5.12	3.66	2.76	-	-
<b>28</b>	0.23	0.51	0.95	1.77	3.30	4.75	6.14	7.51	10.2	12.8	14.1	16.5	19.0	21.5	19.0	15.0	12.3	10.3	8.81	7.00	5.73	4.09	3.11	-	-
<b>30</b>	0.24	0.55	1.02	1.90	3.55	5.11	6.62	8.10	11.0	13.7	15.2	17.8	20.4	23.1	21.1	16.8	13.5	11.4	9.76	7.75	6.34	4.55	3.45	-	-
<b>32</b>	0.25	0.59	1.09	2.04	3.81	5.48	7.09	8.68	11.7	14.8	16.2	19.0	21.9	24.7	23.2	18.4	15.0	12.6	10.8	8.54	7.00	5.00	-	-	-
<b>35</b>	0.28	0.64	1.21	2.24	4.20	6.03	7.82	9.56	12.9	16.2	17.8	21.1	24.1	27.2	26.6	21.1	17.2	14.3	12.3	9.76	7.99	5.73	-	-	-
<b>40</b>	0.32	0.75	1.39	2.59	4.84	6.97	9.04	11.1	14.9	18.8	20.7	24.3	27.9	31.5	32.5	25.7	21.1	17.6	15.0	11.9	9.76	7.00	-	-	-
<b>45</b>	0.38	0.84	1.58	2.95	5.50	7.93	10.3	12.5	17.0	21.3	23.5	27.6	31.6	35.7	38.6	30.6	25.1	21.1	18.0	14.2	11.7	-	-	-	-

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."





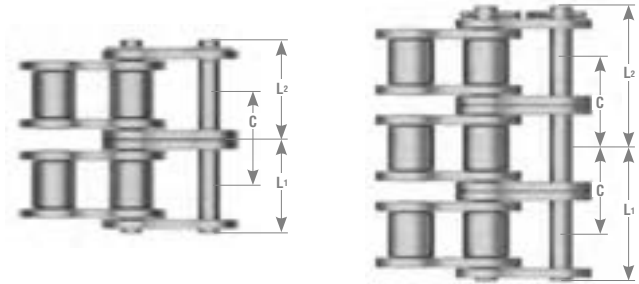
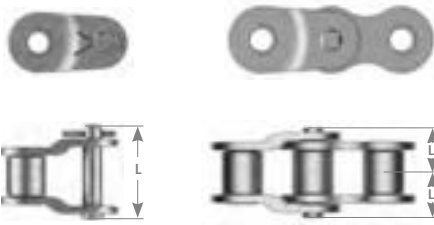
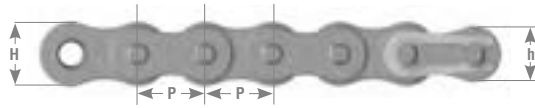
	P	Roll dia.	W	T	H	h	D
<b>50</b>	0.625	0.400	0.375	0.080	0.591	0.512	0.200

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>50RB</b>	1	0.874	0.406	0.469	0.890	0.713	Riveted	4,880	7,050	1,430	0.70
<b>50-2RB</b>	2	1.594	0.762	0.833	1.646		Riveted	9,760	14,100	2,430	1.39
<b>50-3RB</b>	3	2.307	1.118	1.189	2.358		Riveted	14,640	21,150	3,580	2.08
<b>50-4RB</b>	4	3.020	1.474	1.545	3.075		Riveted	-	28,200	4,730	2.76
<b>50-5RB</b>	5	3.732	1.831	1.902	3.787		Riveted	-	35,250	5,590	3.45
<b>50-6RB</b>	6	4.449	2.189	2.260	4.504		Riveted	-	42,300	6,590	4.14

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6000	7000	8000
	A											B											C		
11	0.16	0.38	0.71	1.33	2.48	3.58	4.64	5.66	7.67	9.62	10.6	10.3	8.14	6.65	5.58	4.43	3.62	3.04	2.59	2.07	1.68	1.41	1.21	1.05	0.93
12	0.19	0.42	0.78	1.46	2.72	3.93	5.10	6.22	8.42	10.6	11.6	11.7	9.27	7.59	6.36	5.04	4.13	3.46	2.95	2.35	1.92	1.61	1.37	1.19	1.05
13	0.20	0.46	0.86	1.60	2.98	4.28	5.55	6.79	9.19	11.5	12.7	13.2	10.4	8.56	7.16	5.70	4.65	3.90	3.33	2.64	2.16	1.81	1.56	1.34	-
14	0.21	0.50	0.93	1.73	3.22	4.64	6.01	7.35	9.95	12.5	13.7	14.8	11.7	9.56	8.02	6.36	5.20	4.36	3.73	2.95	2.43	2.02	1.73	1.50	-
15	0.23	0.54	0.99	1.86	3.47	5.00	6.48	7.93	10.7	13.4	14.8	16.4	13.0	10.6	8.89	7.05	5.77	4.83	4.13	3.27	2.68	2.25	1.92	1.66	-
16	0.25	0.58	1.07	2.00	3.73	5.36	6.95	8.49	11.5	14.3	15.8	18.0	14.3	11.7	9.79	7.76	6.36	5.32	4.55	3.61	2.95	2.47	2.11	1.84	-
17	0.27	0.62	1.14	2.13	3.97	5.73	7.42	9.07	12.3	15.4	16.9	19.7	15.7	12.8	10.7	8.50	6.96	5.83	4.99	3.96	3.23	2.71	2.31	2.01	-
18	0.28	0.66	1.22	2.27	4.22	6.09	7.89	9.64	13.0	16.4	18.0	21.2	17.0	13.9	11.7	9.27	7.59	6.36	5.42	4.30	3.53	2.95	2.52	-	-
19	0.31	0.68	1.29	2.40	4.48	6.45	8.37	10.2	13.8	17.3	19.0	22.5	18.5	15.2	12.7	10.0	8.22	6.89	5.89	4.67	3.82	3.21	2.74	-	-
20	0.32	0.72	1.35	2.53	4.73	6.83	8.84	10.8	14.6	18.4	20.1	23.7	20.0	16.4	13.7	10.8	8.89	7.44	6.36	5.04	4.13	3.46	2.95	-	-
21	0.34	0.76	1.43	2.68	4.99	7.19	9.32	11.4	15.4	19.3	21.2	25.1	21.5	17.6	14.8	11.7	9.57	8.02	6.84	5.42	4.44	3.73	3.18	-	-
22	0.35	0.80	1.50	2.82	5.24	7.56	9.80	12.0	16.2	20.4	22.4	26.3	23.1	18.8	15.8	12.5	10.2	8.60	7.34	5.82	4.76	4.00	3.41	-	-
23	0.38	0.84	1.58	2.95	5.51	7.94	10.3	12.6	17.0	21.3	23.5	27.6	24.7	20.1	16.9	13.4	11.0	9.19	7.84	6.22	5.10	4.28	-	-	-
24	0.39	0.89	1.66	3.08	5.77	8.30	10.8	13.2	17.8	22.4	24.5	29.0	26.3	21.5	18.0	14.3	11.7	9.79	8.35	6.64	5.42	4.55	-	-	-
25	0.40	0.93	1.73	3.23	6.02	8.68	11.3	13.8	18.6	23.3	25.6	30.2	27.9	22.8	19.2	15.2	12.4	10.4	8.89	7.05	5.77	4.83	-	-	-
26	0.43	0.97	1.81	3.37	6.29	9.05	11.7	14.3	19.4	24.4	26.8	31.5	29.6	24.3	20.2	16.1	13.2	11.0	9.43	7.47	6.13	5.14	-	-	-
28	0.46	1.05	1.96	3.65	6.81	9.82	12.7	15.6	21.1	26.4	29.0	34.2	33.1	27.0	22.7	18.0	14.8	12.3	10.5	8.35	6.84	5.74	-	-	-
30	0.50	1.13	2.11	3.93	7.34	10.6	13.7	16.8	22.7	28.4	31.2	36.7	36.7	30.0	25.1	19.8	16.4	13.7	11.7	9.27	7.59	-	-	-	-
32	0.54	1.21	2.27	4.21	7.87	11.3	14.6	18.0	24.3	30.4	33.5	39.4	40.4	33.3	27.8	22.0	18.0	15.2	12.9	10.2	8.35	-	-	-	-
35	0.59	1.33	2.49	4.64	8.66	12.5	16.2	19.7	26.8	33.5	36.9	43.4	46.3	38.1	31.6	25.1	20.7	17.2	14.8	11.7	9.56	-	-	-	-
40	0.67	1.54	2.87	5.36	10.0	14.5	18.6	22.8	31.0	38.8	42.6	50.3	56.5	46.4	38.8	30.7	25.1	21.1	18.0	14.3	-	-	-	-	-
45	0.76	1.74	3.27	6.09	11.4	16.4	21.2	25.9	35.1	44.0	48.4	57.0	65.6	55.1	46.1	36.6	30.0	25.1	21.5	-	-	-	-	-	-

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



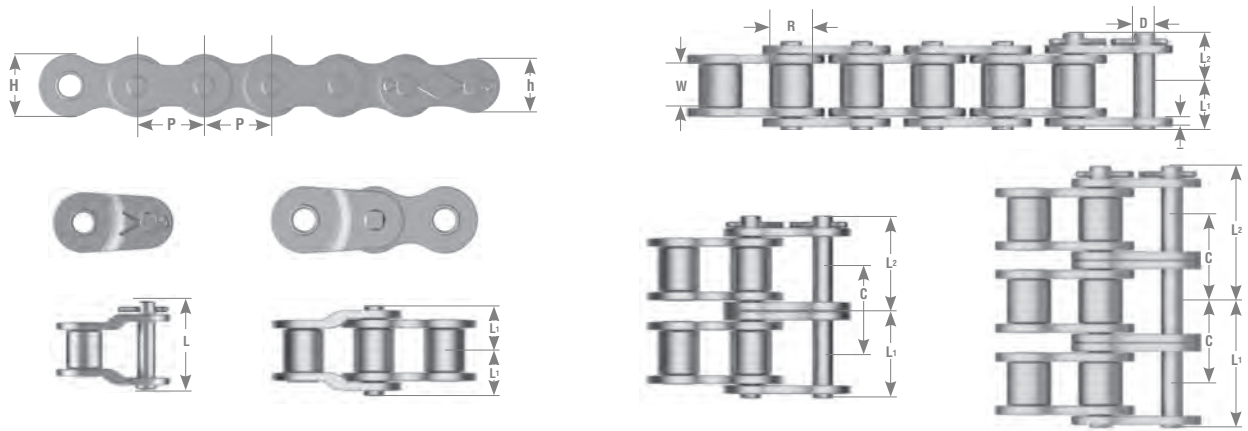
	P	R	W	T	H	h	D
<b>60</b>	0.750	0.469	0.500	0.094	0.713	0.614	0.234

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>60RB</b>	1	1.087	0.506	0.581	1.110	0.897	Rivet/Cotter	7,030	9,920	1,980	1.03
<b>60-2RB</b>	2	1.988	0.955	1.033	2.071		Riveted	14,060	19,840	3,370	2.04
<b>60-3RB</b>	3	2.906	1.404	1.502	2.972		Riveted	21,090	29,760	4,960	3.05
<b>60-4RB</b>	4	3.803	1.852	1.951	3.870		Riveted	-	39,680	6,550	4.06
<b>60-5RB</b>	5	4.705	2.303	2.402	4.772		Riveted	-	49,600	7,740	5.07
<b>60-6RB</b>	6	5.606	2.752	2.854	5.669		Riveted	-	59,520	9,130	6.08

- Note:  
 1. "RB" designation indicates 10° box riveted. Cottered, cut-to-length and reel stock available upon request.  
 2. Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.  
 3. Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2500	3000	3500	4000	4500
	A											B						C							
11	0.30	0.67	1.26	2.35	3.39	4.39	6.32	8.19	10.0	11.8	13.5	15.3	17.0	15.6	13.5	11.9	9.41	7.70	6.45	5.51	3.94	3.00	2.39	1.94	1.64
12	0.32	0.74	1.38	2.59	3.71	4.81	6.95	9.00	11.0	13.0	14.9	16.8	18.6	17.8	15.6	13.5	10.7	8.77	7.35	6.29	4.49	3.42	2.71	2.23	1.86
13	0.35	0.80	1.52	2.82	4.06	5.26	7.58	9.80	12.0	14.1	16.2	18.2	20.4	20.1	17.4	15.2	12.1	9.90	8.30	7.08	5.07	3.85	3.06	2.51	-
14	0.39	0.87	1.64	3.06	4.40	5.70	8.21	10.6	13.0	15.3	17.6	19.8	22.0	22.4	19.4	17.0	13.5	11.1	9.27	7.91	5.66	4.32	3.42	2.80	-
15	0.42	0.94	1.76	3.29	4.73	6.13	8.84	11.5	13.9	16.5	18.9	21.3	23.7	24.8	21.6	18.8	15.0	12.3	10.3	8.77	6.29	4.77	3.80	3.10	-
16	0.44	1.01	1.89	3.53	5.08	6.57	9.47	12.3	15.0	17.7	20.2	22.9	25.5	27.4	23.7	20.9	16.5	13.5	11.3	9.67	6.92	5.26	4.17	3.42	-
17	0.47	1.09	2.01	3.77	5.42	7.03	10.1	13.1	16.0	18.9	21.7	24.4	27.2	29.9	26.0	22.9	18.1	14.8	12.4	10.6	7.58	5.77	4.57	3.74	-
18	0.51	1.15	2.15	4.00	5.77	7.47	10.8	13.9	17.0	20.1	23.1	26.0	29.0	31.8	28.3	24.9	19.7	16.1	13.5	11.5	8.26	6.29	4.99	4.08	-
19	0.54	1.22	2.28	4.24	6.12	7.91	11.4	14.8	18.1	21.3	24.4	27.6	30.7	33.7	30.7	27.1	21.5	17.6	14.6	12.5	8.96	6.81	5.40	4.43	-
20	0.56	1.29	2.40	4.48	6.46	8.37	12.1	15.6	19.0	22.5	25.9	29.1	32.5	35.7	33.1	29.2	23.1	18.9	15.8	13.5	9.67	7.35	5.83	-	-
21	0.59	1.35	2.53	4.73	6.81	8.82	12.7	16.5	20.1	23.7	27.2	30.7	34.2	37.5	35.7	31.5	24.8	20.2	17.0	14.5	10.4	7.91	6.29	-	-
22	0.63	1.42	2.67	4.98	7.16	9.28	13.4	17.3	21.2	24.9	28.7	32.3	35.9	39.4	38.2	33.8	26.6	21.9	18.2	15.6	11.1	8.49	6.73	-	-
23	0.66	1.50	2.79	5.22	7.51	9.74	14.1	18.1	22.3	26.1	30.0	33.9	37.7	41.4	40.9	36.1	28.4	23.3	19.4	16.8	11.9	9.08	7.19	-	-
24	0.68	1.57	2.92	5.46	7.87	10.2	14.6	19.0	23.2	27.4	31.5	35.5	39.4	43.3	43.6	38.2	30.3	24.8	20.8	17.8	12.7	9.67	7.67	-	-
25	0.72	1.64	3.06	5.71	8.22	10.6	15.3	19.8	24.3	28.6	32.9	37.1	41.2	45.3	46.4	40.6	32.2	26.4	22.1	18.9	13.5	10.3	8.15	-	-
26	0.75	1.72	3.19	5.95	8.58	11.1	16.0	20.8	25.3	29.9	34.3	38.8	43.0	47.3	49.2	43.2	34.2	28.0	23.5	20.0	14.3	10.9	8.65	-	-
28	0.82	1.85	3.46	6.45	9.29	12.0	17.3	22.4	27.5	32.3	37.1	42.0	46.7	51.2	55.0	48.3	38.2	31.4	26.1	22.4	16.0	12.2	-	-	-
30	0.87	2.00	3.73	6.95	10.0	13.0	18.6	24.1	29.6	34.9	40.1	45.2	50.2	55.3	60.2	53.5	42.4	34.7	29.1	24.8	17.8	13.5	-	-	-
32	0.94	2.15	4.00	7.46	10.7	13.9	20.0	25.9	31.8	37.4	42.9	48.4	53.8	59.1	64.5	58.9	46.7	38.2	32.1	27.4	19.6	14.9	-	-	-
35	1.03	2.36	4.40	8.21	11.8	15.3	22.1	28.6	35.0	41.2	47.3	53.4	59.3	65.2	71.1	67.5	53.4	43.7	36.6	31.4	22.4	17.0	-	-	-
40	1.19	2.72	5.08	9.48	13.7	17.7	25.5	33.0	40.4	47.6	54.6	61.6	68.5	75.4	82.1	82.3	65.7	53.5	44.8	38.2	27.4	-	-	-	-
45	1.35	3.10	5.77	10.8	15.6	20.1	29.0	37.5	45.9	54.0	62.1	70.0	77.8	85.6	93.2	98.3	78.4	63.7	53.4	45.6	32.6	-	-	-	-

- Note:  
 1. When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.  
 2. Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.  
 3. For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.  
 4. Refer to page 251, "Procedures for Selecting Roller Chain."



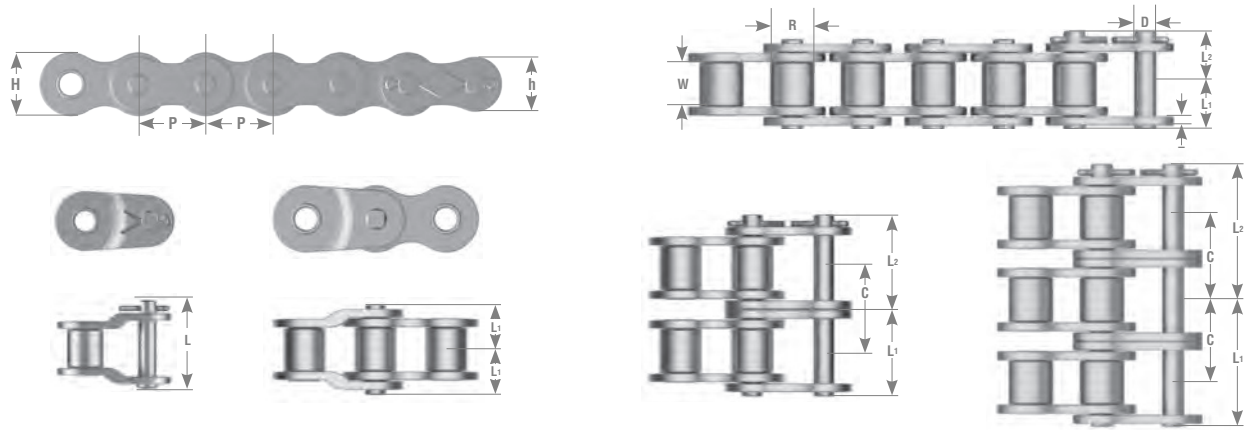
	P	Roll dia.	W	T	H	h	D
<b>80</b>	1.000	0.625	0.625	0.125	0.949	0.819	0.312

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Ave. Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>80RB</b>	1	1.398	0.640	0.758	1.441	1.153	Rivet/Cotter	12,500	17,640	3,300	1.79
<b>80-2RB</b>	2	2.552	1.217	1.335	2.657		Riveted	25,000	35,300	5,620	3.54
<b>80-3RB</b>	3	3.705	1.795	1.910	3.815		Riveted	37,500	52,900	8,270	5.30
<b>80-4RB</b>	4	4.862	2.372	2.490	4.972		Riveted	50,000	70,500	10,900	7.06
<b>80-5RB</b>	5	6.020	2.951	3.069	6.126		Riveted	62,504	88,200	12,900	8.81
<b>80-6RB</b>	6	7.170	3.528	3.642	7.280		Riveted	75,000	105,800	15,200	10.57

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2700	3000	3400
	A												B						C						
11	0.89	2.01	3.75	7.01	10.1	13.1	18.9	24.4	29.9	30.3	30.3	27.4	22.9	19.6	17.0	14.9	11.8	9.70	8.13	6.93	6.01	5.28	4.43	3.78	1.70
12	0.97	2.21	4.13	7.71	11.1	14.3	20.7	26.8	32.9	33.4	33.4	31.2	26.1	22.4	19.4	17.0	13.5	11.1	9.25	7.90	6.85	6.01	5.04	4.30	-
13	1.06	2.41	4.51	8.41	12.1	15.7	22.5	29.2	35.8	36.3	36.3	35.3	29.5	25.2	21.9	19.2	15.2	12.5	10.4	8.92	7.72	6.79	5.69	4.85	-
14	1.14	2.61	4.88	9.11	13.1	17.0	24.4	31.6	38.8	39.4	39.4	39.4	33.0	28.2	24.4	21.5	17.0	13.9	11.7	10.0	8.64	7.58	6.36	5.42	-
15	1.23	2.82	5.26	9.80	14.1	18.2	26.4	34.2	41.7	43.7	43.7	43.7	36.6	31.2	27.1	23.7	18.9	15.4	12.9	11.1	9.57	8.41	7.04	6.01	-
16	1.33	3.02	5.63	10.5	15.2	19.6	28.3	36.6	44.8	48.1	48.1	48.1	40.4	34.5	29.8	26.1	20.8	17.0	14.2	12.2	10.6	9.25	7.76	6.62	-
17	1.41	3.22	6.02	11.2	16.2	20.9	30.2	39.2	47.7	52.7	52.7	52.7	44.1	37.7	32.7	28.7	22.8	18.6	15.6	13.3	11.6	10.1	8.50	7.25	-
18	1.50	3.43	6.40	11.9	17.2	22.3	32.1	41.6	50.8	57.4	57.4	57.4	48.1	41.0	35.5	31.2	24.8	20.2	17.0	14.5	12.6	11.1	9.25	7.90	-
19	1.58	3.63	6.79	12.7	18.2	23.6	34.1	44.1	53.9	61.7	61.7	61.7	52.2	44.5	38.6	33.9	27.0	22.0	18.5	15.7	13.7	12.0	10.0	8.57	-
20	1.66	3.85	7.17	13.4	19.3	24.9	35.9	46.7	57.0	65.3	65.3	65.3	56.3	48.1	41.7	36.6	29.1	23.7	20.0	17.0	14.8	12.9	10.8	-	-
21	1.76	4.05	7.56	14.1	20.4	26.3	38.0	49.1	60.1	68.8	68.8	68.8	60.6	51.8	44.9	39.4	31.2	25.6	21.5	18.2	15.8	13.9	11.7	-	-
22	1.84	4.26	7.95	14.9	21.3	27.6	39.8	51.6	63.2	72.3	72.3	72.3	65.0	55.5	48.1	42.2	33.5	27.4	22.9	19.6	17.0	14.9	12.5	-	-
23	1.92	4.47	8.34	15.6	22.4	29.1	41.8	54.2	66.2	75.9	75.9	75.9	69.5	59.3	51.4	45.2	35.8	29.4	24.5	20.9	18.2	16.0	13.4	-	-
24	2.00	4.68	8.73	16.4	23.5	30.4	43.9	56.7	69.3	79.5	79.5	79.5	74.0	63.3	54.8	48.1	38.2	31.2	26.1	22.4	19.4	17.0	14.2	-	-
25	2.09	4.89	9.13	17.0	24.5	31.8	45.7	59.3	72.5	83.0	83.0	83.0	78.7	67.2	58.3	51.1	40.6	33.3	27.9	23.7	20.7	18.1	15.2	-	-
26	2.17	5.10	9.52	17.7	25.6	33.1	47.7	61.8	75.6	86.6	86.6	86.6	83.5	71.3	61.8	54.3	43.0	35.3	29.5	25.2	21.9	19.2	16.1	-	-
28	2.33	5.53	10.3	19.3	27.8	35.9	51.8	67.1	81.9	93.9	93.9	93.9	93.3	79.7	69.1	60.6	48.1	39.4	33.0	28.2	24.4	21.5	-	-	-
30	2.51	5.95	11.1	20.8	29.9	38.8	55.8	72.1	88.2	104	104	104	104	88.4	76.6	67.2	53.4	43.7	36.6	31.2	27.1	23.7	-	-	-
32	2.67	6.38	11.9	22.3	32.1	41.4	59.8	77.4	94.7	112	114	114	114	97.4	84.4	74.0	58.7	48.1	40.4	34.5	29.8	26.1	-	-	-
35	2.92	7.03	13.1	24.5	35.3	45.7	65.8	85.3	104	123	130	130	130	111	96.6	84.8	67.2	55.0	46.1	39.4	34.2	-	-	-	-
40	3.34	8.13	15.2	28.3	40.8	52.8	76.0	98.6	120	142	153	153	153	135	118	104	82.2	67.2	56.3	48.1	20.0	-	-	-	-
45	3.75	9.23	17.2	32.2	46.3	59.9	86.4	112	137	161	174	174	174	162	141	124	98.0	80.2	67.2	54.2	-	-	-	-	-

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



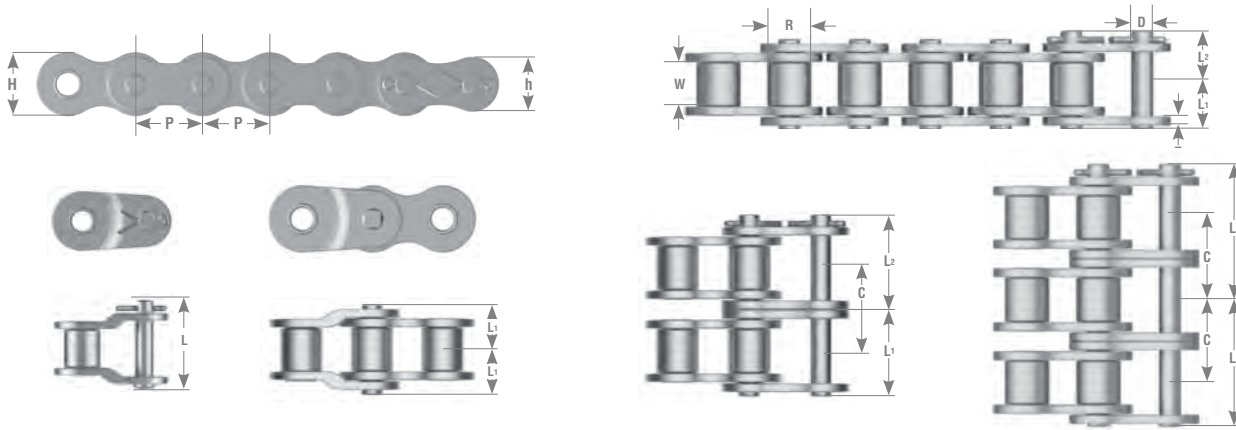
	P	R	W	T	H	h	D
<b>100</b>	1.250	0.750	0.750	0.156	1.185	1.024	0.375

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>100RB</b>	1	1.677	0.778	0.900	1.720	1.408	Rivet/Cotter	19,530	26,460	5,070	2.68
<b>100-2RB</b>	2	3.091	1.484	1.606	3.209		Rivet/Cotter	39,060	52,910	8,620	5.27
<b>100-3RB</b>	3	4.504	2.191	2.313	4.618		Riveted	58,590	79,370	12,680	7.91
<b>100-4RB</b>	4	5.913	2.896	3.018	6.028		Riveted	78,160	105,820	16,730	10.55
<b>100-5RB</b>	5	7.327	3.602	3.724	7.437		Riveted	97,650	132,280	19,780	13.12
<b>100-6RB</b>	6	8.740	4.309	4.431	8.846		Riveted	111,190	158,730	23,320	15.78

- Note:
- "RB" designation indicates 10" box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																							
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	2200	2400	2600
	Lubrication System																							
	A				B										C									
11	1.70	3.88	7.23	13.5	19.4	25.2	36.2	44.0	44.0	44.0	40.1	32.7	27.5	23.5	20.4	17.8	15.8	14.2	11.6	9.71	8.29	7.19	6.30	1.29
12	1.86	4.25	7.94	14.8	21.3	27.6	39.8	48.4	48.4	48.4	45.6	37.4	31.2	26.7	23.2	20.4	18.0	16.1	13.2	11.1	9.45	8.19	7.19	-
13	2.04	4.64	8.65	16.1	23.2	30.2	43.4	52.7	52.7	52.7	51.5	42.1	35.3	30.2	26.1	22.9	20.4	18.2	14.9	12.5	10.7	9.24	8.10	-
14	2.20	5.03	9.37	17.4	25.2	32.6	47.1	57.5	57.5	57.5	47.1	39.4	33.7	29.2	25.6	22.7	20.4	16.6	13.9	11.9	10.3	9.07	-	-
15	2.37	5.42	10.1	18.9	27.1	35.1	50.7	63.8	63.8	63.8	52.2	43.7	37.4	32.3	28.4	25.2	22.5	18.5	15.4	13.2	11.5	10.0	-	-
16	2.55	5.81	10.8	20.2	29.1	37.7	54.3	70.3	70.3	70.3	57.5	48.1	41.2	35.7	31.2	27.8	24.8	20.4	17.0	14.5	12.6	11.1	-	-
17	2.72	6.20	11.6	21.6	31.1	40.2	58.1	75.1	77.0	77.0	63.0	52.8	45.1	39.0	34.3	30.4	27.2	22.3	18.6	16.0	13.8	-	-	-
18	2.88	6.60	12.3	22.9	33.1	42.8	61.7	79.9	83.8	83.8	68.7	57.5	49.1	42.5	37.4	33.1	29.6	24.3	20.4	17.3	15.0	-	-	-
19	3.04	6.99	13.0	24.3	35.0	45.5	65.4	84.8	90.9	90.9	74.4	62.4	53.2	46.1	40.5	35.9	32.2	26.3	22.0	18.8	16.4	-	-	-
20	3.21	7.39	13.8	25.7	37.0	48.0	69.1	89.6	96.4	96.4	80.3	67.3	57.5	49.9	43.7	38.8	34.7	28.4	23.9	20.4	17.6	-	-	-
21	3.37	7.79	14.5	27.1	39.0	50.6	72.8	94.4	102	102	86.5	72.4	61.8	53.6	47.1	41.7	37.4	30.6	25.6	21.9	18.9	-	-	-
22	3.53	8.18	15.3	28.6	41.0	53.2	76.6	99.2	107	107	92.7	77.6	66.4	57.5	50.4	44.8	40.1	32.7	27.5	23.5	20.4	-	-	-
23	3.69	8.58	16.1	29.9	43.0	55.8	80.3	104	112	112	99.1	83.0	70.9	61.4	53.9	47.9	42.8	35.0	29.4	25.1	22.4	-	-	-
24	3.88	9.00	16.8	31.4	45.1	58.5	84.2	109	117	117	106	88.5	75.6	65.6	57.5	51.0	45.6	37.4	31.2	26.7	-	-	-	-
25	4.01	9.40	17.6	32.7	47.2	61.0	88.0	114	123	123	112	94.1	80.3	69.6	61.2	54.2	48.5	39.7	33.3	28.4	-	-	-	-
26	4.17	9.80	18.2	34.2	49.2	63.7	91.7	119	128	128	119	99.8	85.3	73.9	64.9	57.5	51.5	42.1	35.3	30.2	-	-	-	-
28	4.49	10.6	19.8	37.0	53.2	69.1	99.4	129	138	138	133	112	95.2	82.6	72.4	64.2	57.5	47.1	39.4	33.7	-	-	-	-
30	4.81	11.4	21.3	39.8	57.4	74.4	107	138	149	149	148	124	106	91.6	80.3	71.3	63.8	52.2	43.7	37.4	-	-	-	-
32	5.14	12.3	22.9	42.8	61.6	79.8	115	149	162	162	162	137	116	101	88.5	78.6	70.3	57.5	45.2	-	-	-	-	-
35	5.62	13.5	25.2	47.1	67.9	87.8	126	164	186	186	186	156	133	115	101	89.8	80.3	65.8	55.1	-	-	-	-	-
40	6.41	15.6	29.1	54.3	78.3	102	146	189	228	228	228	190	162	141	124	110	98.2	80.3	-	-	-	-	-	-
45	7.21	17.7	33.1	61.7	88.9	115	166	215	263	263	263	228	194	168	148	131	117	45.3	-	-	-	-	-	-

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



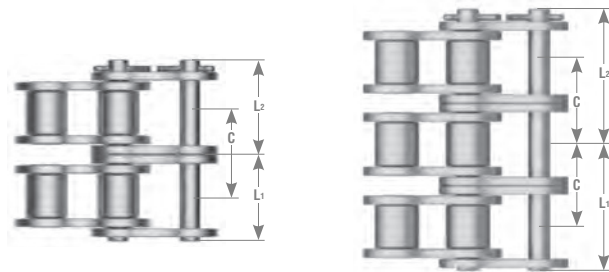
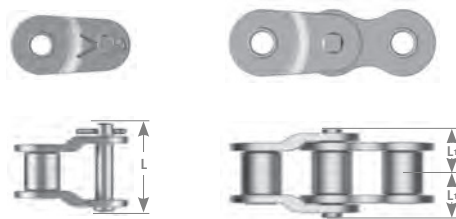
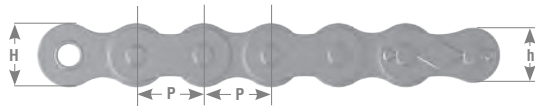
	P	R	W	T	H	h	D
<b>120</b>	1.500	0.875	1.000	0.187	1.425	1.228	0.437

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>120RB</b>	1	2.118	0.980	1.138	2.165	1.789	Rivet/Cotter	28,125	37,480	6,830	3.98
<b>120-2RB</b>	2	3.906	1.874	2.031	4.063		Rivet/Cotter	56,250	74,960	11,610	7.86
<b>120-3RB</b>	3	5.701	2.772	2.929	5.850		Riveted	84,375	112,440	17,080	11.78
<b>120-4RB</b>	4	7.488	3.665	3.823	7.638		Riveted	112,500	149,920	22,550	15.70
<b>120-5RB</b>	5	9.280	4.561	4.719	9.425		Riveted	140,625	187,400	26,650	19.59
<b>120-6RB</b>	6	11.067	5.455	5.612	11.213		Riveted	168,750	224,880	31,430	23.49

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																							
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
	Lubrication System																							
	A			B									C											
<b>11</b>	2.74	6.25	11.7	21.7	31.4	40.6	58.5	68.4	68.4	58.3	46.4	38.0	31.8	27.1	23.5	20.7	18.4	16.4	14.8	13.4	12.2	11.2	10.37	9.60
<b>12</b>	3.00	6.87	12.8	23.9	34.5	44.7	64.2	75.2	75.2	66.5	52.8	43.2	36.2	31.0	26.8	23.5	20.9	18.6	16.9	15.3	13.9	12.8	11.81	10.93
<b>13</b>	3.29	7.48	13.9	26.0	37.5	48.7	70.1	81.9	81.9	75.0	59.5	48.7	40.9	34.9	30.2	26.6	23.5	21.1	19.0	17.2	15.7	14.5	13.32	12.32
<b>14</b>	3.55	8.11	15.2	28.3	40.6	52.7	75.9	88.8	88.8	83.8	66.5	54.4	45.6	39.0	33.8	29.6	26.3	23.5	21.2	19.3	17.6	16.1	14.89	8.94
<b>15</b>	3.84	8.74	16.4	30.4	43.9	56.7	81.8	95.6	95.6	92.9	73.8	60.3	50.6	43.2	37.4	32.9	29.1	26.1	23.5	21.3	19.4	17.8	16.49	
<b>16</b>	4.10	9.37	17.4	32.6	46.9	60.9	87.7	103	103	102	81.3	66.5	55.8	47.6	41.3	36.2	32.2	28.7	25.9	23.5	21.5	19.7	18.24	
<b>17</b>	4.39	10.0	18.6	34.9	50.2	65.0	93.6	112	112	112	89.0	72.8	61.0	52.2	45.2	39.7	35.1	31.5	28.4	25.7	23.5	21.6	19.85	
<b>18</b>	4.65	10.6	19.8	37.0	53.4	69.2	99.6	122	122	122	97.0	79.4	66.5	56.9	49.2	43.2	38.4	34.3	31.0	28.0	25.6	23.5	11.30	
<b>19</b>	4.92	11.3	21.1	39.3	56.6	73.4	106	133	133	133	105	86.1	72.1	61.6	53.4	46.9	41.6	37.1	33.5	30.4	27.8	25.5		
<b>20</b>	5.18	11.9	22.3	41.6	59.8	77.5	112	143	143	143	114	92.9	77.9	66.5	57.7	50.6	44.9	40.2	36.2	32.9	30.0	27.5		
<b>21</b>	5.43	12.6	23.5	43.7	63.0	81.7	118	153	154	154	122	100	83.8	71.6	62.1	54.4	48.3	43.2	39.0	35.4	32.3	29.6		
<b>22</b>	5.70	13.2	24.7	46.0	66.2	85.8	124	160	165	165	131	107	89.8	76.7	66.5	58.3	51.8	46.4	41.8	38.0	34.6	16.6		
<b>23</b>	5.95	13.8	25.9	48.3	69.6	90.1	130	168	177	177	139	115	96.2	82.1	71.1	62.5	55.4	49.5	44.7	40.5	37.0			
<b>24</b>	6.21	14.5	27.1	50.6	72.8	94.3	135	176	188	188	149	122	102	87.4	75.8	66.5	59.0	52.8	47.6	43.2	39.4			
<b>25</b>	6.48	15.2	28.3	52.8	76.0	98.6	142	184	196	196	158	130	109	92.9	80.6	70.8	62.8	56.2	50.6	46.0	41.3			
<b>26</b>	6.73	15.8	29.5	55.1	79.4	103	148	192	204	204	169	138	115	98.6	85.4	75.0	66.5	59.5	53.6	48.7	26.6			
<b>28</b>	7.25	17.2	32.1	59.7	86.0	111	161	208	221	221	188	154	129	110	95.5	83.8	74.4	66.5	59.9	54.4				
<b>30</b>	7.76	18.5	34.5	64.4	92.7	120	173	224	239	239	209	170	143	122	106	92.9	82.5	73.8	66.5	42.4				
<b>32</b>	8.29	19.8	37.0	68.9	99.4	129	185	240	256	256	229	188	158	134	117	102	90.9	81.3	73.4					
<b>35</b>	9.07	21.9	40.8	76.0	109	142	204	264	282	282	263	216	181	154	134	117	104	92.9	47.7					
<b>40</b>	10.4	25.2	47.1	87.7	126	164	236	306	325	325	322	263	220	188	164	143	127	59.5						
<b>45</b>	11.7	28.6	53.4	99.6	143	186	268	347	384	384	384	314	263	224	194	170	80.1							

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



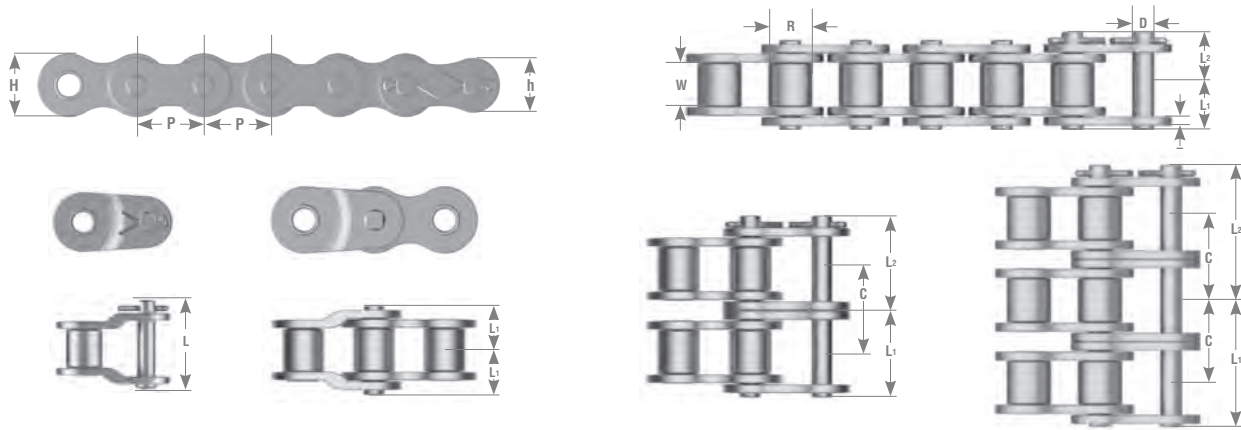
	P	R	W	T	H	h	D
<b>140</b>	1.750	1.000	1.000	0.219	1.661	1.433	0.500

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>140RB</b>	1	2.307	1.059	1.248	2.343	1.924	Rivet/Cotter	38,280	48,500	9,040	5.03
<b>140-2RB</b>	2	4.232	2.022	2.211	4.421		Rivet/Cotter	76,560	97,000	15,370	9.97
<b>140-3RB</b>	3	6.165	2.986	3.179	6.350		Rivet/Cotter	114,840	145,500	22,600	14.92
<b>140-4RB</b>	4	8.091	3.949	4.142	8.276		Riveted	153,120	194,000	29,830	19.16
<b>140-5RB</b>	5	10.016	4.913	5.102	10.201		Riveted	191,400	242,500	35,250	24.84
<b>140-6RB</b>	6	11.949	5.878	6.071	12.126		Riveted	229,680	291,000	41,580	29.77

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																							
	10	25	50	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
	Lubrication System																							
	A					B					C													
<b>11</b>	4.22	9.64	18.0	33.5	48.4	62.6	76.6	90.3	97.5	97.5	86.9	75.2	66.1	52.4	42.9	35.9	30.7	26.6	23.3	20.7	18.5	16.8	15.2	
<b>12</b>	4.64	10.6	19.7	36.9	53.1	68.8	84.1	99.1	107	107	99.0	85.8	75.2	59.7	48.9	41.0	35.0	30.3	26.6	23.6	21.1	19.0	17.3	
<b>13</b>	5.07	11.5	21.6	40.2	57.9	75.1	91.7	108	117	117	112	96.7	84.9	67.3	55.1	46.3	39.4	34.2	30.0	26.6	23.9	21.5	19.4	
<b>14</b>	5.48	12.5	23.3	43.6	62.8	81.3	99.4	117	127	127	125	108	94.8	75.2	61.6	51.6	44.1	38.2	33.5	29.8	26.6	24.0	21.7	
<b>15</b>	5.91	13.5	25.2	46.9	67.6	87.6	107	126	138	138	138	120	105	83.5	68.4	57.3	48.9	42.4	37.1	33.0	29.5	26.6	-	
<b>16</b>	6.33	14.5	27.0	50.3	72.5	93.9	115	135	153	153	153	132	116	92.0	75.2	63.0	53.9	46.7	41.0	36.3	32.5	29.4	-	
<b>17</b>	6.76	15.4	28.8	53.8	77.4	100	123	145	166	166	166	145	127	101	82.5	69.1	59.0	51.1	44.9	39.8	35.7	32.1	-	
<b>18</b>	7.19	16.4	30.6	57.1	82.3	107	130	154	177	182	182	157	138	110	89.8	75.2	64.2	55.7	48.9	43.3	38.8	35.0	-	
<b>19</b>	7.59	17.4	32.5	60.6	87.3	113	138	162	188	193	193	170	150	119	97.4	81.7	69.7	60.5	53.0	47.1	42.1	38.0	-	
<b>20</b>	7.99	18.4	34.3	64.1	92.3	119	146	172	197	204	204	185	162	128	105	88.1	75.2	65.3	57.3	50.8	45.5	-	-	
<b>21</b>	8.38	19.4	36.2	67.5	97.2	126	154	181	208	216	216	198	174	138	113	94.8	81.0	70.1	61.6	54.6	48.9	-	-	
<b>22</b>	8.78	20.4	38.1	70.9	102	132	162	190	219	227	227	213	186	149	121	102	86.9	75.2	66.1	58.6	52.4	-	-	
<b>23</b>	9.19	21.3	40.0	74.4	107	139	170	200	231	237	237	228	200	158	130	109	92.8	80.5	70.7	62.6	56.1	-	-	
<b>24</b>	9.59	22.4	41.8	78.0	112	146	178	209	241	249	249	243	213	169	138	116	99.0	85.8	75.2	66.8	59.7	-	-	
<b>25</b>	10.0	23.5	43.7	81.5	117	152	186	219	252	260	260	257	227	180	148	123	105	91.2	80.1	70.9	63.6	-	-	
<b>26</b>	10.4	24.4	45.6	85.0	122	158	194	228	263	274	274	274	240	190	156	131	112	96.7	84.9	75.2	-	-	-	
<b>28</b>	11.2	26.4	49.3	92.1	133	172	211	248	284	306	306	306	268	213	174	146	125	108	94.8	84.1	-	-	-	
<b>30</b>	12.0	28.6	53.2	99.2	143	185	227	267	307	339	339	339	298	236	193	162	138	120	105	93.3	-	-	-	
<b>32</b>	12.8	30.6	57.0	106	153	198	243	286	329	370	370	370	327	260	213	178	153	132	116	-	-	-	-	
<b>35</b>	13.9	33.7	62.8	117	169	219	267	315	362	408	408	408	375	298	244	204	174	152	133	-	-	-	-	
<b>40</b>	16.0	38.9	72.5	135	194	252	308	363	418	471	471	471	459	363	298	249	213	178	-	-	-	-	-	
<b>45</b>	18.0	44.1	82.3	154	221	287	351	413	475	535	547	547	547	433	355	298	237	192.8	-	-	-	-	-	

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



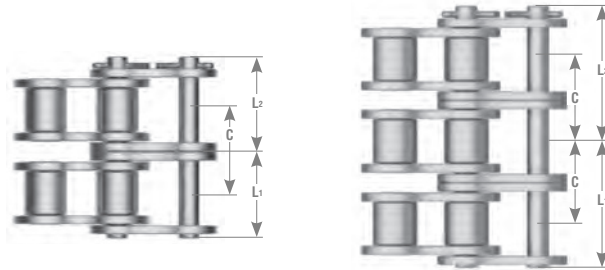
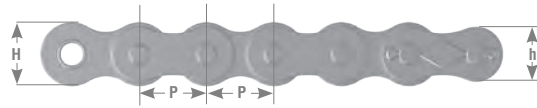
	P	R	W	T	H	h	D
<b>160</b>	2.000	1.125	1.250	0.250	1.898	1.638	0.562

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>160RB</b>	1	2.705	1.254	1.451	2.764	2.305	Rivet/Cotter	50,000	62,830	11,900	6.79
<b>160-2RB</b>	2	5.012	2.407	2.604	5.205		Rivet/Cotter	100,000	125,660	20,230	13.47
<b>160-3RB</b>	3	7.319	3.561	3.758	7.508		Rivet/Cotter	150,000	188,490	29,760	20.17
<b>160-4RB</b>	4	9.622	4.715	4.907	9.811		Riveted	200,000	251,320	39,280	26.92
<b>160-5RB</b>	5	11.929	5.868	6.061	12.114		Riveted	250,000	314,150	46,420	33.52
<b>160-6RB</b>	6	14.236	7.020	7.217	14.417		Riveted	300,000	376,990	54,760	40.27

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																							
	10	25	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300
	Lubrication Systems																							
	A			B									C											
11	5.12	11.7	21.9	40.8	58.7	76.0	92.9	99.9	99.9	99.9	83.8	71.5	62.0	54.4	48.3	43.2	38.9	35.4	32.3	29.6	25.3	21.9	19.2	17.0
12	5.75	13.1	24.4	45.6	65.7	85.2	104	117	117	117	98.2	83.8	72.5	63.7	56.5	50.6	45.6	41.4	37.8	34.7	29.6	25.6	22.5	20.0
13	6.37	14.5	27.1	50.6	72.8	94.4	115	132	132	132	113	96.7	83.8	73.5	65.2	58.3	52.6	47.7	43.6	40.0	34.2	29.6	26.0	23.1
14	7.00	16.0	29.8	55.5	80.1	104	127	145	145	145	129	110	95.5	83.8	74.3	66.5	59.9	54.4	49.6	45.6	38.9	33.8	29.6	26.3
15	7.63	17.4	32.5	60.6	87.3	113	138	158	158	158	145	124	108	94.4	83.8	75.0	67.6	61.3	56.1	51.4	43.9	38.1	33.4	29.6
16	8.26	18.9	35.1	65.7	94.5	123	150	172	172	172	138	120	106	93.6	83.8	75.5	68.5	62.6	57.4	49.1	42.5	37.3	33.1	33.1
17	8.90	20.2	38.0	70.7	102	132	161	185	185	185	154	133	117	104	92.9	83.8	76.0	69.5	63.7	54.4	47.2	41.4	-	-
18	9.55	21.7	40.6	75.9	109	142	173	198	198	198	169	148	129	114	102	92.3	83.8	76.4	70.1	59.9	51.9	45.6	-	-
19	10.2	23.2	43.4	81.0	117	152	185	217	217	217	185	161	141	125	112	101	91.7	83.8	76.8	65.6	56.9	49.9	-	-
20	10.8	24.7	46.1	86.1	124	161	196	232	237	237	202	176	154	137	122	110	99.9	91.3	83.8	71.5	62.0	54.4	-	-
21	11.4	26.3	48.9	91.3	132	170	208	245	257	257	220	190	166	148	132	119	108	99.0	90.8	77.5	67.2	59.0	-	-
22	12.0	27.8	51.8	96.6	139	180	220	259	278	278	237	205	180	160	143	129	117	107	98.2	83.8	72.5	63.7	-	-
23	12.6	29.2	54.4	102	146	190	232	274	295	295	255	221	194	172	154	138	126	115	106	90.1	78.2	68.5	-	-
24	13.2	30.7	57.3	107	154	200	244	287	310	310	274	237	208	185	165	149	135	123	113	96.7	83.8	-	-	-
25	13.8	32.2	60.1	112	162	209	256	302	326	326	292	253	223	197	177	160	145	132	121	103	89.6	-	-	-
26	14.5	33.8	63.0	117	169	220	268	316	341	341	311	270	237	211	188	169	154	141	129	110	95.5	-	-	-
28	15.0	35.3	65.8	123	177	229	280	330	357	357	331	287	252	224	200	180	164	149	137	117	101	-	-	-
30	15.7	36.7	68.7	128	185	239	292	345	371	371	351	304	267	237	212	192	173	158	145	124	108	-	-	-
32	16.9	39.8	74.4	138	200	259	316	373	402	402	393	341	299	264	237	213	194	177	162	138	120	-	-	-
35	18.1	42.9	80.2	150	216	279	341	402	436	436	436	377	331	294	263	237	215	196	180	154	-	-	-	-
40	19.3	46.0	86.0	161	231	299	366	430	480	480	480	416	365	323	290	261	237	216	198	169	-	-	-	-
45	21.1	50.7	94.7	177	255	330	402	475	546	548	548	475	417	370	331	299	271	248	227	180	-	-	-	-

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."



	P	R	W	T	H	h	D
<b>180</b>	2.250	1.406	1.406	0.281	2.134	1.843	0.687

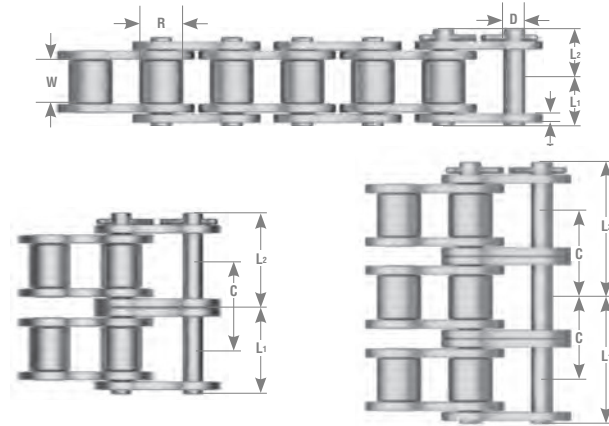
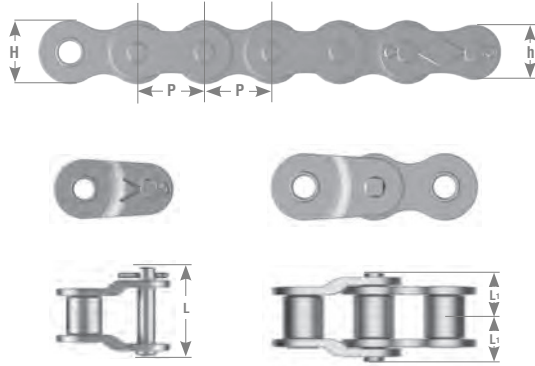
TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>180RB</b>	1	3.075	1.404	1.671	3.173	2.592	Rivet/Cotter	63,280	83,110	13,670	9.04
<b>180-2RB</b>	2	5.673	2.707	2.967	5.949		Rivet/Cotter	126,560	166,220	23,240	17.82
<b>180-3RB</b>	3	8.276	4.004	4.272	8.539		Rivet/Cotter	189,840	249,340	34,170	25.68
<b>180-4RB</b>	4	10.870	5.301	5.569	11.134		Riveted	253,120	332,450	45,110	34.20
<b>180-5RB</b>	5	13.465	6.598	6.866	13.724		Riveted	316,400	415,570	53,310	42.73
<b>180-6RB</b>	6	16.059	7.896	8.163	16.315		Riveted	379,680	498,680	62,880	51.25

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																							
	10	25	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
	Lubrication System																							
	A			B						C														
<b>11</b>	8.22	18.8	35.0	65.3	94.0	122	149	152	149	124	106	92.0	80.7	71.6	64.1	57.8	52.4	47.9	44.0	40.5	37.5	34.9	32.59	
<b>12</b>	9.03	20.7	38.5	71.7	103	134	164	169	169	142	121	105	92.0	81.7	73.1	65.8	59.8	54.6	50.2	46.1	42.8	39.7	37.01	
<b>13</b>	9.84	22.4	42.0	78.2	113	146	178	190	190	190	160	137	118	104	92.0	82.3	74.3	67.5	61.6	56.5	52.0	48.3	44.8	
<b>14</b>	10.7	24.3	45.5	84.8	122	158	193	213	213	213	178	153	132	116	103	92.0	83.0	75.4	68.8	63.2	58.2	53.9	50.2	
<b>15</b>	11.5	26.1	48.9	91.3	131	170	208	236	236	236	198	169	146	129	114	102	92.0	83.5	76.3	70.0	64.5	59.8	55.5	
<b>16</b>	12.3	28.2	52.4	97.9	141	182	223	256	256	256	219	186	161	142	126	113	101	92.0	84.1	77.1	71.1	65.8	61.2	
<b>17</b>	13.2	30.0	56.1	104	150	194	239	270	270	270	239	204	177	156	138	123	111	101	92.0	84.5	77.9	72.1	-	
<b>18</b>	13.9	31.9	59.5	111	160	208	253	290	290	290	260	223	193	169	150	134	121	110	100	92.0	84.9	78.6	-	
<b>19</b>	14.8	33.8	63.2	118	170	220	268	307	307	307	283	241	209	184	162	146	131	119	109	99.8	92.0	85.2	-	
<b>20</b>	15.6	35.8	66.8	125	180	232	284	326	326	326	304	260	225	198	176	157	142	129	117	108	99.4	92.0	-	
<b>21</b>	16.4	37.7	70.4	131	189	245	299	343	343	343	329	280	243	213	189	169	153	138	126	116	107	99.0	-	
<b>22</b>	17.0	39.7	74.0	138	198	257	315	361	361	361	351	300	260	228	202	181	164	149	135	124	115	-	-	
<b>23</b>	17.8	41.6	77.6	145	209	271	330	378	378	378	375	321	279	244	217	194	174	158	145	133	123	-	-	
<b>24</b>	18.6	43.6	81.3	152	219	283	346	401	401	401	401	342	296	260	231	207	186	169	154	142	131	-	-	
<b>25</b>	19.4	45.5	84.9	158	228	296	362	426	426	426	426	363	315	276	245	220	198	180	164	150	139	-	-	
<b>26</b>	20.2	47.5	88.6	165	239	308	377	444	452	452	452	386	334	294	260	233	211	190	174	160	-	-	-	
<b>28</b>	21.7	51.5	96.0	180	257	334	409	481	506	506	506	432	374	329	291	260	235	213	194	178	-	-	-	
<b>30</b>	23.3	55.4	103	193	278	361	440	519	561	561	561	479	414	363	323	288	260	236	216	198	-	-	-	
<b>32</b>	24.8	59.4	111	207	298	386	472	557	601	601	601	527	457	401	355	318	287	260	237	-	-	-	-	
<b>35</b>	27.2	65.4	122	228	329	425	520	613	662	662	662	602	523	459	406	363	329	291	220	-	-	-	-	
<b>40</b>	31.1	75.6	141	263	380	491	601	676	676	676	676	621	575	524	465	398	325	244	-	-	-	-	-	
<b>45</b>	35.0	85.8	160	299	430	558	683	739	739	739	739	680	632	578	514	441	361	271	-	-	-	-	-	

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."





	P	R	W	T	H	h	D
<b>200</b>	2.500	1.562	1.500	0.312	2.374	2.047	0.781

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>200RB</b>	1	3.299	1.535	1.764	3.437	2.817	Rivet/Cotter	78,125	105,820	16,090	11.08
<b>200-2RB</b>	2	6.122	2.947	3.175	6.346		Rivet/Cotter	156,250	211,640	27,350	21.93
<b>200-3RB</b>	3	8.945	4.360	4.585	9.173		Rivet/Cotter	234,375	317,470	40,230	32.94
<b>200-4RB</b>	4	11.768	5.772	5.996	11.996		Riveted	312,500	423,290	53,100	43.79
<b>200-5RB</b>	5	14.591	7.181	7.409	14.815		Riveted	390,625	529,110	62,760	54.64
<b>200-6RB</b>	6	17.413	8.593	8.821	17.638		Riveted	468,750	634,930	74,030	65.58

**Note:**

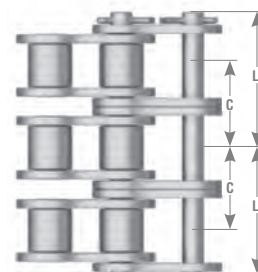
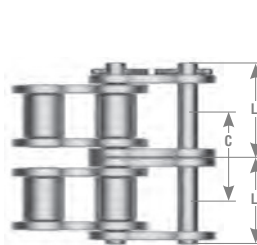
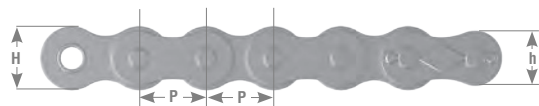
1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
2. Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
3. Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																		
	10	15	20	30	40	50	70	100	150	200	250	300	350	400	450	500	550	600	650
	Lubrication System																		
	A				B								C						
<b>11</b>	10.8	15.6	20.1	29.0	37.4	45.7	62.0	85.4	123	160	181	181	181	161	135	115	100	87.8	77.9
<b>12</b>	11.8	17.0	22.0	31.8	41.2	50.3	68.1	93.9	135	176	198	198	198	184	154	132	114	100	-
<b>13</b>	12.9	18.5	24.0	34.6	44.9	54.8	74.3	102	148	190	216	216	216	208	174	149	129	113	-
<b>14</b>	13.9	20.1	26.0	37.5	48.5	59.4	80.5	111	160	207	235	235	235	232	194	166	143	126	-
<b>15</b>	15.0	21.7	28.0	40.4	52.3	64.0	86.6	119	172	223	257	257	257	257	216	184	160	139	-
<b>16</b>	16.1	23.2	30.0	43.3	56.2	68.7	92.9	128	185	239	283	283	283	283	237	202	176	154	-
<b>17</b>	17.2	24.8	32.2	46.3	59.9	73.2	99.2	137	197	255	310	310	310	310	260	223	192	169	-
<b>18</b>	18.2	26.4	34.2	49.2	63.7	77.9	106	145	209	271	331	338	338	338	283	241	209	184	-
<b>19</b>	19.3	27.9	36.2	52.2	67.6	82.6	112	154	223	288	351	366	366	366	307	263	228	200	-
<b>20</b>	20.4	29.5	38.2	55.1	71.5	87.3	118	164	235	304	371	389	389	389	331	283	245	-	-
<b>21</b>	21.3	31.1	40.4	58.1	75.4	92.0	125	172	248	321	392	409	409	409	357	304	264	-	-
<b>22</b>	22.4	32.7	42.4	61.2	79.1	96.8	131	181	260	337	412	430	430	430	382	327	283	-	-
<b>23</b>	23.3	34.3	44.5	64.1	83.1	102	138	189	274	354	432	452	452	452	409	349	303	-	-
<b>24</b>	24.4	35.9	46.7	67.2	87.0	106	143	198	286	370	453	473	473	473	436	373	323	-	-
<b>25</b>	25.3	37.5	48.7	70.1	90.9	111	150	208	299	388	473	495	495	495	464	396	343	-	-
<b>26</b>	26.4	39.3	50.8	73.2	94.8	116	157	216	311	404	493	516	516	516	492	420	363	-	-

**Note:**

1. When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
2. Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
3. For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
4. Refer to page 251, "Procedures for Selecting Roller Chain."

# No. 240



	P	R	W	T	H	h	D
<b>240</b>	3.000	1.875	1.875	0.375	2.850	2.457	0.937

TSUBAKI Chain Number	Number of Strands	L1+L2	L1	L2	L	Transverse Pitch C	Pin Type	ANSI Standard Min. Tensile Strength (lb)	Tsubaki Average Tensile Strength	Maximum Allowable Load	Approximate Mass lb/ft
<b>240RB</b>	1	4.071	1.886	2.185	4.201	3.458	Rivet/Cotter	112,500	154,320	22,260	16.46
<b>240-2RB</b>	2	7.531	3.618	3.913	7.811		Rivet/Cotter	225,000	308,640	37,850	32.32
<b>240-3RB</b>	3	10.984	5.348	5.636	11.272		Rivet/Cotter	337,500	462,970	55,660	48.11
<b>240-4RB</b>	4	14.453	7.079	7.374	14.732		Riveted	450,000	617,290	73,480	63.90
<b>240-5RB</b>	5	17.913	8.809	9.104	18.189		Riveted	562,500	771,610	86,840	79.70
<b>240-6RB</b>	6	21.370	10.539	10.831	21.657		Riveted	675,000	925,940	102,420	95.49

- Note:
- "RB" designation indicates 10° box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Maximum allowable load when using a one-pitch offset link (OL) is 65% of the above.
  - Maximum allowable load when using a two-pitch offset link (2POL) is 100% of the above.

No. of Small Sprocket Teeth	Maximum Speed - Small Sprocket (RPM)																			
	5	10	15	20	25	30	40	50	60	80	100	125	150	175	200	250	300	350	400	450
	A					B										C				
<b>11</b>	9.28	17.8	25.7	33.3	40.8	48.0	62.1	76.0	89.6	116	142	173	204	235	264	271	271	228	186	157
<b>12</b>	10.1	19.6	28.3	36.6	44.8	52.7	68.3	83.4	98.3	127	156	190	224	257	291	298	298	260	213	
<b>13</b>	11.0	21.3	30.8	39.8	48.8	57.4	74.4	91.1	107	139	170	208	244	282	316	325	325	294	240	
<b>14</b>	11.8	23.2	33.4	43.2	52.8	62.2	80.6	98.6	116	150	184	225	266	304	343	353	353	327	268	
<b>15</b>	12.6	24.9	35.9	46.5	56.9	67.1	86.9	106	125	162	198	243	286	329	370	380	380	363	298	
<b>16</b>	13.5	26.7	38.5	49.9	61.0	71.9	93.2	114	134	174	212	260	306	351	397	401	401	361	327	
<b>17</b>	14.3	28.6	41.2	53.2	65.2	76.7	100	122	143	185	227	278	327	375	402	402	402	377	359	
<b>18</b>	15.2	30.3	43.7	56.7	69.3	81.7	106	129	153	197	241	295	347	400	406	406	406	390	377	
<b>19</b>	16.0	32.1	46.4	60.1	73.5	86.6	112	137	161	209	256	312	369	424	425	425	425	408	390	
<b>20</b>	16.9	33.5	49.1	63.6	77.6	91.5	119	145	170	221	271	330	389	443	443	443	443	424	408	
<b>21</b>	17.7	35.4	51.6	66.9	81.8	96.4	125	153	180	233	286	349	410	463	463	463	463	440	424	
<b>22</b>	18.5	37.1	54.3	70.4	86.1	101	131	161	189	245	299	366	432	464	464	464	459	455	422	
<b>23</b>	19.4	38.1	57.0	73.9	90.3	106	138	169	198	257	314	385	453	496	496	496	481	469	448	
<b>24</b>	20.2	40.5	59.7	77.4	94.5	111	145	177	208	270	330	402	475	531	531	531	504	483		
<b>25</b>	21.1	42.1	62.4	80.9	98.8	116	150	184	217	282	345	421	496	550	550	550	520	496		
<b>26</b>	21.9	43.9	65.0	84.4	103	121	157	192	227	294	359	439	518	561	561	561	532	510		

- Note:
- When using one pitch offset links (OL), HP ratings are 80% of the above. Two pitch offset links (2POL) can be used at 100% of the above values.
  - Multiply the value given above by the multiple strand factor (page 251 Table 2) in order to obtain the transmission horsepower of multiple strand chain.
  - For lubrication systems A, B & C, refer to pages 257 & 258 for explanation. Please consult Tsubaki for use of horsepower ratings to the right of the boundary line.
  - Refer to page 251, "Procedures for Selecting Roller Chain."

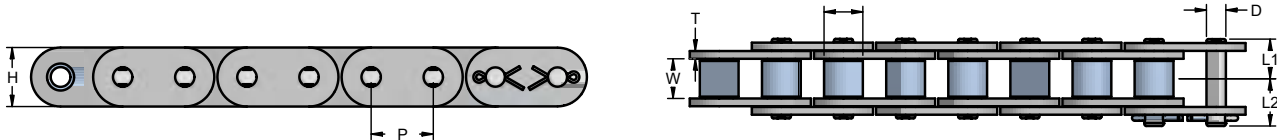
# SINGLE PITCH CONVEYOR SERIES



Tsubaki Conveyor Series chains provide a high quality conveying medium for material handling equipment, road building machinery, farm implement equipment, bakery applications, packaging and numerous other applications. From driving, to conveying this is yet another offering from Tsubaki to meet your application requirements.

To better understand the terminology, here is how Tsubaki Conveyor Series chains are identified

- C = Conveyor or straight side bar.



## Single Pitch

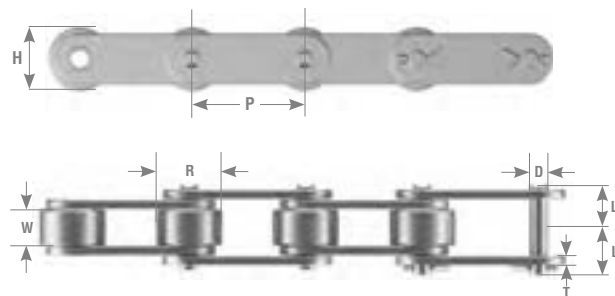
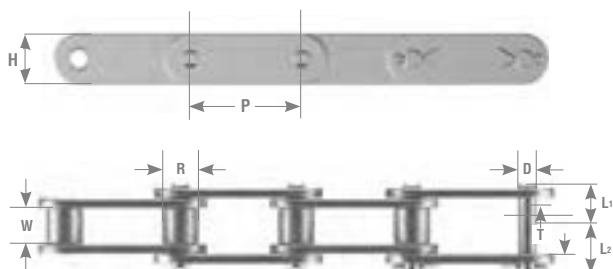
Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Pin			Plate		Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.	No. of Links per 10 ft.
				D	L1	L2	T	H				
<b>C40RB</b>	0.500	0.312	0.312	0.156	0.325	0.392	0.060	0.472	3,750	595	0.34	120
<b>C50RB</b>	0.625	0.400	0.375	0.200	0.406	0.472	0.080	0.591	6,170	970	0.56	96
<b>C60RB</b>	0.750	0.469	0.500	0.234	0.573	0.652	0.125	0.677	9,040	1,410	1.01	80
<b>C80RB</b>	1.000	0.625	0.625	0.312	0.720	0.823	0.156	0.906	15,400	2,400	1.62	60
<b>C100RB</b>	1.250	0.750	0.750	0.375	0.858	0.965	0.187	1.160	24,300	3,840	2.38	48
<b>C120RB</b>	1.500	0.875	1.000	0.437	1.203	1.203	0.219	1.380	34,000	5,380	3.41	40

# DOUBLE PITCH CONVEYOR SERIES



How to identify conveyor chains

- (20) in front of the chain sizes (i.e. 2040) indicates double pitch
- H = Heavy side bar construction
- 2 = Oversized roller construction
- D = Delrin plastic oversized rollers



## Double Pitch

Tsubaki	Pitch	Roller Diameter	Width Between Roller Link Plates	Pin			Plate		Transverse Pitch	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.	No. of Links per 10 ft.
				D	L1	L2	T	H					
Chain No.	P	R	W	D	L1	L2	T	H	C				
<b>STANDARD ROLLER TYPE</b>													
C2040RB	1.00	0.312	0.312	0.156	0.325	0.392	0.060	0.472	NA	3,750	595	0.34	120
C2050RB	1.25	0.400	0.375	0.200	0.406	0.472	0.080	0.591	NA	6,170	970	0.56	96
C2060HRB	1.50	0.469	0.500	0.234	0.573	0.652	0.125	0.677	NA	9,040	1,410	1.01	80
C2080HRB	2.00	0.625	0.625	0.312	0.720	0.823	0.156	0.906	NA	15,400	2,400	1.62	60
C2100HRB	2.50	0.750	0.750	0.375	0.858	0.965	0.187	1.160	NA	24,300	3,840	2.38	48
C2120HRB	3.00	0.875	1.000	0.437	1.203	1.203	0.219	1.380		34,000	5,380	3.41	40
C2160HRB	4.00	1.125	1.250	0.562	1.514	1.514	0.281	1.850	NA	58,000	9,190	6.02	30
<b>OVERSIZED ROLLER TYPE</b>													
C2042RB	1.00	0.625	0.312	0.156	0.325	0.392	0.060	0.472	1.028	3,750	595	0.58	120
C2052RB	1.25	0.750	0.375	0.200	0.406	0.472	0.080	0.591	1.283	6,170	970	0.87	96
C2062HRB	1.50	0.875	0.500	0.234	0.573	0.652	0.125	0.677	1.539	9,040	1,410	1.47	80
C2082HRB	2.00	1.125	0.625	0.312	0.720	0.823	0.156	0.906	1.924	15,400	2,400	2.37	60
C2102HRB	2.50	1.562	0.750	0.375	0.858	0.965	0.187	1.160	2.055	24,300	3,840	3.90	48
C2122HRB	3.00	1.750	1.000	0.437	1.061	1.203	0.219	1.380		34,000	5,380	5.46	40
C2162HRB	4.00	2.250	1.250	0.562	1.337	1.514	0.281	1.850	2.437	58,000	9,190	9.21	30

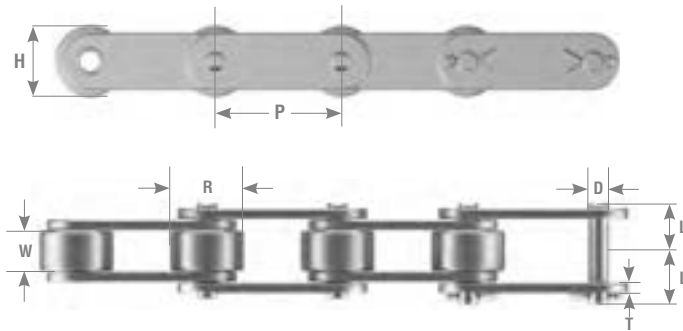
Note:

1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.
2. Refer to attachment chain section for attachment dimensions.
3. Heavy side plates are used for C2060H (2) and up. (H) indicates heavy side bars.
4. Spring clip type connecting links will be provided for sizes C2040-C2060H including oversized rollers.
5. (2) indicates oversized roller style.

# CONVEYOR SERIES: DELRIN ROLLER



Delrin roller conveyor series chains have a plastic (polyacetal resin) roller to offer a smooth, quiet operation and long wear life. Stainless steel chain with plastic rollers is also available for those applications where corrosion resistance is required.



## Delrin Roller - Double Pitch

Tsubaki	Pitch	Roller Diameter	Width Between Roller Link Plates	Pin				Plate		Average Tensile Strength	Maximum Allowable Load*	Maximum Allowable Roller Load*	Approx. Weight lbs/ft.	No. of Links per 10 ft.
				D	L1	L2	L1+L2	T	H					
<b>C2042DRB</b>	1.00	0.625	0.312	0.156	0.325	0.392	0.717	0.060	0.472	3,700	100	44	0.33	120
<b>C2052DRB</b>	1.25	0.750	0.375	0.200	0.406	0.472	0.878	0.080	0.591	6,100	154	66	0.57	96
<b>C2062HDRB</b>	1.50	0.875	0.500	0.234	0.573	0.652	1.225	0.125	0.677	9,000	231	110	0.98	80
<b>C2082HDRB</b>	2.00	1.125	0.625	0.312	0.720	0.823	1.543	0.156	0.906	15,400	397	200	1.77	60
<b>C2102HDRB</b>	2.50	1.562	0.750	0.375	0.858	0.965	1.823	0.187	1.160	24,000	573	286	2.52	48

Note:

1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
2. Refer to attachment chain section for attachment dimensions.
3. Heavy side plates are used for C2060H (2) and up. (H) indicates heavy side bars.
4. Spring clip type connecting links will be provided for sizes C2040-C2060H including oversized rollers.
5. (2) indicates oversized roller style.



# HEAVY-DUTY CHAINS

When just a standard ANSI carbon steel roller chain won't do, Tsubaki completes its line of ANSI chains with a full line of Heavy-Duty series roller chains. Tsubaki offers many options to handle the most rugged and high-load applications. Heavy chains, "T" series chains for better shock load, "HT" series for greater ultimate tensile strength, and a full series of Super, Super Heavy and Ultra Super Chains for the largest load rated chains.



# HEAVY DUTY CHAINS

Tsubaki offers the most complete line of roller chains for tough applications that require extra performance, like material handling and construction. Heavy Series Chains are directly interchangeable with standard ANSI chains and require no special equipment modifications or sprockets.

## T Series

Chains have thru-hardened pins for higher ultimate tensile strength and greater shock resistance.



## H Series

Chains have thicker link plates and longer pins than standard roller chains. They handle up to 10 percent higher loads.



## HT Series

Chains have thru-hardened pins and thicker link plates for 15 to 30 percent higher ultimate strength and even more shock load resistance.



## Super Series

Chains have wider-waist link plates, ball-drifted pitch holes, and through-hardened pins for greater shock resistance and 25 to 30 percent higher maximum allowable loads.



## H-Super Series

Chains have the same features as Super Series, plus wider-waist and thicker link plates for even higher maximum allowable loads.

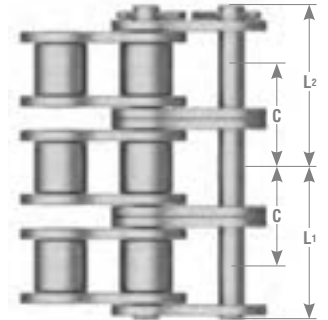
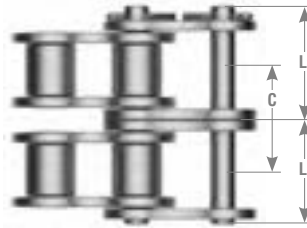
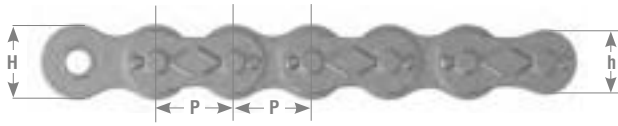


## Ultra Super Series

Chains provide the highest ultimate tensile strength and maximum allowable loads of any Tsubaki roller chain. In some applications, these chains can transmit virtually twice the load of their standard equivalents.



# HEAVY SERIES



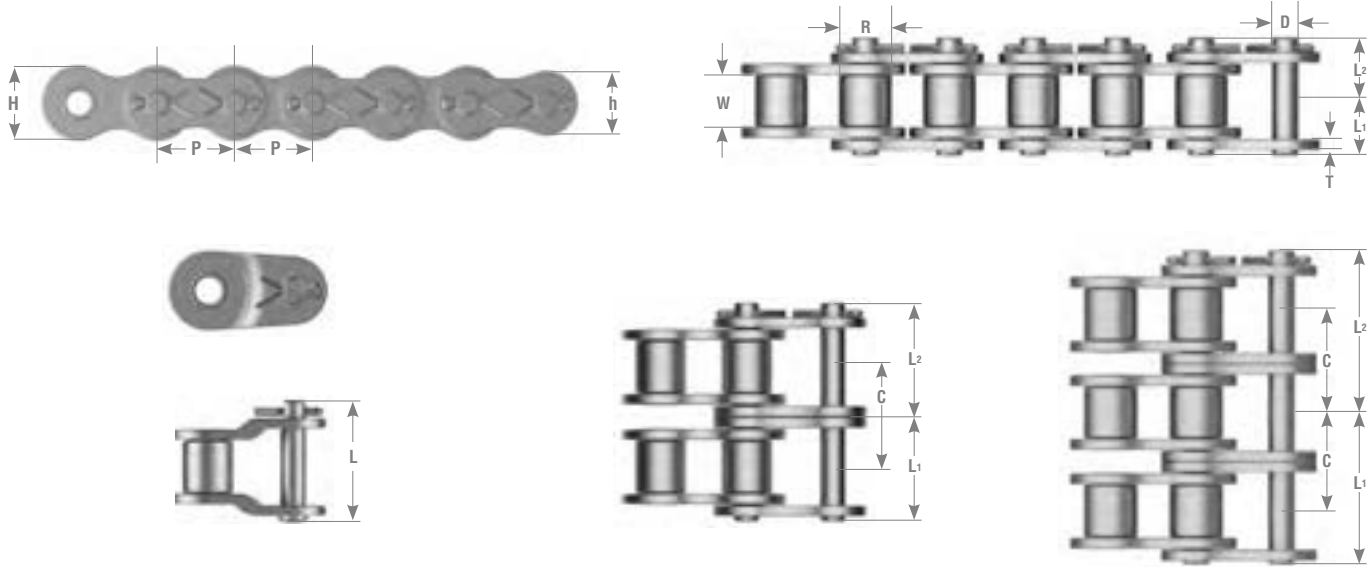
Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Plate			Pin			Transverse Pitch C	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	D	L1	L2				
<b>SINGLE STRAND</b>													
60HRB	0.75	0.469	0.500	0.125	0.072	0.214	0.015	0.583	0.669	NA	9,920	2,200	1.21
80HRB	1.00	0.625	0.625	0.156	0.094	0.272	0.024	0.720	0.823	NA	17,640	3,630	2.08
100HRB	1.25	0.750	0.750	1.870	0.125	0.339	0.030	0.858	0.965	NA	26,460	5,510	3.07
120HRB	1.50	0.875	1.000	0.219	0.188	0.500	0.050	1.061	1.203	NA	37,480	7,270	4.38
140HRB	1.75	1.000	1.000	0.250	0.134	0.425	0.040	1.138	1.303	NA	48,510	9,590	5.54
160HRB	2.00	1.125	1.250	0.281	0.188	0.496	0.040	1.337	1.514	NA	60,630	12,500	7.35
200HRB	2.50	1.562	1.500	0.375	0.250	0.579	0.050	1.689	1.894	NA	103,630	17,600	12.33
240HRB	3.00	1.875	1.875	0.500	0.312	0.717	0.060	2.157	2.453	NA	152,140	25,300	19.54
<b>DOUBLE STRAND</b>													
60H-2RB	0.75	0.469	0.500	0.400	0.375	0.878	0.080	1.094	1.177	1.028	19,840	3,700	2.41
80H-2RB	1.00	0.625	0.625	0.463	0.500	1.087	0.094	1.362	1.465	1.283	35,280	6,100	4.15
100H-2RB	1.25	0.750	0.750	0.625	0.625	1.398	0.125	1.630	1.736	1.539	52,920	9,300	6.07
120H-2RB	1.50	0.875	1.000	0.750	0.750	1.678	0.156	2.024	2.165	1.924	74,960	12,300	8.67
140H-2RB	1.75	1.000	1.000	0.875	1.000	2.118	0.187	2.165	2.343	2.055	94,370	16,300	11.01
160H-2RB	2.00	1.125	1.250	1.000	1.000	2.307	0.219	2.555	2.740	2.437	121,260	21,200	14.64
200H-2RB	2.50	1.562	1.500	1.125	1.250	2.705	0.250	3.230	3.437	3.083	207,260	29,900	24.51
240H-2RB	3.00	1.875	1.875	1.406	1.406	3.075	0.281	4.146	4.445	3.985	304,280	43,000	38.47
<b>TRIPLE STRAND</b>													
60H-3RB	0.75	0.469	0.500	1.562	1.500	3.299	0.312	1.608	1.691	1.028	29,760	5,500	3.60
80H-3RB	1.00	0.625	0.625	1.875	1.875	4.071	0.375	2.006	2.108	1.283	52,920	9,000	6.21
100H-3RB	1.25	0.750	0.750	1.562	1.500	3.299	0.312	2.402	2.504	1.539	79,380	13,700	9.10
120H-3RB	1.50	0.875	1.000	1.875	1.875	4.071	0.375	2.988	3.126	1.924	112,400	18,100	12.99
140H-3RB	1.75	1.000	1.000	1.562	1.500	3.299	0.312	3.195	3.560	2.055	141,550	23,900	16.48
160H-3RB	2.00	1.125	1.250	1.875	1.875	4.071	0.375	3.778	3.955	2.437	181,890	31,200	21.93
200H-3RB	2.50	1.562	1.500	1.562	1.500	3.299	0.312	4.774	4.985	3.083	310,890	44,000	36.81
240H-3RB	3.00	1.875	1.875	1.875	1.875	4.071	0.375	6.144	6.439	3.985	496,420	63,200	57.33

Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.

\*2. Please refer to the technical resource section, "Selection for Slow Speed."



# T SERIES

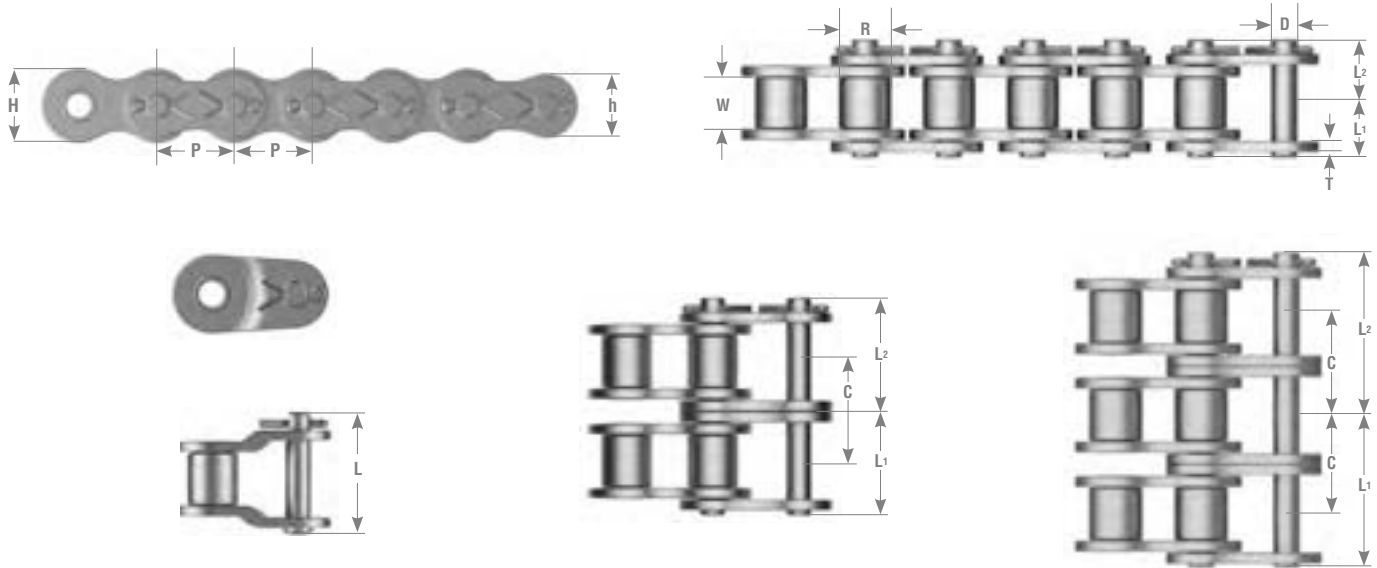


Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Plate			Pin			Transverse Pitch C	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	D	L1	L2				
<b>SINGLE STRAND</b>													
60TRB	0.75	0.469	0.500	0.094	0.713	0.614	0.234	0.506	0.581	NA	10,300	1,980	1.03
80TRB	1.00	0.625	0.625	0.125	0.949	0.819	0.312	0.640	0.758	NA	17,600	3,300	1.79
100TRB	1.25	0.750	0.750	0.156	1.185	1.024	0.375	0.778	0.900	NA	27,400	5,070	2.68
120TRB	1.50	0.875	1.000	0.187	1.425	1.228	0.437	0.980	1.138	NA	39,700	6,830	3.98
140TRB	1.75	1.000	1.000	0.219	1.661	1.433	0.500	1.059	1.248	NA	52,800	9,040	5.03
160TRB	2.00	1.125	1.250	0.250	1.898	1.638	0.562	1.254	1.451	NA	68,300	11,900	6.79
200TRB	2.50	1.562	1.500	0.312	2.374	2.047	0.781	1.535	1.764	NA	105,800	16,090	11.08
240TRB	3.00	1.875	1.875	0.375	2.850	2.457	0.937	1.886	2.185	NA	154,200	22,260	16.46
<b>DOUBLE STRAND</b>													
60T-2RB	0.75	0.469	0.500	0.094	0.713	0.614	0.234	0.955	1.033	0.897	20,600	3,370	2.04
80T-2RB	1.00	0.625	0.625	0.125	0.949	0.819	0.312	1.217	1.335	1.153	35,200	5,620	3.54
100T-2RB	1.25	0.750	0.750	0.156	1.185	1.024	0.375	1.484	1.606	1.408	54,600	8,620	5.27
120T-2RB	1.50	0.875	1.000	0.187	1.425	1.228	0.437	1.874	2.031	1.789	79,400	11,610	7.86
140T-2RB	1.75	1.000	1.000	0.219	1.661	1.433	0.500	2.022	2.211	1.924	105,800	15,370	9.97
160T-2RB	2.00	1.125	1.250	0.250	1.898	1.638	0.562	2.407	2.604	2.305	136,600	20,230	13.47
200T-2RB	2.50	1.562	1.500	0.312	2.374	2.047	0.781	2.947	3.175	2.817	211,600	27,350	21.93
240T-2RB	3.00	1.875	1.875	0.375	2.850	2.457	0.937	3.618	3.913	3.458	308,600	37,850	32.32
<b>TRIPLE STRAND</b>													
60T-3RB	0.75	0.469	0.500	0.094	0.713	0.614	0.234	1.404	1.502	0.897	30,900	4,960	3.05
80T-3RB	1.00	0.625	0.625	0.125	0.949	0.819	0.312	1.795	1.909	1.153	52,800	8,270	5.30
100T-3RB	1.25	0.750	0.750	0.156	1.185	1.024	0.375	2.191	2.313	1.408	82,200	12,680	7.91
120T-3RB	1.50	0.875	1.000	0.187	1.425	1.228	0.437	2.772	2.929	1.789	119,100	17,080	11.76
140T-3RB	1.75	1.000	1.000	0.219	1.661	1.433	0.500	2.986	3.179	1.924	158,400	22,600	14.92
160T-3RB	2.00	1.125	1.250	0.250	1.898	1.638	0.562	3.561	3.758	2.305	204,900	24,760	20.17
200T-3RB	2.50	1.562	1.500	0.312	2.374	2.047	0.781	4.360	4.585	2.817	317,400	40,230	32.94
240T-3RB	3.00	1.875	1.875	0.375	2.850	2.457	0.937	5.348	5.636	3.458	462,600	55,660	48.11

Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.

\*2. Please refer to the technical resource section, "Selection for Slow Speed."

# HT SERIES

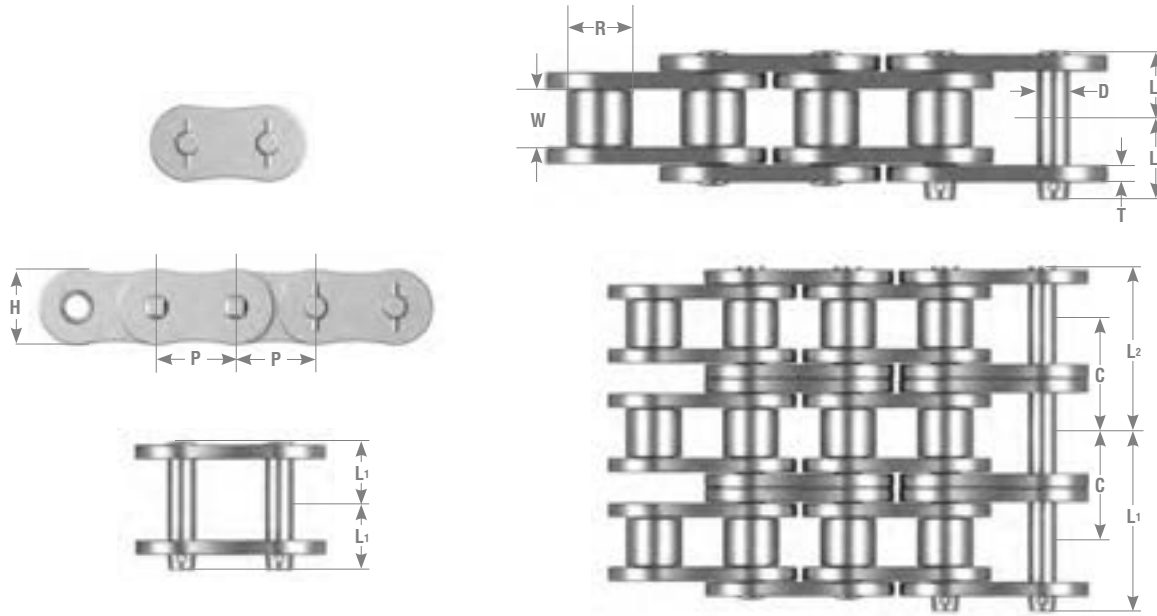


Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Plate			Pin			Transverse Pitch C	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	D	L1	L2				
<b>SINGLE STRAND</b>													
60HTRB	0.75	0.469	0.500	0.125	0.713	0.614	0.234	0.582	0.669	NA	12,500	2,200	1.21
80HTRB	1.00	0.625	0.625	0.156	0.949	0.819	0.312	0.720	0.823	NA	20,900	3,630	2.08
100HTRB	1.25	0.750	0.750	1.870	1.185	1.024	0.375	0.858	0.965	NA	31,900	5,510	3.07
120HTRB	1.50	0.875	1.000	0.219	1.425	1.228	0.437	1.061	1.203	NA	43,000	7,270	4.38
140HTRB	1.75	1.000	1.000	0.250	1.661	1.433	0.500	1.138	1.303	NA	56,200	9,590	5.54
160HTRB	2.00	1.125	1.250	0.281	1.898	1.638	0.562	1.337	1.514	NA	71,600	12,500	7.35
200HTRB	2.50	1.562	1.500	0.375	2.374	2.047	0.781	1.689	1.894	NA	125,600	17,600	12.33
240HTRB	3.00	1.875	1.875	0.500	2.850	2.457	0.937	2.157	2.453	NA	198,400	25,300	19.57
<b>DOUBLE STRAND</b>													
60HT-2RB	0.75	0.469	0.500	0.400	0.713	0.614	0.234	1.094	1.181	1.028	25,100	3,700	2.41
80HT-2RB	1.00	0.625	0.625	0.463	0.949	0.819	0.312	1.358	1.492	1.283	41,800	6,100	4.15
100HT-2RB	1.25	0.750	0.750	0.625	1.185	1.024	0.375	1.630	1.736	1.539	63,900	9,300	6.06
120HT-2RB	1.50	0.875	1.000	0.750	1.425	1.228	0.437	2.024	2.171	1.924	86,000	12,300	8.65
140HT-2RB	1.75	1.000	1.000	0.875	1.661	1.433	0.500	2.163	2.343	2.055	112,400	16,300	10.98
160HT-2RB	2.00	1.125	1.250	1.000	1.898	1.638	0.562	2.555	2.736	2.437	143,000	21,200	14.61
200HT-2RB	2.50	1.562	1.500	1.125	2.374	2.047	0.781	3.230	3.437	3.083	251,300	29,900	24.46
240HT-2RB	3.00	1.875	1.875	1.406	2.850	2.457	0.937	4.146	4.461	3.985	397,900	43,000	38.46
<b>TRIPLE STRAND</b>													
60HT-3RB	0.75	0.469	0.500	1.562	0.713	0.614	0.234	1.614	1.720	1.028	37,700	5,500	3.60
80HT-3RB	1.00	0.625	0.625	1.875	0.949	0.819	0.312	1.998	2.120	1.253	62,800	9,000	6.20
100HT-3RB	1.25	0.750	0.750	1.562	1.185	1.024	0.375	2.400	2.510	1.539	95,900	13,700	9.08
120HT-3RB	1.50	0.875	1.000	1.875	1.425	1.228	0.437	2.984	3.134	1.924	129,000	18,100	12.96
140HT-3RB	1.75	1.000	1.000	1.562	1.661	1.433	0.500	3.191	3.370	2.055	168,600	23,900	16.46
160HT-3RB	2.00	1.125	1.250	1.875	1.898	1.638	0.562	3.778	3.961	2.437	214,900	31,200	21.88
200HT-3RB	2.50	1.562	1.500	1.562	2.374	2.047	0.781	4.774	4.982	3.083	377,000	44,000	36.73
240HT-3RB	3.00	1.875	1.875	1.875	2.850	2.457	0.937	6.144	6.439	3.985	595,200	63,200	57.43

Note: 1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.

\*2. Please refer to the technical resource section, "Selection for Slow Speed."

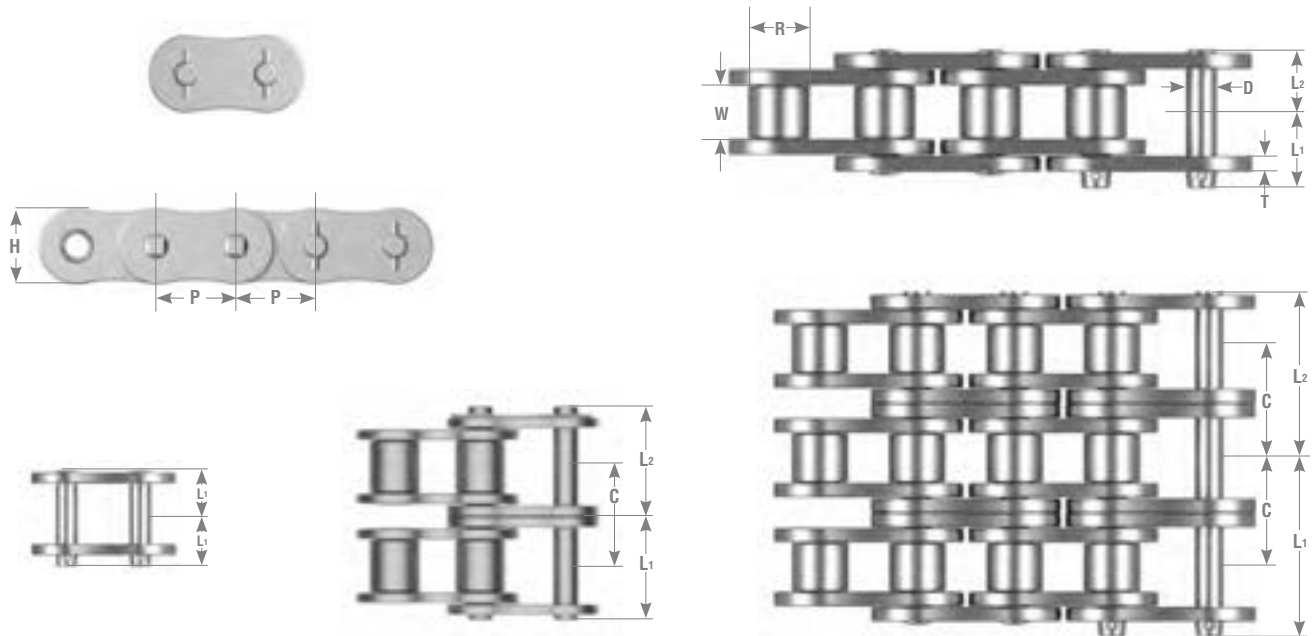
# SUPER SERIES



Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Plate			Pin			Transverse Pitch C	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	D	L1	L2				
<b>SINGLE STRAND</b>													
80SUPERRB	1.000	0.625	0.625	0.125	0.949	0.819	0.312	0.640	0.758	NA	19,100	4,510	1.89
100SUPERRB	1.250	0.750	0.750	0.156	1.185	1.024	0.375	0.778	0.900	NA	28,500	7,280	2.86
120SUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	0.980	1.138	NA	41,800	9,480	4.23
140SUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	1.059	1.248	NA	55,000	12,790	5.40
160SUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	1.254	1.451	NA	70,500	16,520	7.25
180SUPERRB	2.250	1.406	1.406	0.281	2.134	1.843	0.687	1.404	1.671	NA	92,621	19,260	9.56
200SUPERRB	2.500	1.562	1.500	0.312	2.374	2.047	0.781	1.535	1.764	NA	113,500	22,480	11.85
240SUPERRB	3.000	1.875	1.875	0.375	2.850	2.457	0.937	1.886	2.185	NA	165,200	31,240	17.22
<b>DOUBLE STRAND</b>													
80-2SUPERRB	1.000	0.625	0.625	0.125	0.949	0.819	0.312	1.217	1.335	1.153	38,400	7,680	3.78
100-2SUPERRB	1.250	0.750	0.750	0.156	1.185	1.024	0.375	1.484	1.606	1.408	57,300	12,360	5.63
120-2SUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	1.874	2.031	1.789	83,800	16,110	8.36
140-2SUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	2.022	2.211	1.924	110,100	21,730	10.70
160-2SUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	2.407	2.604	2.305	141,100	28,100	14.40
180-2SUPERRB	2.250	1.406	1.406	0.281	2.134	1.843	0.687	2.707	2.967	2.592	185,243	32,820	18.87
200-2SUPERRB	2.500	1.562	1.500	0.312	2.374	2.047	0.781	2.947	3.175	2.817	227,000	38,210	23.46
240-2SUPERRB	3.000	1.875	1.875	0.375	2.850	2.457	0.937	3.618	3.913	3.458	330,400	53,280	34.19
<b>TRIPLE STRAND</b>													
80-3SUPERRB	1.000	0.625	0.625	0.125	0.949	0.819	0.312	1.795	1.909	1.153	57,500	11,300	5.64
100-3SUPERRB	1.250	0.750	0.750	0.156	1.185	1.024	0.375	2.191	2.313	1.408	85,800	18,180	8.45
120-3SUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	2.772	2.929	1.789	125,600	23,600	12.53
140-3SUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	2.986	3.179	1.924	165,200	31,920	16.02
160-3SUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	3.561	3.758	2.305	211,500	41,360	21.57
180-3SUPERRB	2.250	1.406	1.406	0.281	2.134	1.843	0.687	4.004	4.272	2.591	278,763	48,100	27.26
200-3SUPERRB	2.500	1.562	1.500	0.312	2.374	2.047	0.781	4.360	4.585	2.817	241,700	56,200	35.24
240-3SUPERRB	3.000	1.875	1.875	0.375	2.850	2.457	0.937	5.348	5.636	3.458	496,800	78,230	51.14

- Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.  
 2. Four-pitch offset links (4POL) available for single strand only.  
 3. Connecting links are slip fit M-type connecting links (MCL) and and press fit F-type connecting links are (FCL) available.  
 4. Maximum allowable load when using a four-pitch offset link (4POL) is 85% that of the above values.  
 5. Carbon steel sprockets with hardened teeth should be used with Super Series chain.  
 6. Please refer to the technical resource section, "Chain Drive Selection."

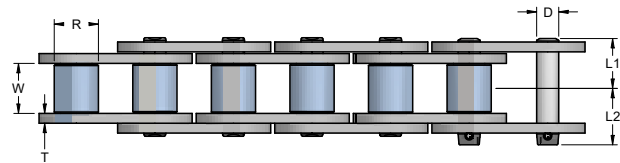
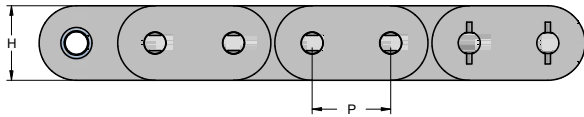
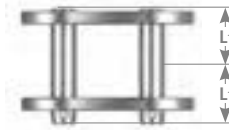
# SUPER H SERIES



Tsubaki	Pitch	Roller Diameter	Width Between Roller Link Plates	Plate			Pin			Transverse Pitch	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	D	L1	L2				
Chain No.	P	R	W	T	H	h	D	L1	L2	C			
<b>SINGLE STRAND</b>													
80HSUPERRB	1.000	0.625	0.625	0.156	0.949	0.819	0.312	0.720	0.823	NA	22,000	5,622	2.21
100HSUPERRB	1.250	0.750	0.750	0.187	1.185	1.024	0.375	0.858	0.965	NA	32,600	8,818	3.28
120HSUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	1.061	1.203	NA	44,000	12,125	4.66
140HSUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	1.138	1.303	NA	57,300	15,366	5.97
160HSUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	1.337	1.514	NA	72,700	20,238	7.88
200HSUPERRB	2.500	1.562	1.500	0.375	2.374	2.047	0.781	1.689	1.894	NA	134,400	27,359	13.22
240HSUPERRB	3.000	1.875	1.875	0.500	2.850	2.457	0.937	2.157	2.453	NA	207,200	37,853	20.47
<b>DOUBLE STRAND</b>													
80-2HSUPERRB	1.000	0.625	0.625	0.125	0.949	0.819	0.312	1.362	1.465	1.283	44,000	9,436	4.38
100-2HSUPERRB	1.250	0.750	0.750	1.560	1.185	1.024	0.375	1.630	1.736	1.539	65,200	14,991	6.39
120-2HSUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	2.024	2.165	1.924	88,100	20,613	9.08
140-2HSUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	2.165	2.343	2.055	114,600	24,361	11.68
160-2HSUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	2.555	2.736	2.437	145,500	32,606	15.44
200-2HSUPERRB	2.500	1.562	1.500	0.312	2.374	2.047	0.781	3.230	3.437	3.083	268,900	41,226	25.86
240-2HSUPERRB	3.000	1.875	1.875	0.375	2.850	2.457	0.937	4.146	4.445	3.985	414,400	57,717	40.16
<b>TRIPLE STRAND</b>													
80-3HSUPERRB	1.000	0.625	0.625	0.125	0.949	0.819	0.312	2.006	2.108	1.283	66,100	13,889	6.55
100-3HSUPERRB	1.250	0.750	0.750	0.156	1.185	1.024	0.375	2.400	2.504	1.539	97,800	22,046	9.50
120-3HSUPERRB	1.500	0.875	1.000	0.187	1.425	1.228	0.437	2.988	3.126	1.924	132,200	30,314	13.50
140-3HSUPERRB	1.750	1.000	1.000	0.219	1.661	1.433	0.500	3.191	3.356	2.055	171,900	35,825	17.39
160-3HSUPERRB	2.000	1.125	1.250	0.250	1.898	1.638	0.562	3.778	3.955	2.437	218,200	47,951	22.99
200-3HSUPERRB	2.500	1.562	1.500	0.312	2.374	2.047	0.781	4.774	4.982	3.083	403,400	60,627	38.50
240-3HSUPERRB	3.000	1.875	1.875	0.375	2.850	2.457	0.937	6.144	6.439	3.985	621,700	84,878	59.87

- Note: 1. Offset Links are not available for H-Super Chain.  
 2. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.  
 3. Press-fit connecting links will be supplied.  
 4. Carbon steel sprockets with hardened teeth are suggested with H-Super Chain.  
 5. \*Please refer to the technical resource section, "Chain Drive Selection" for proper chain selection.

# ULTRA SUPER SERIES



Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Link Plate		Pin			Average Tensile Strength	Maximu Allowable Load*	Approx. Weight lbs/ft.
				T	H	D	L1	L2			
<b>100ULTRASUPER</b>	1.250	0.750	0.750	0.187	1.185	0.375	0.858	0.965	33,500	8,800	3.41
<b>120ULTRASUPER</b>	1.500	0.875	1.000	0.219	1.425	0.437	1.061	1.203	47,800	12,100	4.85
<b>140ULTRASUPER</b>	1.750	1.000	1.000	0.250	1.661	0.500	1.138	1.303	61,200	15,300	6.21
<b>160ULTRASUPER</b>	2.000	1.125	1.250	0.281	1.898	0.562	1.337	1.514	76,700	20,200	8.19
<b>200ULTRASUPER</b>	2.500	1.562	1.500	0.375	2.374	0.781	1.689	1.894	130,200	27,300	13.76
<b>240ULTRASUPER</b>	3.000	1.875	1.875	0.500	2.850	0.937	2.157	2.453	191,800	37,800	21.29

# ATTACHMENT CHAINS

The core to what has made Tsubaki an industry leader in roller chain manufacturing continues to be attachment chains.

Tsubaki stocks a complete offering of standard roller chain attachments in single and double pitch chains. Additional offerings include attachments for lube-free, anti-corrosion, British Standard, hollow pin, and curved chains.

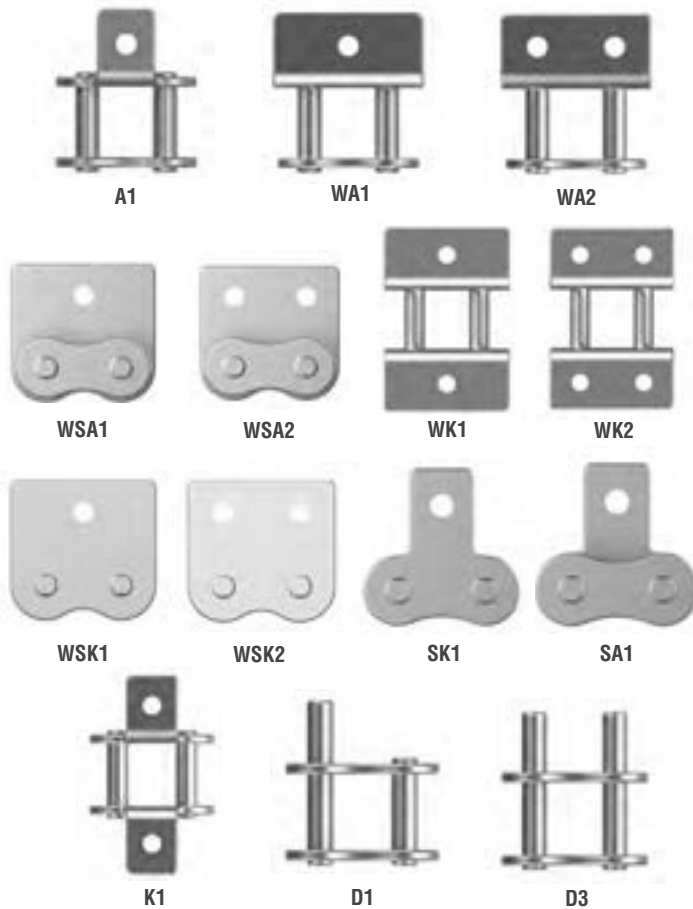


 **TSUBAKI**<sup>®</sup>

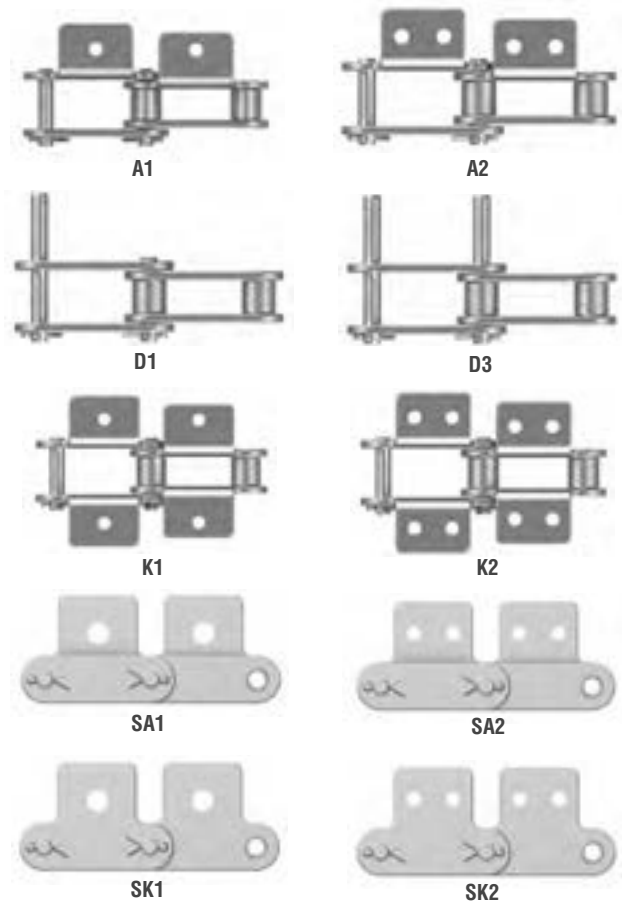
# ATTACHMENT CHAINS

Tsubaki offers a complete line of attachments from stock to meet your conveying needs. The standard attachments Tsubaki stocks includes:

## Single-Pitch Chain



## Double-Pitch Chain



## Converting from other Manufacturers Chains

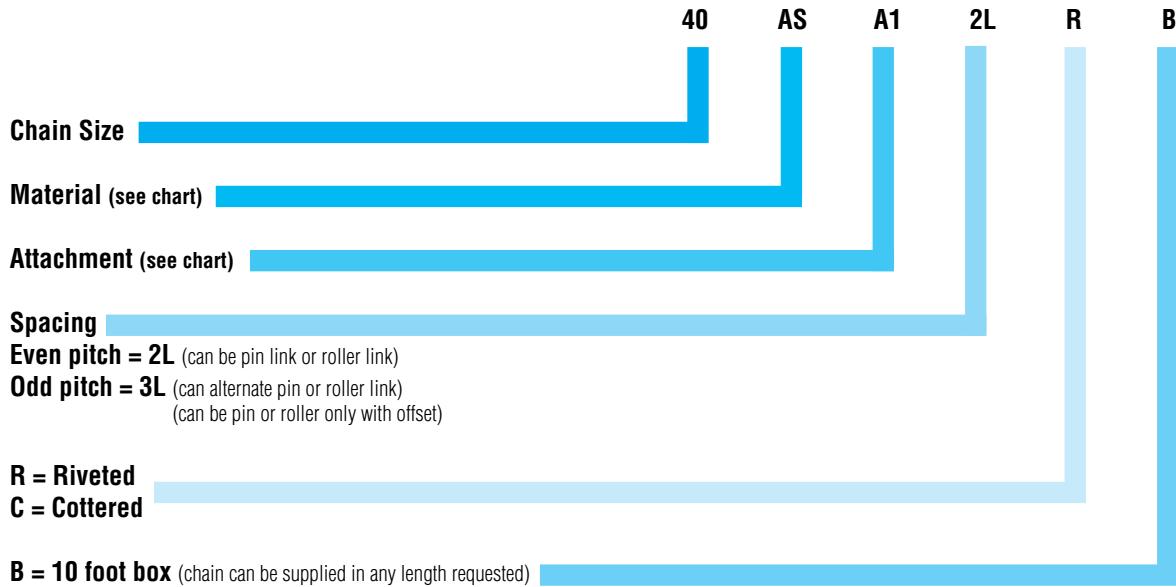
Pitch	Tsubaki No.	Competitors No.	Full Description
Single and	A-1	B-1 one hole	bent attachment, one side, one hole
Double Pitch	K-1	B-2 one hole	bent attachment, two sides, one hole
	SA-1	S1 one hole, M35	straight attachment, one side, one hole
	SK-1	S2 one hole, M1	straight attachment, two sides, one hole
	D-1	E1	one extended pin
	D-3	E2	two extended pins
Double Pitch	A-2	B1 two holes	bent attachment, one side, two holes
	K-2	B2 two holes	bent attachment, two sides, two holes
	SA-2	S1 two holes, M35-2	straight attachment, one side two holes
	SK-2	S2 two holes, M2	straight attachment, two sides, two holes
Single Pitch	WA-1	WCB1 one hole	wide contour, bent attachment, one side, one hole
Wide Contour	WA-2	WCB1 two holes	wide contour, bent attachment, one side, two holes
	WK-1	WCB2 one hole	wide contour, bent attachment, two sides, one hole
	WK-2	WCB2 two holes	wide contour, bent attachment, two sides, two holes
	WSA-1	WCS1 one hole, WM35	wide contour, straight attachment, one side, one hole
	WSA-2	WCS1 two hole, WM35-2	wide contour, straight attachment, one side, two holes
	WSK-1	WCS2 one hole, WM-1	wide contour, straight attachment, two sides, one hole
	WSK-2	WCS2 two holes, WM-2	wide contour, straight attachment, two sides, two holes

All attachments can be customized, please consult factory for details.

# ATTACHMENT CHAINS

## Choosing Tsubaki Attachment Chains

This is how a Tsubaki part number for attachment chain will read.....



## How to order attachment chains:

1. Chain Size
2. Material – see guide above
3. Construction – riveted or cottered
4. What kind of attachment – see listing above
5. Spacing – Distance between attachments
  - a. Even pitch spacing attachment is on the pin link or roller links (Please specify)
  - b. Odd pitch spacing – attachment will alternate inside link (Roller) outside link (pin).  
Attachment can also appear on outer links at odd pitch spacing using offset links.
6. Length of chain – Count number of attachments and spacing
7. Repeats – If spacing is unusual, how often does a group of attachments repeat.

## How to choose the right attachment chain material:

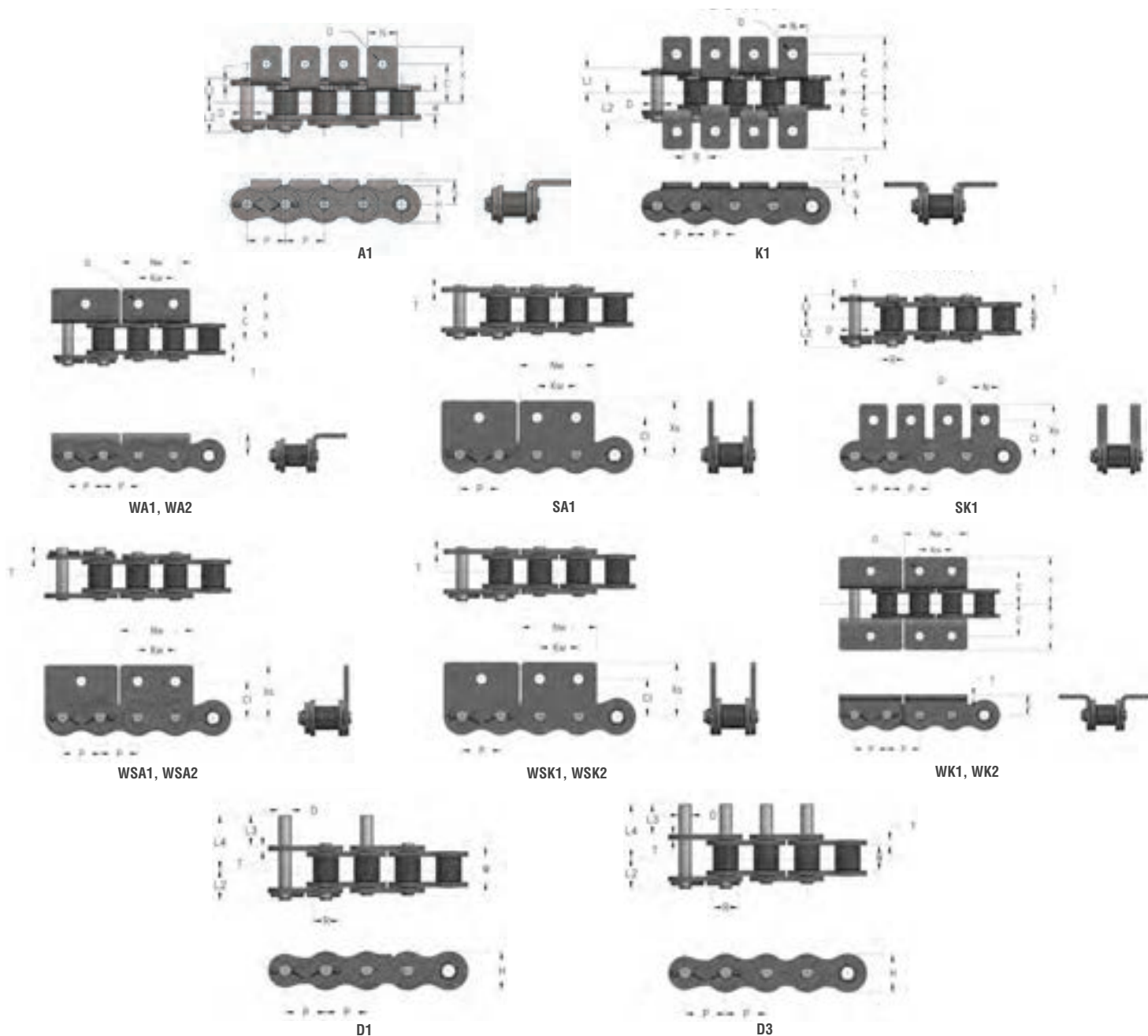
Type of Chain	Material Designation	For this Style of Application or Operating Condition
Carbon Steel		Standard Applications
Nickel Plated	Nickel Plated (NP)	Mildly corrosion resistant
Neptune®	Neptune (NEP)	Wet or outdoor conditions including saltwater.
304 (SS) Stainless	304 (SS)	High or low temperatures and corrosive environment including acids and alkalis.
316 (NS) Stainless	316 (NS)	Extreme corrosive environment. Low or high temperatures, and low magnetic permeability.
600 (AS) Stainless	600 (AS)	Combination of strength and durability in corrosive environments.
Lambda®	Lambda (L)	When lubrication is near impossible including food packaging.
Super Stainless™	Super Stainless (SUPERSS)	When strength of carbon steel is needed and corrosion resistance cannot be sacrificed.
Titan®	Titan (TT)	Harsh, dirty environments.





# SINGLE PITCH ATTACHMENTS

ATTACHMENT CHAINS



Tsubaki Chain No.	Pitch P	Roller Diameter R	Width Between Roller Link Plates W	Plate		Pin			Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				H	T	D	L1	L2			
<b>25RB</b> ♦	0.250	0.130*	0.125	0.230	0.030	0.090	0.150	0.189	926	143	0.094
<b>35RB</b> ♦	0.375	0.200*	0.188	0.354	0.050	0.141	0.230	0.270	2,120	342	0.22
<b>41RB</b>	0.500	0.306	0.250	0.386	0.050	0.141	0.266	0.313	2,120	353	0.27
<b>40RB</b>	0.500	0.312	0.312	0.472	0.060	0.156	0.325	0.392	3,750	595	0.43
<b>50RB</b>	0.625	0.400	0.375	0.591	0.080	0.200	0.406	0.472	6,170	970	0.70
<b>60RB</b>	0.750	0.469	0.500	0.713	0.094	0.234	0.506	0.581	9,040	1,410	1.03
<b>80RB</b>	1.000	0.625	0.625	0.949	0.125	0.312	0.640	0.758	15,400	2,400	1.79
<b>100RB</b>	1.250	0.750	0.750	1.185	0.156	0.375	0.778	0.900	24,300	3,840	2.68
<b>120RB</b>	1.500	0.875	1.000	1.425	0.187	0.437	0.980	1.138	34,000	5,380	3.98
<b>140RB</b>	1.750	1.000	1.000	1.661	0.221	0.500	1.059	1.248	45,900	7,280	5.03
<b>160RB</b>	2.000	1.125	1.250	1.898	0.250	0.562	1.254	1.451	58,000	9,190	6.79

Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request

2. Spring clip conn links for sizes 25-60, cotter style conn links 80-160

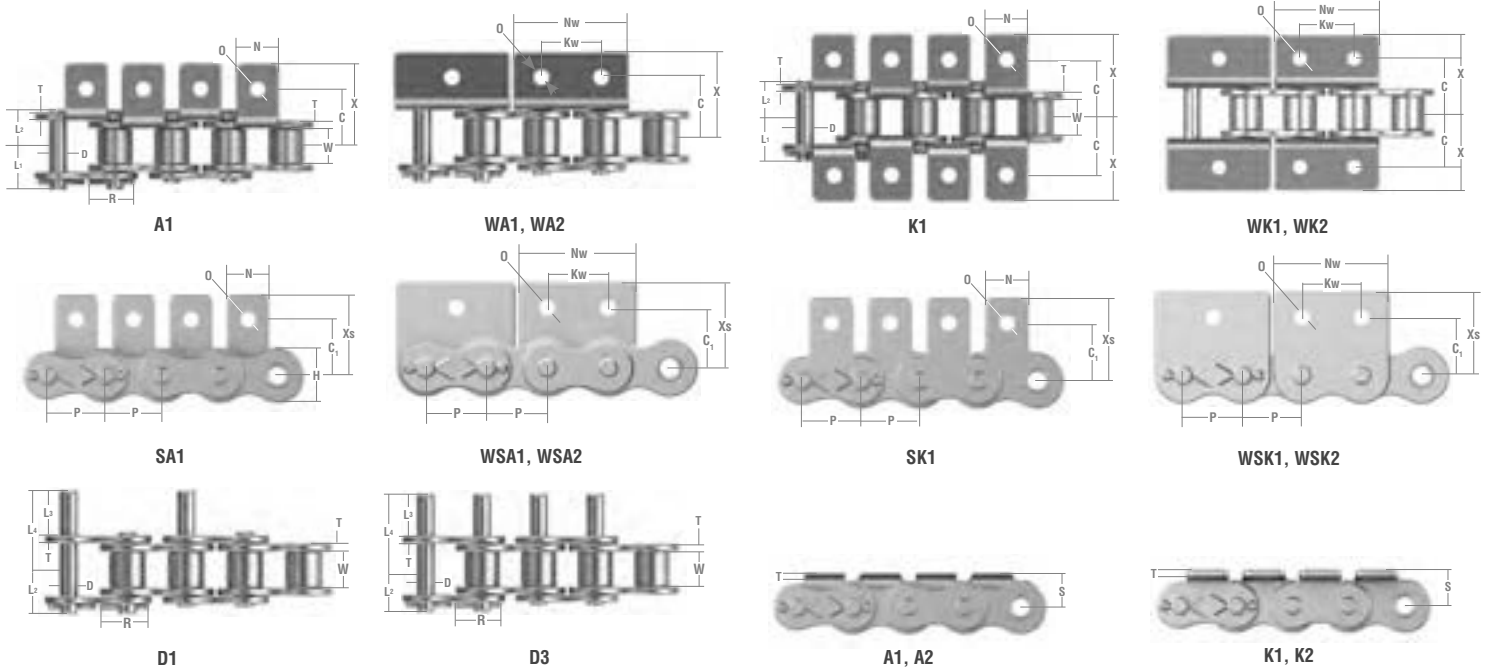
♦ 3. Rollerless

\* 4. Bushing Diameter

5. Attachments chains available in 304, 600, 316 Stainless

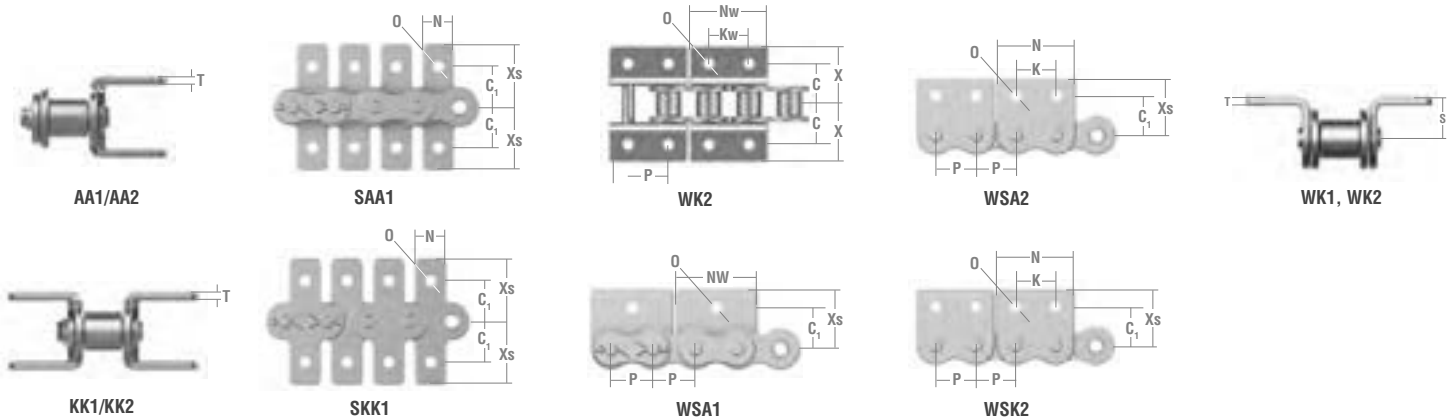
6. Attachment chains available in Neptune® and Nickel Plated.

# SINGLE PITCH ATTACHMENTS



Tsubaki	Attachment									Additional Weight Per Attachment			
	Chain No.	C	C1	N	O	S	X	XS	L3	L4	A-SA	K-SK	D-1
<b>25RB</b>	0.281	0.313	0.220	0.134	0.187	0.421	0.459				0.001	0.002	
<b>35RB</b>	0.375	0.375	0.311	0.102	0.250	0.563	0.573	0.375	0.575		0.002	0.004	0.002
<b>41RB</b>	0.469	0.500	0.375	0.141	0.281	0.646	0.656	0.375	0.608		0.004	0.007	0.002
<b>40RB</b>	0.500	0.500	0.375	0.141	0.312	0.701	0.685	0.375	0.658		0.004	0.009	0.002
<b>50RB</b>	0.625	0.625	0.500	0.205	0.406	0.921	0.907	0.469	0.827		0.007	0.013	0.002
<b>60RB</b>	0.750	0.720	0.626	0.205	0.469	1.110	1.057	0.562	1.011		0.015	0.031	0.007
<b>80RB</b>	1.000	0.969	0.752	0.268	0.625	1.441	1.396	0.750	1.327		0.029	0.057	0.015
<b>100RB</b>	1.250	1.252	1.000	0.342	0.780	1.768	1.732	0.938	1.642		0.570	0.115	0.027
<b>120RB</b>	1.500	1.437	1.126	0.386	0.906	2.197	2.081	1.125	2.020		0.097	0.194	0.044
<b>140RB</b>	1.750	1.750	1.375	0.448	1.125	2.420	2.437	1.312	2.274		0.157	0.313	0.066
<b>160RB</b>	2.000	2.000	1.500	0.516	1.250	2.840	2.750	1.500	2.654		0.214	0.428	0.099

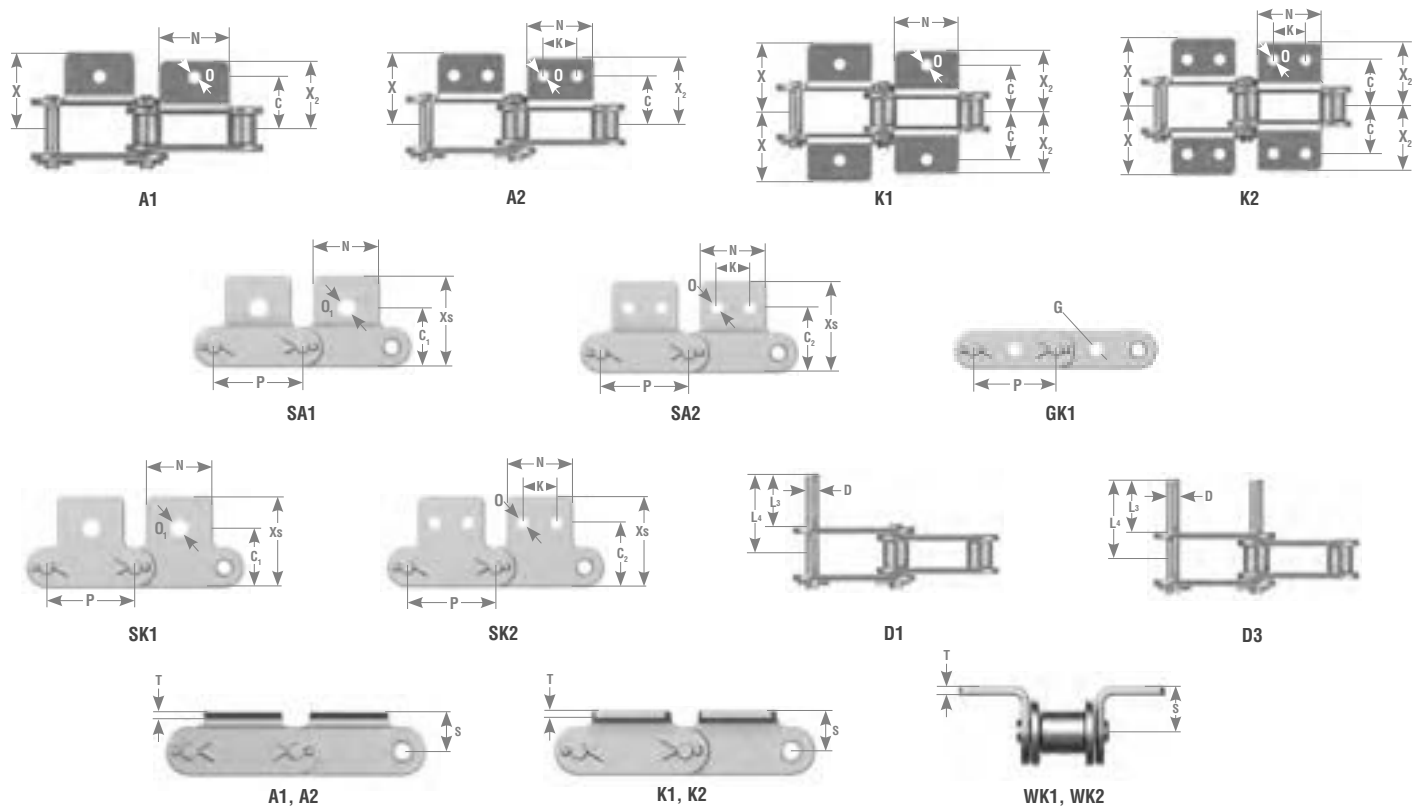
- Note: 1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request  
 2. Spring clip conn links for sizes 25-60, cotter style conn links 80 -160  
 3. Rollerless  
 \*4. Bushing Diameter



Tsubaki	Attachment									Additional Weight Per Attachment				lbs/att
	Chain No.	C	C1	N	O	S	X	XS	NW	KW	AA, SAA	KK, SKK	WA, WSA	
<b>40RB</b>	0.500	0.500	0.375	0.141	0.312	0.701	0.685	0.097	0.500	0.007	0.014	0.007	0.014	
<b>50RB</b>	0.625	0.625	0.500	0.205	0.406	0.921	0.907	1.210	0.625	0.013	0.026	0.015	0.030	
<b>60RB</b>	0.750	0.750	0.626	0.205	0.469	1.110	1.057	1.460	0.750	0.031	0.062	0.026	0.052	
<b>80RB</b>	1.000	1.000	0.752	0.268	0.625	1.441	1.396	1.940	1.000	0.057	0.114	0.062	0.124	
<b>100RB</b>	1.250	1.252	1.000	0.342	0.780	1.768	1.732	1.768	1.250	0.121	0.242	0.121	0.242	

Note: Spring clip connecting links for sizes 40-60, cotter style for sizes 80-100.

# DOUBLE PITCH ATTACHMENTS



Tsubaki	Pitch	Roller Diameter	Width Between Roller Link Plates	Pin			Plate		Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.	Additional Weight Per Attachments		
				D	L1	L2	H	T				A-SA Att.	K - SK Att.	D-1 Att.
Chain No.	P	R	W	D	L1	L2	H	T				A-SA Att.	K - SK Att.	D-1 Att.
<b>STANDARD ROLLER</b>														
C2040RB	1.000	0.312	0.312	0.156	0.325	0.392	0.472	0.060	3,750	595	0.34	0.007	0.013	0.002
C2050RB	1.250	0.400	0.375	0.200	0.406	0.472	0.591	0.080	6,170	970	0.56	0.130	0.260	0.004
C2060HRB	1.500	0.469	0.500	0.234	0.573	0.652	0.677	0.125	9,040	1,410	1.01	0.037	0.075	0.007
C2080HRB	2.000	0.625	0.625	0.312	0.720	0.823	0.906	0.156	15,400	2,400	1.62	0.071	0.141	0.015
C2100HRB	2.500	0.750	0.750	0.375	0.858	0.965	1.160	0.187	24,300	3,840	2.38	0.132	0.265	0.026
C2120HRB	3.000	0.875	1.000	0.437	1.061	1.203	1.380	0.219	34,000	5,380	3.42	0.221	0.441	
C2160HRB	4.000	1.125	1.250	0.563	1.337	1.514	1.850	0.281	58,000	9,190	6.02	0.448	0.895	
<b>OVERSIZED ROLLER</b>														
C2042RB	1.000	0.625	0.312	0.156	0.325	0.392	0.472	0.060	3,750	595	0.58	0.007	0.013	0.002
C2052RB	1.250	0.750	0.375	0.200	0.406	0.472	0.591	0.080	6,170	970	0.87	0.130	0.260	0.004
C2062HRB	1.500	0.875	0.500	0.234	0.573	0.652	0.677	0.125	9,040	1,410	1.47	0.037	0.075	0.007
C2082HRB	2.000	1.125	0.625	0.312	0.720	0.823	0.906	0.156	15,400	2,400	2.37	0.071	0.141	0.015
C2102HRB	2.500	1.562	0.750	0.375	0.858	0.965	1.160	0.187	24,300	3,840	3.90	0.132	0.265	0.026
C2122HRB	3.000	1.750	1.000	0.437	1.061	1.203	1.380	0.219	34,000	5,380	5.46	0.221	0.441	
C2162HRB	4.000	2.250	1.250	0.563	1.337	1.514	1.850	0.281	58,000	9,190	9.21	0.448	0.895	

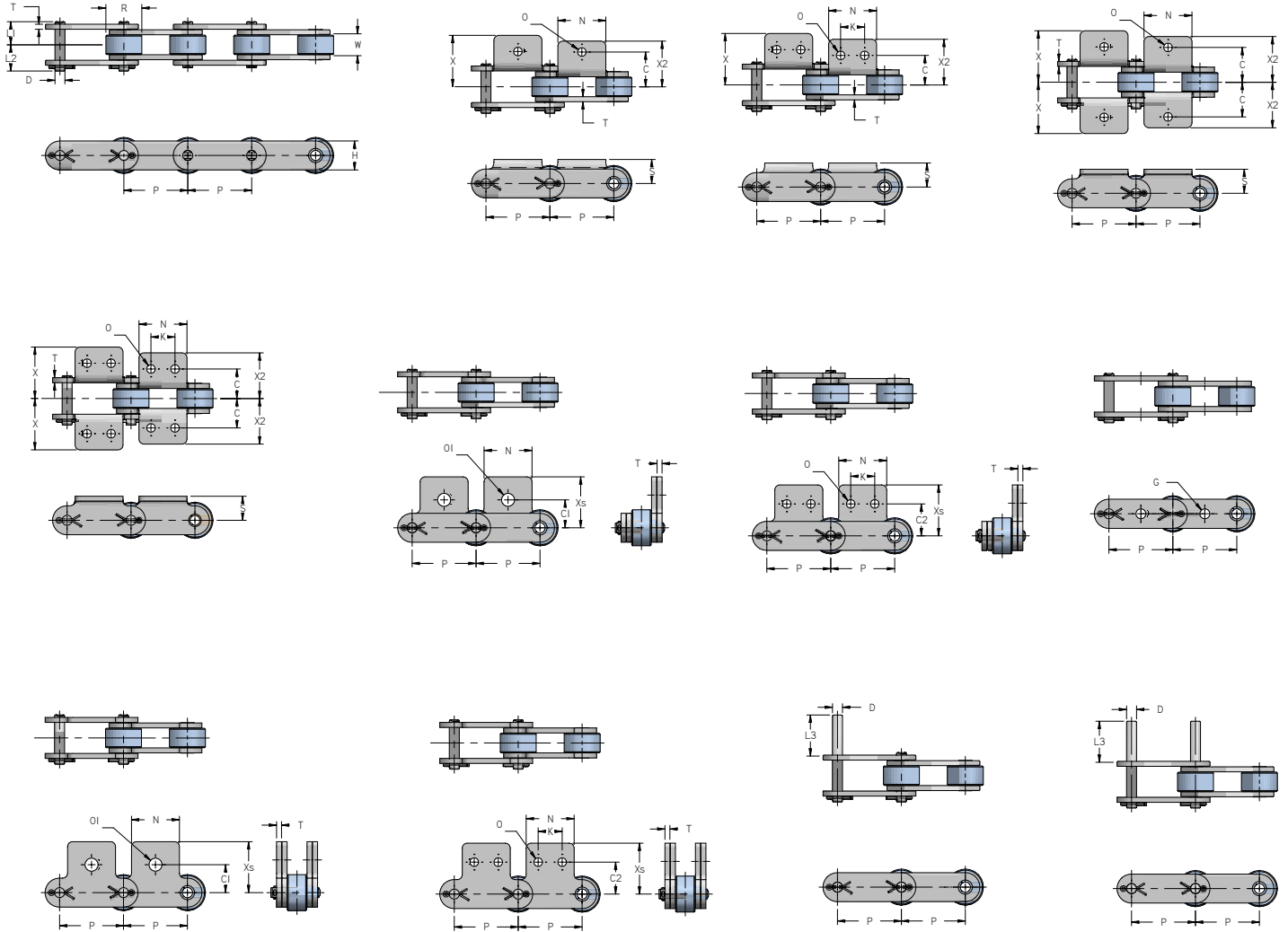
- Note: 1. "RB" designation indicates 10" box riveted. Coated, cut-to-length and reel stock available upon request  
 2. Spring clip conn links for sizes C2040-C2060H, cotter style conn links C2080H -C2160H.  
 3. Heavy side plates are standard on chain sizes C2060H-C2160H.

Tsubaki	A-1, A-2, K-1, K-2 Attachments									SA-1, SK-1, SA-2, SK-2 Attachments						D-1, D-3, GK-1 Attachments			
	X	X2	C	S	K	N	O	XS	C1	C2	K	N	O	O1	T	D	L3	L4	G
C2040RB	0.763	0.693	0.500	0.358	0.374	0.752	0.142	0.780	0.437	0.535	0.374	0.752	0.142	0.205	0.060	0.156	0.375	0.658	0.161
C2050RB	0.953	0.866	0.626	0.437	0.469	0.937	0.205	0.969	0.563	0.626	0.469	0.937	0.205	0.268	0.080	0.200	0.469	0.826	0.201
C2060HRB	1.245	1.150	0.844	0.579	0.563	1.126	0.205	1.205	0.689	0.752	0.563	1.126	0.205	0.343	0.125	0.234	0.562	1.076	0.240
C2080HRB	1.602	1.441	1.094	0.752	0.752	1.500	0.268	1.594	0.874	1.000	0.752	1.500	0.268	0.406	0.156	0.312	0.750	1.392	0.319
C2100HRB	1.970	1.770	1.312	0.922	0.937	1.875	0.323	1.984	1.125	1.250	0.938	1.875	0.323	0.516	0.187	0.375	0.938	1.708	
C2120HRB	2.400	2.160	1.562	1.093	1.125	2.250	0.386	2.361	1.312	1.468	1.125	2.250	0.386	0.578	0.219	0.437	1.125	2.087	
C2160HRB	3.060	2.780	2.062	1.437	1.500	3.000	0.516	3.093	1.750	2.000	1.500	3.000	0.516	0.771	0.281	0.562	1.500	2.719	

- Note: 1. Attachments for standard and oversized rollers have the same dimensions except for dimension "G."  
 2. Attachment spacing done at customer request - location can be on the pin or roller link.  
 3. Spring clip type conn links are used from sizes C2040-C2060H. Cotter pin style conn links for sizes C2080H-C2160H.  
 4. Dimensions "O", "O1", and "G" show actual hole dimensions.

# DOUBLE PITCH ATTACHMENTS - DELRIN ROLLERS

## Oversize "R" Roller Type

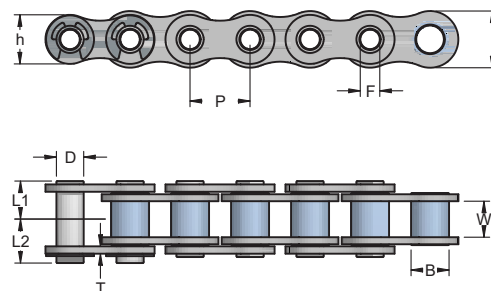


## Double Pitch Attachment Chain with Delrin Rollers

Tsubaki	Pitch	Width Between Roller Link Plates	Roller Dia.	Pin			Plate		Average Tensile Strength	Maximum Allowable Load	Maximum Allowable Roller Load lbs/ Roller	Approx. Weight lbs/ft.	Additional Weight Per Attachments		
Chain No.	P	W	R	D	L1	L2	H	T					A-SA Att.	K - SK Att.	D-1 Att.
<b>C2042DRB</b>	1.000	0.312	0.625	0.156	0.325	0.392	0.472	0.060	3,700	100	44	0.33	0.007	0.013	0.002
<b>C2052DRB</b>	1.250	0.375	0.750	0.200	0.406	0.472	0.591	0.080	6,100	154	66	0.57	0.013	0.026	0.004
<b>C2062HDRB</b>	1.500	0.500	0.875	0.234	0.573	0.652	0.677	0.125	9,000	231	110	0.98	0.037	0.075	0.007
<b>C2082HDRB</b>	2.000	0.625	1.125	0.312	0.720	0.823	0.906	0.156	15,400	397	200	1.77	0.070	0.141	0.015
<b>C2102HDRB</b>	2.500	0.750	1.562	0.375	0.830	0.965	1.160	0.187	24,000	573	286	2.52	0.132	0.264	0.026

Chain No.	C	C1	C2	K	N	O	O1	S	T	X	X2	Xs	D	L3	L4
<b>C2042DRB</b>	0.500	0.437	0.535	0.374	0.752	0.142	0.205	0.358	0.060	0.760	0.693	0.780	0.156	0.374	0.663
<b>C2052DRB</b>	0.626	0.563	0.626	0.469	0.937	0.205	0.268	0.437	0.080	0.953	0.866	0.969	0.200	0.469	0.827
<b>C2062HDRB</b>	0.844	0.689	0.752	0.563	1.126	0.205	0.343	0.579	0.125	1.240	1.110	1.205	0.234	0.563	1.081
<b>C2082HDRB</b>	1.094	0.874	1.000	0.752	1.500	0.268	0.406	0.752	0.156	1.602	1.441	1.594	0.312	0.752	1.398
<b>C2102HDRB</b>	1.312	1.125	1.250	0.938	1.875	0.323	0.516	0.922	0.187	1.950	1.650	1.984	0.375	0.937	1.687

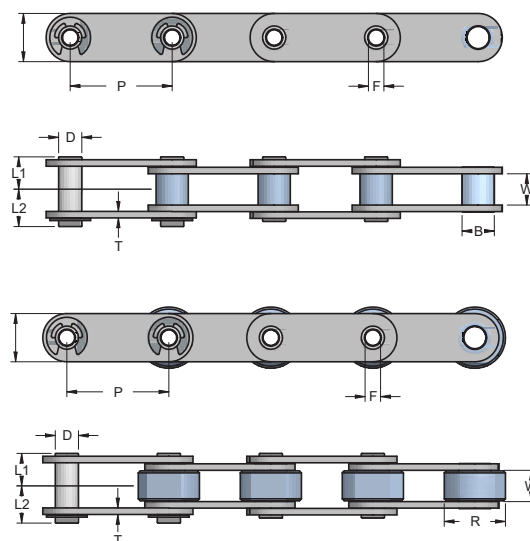
# HOLLOW PIN CHAINS



## Single Pitch Hollow Pin

Standard attachments are available for Hollow Pin (HP) chain. Cross rods may be inserted without taking the chain apart.

Tsubaki Chain No.	Pitch P	Width Between Roller Link Plates W	Bushing Diameter B	Pin				Plate		Average Tensile Strength	Maximum Allowable Load	Approx. Weight lbs/ft
				D	F	L1	L2	H	T			
40HPB	0.500	0.312	0.312	0.224	0.157	0.315	0.374	0.472	0.060	2,430	397	0.36
50HPB	0.625	0.375	0.400	0.284	0.202	0.396	0.459	0.591	0.080	4,410	705	0.58
60HPB	0.750	0.500	0.469	0.330	0.236	0.494	0.561	0.713	0.094	5,950	948	0.85
80HPB	1.000	0.625	0.625	0.448	0.316	0.640	0.701	0.949	0.125	10,800	1,720	1.60

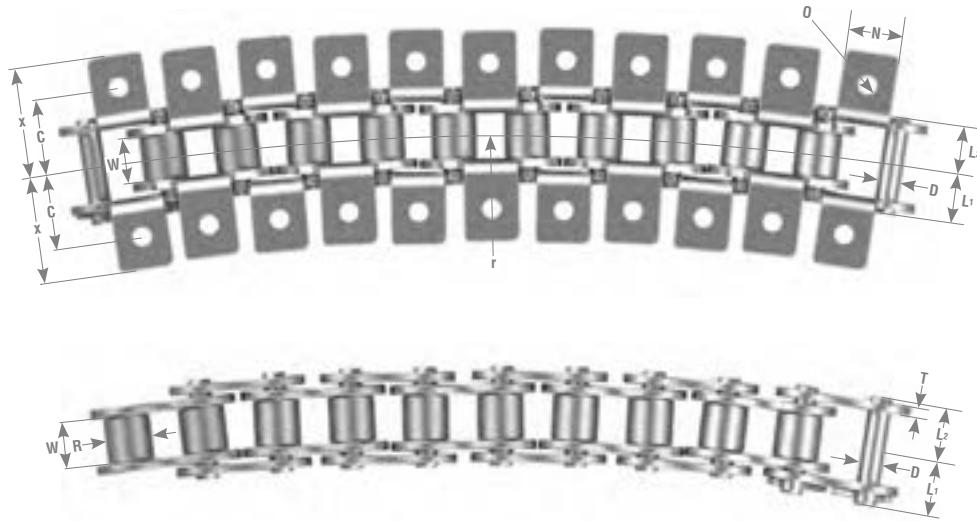


Tsubaki Chain No.	Pitch P	Width Between Roller Link Plates W	Roller Diameter B	Bushing Diameter R	Pin				Plate		Average Tensile Strength	Maximum Allowable Load	Approx. Weight lbs/ft
					D	F	L1	L2	H	T			
<b>STANDARD ROLLER</b>													
C2040HPB	1.000	0.312	0.625		0.224	0.157	0.315	0.374	0.472	0.060	2,430	397	0.36
C2050HPB	1.250	0.375	0.750		0.284	0.202	0.396	0.459	0.591	0.080	4,410	705	0.58
C2060HPB	1.500	0.500	0.875		0.330	0.236	0.494	0.561	0.677	0.094	5,950	948	0.85
C2080HPB	2.000	0.625	1.125		0.448	0.316	0.640	0.701	0.906	0.125	10,800	1,720	1.60
<b>OVERSIZED ROLLER</b>													
C2042HPB	1.000	0.312		0.625	0.224	0.157	0.315	0.374	0.472	0.06	2,430	397	0.55
C2052HPB	1.250	0.375		0.500	0.284	0.202	0.396	0.459	0.591	0.08	4,410	705	0.81
C2062HPB	1.500	0.500		0.875	0.330	0.236	0.494	0.561	0.677	0.094	5,950	948	1.38
C2082HPB	2.000	0.625		1.125	0.448	0.316	0.640	0.701	0.906	0.125	10,800	1,720	1.89

# CURVED CHAINS

Tsubaki Curved chain has the additional clearance between the pins, bushings, roller links and pin links to allow for extra flexibility and greater lateral displacement. The basic dimensions of this chain are equal to the dimensions of standard roller chains.

NOTE: Tsubaki's unique design of the curved chain does not taper the pin diameter. This allows the pin diameter to be uniform throughout the chain.



Tsubaki	Pitch	Width Between Roller Link Plates	Roller Diameter	Pin				Plate			Average Tensile Strength	Maximum Allowable Load	Min. Radius of Side Bow Inches
				D	L1	L2	L1 & L2	H	h	T			
Chain No.	P	W	R	D	L1	L2	L1 & L2	H	h	T			r
<b>35CURB</b>	0.375	0.188	0.200*	0.125	0.238	0.301	0.539	0.354	0.307	0.050	1,800	210	10
<b>40CURB</b>	0.500	0.312	0.312	0.156	0.333	0.384	0.717	0.472	0.409	0.060	3,480	420	14
<b>50CURB</b>	0.625	0.375	0.400	0.200	0.417	0.488	0.905	0.591	0.512	0.080	5,420	640	16
<b>60CURB</b>	0.750	0.500	0.469	0.234	0.522	0.593	1.115	0.713	0.614	0.094	7,830	900	20
<b>80CURB</b>	1.000	0.625	0.625	0.312	0.659	0.789	1.448	0.949	0.819	0.125	13,840	1,560	24

Tsubaki	Approx. Weight lbs./ft	Attachment						Additional Weight Per Attachment lbs./ft	
		C	N	O	S	X	A Att.	K Att.	
Chain No.									
<b>35CURB</b>	0.22	0.375	0.311	0.102	0.250	0.571	0.002	0.003	
<b>40CURB</b>	0.41	0.500	0.374	0.141	0.315	0.709	0.004	0.009	
<b>50CURB</b>	0.68	0.626	0.500	0.205	0.406	0.933	0.007	0.013	
<b>60CURB</b>	0.94	0.750	0.625	0.205	0.469	1.122	0.015	0.031	
<b>80CURB</b>	1.66	1.000	0.752	0.268	0.626	1.461	0.029	0.057	

NOTE: Rollerless (bushing only)





# BRITISH STANDARD CHAINS

Sometimes when an ANSI chain won't fit international machinery, a British Standard chain is needed. Tsubaki has that application covered top to bottom with a full range of British Standard chains. Tsubaki stocks chains from 06B to 32B and beyond. British Standard chains are also available in Lambda<sup>®</sup>, Neptune<sup>®</sup>, Stainless Steel, Nickel plated, and Titan<sup>®</sup>.



## British Standard Roller Chain



To go with its industry leading ANSI roller chains, Tsubaki also manufactures a complete line of British Standard (BS 228 - 8187). These chains meet the International Standards Organization metric dimensions (ISO 606).

British Standard roller chains from Tsubaki are manufactured in various styles including the following:

- **Lube-Free (Lambda®)**
- **Neptune®**
- **Nickel Plated**
- **Stainless Steel**
- **Attachment Chains**

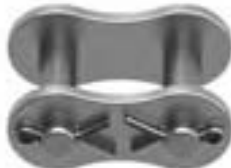
Tsubaki manufactures various sizes and multi-wide widths for an easy drop-in replacement for imported equipment or newly manufactured machinery set for export. These chains are made to the high quality and manufacturing standards that Tsubaki uses in all roller chains it manufactures.

Spring Clip-Style  
Connecting Link



Available for  
RF06B-RS16B

Cotter-Style  
Connecting Link



Available for  
RS20B-RS40B

One-Pitch Offset Link



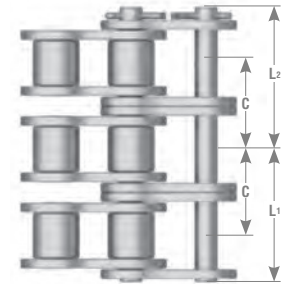
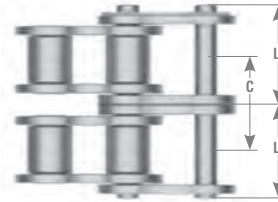
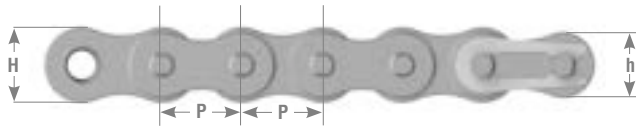
Slip-fit type  
Consult factory for  
use recommendations

Two-pitch Offset Link



Press-fit and riveted type  
Not available for size RS20B and up.

# BRITISH STANDARD ROLLER CHAINS



Tsubaki	ISO BS/DIN NO.	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Dia.	Pin Length	Pin Length	Roller Link Plate Thickness	Pin Link Plate Thickness	Plate Height	Transverse Pitch	Min. Tensile Strength	Max. Allowable Load*	Approx. Weight lbs/ft.	No. of Links per 10 ft.
		P	R	W	D	L1	L2	T	t	H	C				
<b>SINGLE STRAND</b>															
RF06BRB*	06B	0.375	0.250	0.225	0.129	0.240	0.303	0.050	0.040	0.323	-	2,023	438	0.26	320
RS08BRB	08B	0.500	0.335	0.305	0.175	0.329	0.395	0.060	0.060	0.465	-	4,271	854	0.47	240
RS10BRB	10B	0.625	0.400	0.380	0.200	0.376	0.443	0.060	0.060	0.579	-	5,170	1,016	0.64	192
RS12BRB	12B	0.750	0.475	0.460	0.225	0.437	0.512	0.070	0.070	0.634	-	6,969	1,387	0.84	160
RS16BRB	16B	1.000	0.625	0.670	0.326	0.699	0.783	0.156	0.125	0.827	-	15,737	2,945	1.82	120
RS20BRB	20B	1.250	0.750	0.770	0.401	0.783	0.912	0.173	0.134	1.024	-	22,054	4,136	2.59	96
RS24BRB	24B	1.500	1.000	1.000	0.576	1.051	1.254	0.236	0.220	1.315	-	37,543	6,092	5.01	80
RS28BRB	28B	1.750	1.100	1.220	0.626	1.278	1.474	0.295	0.248	1.433	-	44,962	8,430	6.35	68
RS32BRB	32B	2.000	1.150	1.220	0.701	1.264	1.484	0.276	0.248	1.661	-	57,326	9,217	6.89	60
RS40BRB	40B	2.500	1.550	1.500	0.901	1.545	1.774	0.335	0.315	2.083	-	83,854	11,465	10.99	48
RS48BRB	48B	3.000	1.900	1.800	1.151	1.941	2.315	0.476	0.394	2.512	-	127,017	17,310	16.80	40
<b>DOUBLE STRAND</b>															
◇ RF06B-2RB*	06B-2	0.375	0.250	0.225	0.129	0.441	0.506	0.050	0.040	0.323	0.403	3,822	746	0.50	320
◇ RS08B-2RB	08B-2	0.500	0.335	0.305	0.175	0.603	0.669	0.060	0.060	0.465	0.548	7,194	1,452	0.90	240
RS10B-2RB	10B-2	0.625	0.400	0.380	0.200	0.699	0.773	0.060	0.060	0.579	0.653	10,004	1,726	1.24	192
RS12B-2RB	12B-2	0.750	0.475	0.460	0.225	0.819	0.901	0.070	0.070	0.634	0.766	13,713	2,019	1.68	160
RS16B-2RB	16B-2	1.000	0.625	0.670	0.326	1.321	1.407	0.156	0.125	0.827	1.255	28,776	5,013	3.62	120
RS20B-2RB	20B-2	1.250	0.750	0.770	0.401	1.509	1.631	0.173	0.134	1.024	1.435	44,287	7,037	5.14	96
RS24B-2RB	24B-2	1.500	1.000	1.000	0.576	2.004	2.205	0.236	0.220	1.315	1.904	75,311	10,364	9.84	80
RS28B-2RB	28B-2	1.750	1.100	1.220	0.626	2.450	2.646	0.295	0.248	1.433	2.345	84,078	14,343	12.63	68
RS32B-2RB	32B-2	2.000	1.150	1.220	0.701	2.411	2.636	0.276	0.248	1.661	2.305	109,032	15,669	13.51	60
RS40B-2RB	40B-2	2.500	1.550	1.500	0.901	2.970	3.197	0.335	0.315	2.083	2.846	160,963	19,491	21.50	48
RS48B-2RB	48B-2	3.000	1.900	1.800	1.151	3.740	4.110	0.476	0.394	2.512	3.591	224,809	29,450	33.60	40
<b>TRIPLE STRAND</b>															
◇ RF06B-3RB*	06B-3	0.375	0.250	0.225	0.129	0.646	0.705	0.050	0.040	0.323	0.403	5,598	1,097	0.75	320
◇ RS08B-3RB	08B-3	0.500	0.335	0.305	0.175	0.876	0.943	0.060	0.060	0.465	0.548	10,678	2,135	1.34	240
RS10B-3RB	10B-3	0.625	0.400	0.380	0.200	1.026	1.100	0.060	0.060	0.579	0.653	15,017	2,540	1.88	192
RS12B-3RB	12B-3	0.750	0.475	0.460	0.225	1.205	1.283	0.070	0.070	0.634	0.766	20,682	2,967	2.55	160
RS16B-3RB	16B-3	1.000	0.625	0.670	0.326	1.949	2.035	0.156	0.125	0.827	1.255	43,163	7,374	5.36	120
RS20B-3RB	20B-3	1.250	0.750	0.770	0.401	2.226	2.349	0.173	0.134	1.024	1.435	66,319	10,341	7.70	96
RS24B-3RB	24B-3	1.500	1.000	1.000	0.576	2.956	3.157	0.236	0.220	1.315	1.904	112,405	15,242	14.62	80
RS28B-3RB	28B-3	1.750	1.100	1.220	0.626	3.623	3.820	0.295	0.248	1.433	2.345	125,893	21,087	18.95	68
RS32B-3RB	32B-3	2.000	1.150	1.220	0.701	3.563	3.783	0.276	0.248	1.661	2.305	163,886	23,155	20.10	60
RS40B-3RB	40B-3	2.500	1.550	1.500	0.901	4.393	4.621	0.335	0.315	2.083	2.846	242,794	28,776	32.09	48
RS48B-3RB	48B-3	3.000	1.900	1.800	1.151	5.535	5.906	0.476	0.394	2.512	3.591	341,710	43,388	50.40	40

Note: \* Flat shape link plate.

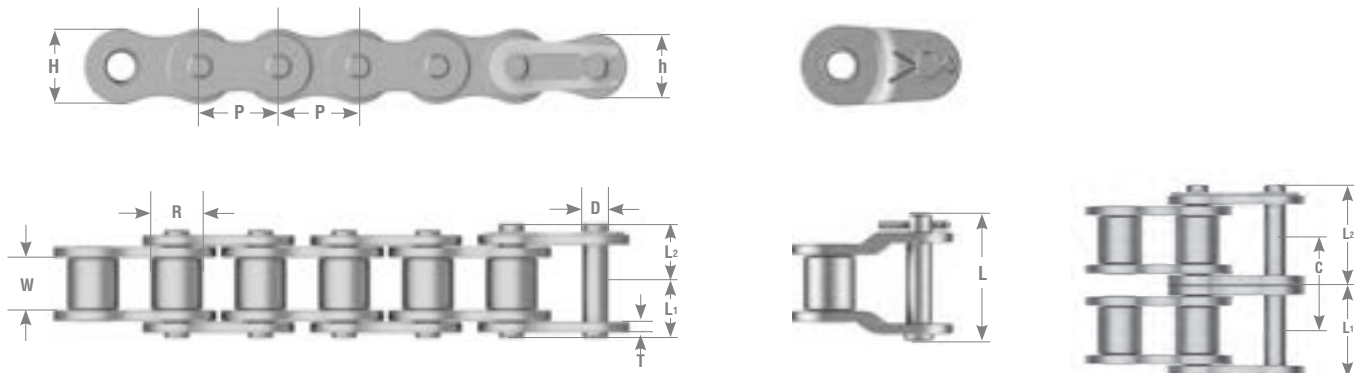
◇ Middle link plate has one solid plate.

RB = 10 foot stocked box including one connecting link. Cut-to-length strands and reel stock available upon request.

# BRITISH STANDARD ROLLER CHAINS



All the benefits of traditional Tsubaki Lambda<sup>®</sup> except with BS/DIN dimensions  
Operates up to 302° F



## British Standard Drive Lambda<sup>®</sup>

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin			Offset Pin	Link Plate				Transverse Pitch	Minimum Tensile Strength	Approx. Weight lbs/ft.
Chain No.	P	R	W	D	L1	L2	L	T2	T1	H	h	C		
<b>SINGLE STRAND</b>														
<b>RF06BLAMRB</b>	0.375	0.250	0.225	0.129	0.240	0.303	0.594	0.040	0.050	0.323	0.323	NA	2,006	0.26
<b>RS08BLAMRB</b>	0.500	0.335	0.305	0.175	0.331	0.394	0.732	0.063	0.063	0.472	0.409	NA	3,080	0.47
<b>RS10BLAMRB</b>	0.625	0.400	0.380	0.200	0.376	0.443	0.819	0.060	0.060	0.579	0.539	NA	3,600	0.64
<b>RS12BLAMRB</b>	0.750	0.475	0.460	0.225	0.437	0.512	0.961	0.070	0.070	0.634	0.634	NA	4,390	0.84
<b>RS16BLAMRB</b>	1.000	0.625	0.670	0.326	0.699	0.785	1.618	0.156	0.126	0.827	0.827	NA	12,170	1.81
<b>RS20BLAMRB</b>	1.250	0.750	0.770	0.401	0.783	0.909	1.835	0.173	0.134	1.024	1.024	NA	21,340	2.59
<b>RS24BLAMRB</b>	1.500	1.000	1.000	0.576	1.049	1.254	2.429	0.236	0.220	1.315	1.228	NA	36,900	5.01
<b>DOUBLE STRAND</b>														
<b>RF06B-2LAMRB</b>	0.375	0.250	0.225	0.129	0.441	0.504	1.020	0.050	0.050	0.323	0.323	0.403	3,792	0.50
<b>RS08B-2LAMRB</b>	0.500	0.335	0.305	0.175	0.602	0.665	1.358	0.063	0.063	0.465	0.409	0.548	6,990	0.91
<b>RS10B-2LAMRB</b>	0.625	0.400	0.380	0.200	0.703	0.770	1.551	0.060	0.060	0.579	0.539	0.653	10,010	1.24
<b>RS12B-2LAMRB</b>	0.750	0.475	0.460	0.225	0.821	0.896	1.807	0.070	0.070	0.634	0.634	0.766	12,985	1.68
<b>RS16B-2LAMRB</b>	1.000	0.625	0.670	0.326	1.321	1.407	2.961	0.156	0.126	0.827	0.827	1.255	23,810	3.63

- Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.  
 2. Refer to attachment chain section for attachment dimensions.  
 3. "RF" designation indicates straight side bar construction.  
 4. Must use Lambda<sup>®</sup> connecting links with Lambda<sup>®</sup> chain. Standard connecting links will not work with Lambda<sup>®</sup> chain.

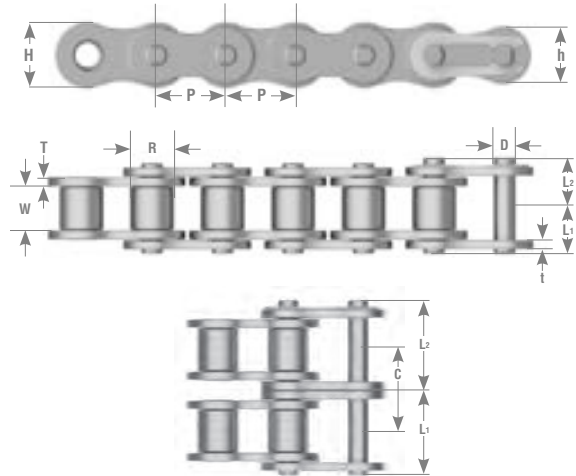
# BRITISH STANDARD CORROSION AND HEAT RESISTANT



Stainless Steel

Nickel Plated

Neptune®



## British Standard Stainless Steel

Tsubaki	ISO BS/DIN NO.	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Dia.	Pin Length	Pin Length	Roller Link Plate Thickness	Pin Link Plate Thickness	Plate Height	Transverse Pitch	Average Tensile Strength	Bearing Area (Nominal) Inch <sup>2</sup>	Approx. Weight lbs/ft.
		P	R	W	D	L1	L2	T	t	H	C			
<b>SINGLE STRAND</b>														
RF06BSSRB	06B	0.375	0.250	0.225	0.129	0.255	0.285	0.050	0.040	0.323	NA	1,430	0.040	0.26
RS08BSSRB	08B	0.500	0.335	0.335	0.175	0.329	0.395	0.060	0.060	0.465	NA	2,200	0.078	0.47
RS10BSSRB	10B	0.625	0.400	0.400	0.200	0.376	0.443	0.060	0.060	0.579	NA	3,190	0.104	0.64
RS12BSSRB	12B	0.750	0.475	0.475	0.225	0.437	0.512	0.070	0.070	0.634	NA	3,740	0.138	0.84
RS16BSSRB	16B	1.000	0.625	0.670	0.326	0.699	0.783	0.156	0.125	0.827	NA	10,560	0.326	1.82
<b>DOUBLE STRAND</b>														
RF06B-2SSRB	06B	0.375	0.250	0.225	0.129	0.354	0.090	0.050	0.040	0.323	0.403	4,080	0.090	0.50
RS08B-2SSRB	08B	0.500	0.335	0.335	0.175	0.472	0.141	0.060	0.060	0.465	0.548	7,600	0.156	0.90
RS10B-2SSRB	10B	0.625	0.400	0.400	0.200	0.591	0.156	0.060	0.060	0.579	0.653	11,700	0.208	1.24
RS12B-2SSRB	12B	0.750	0.475	0.475	0.225	0.713	0.200	0.070	0.070	0.634	0.766	15,000	0.276	1.68
RS16B-2SSRB	16B	1.000	0.625	0.670	0.326	0.949	0.234	0.156	0.125	0.827	1.255	31,500	0.652	3.62

## British Standard Nickel-Plated

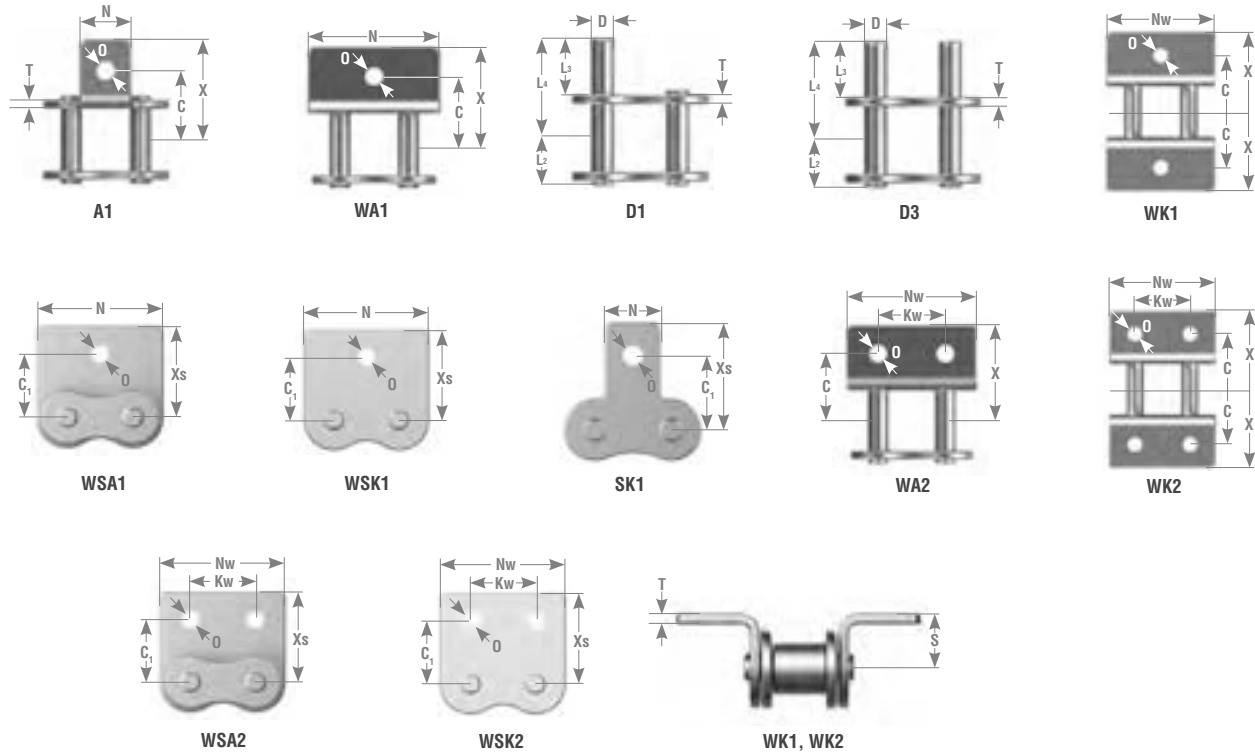
Tsubaki	ISO BS/DIN NO.	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Dia.	Pin Length	Pin Length	Roller Link Plate Thickness	Pin Link Plate Thickness	Plate Height	Transverse Pitch	Average Tensile Strength	Bearing Area (Nominal) Inch <sup>2</sup>	Approx. Weight lbs/ft.
		P	R	W	D	L1	L2	T	t	H	C			
<b>SINGLE STRAND</b>														
RF06BNPRB	06B	0.375	0.250	0.225	0.129	0.255	0.285	0.050	0.040	0.323	NA	2,310	0.040	0.26
RS08BNPRB	08B	0.500	0.335	0.335	0.175	0.329	0.395	0.060	0.060	0.465	NA	4,410	0.078	0.47
RS10BNPRB	10B	0.625	0.400	0.400	0.200	0.376	0.443	0.060	0.060	0.579	NA	5,840	0.104	0.64
RS12BNPRB	12B	0.750	0.475	0.475	0.225	0.437	0.512	0.070	0.070	0.634	NA	7,500	0.138	0.84
RS16BNPRB	16B	1.000	0.625	0.670	0.326	0.699	0.783	0.156	0.125	0.827	NA	16,500	0.326	1.82

## British Standard Neptune®

Tsubaki	ISO BS/DIN NO.	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Dia.	Pin Length	Pin Length	Roller Link Plate Thickness	Pin Link Plate Thickness	Plate Height	Transverse Pitch	Average Tensile Strength	Bearing Area (Nominal) Inch <sup>2</sup>	Approx. Weight lbs/ft.
		P	R	W	D	L1	L2	T	t	H	C			
<b>SINGLE STRAND</b>														
RF06BNEPRB	06B	0.375	0.250	0.225	0.129	0.255	0.285	0.050	0.040	0.323	NA	2,310	0.040	0.26
RS08BNEPRB	08B	0.500	0.335	0.335	0.175	0.329	0.395	0.060	0.060	0.465	NA	4,410	0.078	0.47
RS10BNEPRB	10B	0.625	0.400	0.400	0.200	0.376	0.443	0.060	0.060	0.579	NA	5,840	0.104	0.64
RS12BNEPRB	12B	0.750	0.475	0.475	0.225	0.437	0.512	0.070	0.070	0.634	NA	7,500	0.138	0.84
RS16BNEPRB	16B	1.000	0.625	0.670	0.326	0.699	0.783	0.156	0.125	0.827	NA	16,500	0.326	1.82
<b>DOUBLE STRAND</b>														
RS08B-2NEPRB	08B	0.500	0.335	0.305	0.175	0.603	0.669	0.060	0.060	0.465	0.548	7,600	0.156	0.9
RS10B-2NEPRB	10B	0.625	0.400	0.380	0.200	0.699	0.773	0.060	0.060	0.579	0.653	11,700	0.208	1.24
RS12B-2NEPRB	12B	0.750	0.475	0.460	0.225	0.819	0.901	0.070	0.070	0.634	0.766	15,000	0.276	1.68
RS16B-2NEPRB	16B	1.000	0.625	0.670	0.326	1.335	1.413	0.157	0.125	0.827	1.255	31,500	0.652	3.62

NOTE: 1. "RF" designation indicates straight side-bar construction.  
 2. "RB" designation indicates chain supplied in 10-foot box. Cut-to-length available from factory.  
 3. Additional multi-wide chains available on made-to-order basis.  
 4. Double-pitch British Standard chains are available on a made-to-order basis.  
 5. 600 series (AS) and 316 Series (NS) are available on a made-to-order basis.  
 6. Sizes 06B-12B supplied with spring-clip style conn links. 16B supplied in cottered style.

# BRITISH STANDARD ATTACHMENT CHAINS



Tsubaki	Pitch	Width Between Roller Link Plates	Roller Dia.		Pin		Link Plate				Offset Pin	Minimum Tensile Strength	Approx. Weight lbs/ft.
Chain No.	P	W	R	D	L1	L2	H	h	T	t	L		
RS08BRB	0.500	0.305	0.335	0.175	0.328	0.395	0.472	0.409	0.063	0.063	0.732	2,900	0.47
RS10BRB	0.625	0.379	0.400	0.200	0.375	0.443	0.578	0.539	0.060	0.060	0.819	3,500	0.64
RS12BRB	0.750	0.459	0.475	0.225	0.437	0.512	0.633	0.633	0.070	0.070	0.960	4,960	0.84
RS16BRB	1.000	0.670	0.625	0.325	0.699	0.785	0.826	0.826	0.156	0.125	1.547	13,500	1.82

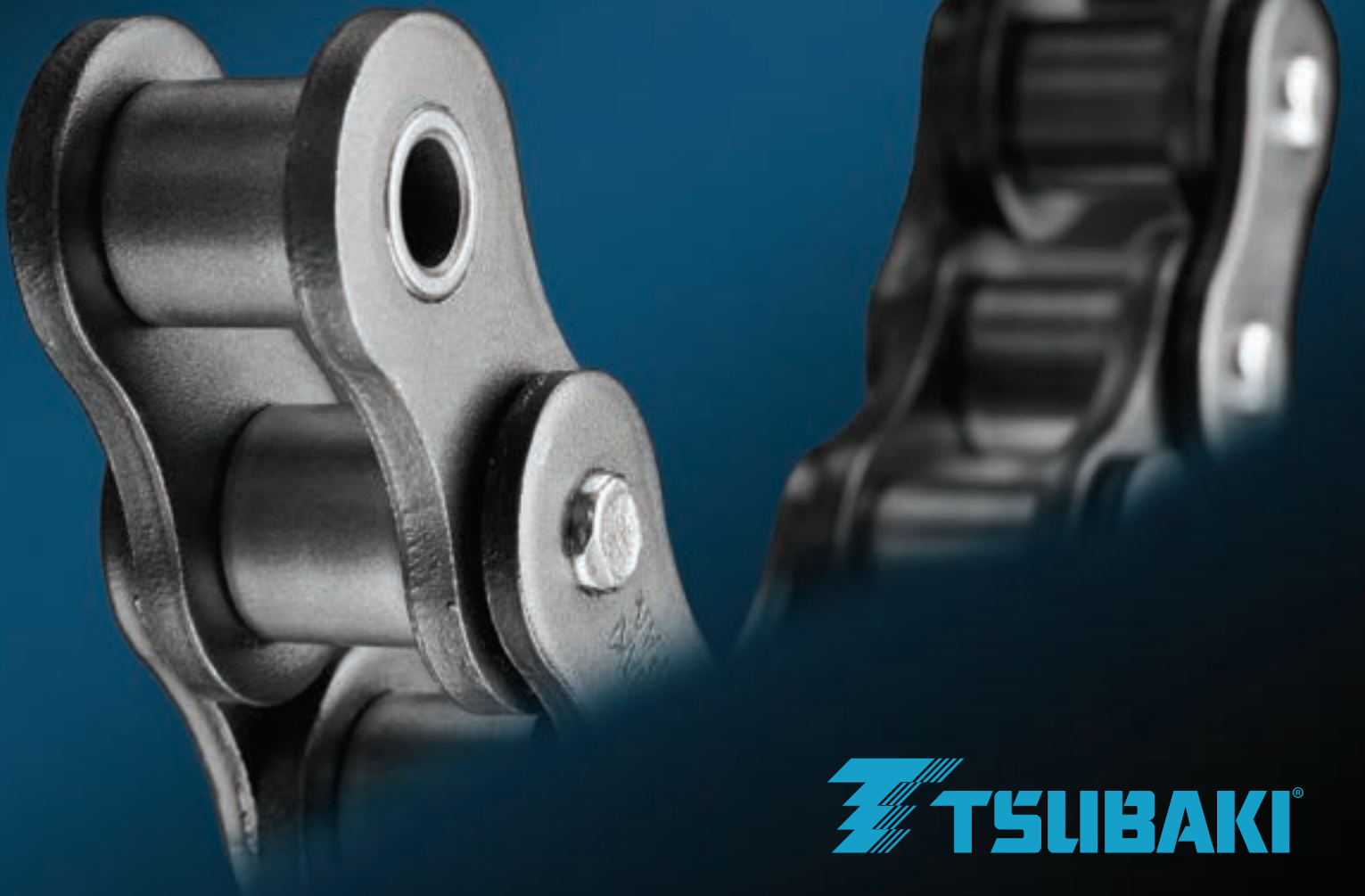
Tsubaki	A1, K1, SA1, SK1 Attachments								D1, D3 Attachments				
Chain No.	C	C1	N	O	S	X	X2	Xs	D	L3	L4		
RS08BRB	0.468	0.500	0.448	0.165	0.350	0.75	0.675	0.759	0.175	0.374	0.667		
RS10BRB	0.625	0.625	0.500	0.196	0.401	0.875	0.811	0.901	0.200	0.468	0.799		
RS12BRB	0.750	0.874	0.649	0.279	0.531	1.175	1.094	1.261	0.225	0.562	0.949		
RS16BRB	0.937	0.941	0.956	0.263	0.598	1.47	1.354	1.342	0.325	0.751	1.389		

Tsubaki	WA1, WA2, WK1, WK2, WSA1, WSA2, WSK1, WSK2 Attachments							
Chain No.	C	C1	O	S	X	Xs	Nw	Kw
RS08BRB	0.500	0.515	0.192	0.350	0.799	0.814	0.968	0.500
RS10BRB	0.625	0.653	0.196	0.401	0.899	0.929	1.181	0.625
RS12BRB	0.687	0.692	0.216	0.448	1.009	1.015	1.370	0.751
RS16BRB	1.125	1.023	0.318	0.625	1.545	1.444	1.811	1.000



# LUBE-FREE CHAINS

Tsubaki Lube-Free Lambda<sup>®</sup> chains are ideal for applications where lubrication is difficult or not possible, from drive and conveyor styles to corrosion resistant and British Standard, Tsubaki has a complete product offering to maximize performance in lube-free applications.



 **TSUBAKI<sup>®</sup>**

# Lambda<sup>®</sup> Chains

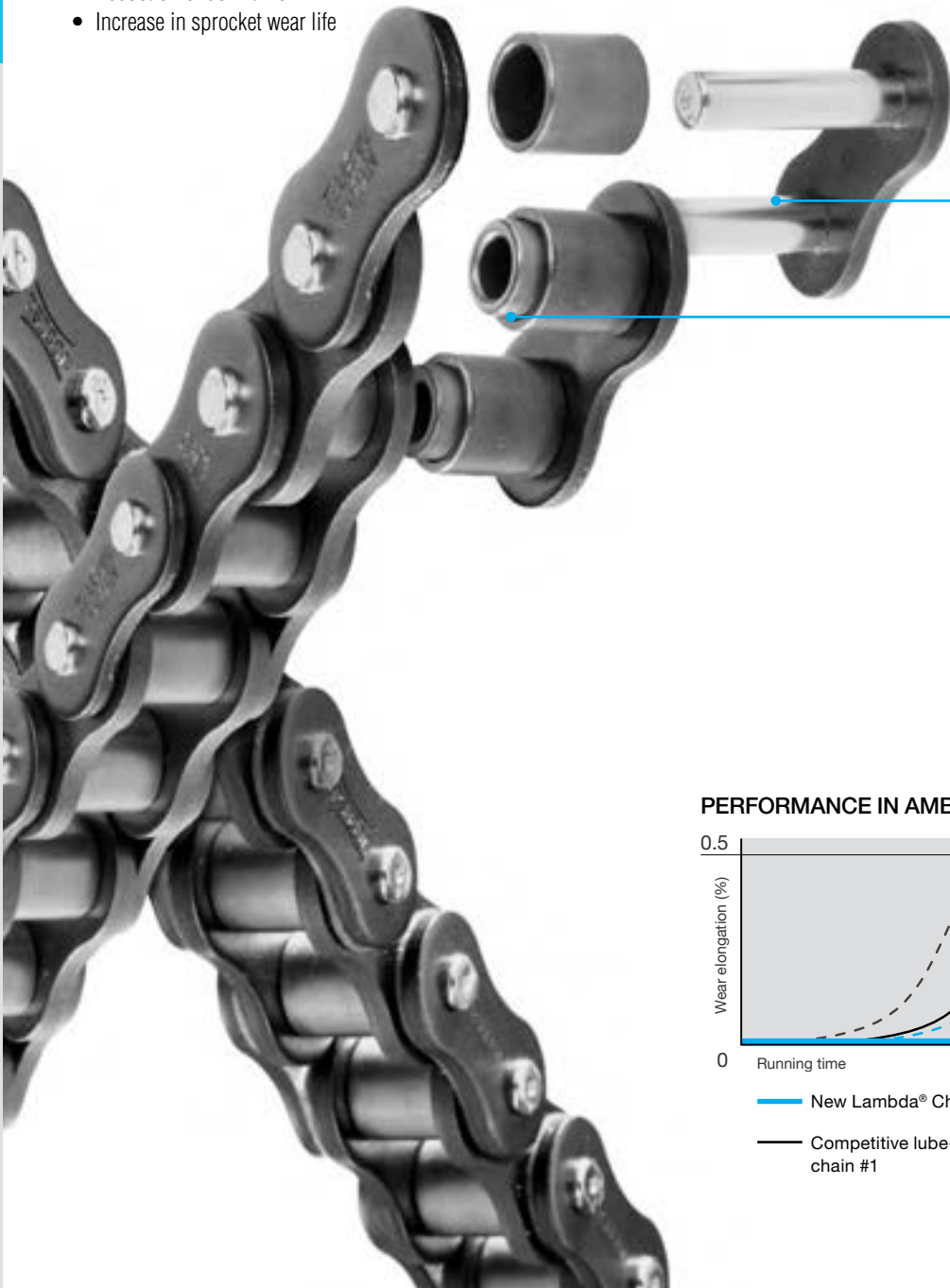


Tsubaki revolutionized the use of oil-impregnated sintered bushings when it first launched Lambda<sup>®</sup> chain in 1988. Since then, Lambda<sup>®</sup> chain has earned its reputation in a number of industries as a cost-saver, reducer of down time and a proficient reducer of maintenance and upkeep.

Lambda<sup>®</sup> chain is now supplied with food-grade lube bushings. The NSF-H1 food-grade lubricant bushing expands the range of applications that Lambda<sup>®</sup> can be found while maintaining the consistent quality Lambda<sup>®</sup> chain is known for.

## Benefits of Lube-Free Chain

- No additional lube needed
- Elimination of contamination
- Environmentally friendly
- Reduces maintenance and replacement costs
- Reduction of downtime
- Increase in sprocket wear life



## STANDARD LAMBDA<sup>®</sup> CHAIN FEATURES

Operating range 14°–302°F (-10°–150°C) for use in a broad range of applications

Nickel-plated pins for superior bearing surface and corrosion resistance

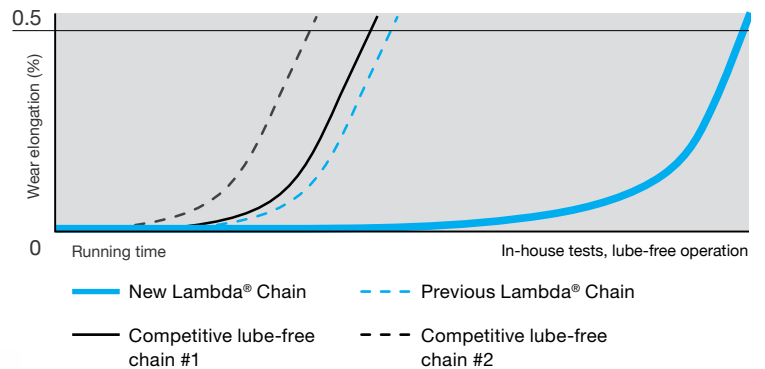
**NEW AND IMPROVED!**  
Sintered bushings with NSF-H1 high-temperature food-grade lubricant for optimal performance in lube-free environments

Black oxide plates for extra corrosion resistance

Hardened components for maximum performance under standard load capacities

Ring-coiled connection links for superior plate strength

## PERFORMANCE IN AMBIENT TEMPERATURES 14°–302°F (-10°–150°C)





# Specialty Lambda<sup>®</sup> Chain Options

- Lambda<sup>®</sup> Chain with Neptune<sup>®</sup> coating
- Lambda<sup>®</sup> Chain with Nickel Plated coating



## Xceeder<sup>®</sup>–Lambda<sup>®</sup>

- Extended wear life beyond standard Lambda<sup>®</sup>
- Special, patented, felt-seal to protect from excessively dirty environments
- Operating temperature same as standard Lambda<sup>®</sup>



## High-Temperature Lambda<sup>®</sup>

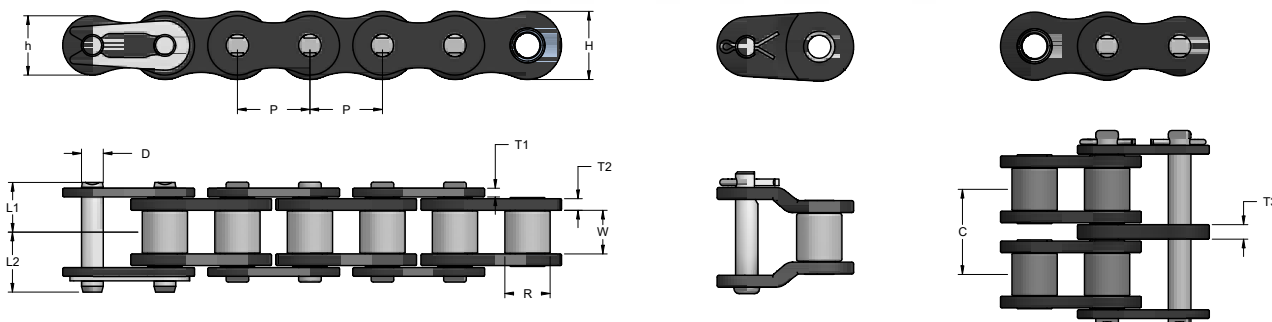
- Operating Temp Range 14° - 446°F -10° - 230°C
- Exterior Includes NSF-H3 Food Grade Lube
- Bushing use NSF-H1 high temperature food-grade lubricant



# DRIVE LAMBDA<sup>®</sup> CHAINS



- Maintenance-free
- Food-Grade lube bushings
- Decrease in down time and maintenance



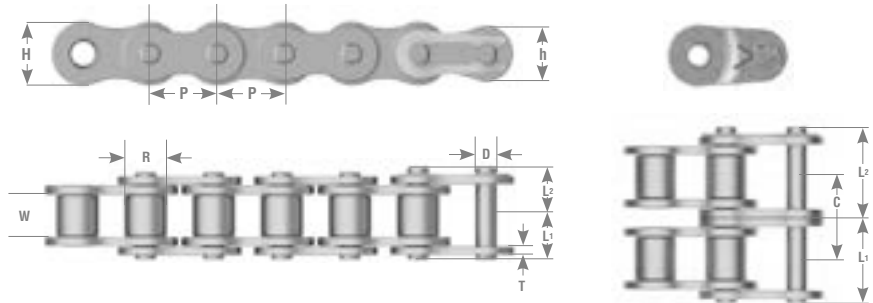
## Single Pitch Drive Lambda<sup>®</sup>

Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W **	Pin			Link Plate				Transverse Pitch C	Minimum Tensile Strength	Allowable Speed (Ft./Min.)	Approx. Weight lbs/ft.	No. of Links per 10 ft.
				D	L1	L2	T1	T2	H	h					
<b>SINGLE STRAND</b>															
40LAMRB	0.500	0.312	0.297	0.156	0.344	0.411	0.060	0.080	0.472	0.409	NA	3,970	500	0.47	240
50LAMRB	0.625	0.400	0.365	0.200	0.423	0.490	0.080	0.094	0.591	0.512	NA	6,390	450	0.75	192
60LAMRB	0.750	0.469	0.483	0.234	0.541	0.618	0.094	0.125	0.713	0.614	NA	9,040	400	1.16	160
80LAMRB	1.000	0.625	0.609	0.312	0.675	0.797	0.125	0.156	0.949	0.819	NA	16,090	300	1.86	120
100LAMRB	1.250	0.750	0.736	0.375	0.813	0.939	0.156	0.187	1.185	1.024	NA	24,000	266	2.89	96
120LAMRB	1.500	0.875	0.974	0.437	1.014	1.179	1.870	0.220	1.425	1.228	NA	33,070	166	4.30	80
140LAMRB	1.750	1.000	0.974	0.500	1.091	1.268	0.220	0.252	1.661	1.433	NA	43,400	166	5.44	68
160LAMRB	2.000	1.125	1.228	0.562	1.289	1.482	0.252	0.281	1.898	1.638	NA	57,300	166	7.06	60
<b>DOUBLE STRAND</b>															
40-2LAMRB	0.500	0.312	0.297	0.156	0.628	0.695	0.060	0.080	0.472	0.409	0.567	3,750	500	0.94	240
50-2LAMRB	0.625	0.400	0.365	0.200	0.781	0.848	0.080	0.094	0.591	0.512	0.713	6,170	450	1.48	192
60-2LAMRB	0.750	0.469	0.483	0.234	0.990	1.061	0.094	0.125	0.713	0.614	0.898	9,040	400	2.28	160
80-2LAMRB	1.000	0.625	0.609	0.312	1.250	1.368	0.125	0.156	0.949	0.819	1.154	15,400	300	3.70	120
100-2LAMRB	1.250	0.750	0.736	0.375	1.516	1.638	0.156	0.187	1.185	1.024	1.409	24,300	266	5.78	96

Note:  
 1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.  
 2. Refer to attachment chain section for attachment dimensions.  
 3. Drive Lambda<sup>®</sup> Connecting Links cannot be used with conveyor series connecting links.  
 \*\*Width between roller link plates (W) is slightly narrower than ANSI chain. Chain can still be used on standard ANSI sprockets.

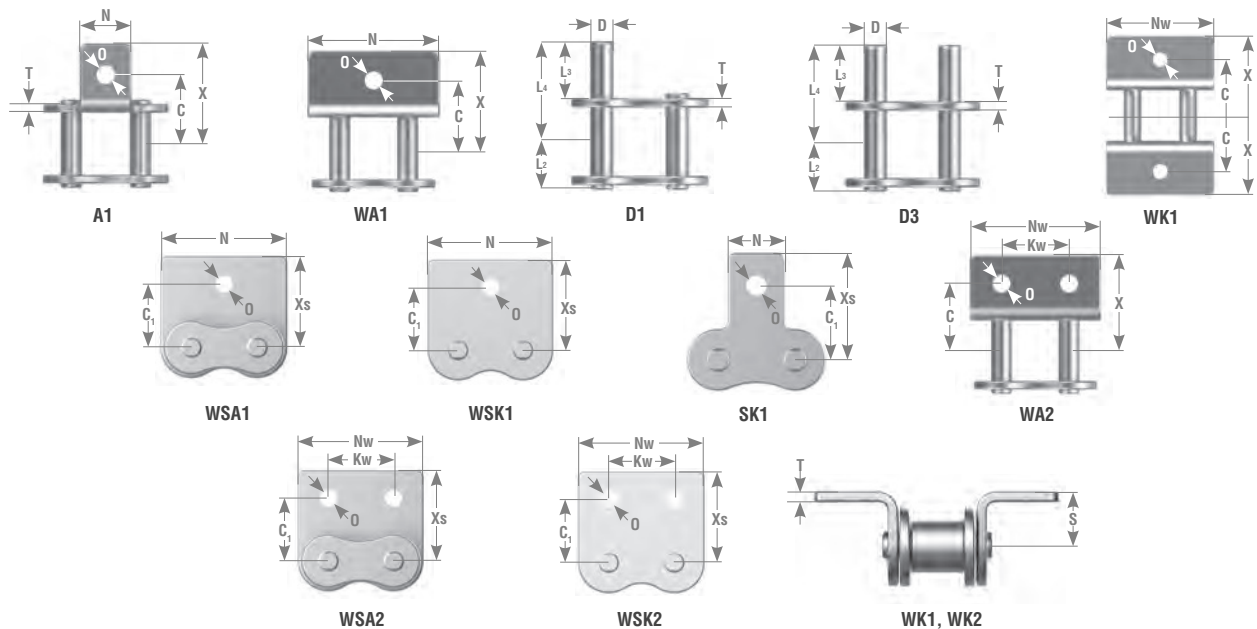
LUBE FREE CHAINS

# CONVEYOR LAMBDA® CHAINS



## Single Pitch Conveyor Lambda®

Tsubaki	Pitch	Width Between Roller Link Plates	Roller Dia.	Pin			Offset Link Pin	Link Plate	Link Plate Thickness	Roller Link Plate Height	Maximum Allowable Load	Approx. Weight lbs/ft.
Chain No.	P	W	R	D	L1	L2	L	H	T	h		
35LRB▲	0.375	0.188	0.200*	0.118	0.230	0.270	0.531	0.354	0.050	0.307	342	0.22
40LRB	0.500	0.313	0.311	0.156	0.325	0.392	0.717	0.060	0.409	0.409	595	0.43
50LRB	0.625	0.375	0.400	0.200	0.405	0.472	0.890	0.080	0.512	0.512	970	0.70
60LRB	0.750	0.500	0.469	0.234	0.506	0.581	1.110	0.094	0.614	0.614	1,410	1.03
80LRB	1.000	0.625	0.625	0.312	0.640	0.758	1.441	0.125	0.819	0.819	2,400	1.79
100LRB	1.250	0.750	0.750	0.375	0.778	0.900	1.720	0.157	1.024	1.024	3,840	2.68
120LRB	1.500	1.000	0.875	0.437	0.980	1.138	2.165	0.187	1.228	1.225	5,380	3.98
140LRB	1.750	1.000	1.000	0.500	1.059	1.248	2.343	0.220	1.433	1.433	7,275	5.03



Tsubaki	Attachment Dimension									Additional Weight Per Attachment		
Chain No.	C	C1	N	O	S	X	Xs	L3	L4	A-SA	K-SK	D-1
35LRB▲	0.374	0.374	0.311	0.134	0.250	0.563	0.563	0.573	0.375	0.002	0.004	0.002
40LRB	0.500	0.500	0.374	0.141	0.315	0.701	0.701	0.685	0.375	0.004	0.008	0.002
50LRB	0.626	0.626	0.500	0.205	0.406	0.922	0.922	0.907	0.469	0.006	0.013	0.004
60LRB	0.750	0.720	0.626	0.205	0.469	1.110	1.110	1.057	0.563	0.015	0.030	0.006
80LRB	1.000	0.969	0.752	0.268	0.626	1.441	1.441	1.396	0.752	0.028	0.057	0.015
100LRB	1.250	1.252	1.000	0.343	0.780	1.768	1.768	1.732	0.937	0.057	0.114	0.026
120LRB	1.500	1.437	1.126	0.406	0.906	2.197	2.000	2.083	1.126	0.097	0.194	0.044
140LRB	1.752	1.752	1.374	0.469	1.126	2.484	2.252	2.500	1.311	0.156	0.313	0.066

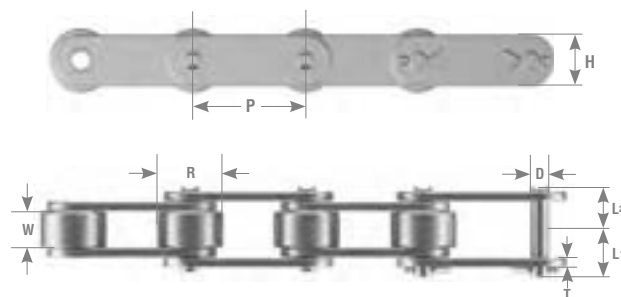
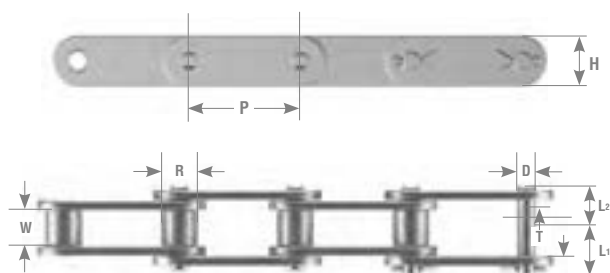
Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.

2. Spring clip conn links for sizes 25-60, cotter style conn links 80 -140.

3. Rollerless.

\*4. Bushing Diameter.

# DOUBLE PITCH LAMBDA<sup>®</sup> CHAINS



## Double-Pitch Lambda<sup>®</sup>

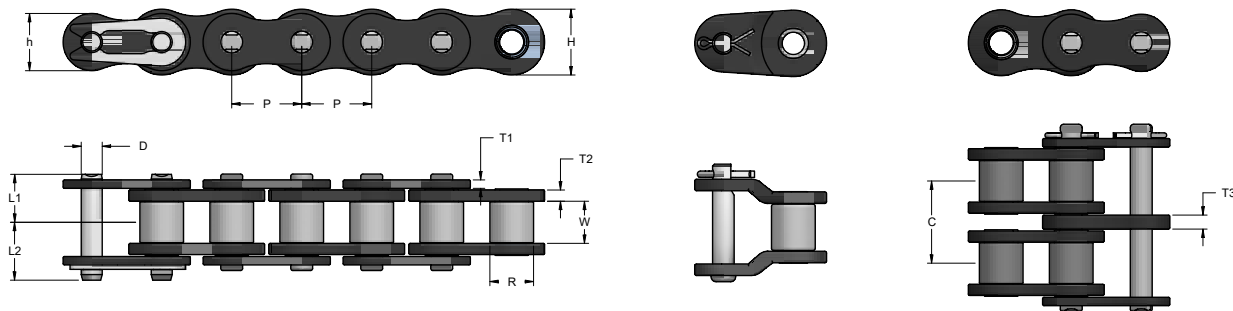
Tsubaki Chain No.	Pitch P	Width Between Roller Link Plates W	Roller Diameter R	Pin			Link Plate		Maximum Allowable Load	Approx. Mass Per Roller (lbs/ft)	Additional Weight Per Attachments (Lbs)		
				D	L1	L2	H	T			A-SA Att.	K - SK Att.	D1 & D3 Att
<b>STANDARD ROLLER</b>													
C2040LRB	1.000	0.313	0.312	0.156	0.325	0.392	0.472	0.060	595	0.34	0.006	0.013	0.002
C2050LRB	1.250	0.375	0.400	0.200	0.406	0.472	0.591	0.080	970	0.56	0.013	0.026	0.004
C2060HLRB	1.500	0.500	0.469	0.234	0.573	0.652	0.677	0.125	1,410	1.01	0.037	0.074	0.006
C2080HLRB	2.000	0.625	0.625	0.312	0.720	0.823	0.905	0.156	2,400	1.62	0.070	0.141	0.015
C2100HLRB	2.500	0.750	0.750	0.375	0.858	0.965	1.126	0.187	3,840	2.38	0.132	0.264	0.026
C2120HLRB	3.000	1.000	0.875	0.437	1.061	1.203	1.354	0.220	5,380	3.42	0.220	0.441	
<b>OVERSIZED ROLLER</b>													
C2042LRB	1.000	0.312	0.625	0.156	0.325	0.392	0.472	0.060	595	0.58	0.006	0.013	0.002
C2052LRB	1.250	0.375	0.750	0.200	0.406	0.472	0.591	0.080	970	0.87	0.013	0.260	0.004
C2062HLRB	1.500	0.500	0.875	0.234	0.573	0.652	0.677	0.125	1,410	1.47	0.037	0.074	0.007
C2082HLRB	2.000	0.625	1.125	0.312	0.720	0.823	0.905	0.156	2,400	2.37	0.070	0.141	0.015
C2102HLRB	2.500	0.750	1.562	0.375	0.858	0.965	1.126	0.187	3,840	3.90	0.132	0.264	0.026
C2122HLRB	3.000	1.000	1.750	0.437	1.061	1.203	1.354	0.220	5,380	5.46	0.221	0.441	

- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Spring clip conn links for sizes C2040-C2060H, cotter style conn links C2080H-C2160H.
  - Heavy side plates are standard on chain sizes C2060H-C2160H.

# LAMBDA<sup>®</sup> FOR CORROSION RESISTANCE



- Operates in temperature up to 302°F
- Ideal for mildly corrosive environments
- Long-lasting, food-grade lube bushings



## Nickel-Plated Lambda<sup>®</sup>

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Link Plate Thickness	Roller Link Plate Thickness	Roller Link Plate Height	Pin Link Plate Height	Pin Dia.	Pin			Approx. Weight lbs/ft.
Chain No.	P	R	W**	T1	T2	H	h	D	L1	L2	L	
40NPLAMRB	0.500	0.312	0.297	0.060	0.080	0.472	0.409	0.156	0.344	0.411	0.787	0.47
50NPLAMRB	0.625	0.400	0.365	0.080	0.094	0.591	0.512	0.200	0.423	0.490	0.945	0.75
60NPLAMRB	0.750	0.469	0.483	0.094	0.125	0.713	0.614	0.234	0.541	0.618	1.260	1.16
80NPLAMRB	1.000	0.625	0.609	0.125	0.156	0.949	0.819	0.312	0.675	0.797	1.571	1.86
100NPLAMRB	1.250	0.750	0.736	0.156	0.187	1.185	1.024	0.375	0.813	0.939	1.870	2.89
120NPLAMRB	1.500	0.875	0.974	0.187	0.220	1.425	1.228	0.437	1.014	1.179	2.323	4.30
140NPLAMRB	1.750	1.000	0.974	0.220	0.252	1.661	1.433	0.500	1.091	1.268	2.508	5.40

- Note:
1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  2. Refer to attachment chain section for attachment dimensions.
  3. Available in Double-pitch and multi-wide Lambda<sup>®</sup> on a made-to-order basis.

## Neptune<sup>®</sup> Lambda<sup>®</sup>

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin Link Plate Thickness	Roller Link Plate Thickness	Roller Link Plate Height	Pin Link Plate Height	Pin Dia.	Pin			Approx. Weight lbs/ft.
Chain No.	P	R	W**	T1	T2	H	h	D	L1	L2	L	
40NEPLAMRB	0.500	0.312	0.297	0.060	0.080	0.472	0.409	0.156	0.344	0.411	0.787	0.43
50NEPLAMRB	0.625	0.400	0.365	0.080	0.094	0.591	0.512	0.200	0.423	0.490	0.945	0.70
60NEPLAMRB	0.750	0.469	0.483	0.094	0.125	0.713	0.614	0.234	0.541	0.618	1.260	1.03
80NEPLAMRB	1.000	0.625	0.609	0.125	0.156	0.949	0.819	0.312	0.675	0.797	1.571	1.79

- Note:
1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  2. Refer to attachment chain section for attachment dimensions.
  3. Available in Double-pitch and multi-wide Lambda<sup>®</sup> on a made-to-order basis.

# DRIVE XCEEDER® CHAIN



Xceeder® Lambda® chain extends the wear resistance of ordinary Lambda® chain by including oil-impregnated felt-seals between each pin link plate. The special Lambda® Logo and patented seals hold in the lube while keeping excessive dirt out.



### Selection Guidelines:

- Operating Temperatures: 14°F - 302°F

### Connecting Links:

- 40DX-60DX = clip style
- 80DX - 100DX = cottered style
- 40DX-100DX = Stocked in 10 foot boxes

Use on Standard Carbon Steel, hardened-tooth sprockets.



## Drive Xceeder®

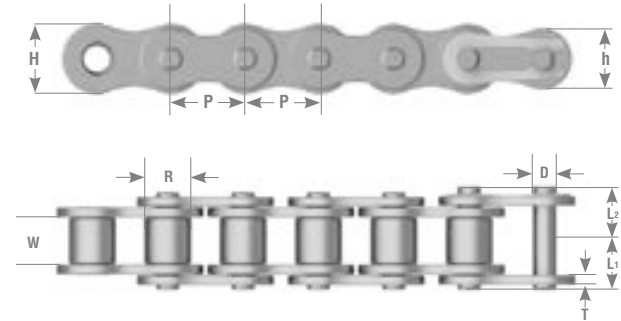
Tsubaki	Pitch	Roller Diameter	Width Between Roller Link Plates	Link Plate				Pin		
Chain No.	P	R	W	T1	T2	H	h	D	L1	L2
<b>40DXRB</b>	0.500	0.312	0.297	0.060	0.080	0.472	0.409	0.156	0.370	0.437
<b>50DXRB</b>	0.625	0.400	0.365	0.080	0.094	0.591	0.512	0.200	0.449	0.516
<b>60DXRB</b>	0.750	0.469	0.483	0.094	0.125	0.713	0.614	0.234	0.583	0.650
<b>80DXRB</b>	1.000	0.625	0.609	0.125	0.156	0.949	0.819	0.312	0.720	0.823
<b>100DXRB</b>	1.250	0.750	0.736	0.156	0.187	1.185	1.024	0.375	0.858	0.965

**Note:**

1. Due to the felt seals, Xceeder® Chain lin length is slightly longer than standard Tsubaki chain.
2. Offset links for Xceeder® chain are not available.

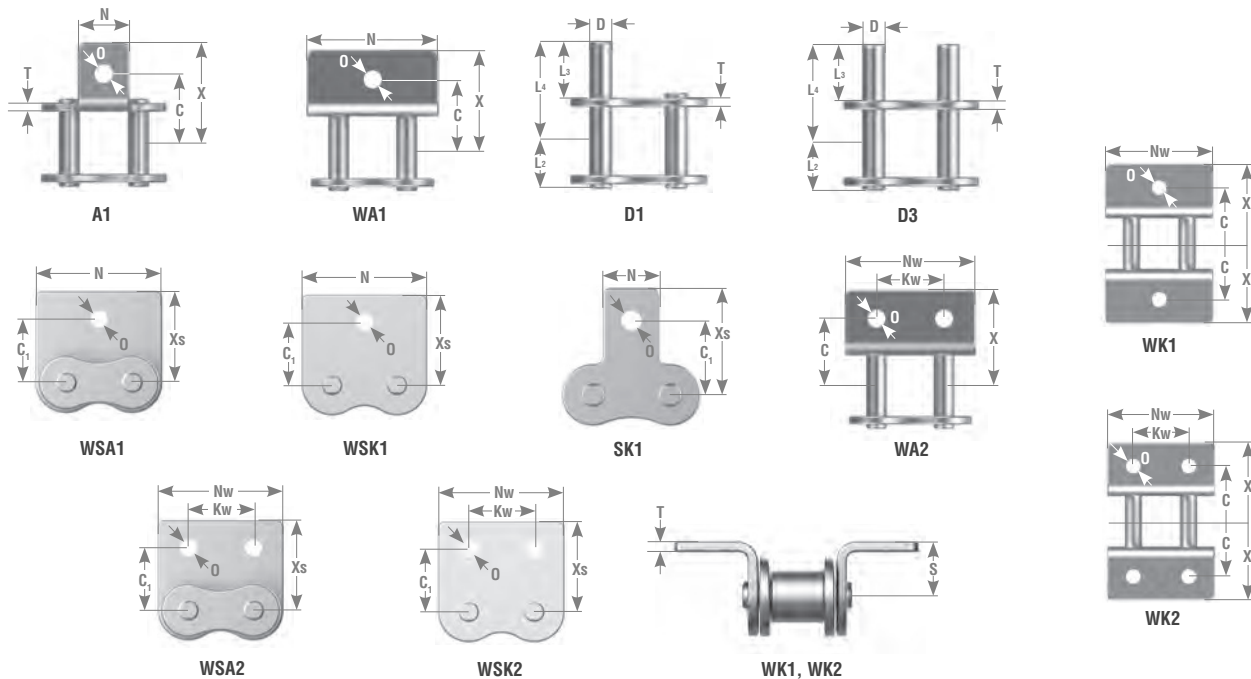
Tsubaki Chain No.	ANSI Minimum Tensile Strength	Xceeder® Average Tensile Strength	Approx. Weight (lbs/ft)	No. of Links/10 ft.	Allowable Speed (ft./Min)
<b>40DXRB</b>	3,125	4,300	0.47	240	490
<b>50DXRB</b>	4,880	7,050	0.75	192	442
<b>60DXRB</b>	7,030	9,920	1.16	160	393
<b>80DXRB</b>	12,500	17,600	1.86	120	295
<b>100DXRB</b>	19,530	26,500	2.89	96	262

# CONVEYOR XCEEDER® CHAINS



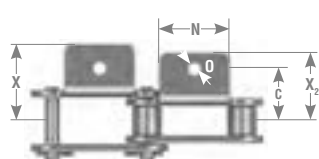
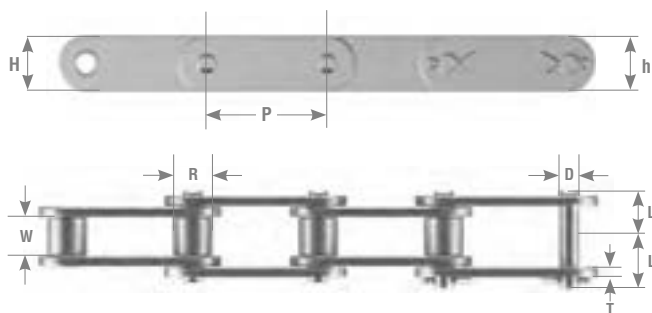
## Conveyor Xceeder®

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin	Link Plate	ANSI Min. Tensile Strength	Xceeder® Avg. Tensile Strength	Xceeder® Max. Allowable Load Tension	Approx. Weight (lbs/ft)		
Chain No.	P	R	W	D	L1 L2 T	H	h				
<b>40CXRB</b>	0.500	0.312	0.297	0.156	0.350 0.417 0.060	0.472	0.409	3,125	4,300	816	0.47
<b>50CXRB</b>	0.625	0.400	0.365	0.200	0.433 0.500 0.080	0.591	0.512	4,880	7,050	1,430	0.75
<b>60CXRB</b>	0.750	0.469	0.483	0.234	0.539 0.614 0.094	0.713	0.614	7,030	9,920	1,980	1.16
<b>80CXRB</b>	1.000	0.625	0.609	0.312	0.673 0.791 0.125	0.949	0.839	12,500	17,600	3,310	1.86
<b>100CXRB</b>	1.250	0.750	0.736	0.375	0.811 0.929 0.156	1.185	1.024	19,530	26,500	5,070	2.89

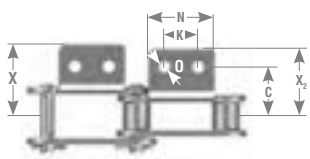


Chain No.	C	C1	N	O	S	X	X2	Xs	A & SA Att	K & SK Att
<b>40CXRB</b>	0.500	0.500	0.375	0.141	0.315	0.724	0.701	0.685	0.004	0.009
<b>50CXRB</b>	0.626	0.626	0.500	0.205	0.406	0.949	0.921	0.907	0.007	0.013
<b>60CXRB</b>	0.750	0.720	0.625	0.205	0.469	1.441	1.110	1.057	0.015	0.031
<b>80CXRB</b>	1.000	0.969	0.752	0.268	0.625	1.476	1.441	1.396	0.029	0.057
<b>100CXRB</b>	1.250	1.252	1.000	0.342	0.780	1.795	1.768	1.732	0.057	0.115

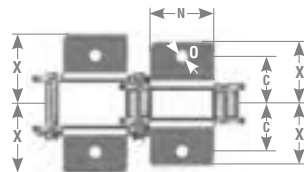
Note:  
 1. Due to the felt seals, Xceeder® chain pin length is slightly longer than standard Tsubaki chain.  
 2. The "X" dimension is also longer on Xceeder® attachments than on standard attachment chain. Please verify all dimensions for proper clearance.



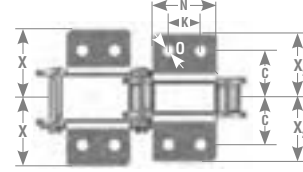
A1



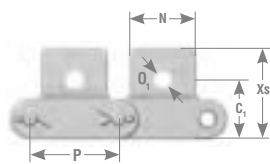
A2



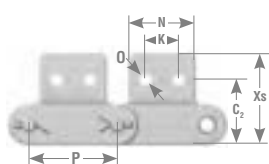
K1



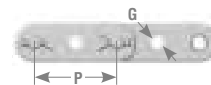
K2



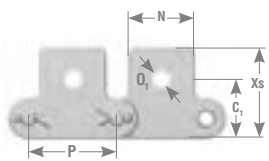
SA1



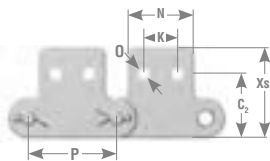
SA2



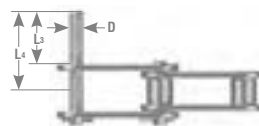
GK1



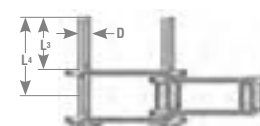
SK1



SK2



D1



D3



A1, A2



K1, K2



WK1, WK2

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin			Link Plate		Xceeder Avg. Tensile Strength	Xceeder® Max. Allowable Load Tension
Chain No.	P	R	W	D	L1	L2	T	H		
C2040CXR	1.000	0.312	0.297	0.156	0.350	0.417	0.060	0.472	4,300	816
C2050CXR	1.250	0.400	0.365	0.200	0.433	0.500	0.080	0.591	7,050	1,430
C2060CXR	1.500	0.469	0.483	0.234	0.600	0.675	0.125	0.677	9,920	1,980
C2080CXR	2.000	0.625	0.609	0.312	0.754	0.856	0.156	0.906	17,600	3,310
C2100CXR	2.500	0.750	0.736	0.375	0.840	0.996	0.187	1.126	26,500	5,070

Chain No.	C	C1	C2	K	N	O	O1	S	X	X2
C2040CXR	0.500	0.437	0.535	0.374	0.752	0.142	0.205	0.358	0.783	0.693
C2050CXR	0.626	0.563	0.626	0.469	0.937	0.205	0.268	0.437	0.978	0.866
C2060CXR	0.844	0.689	0.752	0.563	1.126	0.205	0.343	0.579	1.276	1.110
C2080CXR	1.094	0.874	1.000	0.752	1.500	0.268	0.406	0.752	1.638	1.441
C2100CXR	1.312	1.125	1.252	0.937	1.875	0.343	0.563	0.921	2.000	1.768

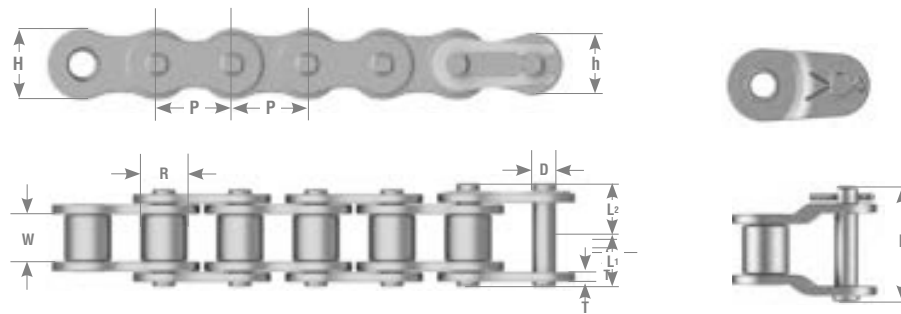


# HIGH-TEMPERATURE LAMBDA<sup>®</sup> CHAINS



- Operating Temp Range 14° - 446°F -10° - 230°C
- Exterior Includes NSF-H3 Food Grade Lube
- Bushing use NSF-H1 high temperature food-grade lubricant

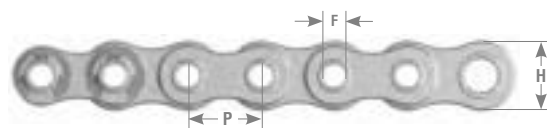
**NOTE:** Not to be used in environments greater than 446°F as this will reduce wear life considerably. Harmful gases may be emitted at temperatures over 536°F



## KF (High-Temp) Lambda<sup>®</sup>

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin			Link Plate				Minimum Tensile Strength	Approx. Weight lbs/ft.	Allowable Speed (F/Min)
Chain No.	P	R	W	D	L1	L2	T1	T2	H	h			
40LAMKF	0.500	0.312	0.297	0.156	0.344	0.411	0.060	0.080	0.472	0.409	3970	0.47	500
50LAMKF	0.625	0.400	0.365	0.200	0.423	0.490	0.080	0.094	0.591	0.512	6400	0.75	450
60LAMKF	0.750	0.469	0.483	0.234	0.541	0.618	0.094	0.125	0.713	0.614	9040	1.16	400
80LAMKF	1.000	0.625	0.609	0.312	0.675	0.797	0.125	0.156	0.949	0.819	16090	1.86	300

# HOLLOW PIN LAMBDA<sup>®</sup> CHAINS

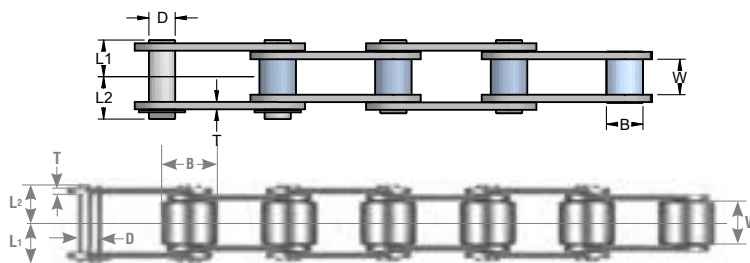
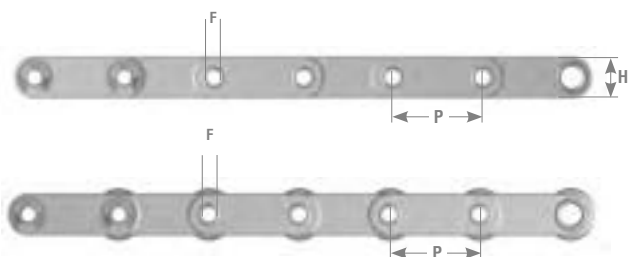


## Single Pitch Hollow Pin Lambda<sup>®</sup>

Tsubaki	Pitch	Width Between Bushing Link Plates	Bushing Dimensions				Hollow Pin		Link Plate		Offset Pin Length	Average Tensile Strength	Approx. Weight lbs/ft.
Chain No.	P	W	B	R	D	F	L1	L2	H	T	L		
40LHPB	0.500	0.312	0.312	0.625	0.224	0.157	0.315	0.374	0.472	0.060	0.752	2,430	0.36
50LHPB	0.625	0.375	0.400	0.750	0.284	0.202	0.396	0.459	0.591	0.080	0.921	4,410	0.58
60LHPB	0.750	0.500	0.469	0.879	0.330	0.236	0.494	0.561	0.713	0.094	1.130	5,950	0.85
80LHPB	1.000	0.625	0.625	1.125	0.448	0.316	0.640	0.701	0.949	0.126	1.405	10,800	1.44

### Note:

1. "B" designation indicates 10' box. Cut-to-length and reel stock available upon request.
2. Attachments or cross rods can be put at any pitch spacing.



## Double Pitch Hollow Pin Lambda<sup>®</sup>

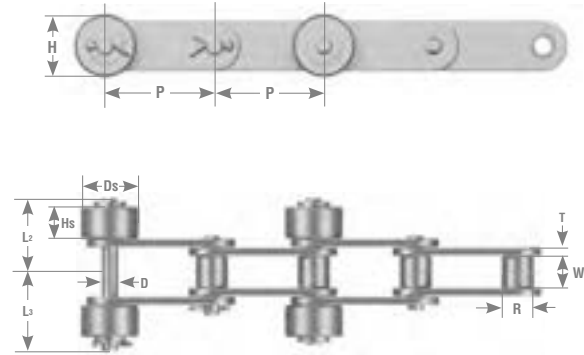
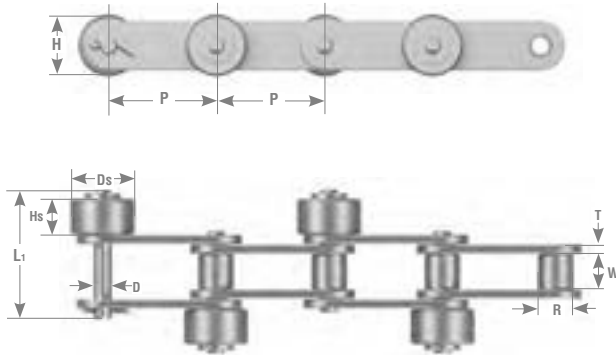
Tsubaki	Pitch	Width Between Bushing Link Plates	Bushing Dimensions				Hollow Pin		Link Plate		Offset Pin Length	Maximum Allowable Load	Approx. Weight lbs/ft.
Chain No.	P	W	B	R	D	F	L1	L2	H	T	L		
C2040LHPB	1.000	0.312	0.312	0.625	0.224	0.157	0.315	0.374	0.472	0.060	0.752	2,430	0.55
C2050LHPB	1.250	0.375	0.400	0.750	0.284	0.202	0.396	0.459	0.591	0.080	0.921	4,410	0.81
C2060LHPB	1.500	0.500	0.469	0.875	0.330	0.236	0.494	0.561	0.677	0.094	1.130	5,950	1.38
C2080LHPB	2.000	0.625	0.625	1.125	0.448	0.316	0.640	0.701	0.906	0.125	1.405	10,800	1.89

# OUTBOARD ROLLER LAMBDA<sup>®</sup> CHAINS



**Type I Staggered Installation**

**Type II Crosswise Installation**



## Double Pitch Chain With Outboard Rollers without brake

Chain Number		Roller Type	Pitch	Roller Dia.		Width between Roller Link Plates		Link Plate		Pin			Outboard Roller		Approx. Weight Lbs/Ft.	
Plastic Roller	Steel Roller		P	R	W		T	H	D	L1	L2	L3	Ds	Hs	Plastic Roller	Steel Roller
C2040LPSR	C2040LSR	S	1.00	0.312	0.312		0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	-	0.44
C2050LPSR	C2050LSR	S	1.25	0.400	0.375		0.080	0.591	0.200	0.469	0.850	0.917	0.750	0.370	-	0.69
C2060LPSR	C2060LSR	S	1.50	0.469	0.500		0.125	0.677	0.234	0.667	1.167	1.262	0.875	0.496	-	1.21
C2042LPSR	C2042LSR	R	1.00	0.625	0.312		0.060	0.472	0.156	0.380	0.909	0.965	0.906	0.512	0.60	0.83
C2052LPSR	C2052LSR	R	1.25	0.750	0.375		0.080	0.591	0.200	0.469	0.996	1.063	1.063	0.512	0.83	1.14
C2062LPSR	C2062LSR	R	1.50	0.875	0.500		0.125	0.677	0.234	0.667	1.167	1.262	1.181	0.496	1.30	1.77

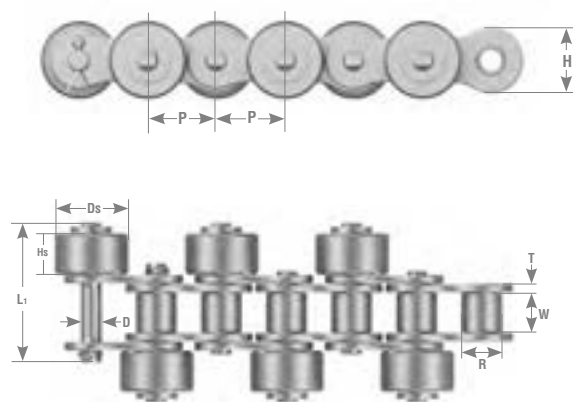
## Double Pitch Chain With Outboard Rollers with Brake

Chain Number	Roller Type	Pitch	Roller Dia.		Width between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight
		P	R	W		T	H	D	L1	L2	L3	Ds	Hs	
C2040LSRP	S	1.00	0.312	0.312		0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.69
C2050LSRP	S	1.25	0.400	0.375		0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	1.03
C2060LSRP	S	1.50	0.469	0.500		0.125	0.677	0.234	0.667	1.167	1.262	0.875	0.496	1.72
C2040LSRP	R	1.00	0.625	0.312		0.060	0.472	0.156	0.380	0.909	0.965	0.906	0.512	-
C2052LSRP	R	1.25	0.750	0.375		0.080	0.591	0.200	0.469	0.996	1.063	1.063	0.512	-
C2062LSRP	R	1.50	0.875	0.500		0.125	0.677	0.234	0.667	1.167	1.262	1.181	0.496	-

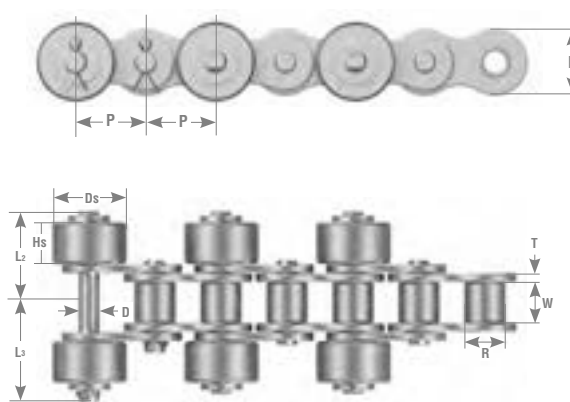
# OUTBOARD ROLLER LAMBDA<sup>®</sup> CHAINS



**Type I Staggered Installation**



**Type II Crosswise Installation**



## RS Chain with Steel and Plastic Outboard Rollers Chain without Brake

Chain Number		Pitch	Roller Dia.	Width Between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight	Approx. Weight
Plastic Roller	Steel Roller	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	Steel	Plastic
40LPSR	40LSR	0.500	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	1.120	0.63
50LPSR	50LSR	0.625	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	1.630	0.95
60LPSR	60LSR	0.750	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	2.440	1.42

## Chain with Brake

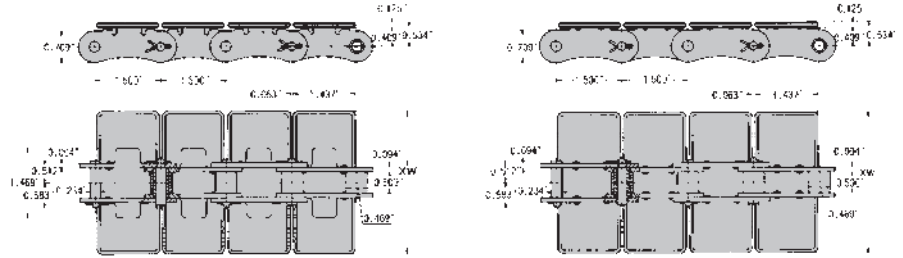
Chain Number	Pitch	Roller Dia.	Width Between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight
	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	
40LSRP	0.500	0.312	0.312	0.059	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.63
50LSRP	0.625	0.400	0.375	0.079	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.95
60LSRP	0.750	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	1.42

# TOP PLATE LAMBDA® CHAINS

## TS Top Chain Linear Movement - Lube Free Style

Tsubaki TS Top Chain consists of top plates made of 430 stainless steel, and lube free Lambda® roller chain identical to A2060 (See Specialty Chains section for dimensional information on A2060 chain). The top plates are projection welded to the link plate of the chain. The welded strength provides reliable operation. TS Top Chain is specially designed for use in packaging, bottling, and labeling equipment.

- Installation horizontally over vertical sprockets.
- Chain can be disconnected at any joint for easy installation and maintenance
- Provides dependable trouble-free service
- Wear-resistant
- Sprockets for C2060H chain can be used.

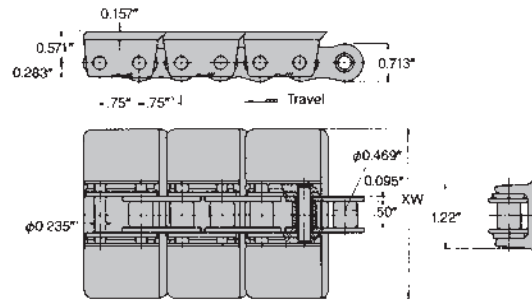


## Stainless Steel Top Plate TS Series Lambda®

Chain Number		Top Plate Width	Approximate Weight Lbs/Ft		Maximum Allowable Load
P	PA	XW	P	PA	
TS550NP-P-LAMBDA	TS550NP-PA-LAMBDA	2.16	1.7	1.9	660
TS635NP-P-LAMBDA	TS635NP-PA-LAMBDA	2.50	1.8	2.0	660
TS762NP-P-LAMBDA	TS762NP-PA-LAMBDA	3.00	2.0	2.2	660
TS826NP-P-LAMBDA	TS826NP-PA-LAMBDA	3.25	2.2	2.4	660
TS950NP-P-LAMBDA	TS950NP-PA-LAMBDA	3.74	2.4	2.6	660
TS1016NP-P-LAMBDA	TS1016NP-PA-LAMBDA	4.00	2.5	2.7	660
TS1100NP-P-LAMBDA	TS1100NP-PA-LAMBDA	4.33	2.6	2.8	660
TS1143NP-P-LAMBDA	TS1143NP-PA-LAMBDA	4.50	2.7	2.9	660
TS1270NP-P-LAMBDA	TS1270NP-PA-LAMBDA	5.00	2.9	3.1	660
TS1524NP-P-LAMBDA	TS1524NP-PA-LAMBDA	6.00	3.3	3.5	660
TS1905NP-P-LAMBDA	TS1905NP-PA-LAMBDA	7.50	3.9	4.1	660

## TN Top Chain Linear Movement - Lube Free Lambda® Style

Tsubaki TN Top chain consists of polyacetal resin top plates snapped onto special chain identical in size to 60 roller chain. The chain is available in lube-free Lambda® chain. The top plate can be correctly and firmly snapped on to the special pins and the chain with ease.



## TN, TN-NP, TN-SS

Top plates are polyacetal, chains are lube-free Lambda®

Chain Number	Top Plate Width	Approximate Weight Lbs/Ft	Maximum Allowable Load
	XW		
TN826NP-LAMBDA	3.25	1.41	1,410
TN1016NP-LAMBDA	4.00	1.48	1,410
TN1143NP-LAMBDA	4.50	1.55	1,410
TN1270NP-LAMBDA	5.00	1.61	1,410
TN1905NP-LAMBDA	7.50	1.88	1,410



# CORROSION & HEAT RESISTANT CHAINS

For the best defense against corrosion, Tsubaki offers a full line of options for the toughest, harshest and most-corrosive applications. Nickel Plated and Neptune® along with a full line of Stainless chains that include 304, 316, 600 and Super Stainless™. In harsh environments where lubrication is a challenge, Tsubaki Titan® chain for improved wear life.



**TSUBAKI®**

# CORROSION RESISTANCE GUIDE

Corrosion resistance varies depending on application conditions. The table listed below should not be considered a guarantee of corrosion resistance and performance. Using this chart as a reference is suggested. Please check the corrosion resistance of the chain in advance according to the actual operating conditions determining chain type.

- 1 - Sufficient Corrosion Resistance
- 2 - Corrosion resistance to some applications
- 3 - No corrosion resistance

Substance	Concentration	Temp (F)	SS	AS	NS	PC	Super SS
Acetic Acid	10%	68	1	1	1	1	1
Acetone		68	1	1	1	1	1
Alcohol			1	1	1	1	1
Aluminum Sulfate	Saturation	68	1	3	1	NA	3
Ammonia Water		68	1	1	1	1	1
Ammonium Chloride	50%	Boiling	2	3	1	NA	3
Ammonium Nitrate		Boiling	1	1	1	2	1
Ammonium Sulfate	Saturation	Boiling	1	2	1	NA	2
Beer		68	1	1	1	1	1
Benzene		68	1	1	1	1	1
Boric Acid	50%	Boiling	1	1	1	NA	1
Butyric Acid		68	1	1	1	1	1
Calcium Chloride	Saturation	68	2	3	1	2	3
Calcium Hydroxide	20%	Boiling	1	1	1	1	1
Calcium Hydrochlorite	11-14%	68	1	3	1	3	3
Carbolic Acid			1	1	1	3	1
Carbon Tetrachlorite (dry)		68	1	1	1	1	1
Chlorinated Water			3	3	1	3	3
Chlorine Gas (dry)		68	2	2	2	NA	2
Chlorine Gas (moist)		68	3	3	2	NA	3
Chromic Acid	5%	68	1	1	1	3	2
Citric Acid	50%	68	1	1	1	NA	1
Coffee		Boiling	1	1	1	1	1
Creosote		68	1	1	1	NA	1
Developing Solution		68	1	1	1	1	1
Ethyl Ether		68	1	1	1	1	1
Ferric Acid	50%	68	1	1	1	3	1
Ferric Chloride	5%	68	2	3	2	NA	3
Formalin	40%	68	1	1	1	NA	1
Formic Acid	50%	68	1	1	1	3	2
Fruit Juice		68	1	1	1	1	1
Gasoline		68	1	1	1	1	1
Glycerol		68	1	1	1	1	1
Honey			1	1	1	1	1
Hydrochloric Acid	2%	68	3	3	3	3	2
Hydrogen Peroxide	30%	68	2	1	1	1	2
Hydrogen Sulfide (dry)			1	1	1	1	1
Hydrogen Sulfide (wet)			3	3	3	3	3
Hydroxybenzene		68	1	1	1	3	1
Kerosene		68	1	1	1	NA	1
Ketchup		68	1	1	1	1	1
Lactic Acid	10%	68	1	2	1	1	2
Lard			1	1	1	NA	1
Linseed Oil	100%	68	1	2	1	1	2
Malic Acid	50%	Boiling	1	1	1	1	1
Mayonnaise		68	1	2	1	1	2
Milk		68	1	1	1	1	1
Nitric Acid	5%	68	1	2	1	3	2
Nitric Acid	65%	68	1	3	1	3	3

Substance	Concentration	Temp (F)	SS	AS	NS	PC	Super SS
Nitric Acid	65%	Boiling	2	3	2	3	3
Oil (Plant/Mineral)		68	1	1	1	1	1
Oleic Acid		68	1	1	1	1	1
Oxalic Acid	10%	68	1	2	1	NA	2
Paraffin		68	1	1	1	1	1
Peracetic Acid			1	1	1	NA	1
Petroleum		68	1	1	1	1	1
Phosphate			1	1	1	NA	1
Phosphoric Acid	5%	68	1	2	1	3	2
Phosphoric Acid	10%	68	2	2	2	3	2
Picric Acid	Saturation	68	1	1	1	NA	1
Potassium	Saturation	68	1	2	1	NA	2
Potassium Bichromate	10%	68	1	1	1	1	1
Potassium Chloride	Saturation	68	1	2	1	NA	2
Potassium Hydroxide	20%	68	1	1	1	1	1
Potassium Nitrate	25%	68	1	1	1	1	1
Potassium Nitrate	25%	Boiling	1	3	1	NA	3
Potassium Permanganate	Saturation	68	1	1	1	NA	1
Sal Ammoniac	50%	Boiling	2	3	1	NA	3
Sea-Water		68	2	3	1	2	3
Soap-and-Water Solution		68	1	1	1	1	1
Sodium Carbonate	Saturation	Boiling	1	1	1	NA	1
Sodium Chloride	5%	68	1	2	1	1	2
Sodium Cyanide		68	1	NA	1	NA	NA
Sodium Hydrocarbonate		68	1	1	1	1	1
Sodium Hydroxide	25%	68	1	1	1	1	1
Sodium Hypochlorite	10%	68	3	3	1	3	3
Sodium Perchlorate	10%	Boiling	1	3	1	NA	3
Sodium Sulfate	Saturation	68	1	1	1	NA	1
Sodium Thiosulfate	25%	Boiling	1	1	1	NA	1
Soft Drink		68	1	1	1	1	1
Stearic Acid	100%	Boiling	3	3	1	3	3
Sugar Solution		68	1	1	1	1	1
Sulfuric Acid	5%	68	3	3	1	3	3
Sulfur Dioxide		68	1	3	1	NA	3
Synthetic Detergent			1	1	1	1	1
Syrup			1	1	1	1	1
Tartaric Acid	10%	68	1	1	1	1	1
Turpentine		95	1	1	1	NA	1
Varnish			1	1	1	NA	1
Vegetable Juice		68	1	1	1	1	1
Vinegar		68	2	3	1	2	3
Water			1	1	1	1	1
Whiskey		68	1	1	1	1	1
Wine		68	1	1	1	1	1
Zinc Chloride	50%	68	2	3	2	2	3
Zinc Sulfate	25%	68	1	1	1	NA	1

# CORROSION RESISTANT GUIDE

## Materials of Component Parts

	Link Plate	Pin	Bushing	Roller
<b>304 (SS)</b>	AISI304	AISI304	AISI304	AISI304
<b>316 (NS)</b>	AISI316	AISI316	AISI304	AISI316
<b>600 (AS)</b>	AISI304	600 Series HT*	600 Series HT*	600 Series HT*
<b>Super SS</b>	Proprietary	Proprietary	Proprietary	Proprietary

\*PH - Precipitation Hardened

600 Series includes 17-4PH, 17-8PH, 13-7PH. Each has comparable corrosion resistance

Double pitch oversized rollers will be AISI304

## Performance of Anti-Corrosive Chains

	Corrosion Resistance	Temperature Resistance	Magnetism	Wear Resistance
<b>Nickel Plated</b>	Acceptable for outdoor and decorative applications	(14°F) to (302°F)	Magnetic	Excellent
<b>Neptune®</b>	Excellent for outdoors, exposure to rain and seawater	(14°F) to (302°F)	Magnetic	Excellent
<b>600 (AS) Series</b>	Good for general acid, alkali and water	(-40°F) to (750°F) (Never use over 930°F)	Magnetic	Good
<b>304 (SS) Series</b>	Good for general acid, alkali and water	(-40°F) to (750°F) (Never use below -270°F or above 1,300°F)	Slightly magnetic due to cold forming parts	Fair
<b>316 (NS) Series</b>	Superior in corrosion protection to SS and AS Chains	(-40°F) to (750°F) (Never use below -420°F or above 1,500°F)	Non-Magnetic	Fair
<b>Super Stainless™</b>	Carbon Steel Strength with 600 Series Corrosion Resistance	(-40°F) to (750°F) (Never use above 930°F)	Magnetic	Excellent

## Chain Selection

General selection is based on bearing pressure between the pin and bushing. Anti-corrosive roller chains are normally intended to be used at a slow speed without lubrication. Chain selection should be made based on the bearing pressure as shown below.

	Maximum Allowable Bearing Pressure Between Pin and Bushing	Maximum Operating Speed
<b>304 (SS)</b>	2,131 psi	230 ft/min
<b>316 (NS)</b>	1,420 psi	230 ft/min
<b>600 (AS)</b>	1,420 psi	230 ft/min

Chain selection can be made using the following formula

Maximum allowable load or maximum bearing pressure can be doubled only when the chain is used in group 1 of the Corrosion Resistance Guide and properly lubricated

## Maximum Allowable Load

The chains maximum allowable load can be obtained by the formula:

(Maximum allowable bearing pressure) • (Bearing area between pin and bushing)

Chain	AS Series	SS Series	NS Series	Super SS
25		26	26	
35	90	60	60	
40	150	99	99	810*
50	231	154	154	1,430*
60	346	231	231	1,980*
80	596	397	397	3,300*
100		573	573	5,070*

\*NOTE - If chain is not lubricated, MAL is 1/3 of published value.



# CORROSION RESISTANT GUIDE

## Service Factor

Type of Impact	Service Factor
Smooth Transmission	1.0
Transmission with some impact	1.3
Transmission with large impact	1.5

## Speed Coefficient

Chain Speed	Speed Coefficient
0-50 Ft/min	1.0
50-100 ft/min	1.2
100-160 ft/min	1.4
160-230 ft/min	1.6

## Temperature Factor

Temperature	AS Series	SS Series	NS Series	Super SS
(-270°F)	X	X	X	X
(-270°F to -40°F)	X	1.0	1.0	X
(-40°F to 500°F)	1.0	1.0	1.0	1.0
(500°F to 750°F)	1.0	1.0	1.0	1.5
(750°F to 930°F)	1.8	1.2	1.0	1.8
(930°F to 1,100°F)	X	1.5	1.2	X
(1,100°F to 1,300°F)	X	1.8	1.5	X
(1,300°F to 1,500°F)	X	X	2.0	X
1,500°F to *	X	X	X	X

X: Not suggested

Use in temperatures exceeding 750F requires increased clearances to accommodate thermal expansion. Consult Tsubaki prior to ordering.

## RPM Factor Kn factor Kz

RPM Kn	RPM Factor Kn
Less than 27	1.00
27 or more, less than 37	1.03
37 or more, less than 50	1.07
50 or more, less than 70	1.10
70 or more, less than 100	1.14
100 or more, less than 150	1.19
150 or more, less than 300	1.27
300 or more, less than 500	1.34
500 or more, less than 1,000	1.44
1,000 or more, less than 2,000	1.54
2,000 or more, less than 4,000	1.65

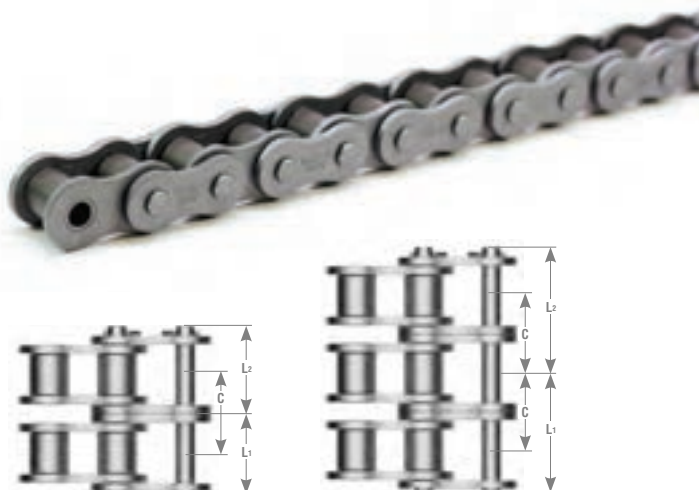
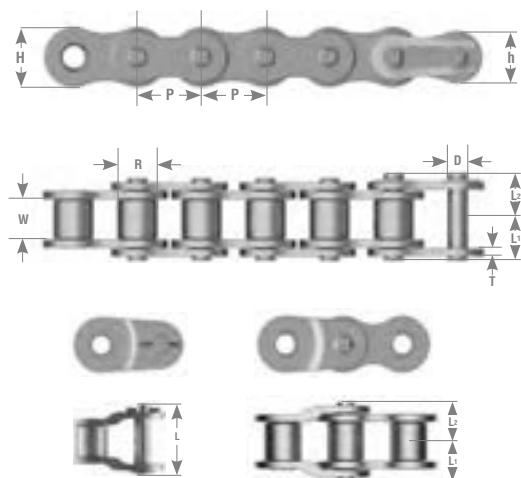
Number of Teeth Kz	Teeth factor Kz
9 or more, less than 12	1.16
12 or more, less than 15	1.14
15 or more, less than 18	1.12
18 or more, less than 24	1.10
24 or more, less than 30	1.08
30 or more, less than 38	1.06
38 or more less than 47	1.04
47 or more less than 60	1.02
60 or higher	1.00

## Chain Selection Method

Chain Selection can be made using the following formula

$$\text{Maximum Chain Tension} \times \text{Service Factor} \times \text{RPM Kn} \times \text{Temperature Factor} \times \text{Tooth Factor (Kz)} \leq \text{Maximum Allowable Load}$$

# SINGLE PITCH NEPTUNE® CHAINS



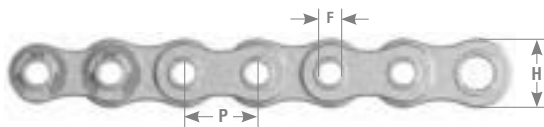
## Single Pitch Neptune®

Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Link Plate			Pin			Transverse Pitch C	Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				T	H	h	L1	L2	D				
<b>SINGLE STRAND</b>													
▲ 35NEPRB	0.375	0.200	0.188	0.050	0.354	0.307	0.23	0.270	0.141	NA	2,530	480	0.22
40NEPRB	0.500	0.312	0.312	0.060	0.472	0.409	0.325	0.392	0.156	NA	4,290	810	0.43
50NEPRB	0.625	0.400	0.375	0.080	0.591	0.512	0.406	0.472	0.200	NA	7,050	1,430	0.70
60NEPRB	0.750	0.469	0.500	0.094	0.713	0.614	0.506	0.581	0.234	NA	9,920	1,980	1.03
80NEPRB	1.000	0.625	0.625	0.125	0.949	0.819	0.640	0.758	0.312	NA	17,640	3,300	1.79
100NEPRB	1.250	0.750	0.750	0.156	1.185	1.024	0.778	0.900	0.375	NA	26,460	5,070	2.68
120NEPRB	1.500	0.875	1.000	0.187	1.425	1.228	0.980	1.138	0.437	NA	37,480	6,830	3.98
140NEPRB	1.750	1.000	1.000	0.219	1.661	1.433	1.059	1.248	0.500	NA	48,510	9,040	5.03
160NEPRB	2.000	1.125	1.250	0.250	1.898	1.638	1.254	1.451	0.562	NA	62,830	11,900	6.79
<b>DOUBLE STRAND</b>													
40-2NEPRB	0.500	0.312	0.312	0.060	0.472	0.409	0.608	0.675	0.156	0.566	8,850	1,370	0.85
50-2NEPRB	0.625	0.400	0.375	0.080	0.591	0.512	0.762	0.833	0.200	0.713	14,100	2,430	1.39
60-2NEPRB	0.750	0.469	0.500	0.094	0.713	0.614	0.955	1.033	0.234	0.897	19,840	3,370	2.04
80-2NEPRB	1.000	0.625	0.625	0.125	0.949	0.819	1.217	1.355	0.312	1.153	35,300	5,620	3.54
100-2NEPRB	1.250	0.750	0.750	0.156	1.185	1.024	1.484	1.606	0.375	1.408	52,910	8,620	5.27
120-2NEPRB	1.500	0.875	1.000	0.187	1.425	1.228	1.874	2.031	0.437	1.789	74,960	11,610	7.86
140-2NEPRB	1.750	1.000	1.000	0.219	1.661	1.433	2.022	2.211	0.500	1.924	97,000	15,370	9.97
<b>TRIPLE STRAND</b>													
40-3NEPRB	0.500	0.312	0.312	0.060	0.472	0.409	0.892	0.951	0.156	0.566	12,870	2,020	1.28
50-3NEPRB	0.625	0.400	0.375	0.080	0.591	0.512	1.118	1.189	0.200	0.713	21,150	3,580	2.08
60-3NEPRB	0.750	0.469	0.500	0.094	0.713	0.614	1.404	1.502	0.234	0.897	29,760	4,960	3.05
80-3NEPRB	1.000	0.625	0.625	0.125	0.949	0.819	1.795	1.910	0.312	1.530	52,900	8,270	5.30
100-3NEPRB	1.250	0.750	0.750	0.156	1.185	1.024	2.191	2.313	0.375	1.408	79,370	12,680	7.91

Note: 1. "RB" designation indicates 10" box riveted. Coated, cut-to-length and reel stock available upon request.

2. Sizes 35-60 Supplied with spring clip style connecting links. 80-160 come coated style.

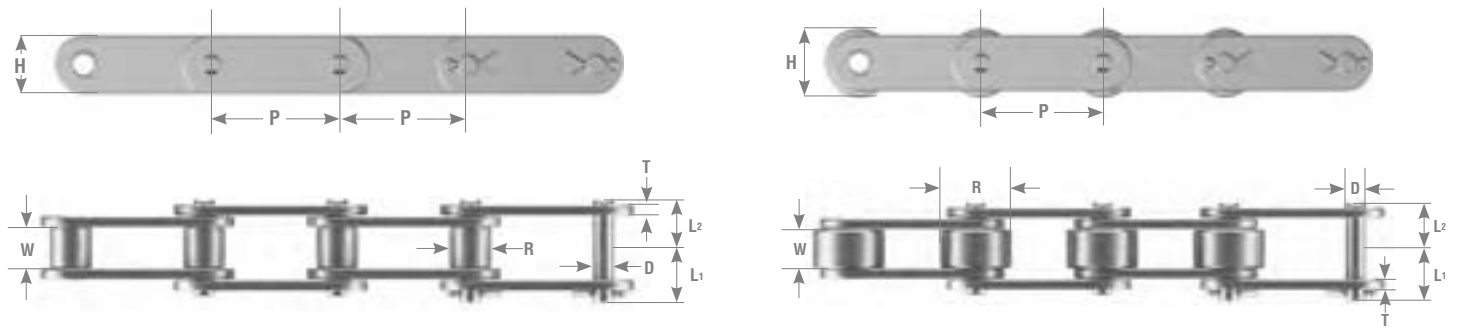
▲ 3. 35 Chain is roller less (bushing only).



## Neptune® Hollow Pin

Tsubaki Chain No.	Pitch P	Width Between Bushing Link Plates W	Bushing Dimensions			Hollow Pin		Link Plate		Average Tensile Strength	Maximum Allowable Load	Approx. Weight lbs/ft.
			B	D	F	L1	L2	H	T			
40NEPHPB	0.500	0.312	0.312	0.224	0.157	0.315	0.379	0.472	0.060	2,430	397	0.36
50NEPHPB	0.625	0.375	0.400	0.284	0.202	0.396	0.459	0.591	0.080	4,410	705	0.58
60NEPHPB	0.750	0.500	0.469	0.330	0.236	0.494	0.561	0.713	0.094	5,950	948	0.85
80NEPHPB	1.000	0.625	0.625	0.448	0.316	0.640	0.701	0.949	0.125	10,800	1,720	1.60

# DOUBLE PITCH NEPTUNE® CHAINS



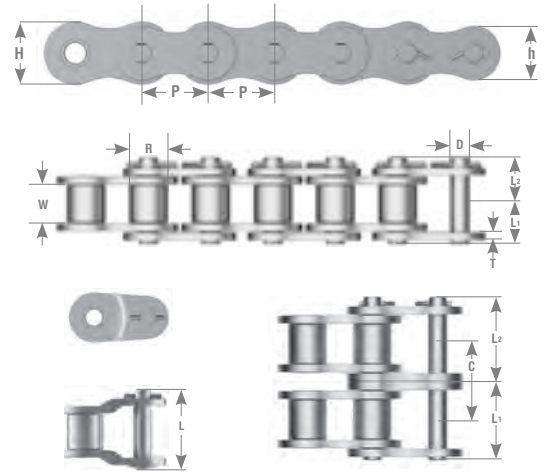
## Double Pitch Neptune®

Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Pin			Link Plate		Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				L1	L2	D	H	T			
<b>STANDARD ROLLER</b>											
<b>C2040NEPRB</b>	1.000	0.312	0.312	0.325	0.380	0.156	0.472	0.060	3,750	590	0.34
<b>C2050NEPRB</b>	1.250	0.400	0.375	0.406	0.469	0.200	0.591	0.080	6,170	970	0.56
<b>C2060HNEPRB</b>	1.500	0.469	0.500	0.575	0.646	0.234	0.677	0.125	9,040	1,410	1.01
<b>C2080HNEPRB</b>	2.000	0.625	0.625	0.720	0.823	0.312	0.906	0.156	15,400	2,400	1.78
<b>OVERSIZED ROLLER</b>											
<b>C2042NEPRB</b>	1.000	0.625	0.312	0.325	0.380	0.156	0.472	0.060	3,740	590	0.58
<b>C2052NEPRB</b>	1.250	0.750	0.375	0.406	0.469	0.200	0.591	0.080	6,170	970	0.87
<b>C2062HNEPRB</b>	1.500	0.875	0.500	0.573	0.646	0.234	0.677	0.125	9,040	1,410	1.47
<b>C2082HNEPRB</b>	2.000	1.125	0.625	0.720	0.823	0.312	0.906	0.156	15,400	2,400	2.47

Note:

1. "RB" designation indicates 10' box riveted. Cotted, cut-to-length and reel stock available upon request.
2. C2040NT-C2060HNT are provided with spring clip connecting links. C2080HNT connecting links are cotted style.

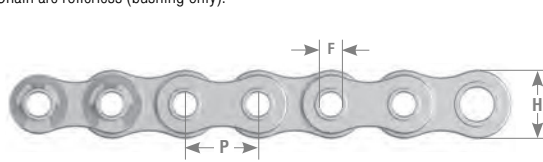
# NICKEL PLATED CHAINS



## Nickel-Plated Chain

Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin			Link Plate			Transverse Pitch	Average Tensile Strength	Max. Allowable LBS.	Approx. Weight lbs/ft.
Chain No.	P	R	W	D	L1	L2	T	H	h	C			
<b>SINGLE STRAND</b>													
25NPRB	0.250	0.130	0.125	0.091	0.150	0.189	0.030	0.230	0.199	NA	1,050	140	0.094
35NPRB	0.375	0.200	0.188	0.141	0.230	0.270	0.050	0.354	0.307	NA	2,530	418	0.220
40NPRB	0.500	0.312	0.312	0.156	0.325	0.392	0.060	0.472	0.409	NA	4,290	706	0.430
41NPRB	0.500	0.306	0.251	0.141	0.266	0.312	0.050	0.382	0.331	NA	2,640	370	0.270
50NPRB	0.625	0.400	0.375	0.200	0.406	0.472	0.080	0.591	0.512	NA	7,050	1,212	0.700
60NPRB	0.750	0.469	0.500	0.234	0.506	0.581	0.094	0.713	0.614	NA	9,920	1,630	1.030
80NPRB	1.000	0.625	0.625	0.312	0.640	0.758	0.125	0.949	0.819	NA	17,640	2,855	1.790
100NPRB	1.250	0.750	0.750	0.375	0.778	0.900	0.156	1.185	1.024	NA	26,640	4,294	2.680
120NPRB	1.500	0.875	1.000	0.437	0.980	1.138	0.187	1.425	1.228	NA	37,480	5,733	3.980
<b>DOUBLE STRAND</b>													
25-2NPRB	0.250	0.130	0.125	0.091	0.276	0.315	0.030	0.230	0.199	0.252	2,100	238	0.181
35-2NPRB	0.375	0.200	0.188	0.141	0.429	0.469	0.050	0.354	0.307	0.399	5,060	711	0.460
40-2NPRB	0.500	0.312	0.312	0.156	0.608	0.675	0.060	0.472	0.409	0.566	8,580	1,200	0.850
50-2NPRB	0.625	0.400	0.375	0.200	0.762	0.833	0.080	0.591	0.512	0.713	14,100	2,000	1.390
60-2NPRB	0.750	0.469	0.500	0.234	0.955	1.033	0.094	0.713	0.614	0.897	19,840	2,771	2.040
80-2NPRB	1.000	0.625	0.625	0.312	1.217	1.335	0.125	0.949	0.819	1.153	35,280	4,854	3.540
100-2NPRB	1.250	0.750	0.750	0.375	1.484	1.606	0.156	1.185	1.024	1.408	53,280	7,300	5.270

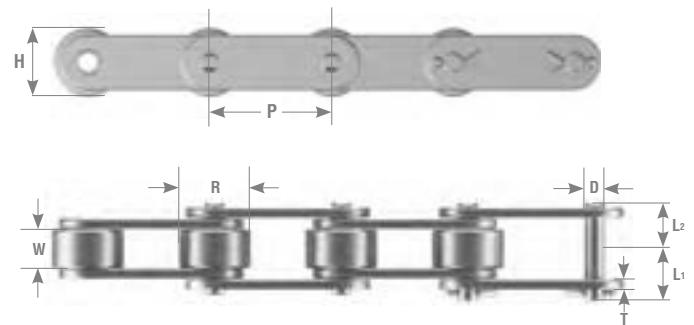
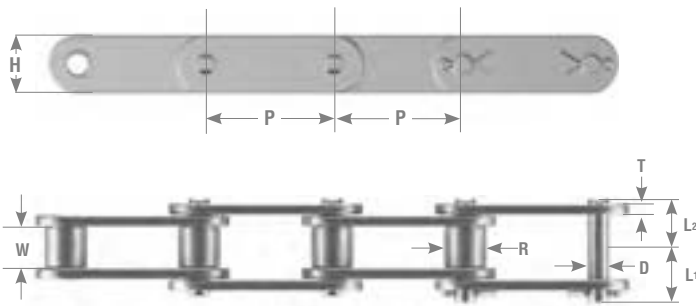
- Note:
- "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.
  - Sizes 25-60 Supplied with spring clip style connecting links. 80-120 come cottered style.
  - 25 & 35 Chain are rollerless (bushing only).



## Nickel-Plated Hollow Pin Chain

Tsubaki	Pitch	Width Between Bushing Link Plates	Bushing Dimensions			Hollow Pin		Link Plate		Average Tensile Strength	Maximum Allowable Load	Approx. Weight lbs/ft.
Chain No.	P	W	B	D	F	L1	L2	H	T			
40NPHPB	0.500	0.312	0.312	0.224	0.157	0.315	0.374	0.472	0.060	2,430	397	0.36
50NPHPB	0.625	0.375	0.400	0.284	0.202	0.396	0.459	0.591	0.080	4,410	705	0.58
60NPHPB	0.750	0.500	0.469	0.330	0.236	0.494	0.561	0.713	0.094	5,950	948	0.85
80NPHPB	1.000	0.625	0.625	0.448	0.316	0.640	0.701	0.949	0.125	10,800	1,720	1.60

# DOUBLE PITCH NICKEL PLATED CHAINS



## Double Pitch Nickel-Plated

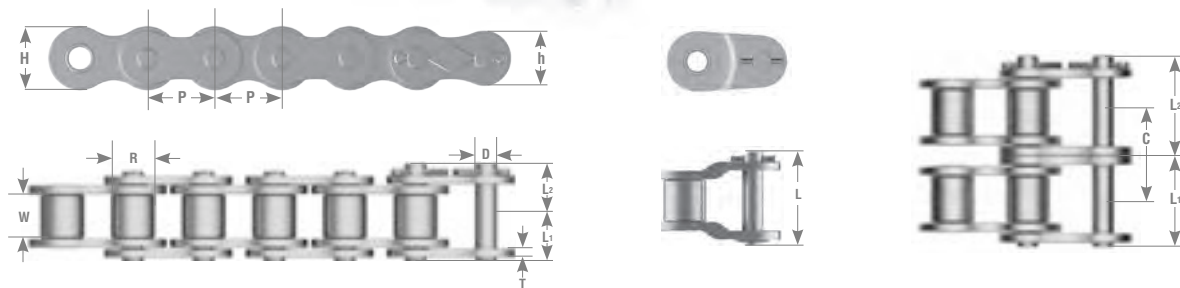
Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Pin			Link Plate		Average Tensile Strength	Approx. Weight lbs/ft.
				D	L1	L2	T	H		
<b>STANDARD ROLLER</b>										
C2040NPRB	1.000	0.312	0.312	0.156	0.325	0.380	0.060	0.472	4,290	0.34
C2050NPRB	1.250	0.400	0.375	0.200	0.406	0.468	0.080	0.591	7,050	0.56
C2060HNPRB	1.500	0.469	0.500	0.234	0.573	0.652	0.125	0.677	9,920	1.01
C2080HNPRB	2.000	0.625	0.625	0.312	0.720	0.823	0.156	0.906	17,640	1.78
<b>OVERSIZED ROLLER</b>										
C2042NPRB	1.000	0.625	0.312	0.156	0.325	0.380	0.060	0.472	4,290	0.58
C2052NPRB	1.250	0.750	0.375	0.200	0.406	0.469	0.080	0.591	7,050	0.87
C2062HNPRB	1.500	0.875	0.500	0.234	0.573	0.652	0.125	0.677	9,920	1.47
C2082HNPRB	2.000	1.125	0.625	0.312	0.720	0.823	0.156	0.906	17,640	2.47

Note:

1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.
2. C2040NP-C2060HNP are provided with spring clip connecting links. C2080HNP connecting links are coated style.

# SINGLE PITCH STAINLESS STEEL CHAINS

## 304 SS Series, 316 NS Series & 600 AS Series

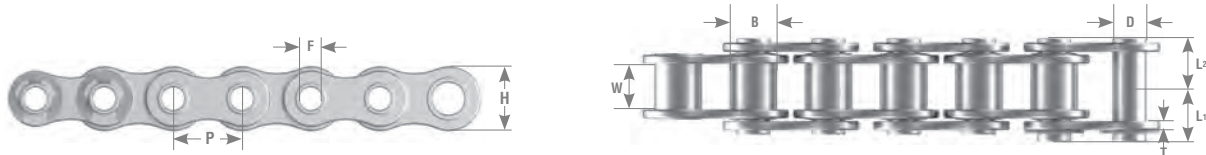


### Single Pitch Stainless Steel

Tsubaki			Pitch	Roller Dia.	Width Between Roller Link Plates	Link Plate		Pin Dia.	SS - NS Pin		AS Pin		Transverse Pitch	Maximum Allowable Load	Maximum Allowable Load	Approx. Weight lbs/ft.
SS (304)	AS (600)	NS (316)	P	R	W	T	H	D	L1	L2	L1	L2	C	SS-NS	AS	
<b>SINGLE STRAND</b>																
25SSRB			0.250	0.130	0.125	0.030	0.230	0.090	0.150	0.189			NA	26		0.09
35SSRB ▲	35ASRB		0.375	0.200	0.188	0.050	0.354	0.141	0.238	0.270	0.238	0.281	NA	60	91	0.22
40SSRB ▲	40ASRB ▲	40NSRB	0.500	0.312	0.312	0.060	0.472	0.156	0.325	0.380	0.325	0.392	NA	99	150	0.43
50SSRB	50ASRB	50NSRB	0.625	0.400	0.375	0.080	0.591	0.200	0.406	0.472	0.406	0.472	NA	154	231	0.70
60SSRB	60ASRB	60NSRB	0.750	0.469	0.500	0.094	0.713	0.234	0.506	0.581	0.506	0.581	NA	231	346	1.03
80SSRB	80ASRB	80NSRB	1.000	0.625	0.625	0.125	0.949	0.312	0.640	0.766	0.640	0.766	NA	397	596	1.79
100SSRB			1.250	0.750	0.750	0.156	1.185	0.375	0.778	0.900			NA	573		2.69
120SSRB			1.500	0.875	1.000	0.197	1.425	0.437	1.014	1.173			NA	859		3.98
<b>DOUBLE STRAND</b>																
25-2SSRB			0.250	0.130	0.125	0.030	0.230	0.090	0.276	0.315			0.252			0.19
35-2SSRB			0.375	0.200	0.188	0.050	0.354	0.141	0.429	0.469			0.399			0.46
40-2SSRB			0.500	0.312	0.312	0.060	0.472	0.156	0.600	0.683			0.567	198		0.85
50-2SSRB			0.625	0.400	0.375	0.080	0.591	0.200	0.754	0.837			0.713	308		1.39
60-2SSRB			0.750	0.469	0.500	0.094	0.713	0.234	0.955	1.030			0.898	463		2.04
80-2SSRB			1.000	0.625	0.625	0.125	0.949	0.312	1.217	1.335			1.154	794		3.54
100-2SSRB			1.250	0.750	0.750	0.156	1.185	0.375	1.484	1.606			1.409	1,147		5.27

▲ Indicates rollerless.

NOTE: 1. Attachment chain is available in attachment chain section.

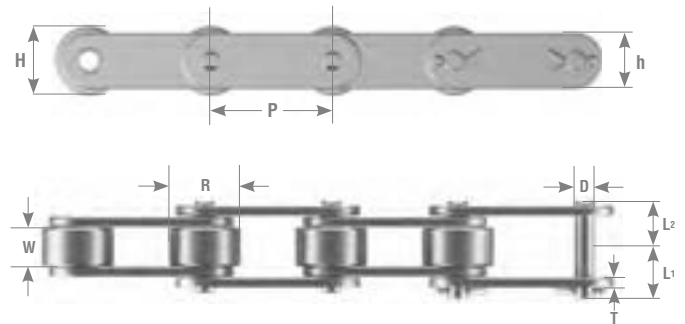
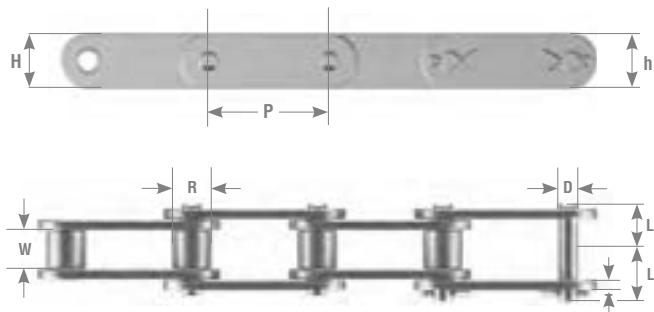


### Stainless Steel Hollow Pin

Tsubaki	Pitch	Width Between Bushing Link Plates	Bushing Dimensions			Hollow Pin		Link Plate		Maximum Allowable Load	Approx. Weight lbs/ft.
Chain No.	P	W	B	D	F	L1	L2	H	T		
40SSHPB	0.500	0.312	0.312	0.224	0.157	0.315	0.374	0.472	0.060	99	0.35
50SSHPB	0.625	0.375	0.400	0.284	0.202	0.396	0.459	0.591	0.080	155	0.56
60SSHPB	0.750	0.500	0.469	0.330	0.236	0.494	0.561	0.713	0.094	231	0.82
80SSHPB	1.000	0.625	0.625	0.448	0.316	0.640	0.701	0.949	0.125	398	1.58

# DOUBLE PITCH STAINLESS STEEL CHAINS

## 304 SS Series, 316 NS Series & 600 AS Series



### Double-Pitch Stainless Steel

Tsubaki	AS (600)	Pitch	Roller Dia.	Width Between Roller Link Plates	Pin			Link Plate		Maximum Allowable Load (lbs)	Maximum Allowable Load (lbs)	Approx. Weight lbs/ft.	No. of Links per 10 ft.
					D	L1	L2	T	H				
SS (304)	AS (600)	P	R	W	D	L1	L2	T	H	SS (304)	AS (600)		
<b>STANDARD ROLLER</b>													
C2040SSRB	C2040ASRB	1.000	0.312	0.312	0.156	0.325	0.392	0.060	0.472	99	150	0.340	120
C2050SSRB	C2050ASRB	1.250	0.400	0.375	0.200	0.406	0.472	0.080	0.591	154	231	0.560	96
C2060HSSRB	C2060HASRB	1.500	0.469	0.500	0.234	0.573	0.652	0.125	0.677	231	346	1.010	80
C2080HSSRB	C2080HASRB	2.000	0.625	0.625	0.312	0.720	0.823	0.156	0.906	397	596	1.620	60
<b>OVERSIZED ROLLER</b>													
C2042SSRB	C2042ASRB	1.000	0.625	0.312	0.156	0.325	0.392	0.060	0.472	99	150	0.580	120
C2052SSRB	C2052ASRB	1.250	0.750	0.375	0.200	0.406	0.472	0.080	0.591	154	231	0.870	96
C2062HSSRB	C2062HASRB	1.500	0.875	0.500	0.234	0.573	0.652	0.125	0.677	231	346	1.470	80
C2082HSSRB	C2082HASRB	2.000	1.125	0.625	0.312	0.720	0.823	0.156	0.906	397	596	2.370	60

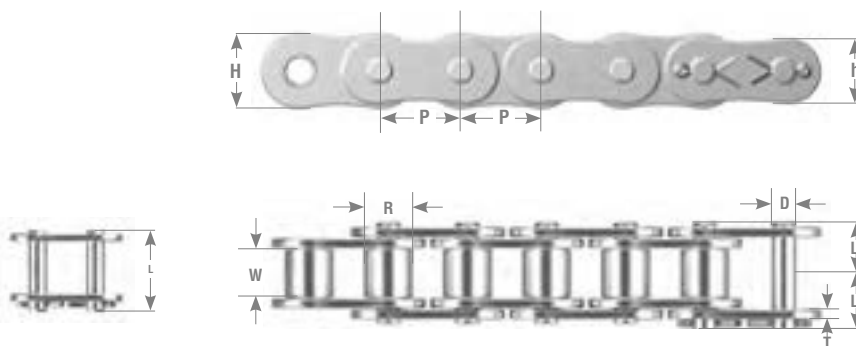
Note: Material of oversized roller is 304SS.  
Attachment chain specifications in attachment chain section.

# SUPER STAINLESS™ STEEL CHAINS



## Features and Benefits Include:

1. Higher side-bar waist for improved fatigue strength
2. Comparable strength to standard ANSI carbon steel chains
3. Hardened stainless components for extended wear life and improved performance
4. Temperature range from - 40°F to 750°F



Tsubaki	Pitch	Roller Dia.	Width Between Roller Link Plates	Link Plate			Pin				Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.	No. of Links per 10 ft.
				T	H	h	L1	L2	L1+L2	D				
Chain No.	P	R	W	T	H	h	L1	L2	L1+L2	D				
<b>40SUPERSSRB</b>	0.500	0.312	0.312	0.060	0.472	0.409	0.325	0.392	0.717	0.156	4,290	810	0.47	240
<b>50SUPERSSRB</b>	0.625	0.400	0.375	0.080	0.591	0.512	0.406	0.469	0.874	0.200	7,050	1,430	0.76	192
<b>60SUPERSSRB</b>	0.750	0.469	0.500	0.094	0.713	0.614	0.506	0.581	1.087	0.234	9,920	1,980	1.12	160
<b>80SUPERSSRB</b>	1.000	0.625	0.625	0.125	0.949	0.819	0.640	0.758	1.398	0.312	17,640	3,300	1.95	120
<b>100SUPERSSRB</b>	1.250	0.750	0.750	0.156	1.185	1.024	0.778	0.900	1.678	0.375	26,460	5,070	2.68	96

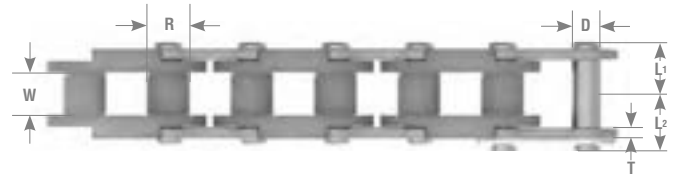
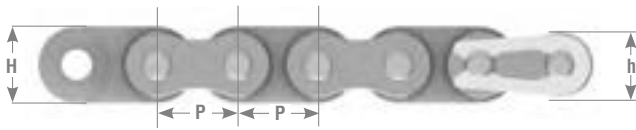
Note:

1. "RB" designation indicates 10' box riveted. Coated, cut-to-length and reel stock available upon request.
2. Larger pitch, conveyor and attachment chains available. Consult factory.
3. Sizes 40-60 supplied with clip-style connecting links. Size 80 and 100 supplied in coated style connecting links.
- \*4. MAL Ratings in lubricated conditions only.



# POLY-STEEL CHAINS

Tsubaki Poly-Steel chains are made to exacting specifications from polyacetal and stainless steel. The combination of polyacetal inner links and 304 stainless steel pins and outer link plates effectively incorporate the advantages of both materials into one chain. Tsubaki Poly-steel chains can be used in both driving and conveying applications.



Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Link Plate				Pin			Maximum Allowable Load*	Approx. Weight lbs/ft.	Color
				T1	T2	H	h	D	L1	L2			
<b>25PC</b>	0.250	0.130	0.125	0.030	0.051	0.236	0.199	0.091	0.177	0.217	18	0.06	White
<b>35PC</b>	0.375	0.200	0.188	0.050	0.087	0.354	0.307	0.141	0.270	0.309	40	0.15	White
<b>40PC</b>	0.500	0.312	0.312	0.060	0.060	0.472	0.409	0.156	0.325	0.392	99	0.26	White
<b>50PC</b>	0.625	0.400	0.375	0.080	0.080	0.591	0.512	0.200	0.406	0.472	155	0.39	White
<b>60PC</b>	0.750	0.469	0.500	0.094	0.094	0.713	0.614	0.234	0.506	0.581	198	0.55	White

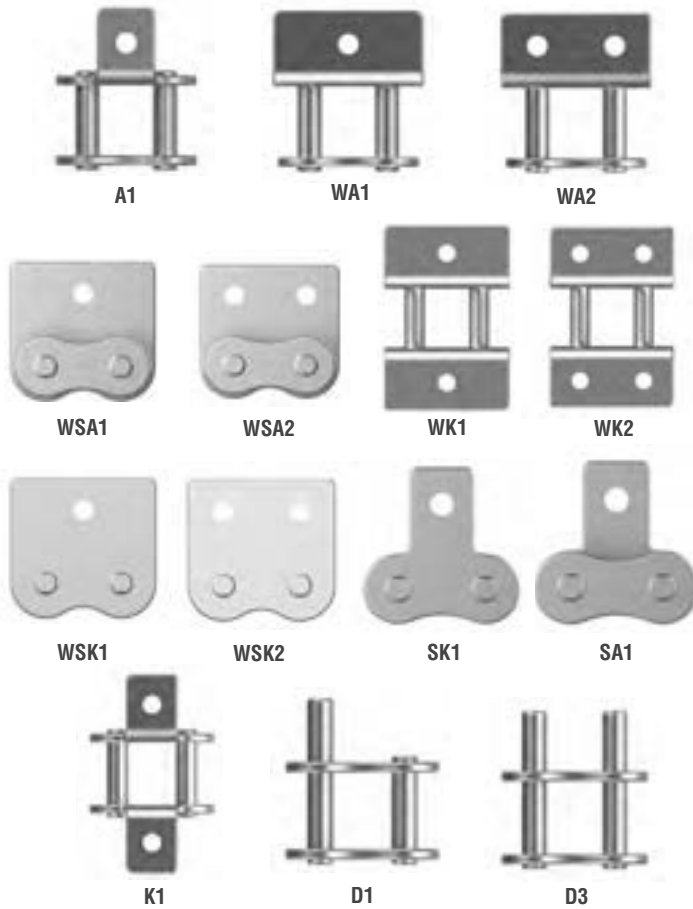
#### Additional Information

- Offset links are not available for PC Chain.
- Standard roller chain sprockets can be used with PC Chain.
- Sizes 40 through 60 PC chain use standard "SS" series connecting links. Sizes 25 and 35 use special connecting links.
- When replacing stainless steel chain with Poly-Steel chain, please check chain tension.  
Chain tension should be less than the maximum allowable load tension.
- Ambient temperature range (-14°F - 176°F) (-10°C - 80°C).
- Maximum chain speed: Less than 230 ft./min.
- Coefficient of sliding friction between chain and guide rail is .25 (without lubrication).
- The chain guide rail must support the bottom side of the links.
- The color of the inner links is white.

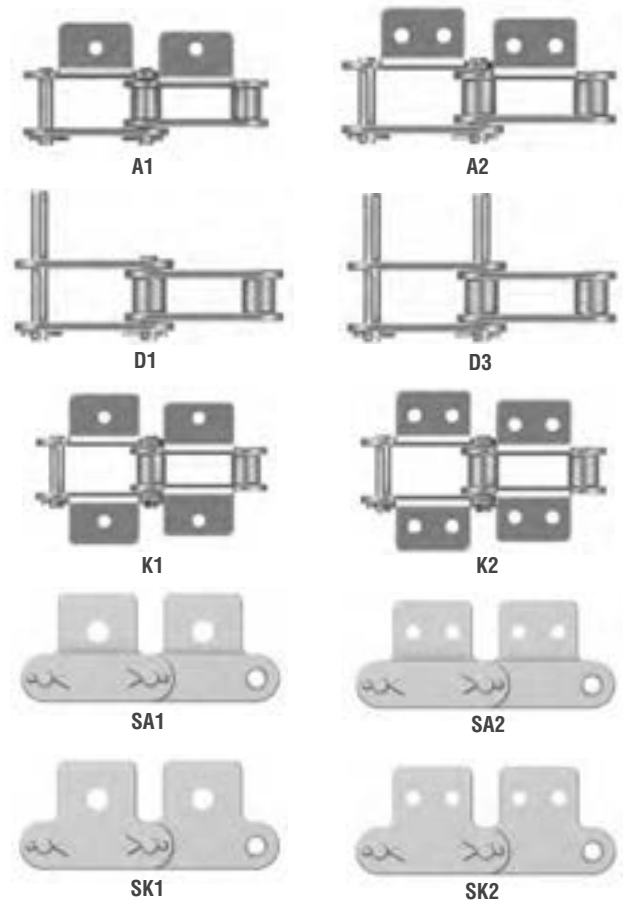
# CORROSION RESISTANT ATTACHMENTS

Tsubaki offers a complete line of attachments from stock to meet your conveying needs. The standard attachments Tsubaki stocks includes:

## Single-Pitch Chain



## Double-Pitch Chain



## Attachments for Corrosion Resistant Applications

Tsubaki offers a complete line of attachments for the toughest Anti-Corrosion applications. From Neptune® and Nickel Plated to various types of stainless steel, Tsubaki has it all. Here is the nomenclature for ordering anti-corrosion attachment chain.

**Chain Size** 40

**Base Chain**  
 NEP = Neptune®  
 NP = Nickel Plated  
 AS = 600 Series Stainless Steel  
 SS = 304 Stainless Steel  
 NS = 316 Stainless Steel  
 SUPERSS = Super Stainless™

All dimensions for these attachments are standard as they are for carbon steel and can be found on pages 34-40 in the Attachment chain section.



Double Pitch Stainless Attachment



Single Pitch Neptune® Attachment

# HARSH ENVIRONMENT CHAINS

The toughest and harshest operating conditions demand a roller chain that is built as tough as the environment it operates in. Titan® chain combines the best of Tsubaki's ANSI roller chain design with a hard-chrome plated pin and coated side plates. This combination makes Titan® chain ideal in the dirtiest and toughest applications where lubrication is difficult. Another extended-life chain solution from Tsubaki.



 **TSUBAKI®**

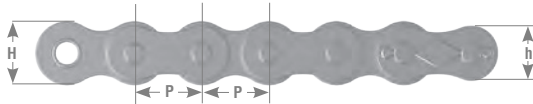
# HARSH ENVIRONMENT CHAINS

## Titan<sup>®</sup> Chain

### Titan<sup>®</sup> Features Include:

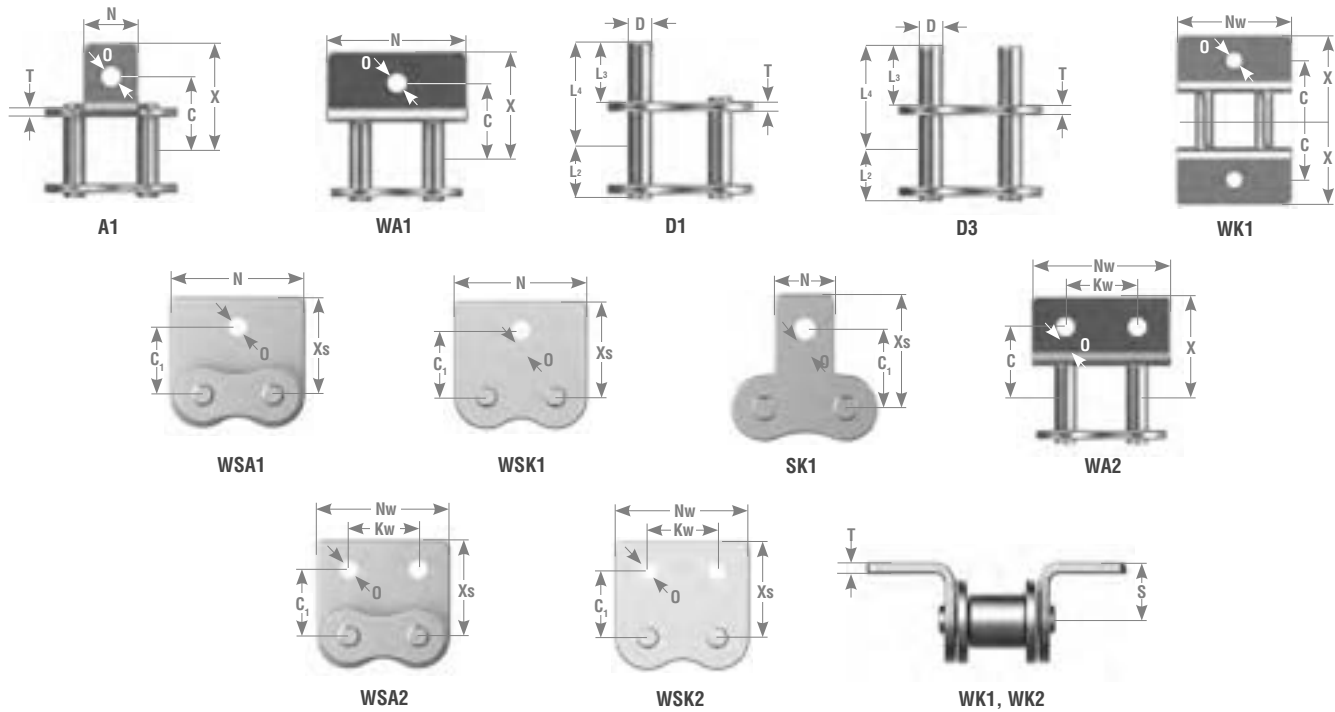
1. Custom engineered pins provide extended wear life and robust performance in high debris environments.
2. Special coated plates provide an additional layer of protection from corrosion.
3. Patented Tsubaki Performax™ lube-groove bushings — available in sizes 80-140.
4. Ring-coined connecting links to increase fatigue strength and durability in what used to be the weakest link in the chain.
5. Available in multi-strand, British Standard, and made-to-order chains as well.

# TITAN<sup>®</sup>



Tsubaki Chain No.	Pitch P	Roller Dia. R	Width Between Roller Link Plates W	Pin			Offset Pin L	Link Plate			Average Tensile Strength	Maximum Allowable Load*	Approx. Weight lbs/ft.
				D	L1	L2		T	H	h			
40TTRB	0.500	0.312	0.312	0.156	0.325	0.392	0.717	0.060	0.472	0.409	4,290	810	0.43
50TTRB	0.625	0.400	0.375	0.200	0.406	0.469	0.890	0.080	0.591	0.512	7,050	1,430	0.70
60TTRB	0.750	0.469	0.500	0.234	0.506	0.581	1.110	0.094	0.713	0.614	9,920	1,980	1.03
80TTRB	1.000	0.625	0.625	0.312	0.640	0.758	1.441	0.125	0.949	0.819	17,640	3,300	1.79
100TTRB	1.250	0.750	0.750	0.375	0.778	0.900	1.720	0.156	1.185	1.024	26,460	5,070	2.68
120TTRB	1.500	0.875	1.000	0.437	0.980	1.138	2.165	0.187	1.425	1.228	37,480	6,830	3.98
140TTRB	1.750	1.000	1.000	0.500	1.059	1.248	2.343	0.219	1.661	1.433	48,500	9,040	5.03
160TTRB	2.000	1.125	1.250	0.562	1.254	1.451	2.764	0.250	1.898	1.638	62,830	11,900	6.79
180TTRB	2.250	1.406	1.406	0.687	1.404	1.671	3.173	0.281	2.134	1.843	83,110	13,670	9.04
200TTRB	2.500	1.562	1.500	0.781	1.535	1.764	3.437	0.312	2.374	2.047	105,820	16,090	11.08
240TTRB	3.000	1.875	1.875	0.937	1.886	2.185	4.201	0.375	2.850	2.457	154,320	22,260	16.46

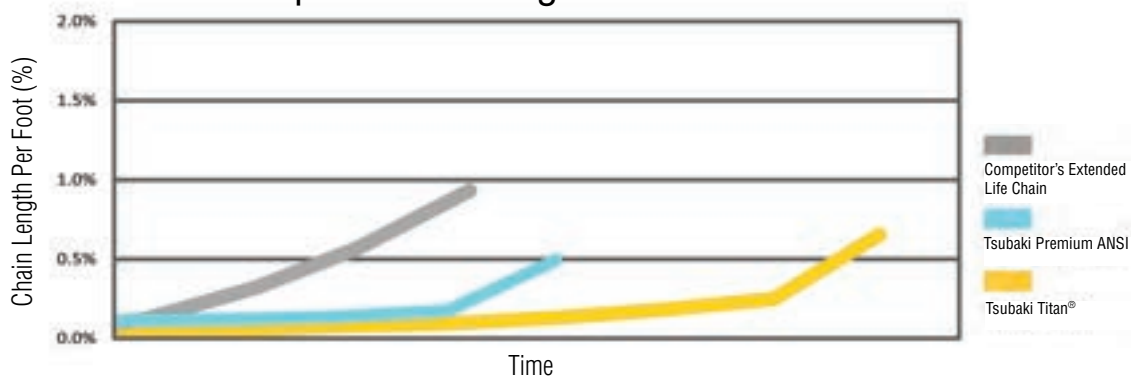
Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.  
 2. Sizes 40-60 Supplied with spring clip style connecting links. 80-240 come cottered style.



Tsubaki	Attachment Dimension									Additional Weight Per Attachment		
Chain No.	C	C1	N	O	S	X	Xs	L3	L4	A-SA	K-SK	D-1
<b>35LRB▲</b>	0.374	0.374	0.311	0.134	0.250	0.563	0.563	0.573	0.375	0.002	0.004	0.002
<b>40LRB</b>	0.500	0.500	0.374	0.141	0.315	0.701	0.701	0.685	0.375	0.004	0.008	0.002
<b>50LRB</b>	0.626	0.626	0.500	0.205	0.406	0.922	0.922	0.907	0.469	0.006	0.013	0.004
<b>60LRB</b>	0.750	0.720	0.626	0.205	0.469	1.110	1.110	1.057	0.563	0.015	0.030	0.006
<b>80LRB</b>	1.000	0.969	0.752	0.268	0.626	1.441	1.441	1.396	0.752	0.028	0.057	0.015
<b>100LRB</b>	1.250	1.252	1.000	0.343	0.780	1.768	1.768	1.732	0.937	0.057	0.114	0.026
<b>120LRB</b>	1.500	1.437	1.126	0.406	0.906	2.197	2.000	2.083	1.126	0.097	0.194	0.044
<b>140LRB</b>	1.752	1.752	1.374	0.469	1.126	2.484	2.252	2.500	1.311	0.156	0.313	0.066


Note: 1. "RB" designation indicates 10' box riveted. Cottered, cut-to-length and reel stock available upon request.  
 2. Spring clip conn links for sizes 25-60, cotter style conn links 80 -140.  
 3. Rollerless.  
 \*4. Bushing Diameter.

### Competitive Testing Wear Results



Results based on harsh environment operating conditions. For more information consult factory.





# OILFIELD CHAINS (ENERGY SERIES®)

Oilfield chains from Tsubaki are designed for high speed and high shock load applications. Oilfield chains are built to deliver reliable power and performance in the most demanding environments. Common applications include, mining, oil and gas exploration, logging, fracking and digging and drilling. Tsubaki Oilfield chains come with the Performax™ bushings for sizes 80-120 chains and are API Certified.



**TSUBAKI®**

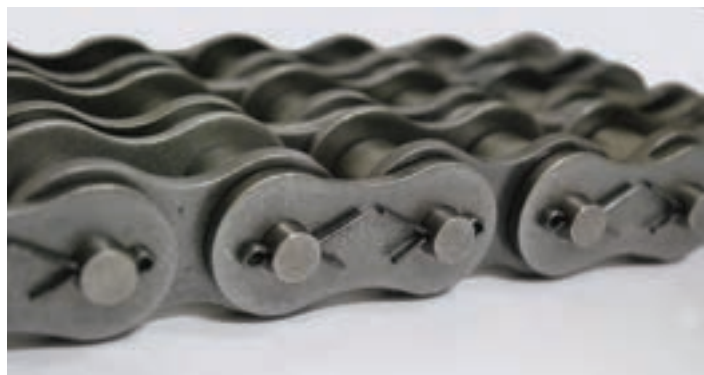
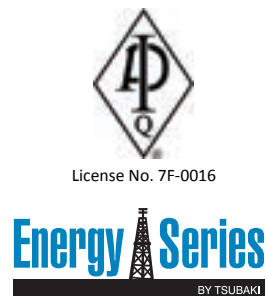
# OILFIELD CHAINS



OILFIELD CHAINS (ENERGY SERIES)

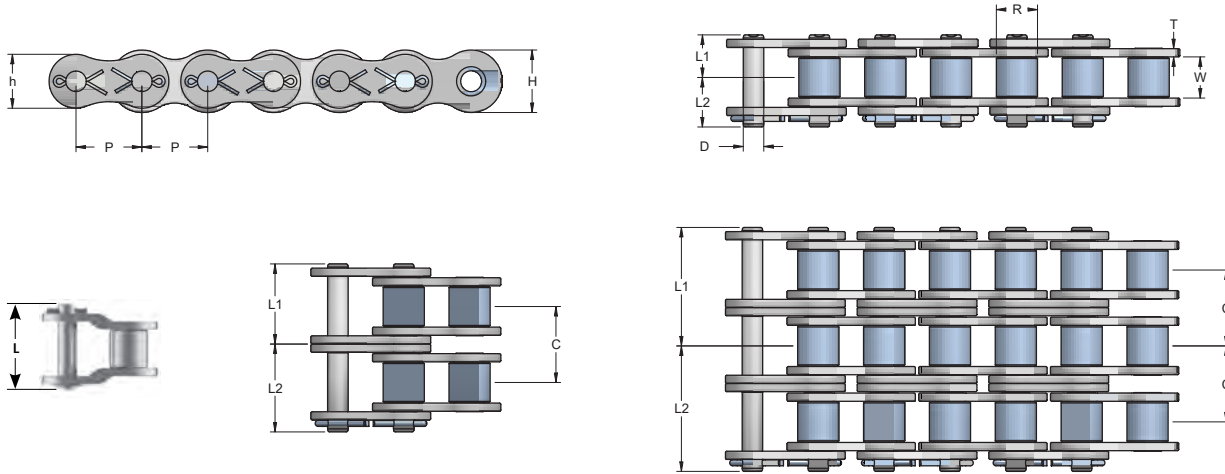
## Benefits:

- Stronger pins for longer chain life
- Ballized holes for improved fatigue strength
- Shot peened plates for maximum strength
- Performax™ bushings for sizes 80-120
- Special hot-dipping lube process to hold lube longer in the key wear areas





# OILFIELD CHAINS



## Single Strand Dimensions

Chain No.	Pitch	L1	L2	L	D	R	W	h	H	C	T	ATS*	WPF*
E80CB	1.00	0.640	0.758	1.398	0.312	0.625	0.625	0.819	0.949	1.153	0.125	17,600	1.79
E100CB	1.25	0.778	0.900	1.678	0.375	0.750	0.750	1.025	1.185	1.408	0.156	27,300	2.68
E120CB	1.50	0.980	1.138	2.118	0.437	0.875	1.000	1.228	1.425	1.789	0.187	39,700	3.98
E140CB	1.75	1.059	1.248	2.307	0.500	1.000	1.000	1.433	1.661	1.924	0.219	52,900	5.03
E160CB	2.00	1.254	1.451	2.705	0.562	1.125	1.250	1.638	1.898	2.305	0.250	68,300	6.79
E180CB	2.25	1.404	1.671	3.075	0.687	1.406	1.406	1.843	2.134	2.592	0.281	80,500	9.04
E200CB	2.50	1.535	1.764	3.299	0.781	1.562	1.500	2.047	2.374	2.817	0.312	105,800	11.08
E240CB	3.00	1.886	2.185	4.071	0.937	1.875	1.875	2.457	2.850	3.458	0.375	154,300	16.46
E80HCB	1.00	0.720	0.823	1.543	0.312	0.625	0.625	0.819	0.949	1.283	0.156	20,900	2.08
E100HCB	1.25	0.858	0.965	1.823	0.375	0.750	0.750	1.025	1.185	1.539	0.187	32,000	3.17
E120HCB	1.50	1.061	1.203	2.264	0.437	0.875	1.000	1.228	1.425	1.924	0.219	43,000	4.38
E140HCB	1.75	1.138	1.303	2.441	0.500	1.000	1.000	1.433	1.661	2.055	0.250	56,200	5.54
E160HCB	2.00	1.337	1.514	2.851	0.562	1.125	1.250	1.638	1.898	2.437	0.281	71,700	7.35
E180HCB	2.25	1.486	1.734	3.22	0.687	1.406	1.406	1.843	2.134	2.722	0.312	80,500	9.60
E200HCB	2.50	1.689	1.894	3.583	0.781	1.562	1.500	2.047	2.374	3.083	0.375	125,700	12.33
E240HCB	3.00	2.157	2.453	4.610	0.937	1.875	1.875	2.457	2.850	3.985	0.500	198,400	19.54

\*Average Tensile Strength

\*Weight Per Foot

## Multi-Strand Dimensions

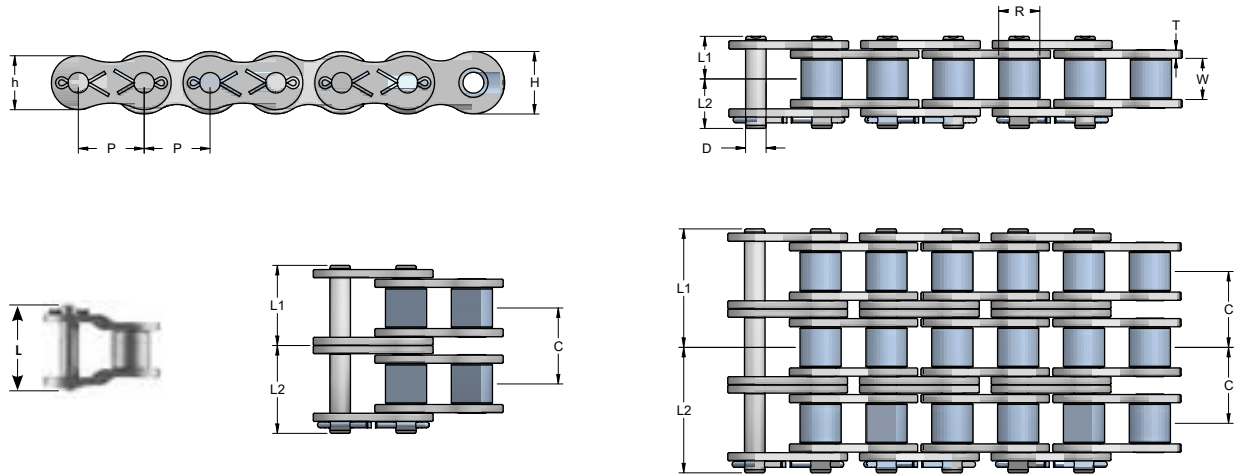
Double-Wide Strands					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-2CB	1.00	1.217	1.335	35,200	3.54
E100-2CB	1.25	1.482	1.604	54,600	5.27
E120-2CB	1.50	1.875	2.033	71,880	7.86
E140-2CB	1.75	2.021	2.210	94,370	9.97
E160-2CB	2.00	2.407	2.604	136,600	13.47
E180-2CB	2.25	2.700	2.967	161,000	17.82
E200-2CB	2.50	2.944	3.173	211,600	21.93
E240-2CB	3.00	3.615	3.914	308,600	32.32
E80H-2CB	1.00	1.362	1.465	41,800	4.15
E100H-2CB	1.25	1.628	1.735	64,000	6.07
E120H-2CB	1.50	2.023	2.165	71,880	8.67
E140H-2CB	1.75	2.166	2.331	94,370	11.01
E160H-2CB	2.00	2.556	2.733	143,400	14.64
E180H-2CB	2.25	2.847	3.095	161,000	19.20
E200H-2CB	2.50	3.231	3.436	207,260	24.51
E240H-2CB	3.00	4.150	4.446	304,280	38.47

\*Average Tensile Strength

\*Weight Per Foot

Triple-Wide Strands					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-3CB	1.00	1.793	1.911	52,800	5.30
E100-3CB	1.25	2.186	2.308	81,900	7.91
E120-3CB	1.50	2.769	2.927	107,820	11.78
E140-3CB	1.75	2.983	3.172	141,550	14.92
E160-3CB	2.00	3.559	3.756	204,900	20.17
E180-3CB	2.25	3.996	4.263	241,500	25.68
E200-3CB	2.50	4.352	4.581	317,400	32.94
E240-3CB	3.00	5.344	5.643	462,900	48.11
E80H-3CB	1.00	2.003	2.106	62,700	6.21
E100H-3CB	1.25	2.397	2.504	96,000	9.10
E120H-3CB	1.50	2.985	3.127	107,820	12.99
E140H-3CB	1.75	3.193	3.358	141,550	16.48
E160H-3CB	2.00	3.774	3.951	215,100	21.93
E180H-3CB	2.25	4.208	4.456	241,500	28.80
E200H-3CB	2.50	4.772	4.977	310,890	36.81
E240H-3CB	3.00	6.142	6.438	456,420	57.33

# OILFIELD CHAINS – MULTI-STRAND



## Multi-Strand Dimensions

4-Strand Wide					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-4CB	1.00	2.370	2.488	70,400	7.06
E100-4CB	1.25	2.890	3.012	109,200	10.55
E120-4CB	1.50	3.664	3.822	143,760	15.70
E140-4CB	1.75	3.945	4.134	188,740	19.16
E160-4CB	2.00	4.712	4.909	273,200	26.92
E180-4CB	2.25	5.292	5.559	322,000	34.20
E200-4CB	2.50	5.761	5.990	423,200	43.79
E240-4CB	3.00	7.073	7.372	617,200	63.90
E80H-4CB	1.00	2.645	2.748	83,600	8.27
E100H-4CB	1.25	3.167	3.274	128,000	12.13
E120H-4CB	1.50	3.947	4.089	143,760	17.31
E140H-4CB	1.75	4.221	4.386	188,730	21.95
E160H-4CB	2.00	4.993	5.170	286,800	29.22
E180H-4CB	2.25	5.569	5.817	322,000	38.40
E200H-4CB	2.50	6.314	6.519	502,800	49.11
E240H-4CB	3.00	8.135	8.431	793,600	76.19

5-Strand Wide					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-5CB	1.00	2.946	3.064	88,000	8.81
E100-5CB	1.25	3.594	3.716	136,500	13.12
E120-5CB	1.50	4.558	4.716	179,700	19.59
E140-5CB	1.75	4.907	5.096	235,920	24.84
E160-5CB	2.00	5.864	6.061	341,500	33.53
E180-5CB	2.25	6.588	6.855	402,500	42.73
E200-5CB	2.50	7.169	7.398	529,000	54.64
E240-5CB	3.00	8.802	9.101	771,500	79.70
E80H-5CB	1.00	3.286	3.389	104,500	10.33
E100H-5CB	1.25	3.936	4.043	160,000	15.16
E120H-5CB	1.50	4.909	5.051	179,700	21.63
E140H-5CB	1.75	5.248	5.413	235,910	27.42
E160H-5CB	2.00	6.211	6.388	358,500	36.51
E180H-5CB	2.25	6.930	7.178	402,500	48.00
E200H-5CB	2.50	7.855	8.06	628,500	61.41
E240H-5CB	3.00	10.127	10.423	992,000	95.05

6-Strand Wide					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-6CB	1.00	3.523	3.641	105,600	10.57
E100-6CB	1.25	4.298	4.420	163,800	15.78
E120-6CB	1.50	5.453	5.611	215,640	23.49
E140-6CB	1.75	5.869	6.058	283,110	29.77
E160-6CB	2.00	7.017	7.214	409,800	40.27
E180-6CB	2.25	7.884	8.151	483,000	51.25
E200-6CB	2.50	8.578	8.807	634,800	65.58
E240-6CB	3.00	10.531	10.830	925,800	95.49
E80H-6CB	1.00	3.928	4.031	125,400	12.39
E100H-6CB	1.25	4.706	4.813	192,000	18.19
E120H-6CB	1.50	5.871	6.013	215,640	25.95
E140H-6CB	1.75	6.276	6.441	283,090	32.89
E160H-6CB	2.00	7.430	7.607	430,200	43.80
E180H-6CB	2.25	8.291	8.539	483,000	57.60
E200H-6CB	2.50	9.397	9.602	754,200	73.71
E240H-6CB	3.00	12.12	12.416	1,190,400	113.91

8-Strand Wide					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-8CB	1.00	4.676	4.794	140,800	14.08
E100-8CB	1.25	5.706	5.828	218,400	21.01
E120-8CB	1.50	7.242	7.400	287,520	31.28
E140-8CB	1.75	7.793	7.982	377,490	40.38
E160-8CB	2.00	9.322	9.519	546,400	53.62
E180-8CB	2.25	10.476	10.743	644,000	68.30
E200-8CB	2.50	11.395	11.624	846,400	87.37
E240-8CB	3.00	13.989	14.288	1,234,400	127.08
E80H-8CB	1.00	5.211	5.314	167,200	16.51
E100H-8CB	1.25	6.245	6.352	256,000	24.25
E120H-8CB	1.50	7.795	7.937	287,520	34.59
E140H-8CB	1.75	8.331	8.496	377,450	43.83
E160H-8CB	2.00	9.867	10.044	573,600	58.38
E180H-8CB	2.25	11.013	11.261	644,000	76.80
E200H-8CB	2.50	12.480	12.685	1,005,600	98.31
E240H-8CB	3.00	16.105	16.401	1,587,200	151.63

10-Strand Wide					
Chain No.	Pitch	L1	L2	ATS*	WPF*
E80-10CB	1.00	5.829	5.947	176,000	17.59
E100-10CB	1.25	7.114	7.236	273,000	26.24
E120-10CB	1.50	9.031	9.189	359,400	39.07
E140-10CB	1.75	9.717	9.906	471,870	50.99
E160-10CB	2.00	11.627	11.824	683,000	66.97
E180-10CB	2.25	13.068	13.335	805,000	85.35
E200-10CB	2.50	14.212	14.441	1,058,000	109.16
E240-10CB	3.00	—	—	—	—
E80H-10CB	1.00	6.494	6.597	209,000	20.63
E100H-10CB	1.25	7.784	7.891	320,000	30.31
E120H-10CB	1.50	9.719	9.861	359,400	43.23
E140H-10CB	1.75	10.386	10.551	471,810	54.77
E160H-10CB	2.00	12.304	12.481	717,000	72.96
E180H-10CB	2.25	13.735	13.983	805,000	96.00
E200H-10CB	2.50	15.563	15.768	1,257,000	122.91
E240H-10CB	3.00	—	—	—	—

\*Average Tensile Strength  
\*Weight Per Foot

# LEAF CHAINS

Another segment of the Tsubaki chain product line is the full line of AL and BL Series leaf chains. When lifting applications require chains without rollers to carry to load, Tsubaki is there with the BL Series leaf chains. Tsubaki manufactures leaf chains from 1/2" pitch to 2-1/2" pitch in numerous lacing combinations. Please consult Tsubaki for the right Leaf Chain design needed to fit your application.



 **TSUBAKI**<sup>®</sup>

# LEAF CHAINS



BL Series chains are a heavier version of leaf chain that has, in most cases, replaced the AL series leaf chains. BL chains are manufactured with a larger pin and larger plate to comparable AL series chains. Tsubaki offers both AL and BL series leaf chains.



# AL & BL SERIES

## Step 1:

From the application table listed below, determine the chain type and service factor.

**Application Table**

Type of Chain	Shock	Applications	Service Factor	Chain Speed ft./Min.
AL Series	Moderate	Suspension of counterweights	1.0	Less than 100
AL & BL Series		Fork lift	1.3	
BL Series	Heavy	Mining machinery Construction equipment	1.5	

## Step 2:

Multiply the required working load by the service factor and safety factor below to obtain the design tensile strength.

**Safety Factor**

Type of Chain	Safety Factor	Chain Speed Ft./Min.	Service Factor	Maximum Number of Reciprocations
AL Series	12	Less than 100	1.0	Less than 100 per day
BL Series	9	Less than 100	1.3	Less than 1,000 per day

## Step 3:

From the chain list, select a chain having a tensile strength not less than obtained in step 2.

Working Load	X	Service Factor	X	Safety Factor	≤	Minimum Tensile Strength
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\*Working Load including weights of attachments, inertia force and impact force.

## When ordering, specify your requirements:

- For odd numbers of pitches, inner links (male ends) will be provided.
- Clevis connector or press fit rivet outer links are both available in popular sizes.

## Connection with Clevis:

1: When an inner link (male end) is used, a clevis pin will be supplied by the clevis manufacturer.

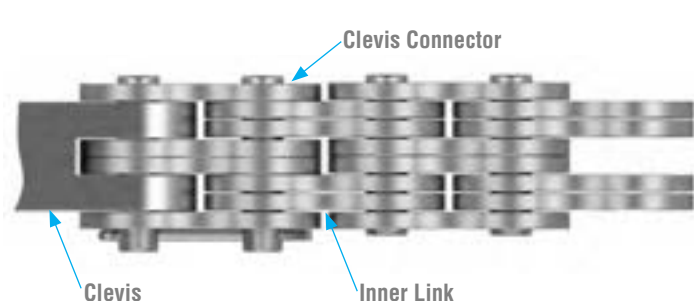
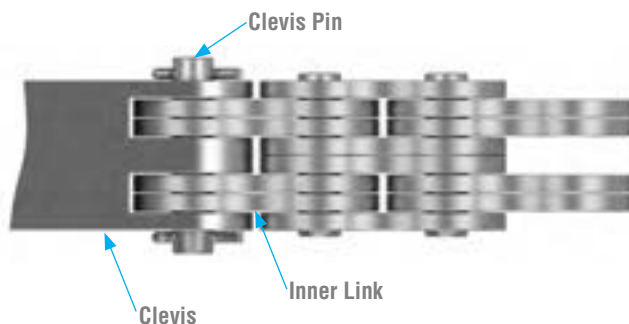


Clevis Connector

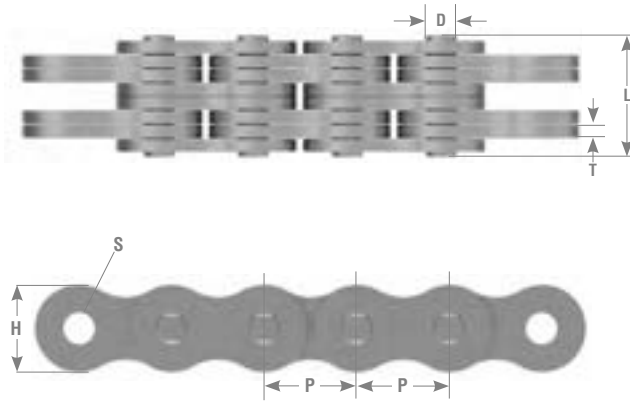


Press fit and rivet outer link

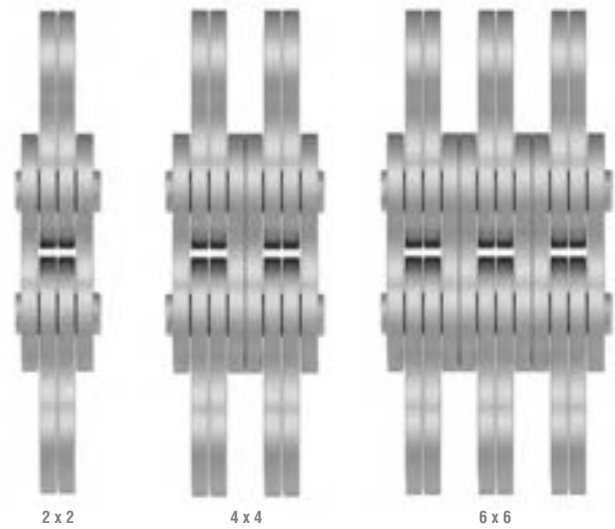
2: When an outer link (female end) is used, the press fit outer link provides the most integrity.



# AL SERIES



## Lacing Combinations



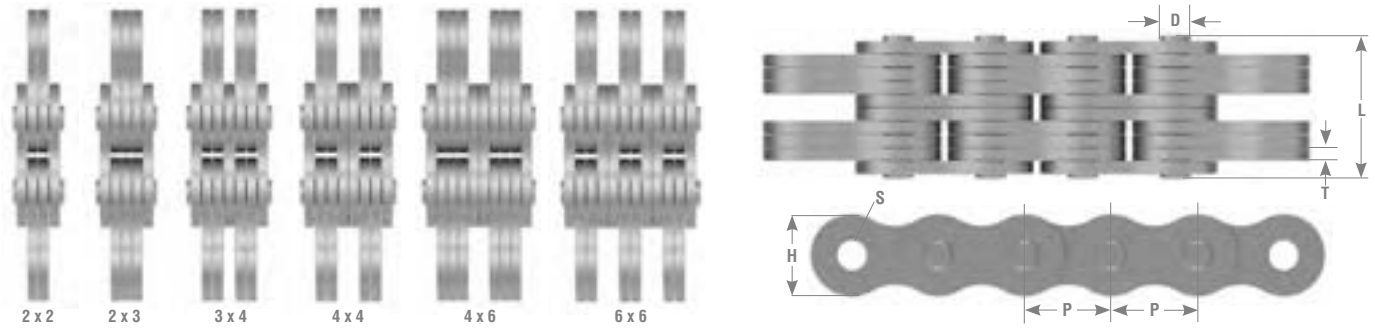
Tsubaki	Pitch	Lacing	Min. Tensile Strength lbs.	Pin		Link Plate		Hole Diameter (Min.)	Approx. Weight lbs/ft.
Chain No.	P			D	L	T	H	S	
AL422	0.500	2x2	3,700	0.156	0.331	0.060	0.409	0.1578	0.25
AL444	0.500	4x4	7,500	0.156	0.585	0.060	0.409		0.50
AL466	0.500	6x6	11,200	0.156	0.839	0.060	0.409		0.74
AL522	0.625	2x2	6,200	0.200	0.427	0.080	0.512	0.2019	0.42
AL544	0.625	4x4	12,300	0.200	0.762	0.080	0.512		0.82
AL566	0.625	6x6	18,500	0.200	1.094	0.080	0.512		1.21
AL622	0.750	2x2	8,600	0.234	0.498	0.094	0.614	0.2362	0.58
AL644	0.750	4x4	17,200	0.234	0.888	0.094	0.614		1.15
AL666	0.750	6x6	25,800	0.234	1.278	0.094	0.614		1.70
AL822	1.000	2x2	14,600	0.311	0.644	0.125	0.819	0.3138	1.01
AL844	1.000	4x4	29,100	0.311	1.173	0.125	0.819		2.00
AL866	1.000	6x6	43,600	0.311	1.701	0.125	0.819		2.97
AL1022	1.250	2x2	22,000	0.373	0.789	0.156	1.024	0.3768	1.80
AL1044	1.250	4x4	44,000	0.373	1.445	0.156	1.024		3.56
AL1066	1.250	6x6	66,000	0.373	2.098	0.156	1.024		5.31
AL1222	1.500	2x2	31,700	0.437	0.953	0.187	1.228	0.4386	2.39
AL1244	1.500	4x4	63,400	0.437	1.732	0.187	1.228		4.75
AL1266	1.500	6x6	95,000	0.437	2.514	0.187	1.228		7.07
AL1444	1.750	4x4	83,600	0.500	2.020	0.219	1.433	0.5016	6.95
AL1466	1.750	6x6	125,400	0.500	2.935	0.219	1.433		10.18
AL1644	2.000	4x4	105,800	0.562	2.285	0.250	1.638	0.5638	8.70
AL1666	2.000	6x6	158,000	0.562	3.325	0.250	1.638		13.00

## Non-Standard Chain

Tsubaki	Pitch	Lacing	Min. Tensile Strength lbs.	Pin		Link Plate		Hole Diameter (Min.)	Approx. Weight lbs/ft.
Chain No.	P			D	L	T	H	S	
BL523 (6H-5)	0.625	3x2	7,000	0.187	0.583	0.094	0.590	0.189	0.790

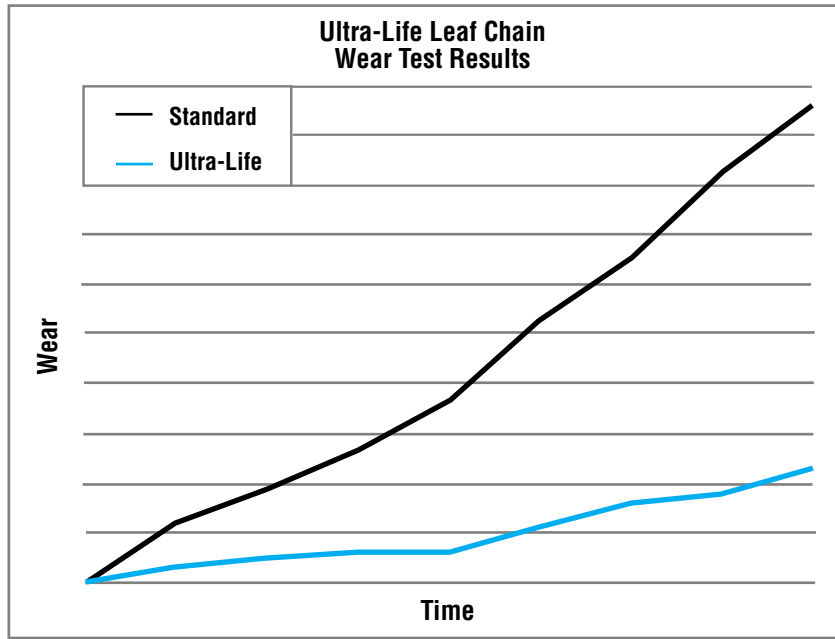
Note - BL523 is only available as a replacement chain and should not be specified for new applications or designs.

# BL SERIES



Tsubaki	Pitch	Lacing	Min. Tensile Strength (Lbs)	ASME Min. Tensile Strength (Lbs)	Pin	Pin	Link Plate		Hole Dia. (Min.)	Approx. Weight lbs/70ft.
Chain No.	P				L	D	T	H	S	
BL422	0.500	2x2	5,300	5,000	0.427	0.200	0.080	0.472	0.202	0.46
BL423	0.500	2x3	5,300	5,000	0.510					0.56
BL434	0.500	3x4	7,900	7,500	0.677					0.76
BL444	0.500	4x4	10,600	10,000	0.764					0.86
BL446	0.500	4x6	10,600	10,000	0.929					1.11
BL466	0.500	6x6	15,600	15,000	1.094					1.32
BL522	0.625	2x2	8,800	7,500	0.498	0.234	0.094	0.591	0.236	0.72
BL523	0.625	2x3	8,800	7,500	0.594					0.85
BL534	0.625	3x4	13,200	11,000	0.791					1.14
BL544	0.625	4x4	17,600	15,000	0.888					1.27
BL546	0.625	4x6	17,600	15,000	1.083					1.61
BL566	0.625	6x6	26,400	22,500	1.278					1.88
BL622	0.750	2x2	14,300	11,000	0.645	0.312	0.125	0.713	0.314	1.13
BL623	0.750	2x3	14,300	11,000	0.778					1.37
BL634	0.750	3x4	21,500	17,000	1.041					1.90
BL644	0.750	4x4	28,500	22,000	1.173					2.14
BL646	0.750	4x6	28,500	22,000	1.437					2.69
BL666	0.750	6x6	43,000	33,000	1.701					3.18
BL822	1.000	2x2	23,100	19,000	0.794	0.375	0.156	0.949	0.377	1.74
BL823	1.000	2x3	23,100	19,000	0.953					2.15
BL834	1.000	3x4	34,800	29,000	1.281					2.98
BL844	1.000	4x4	46,200	38,000	1.453					3.39
BL846	1.000	4x6	46,200	38,000	1.772					4.25
BL866	1.000	6x6	69,500	57,000	2.098					5.07
BL1023	1.250	2x3	31,700	26,000	1.134	0.437	0.187	1.185	0.439	3.15
BL1034	1.250	3x4	48,500	41,000	1.529					4.40
BL1044	1.250	4x4	63,400	52,000	1.732					5.03
BL1046	1.250	4x6	63,400	52,000	2.114					6.24
BL1066	1.250	6x6	95,200	78,000	2.514					7.50
BL1222	1.500	2x2	41,800	34,000	1.106					0.500
BL1223	1.500	2x3	41,800	34,000	1.335	4.39				
BL1234	1.500	3x4	67,200	55,000	1.791	6.11				
BL1244	1.500	4x4	83,600	68,000	2.020	6.98				
BL1246	1.500	4x6	83,600	68,000	2.478	8.07				
BL1266	1.500	6x6	125,600	102,000	2.935	9.80				
BL1422	1.750	2x2	52,900	43,000	1.244	0.562	0.250	1.661	0.564	4.91
BL1423	1.750	2x3	52,900	43,000	1.504					6.09
BL1434	1.750	3x4	87,000	71,010	2.024					7.61
BL1444	1.750	4x4	105,800	86,000	2.285					8.71
BL1446	1.750	4x6	105,800	86,000	2.805					12.10
BL1466	1.750	6x6	158,700	130,000	3.325					15.13
BL1622	2.000	2x2	79,300	65,000	1.405	0.687	0.281	1.898	0.689	6.61
BL1623	2.000	2x3	79,300	65,000	1.703					8.17
BL1634	2.000	3x4	124,500	99,000	2.299					11.39
BL1644	2.000	4x4	158,600	130,000	2.598					12.75
BL1646	2.000	4x6	158,600	130,000	3.191					16.19
BL1666	2.000	6x6	237,900	195,000	3.785					19.31
BL1688	2.000	6x8	317,200	260,000	4.764	27.41				
BL2022	2.500	2x2	119,000	97,500	1.887	0.937	0.375	2.374	0.939	9.70
BL2023	2.500	2x3	119,000	97,500	2.280					12.06
BL2034	2.500	3x4	178,800	146,000	3.064					16.77
BL2044	2.500	4x4	238,500	195,000	3.456					19.12
BL2046	2.500	4x6	238,500	195,000	4.240					23.81
BL2066	2.500	6x6	357,800	292,500	5.044					28.23

# ULTRA-LIFE SERIES LEAF CHAIN



- Premium Ultra-Life (UL) Leaf Chain
- Up to 4X wear life vs. standard BL chain
- Extended replacement / maintenance intervals
- Available sizes: BL12 through BL16, all standard lacings
- Specially hardened components for ultra wear life
- Standard BL Series dimensions
- Part Number:
  - (BL) – BL Series Chain
  - (12 or 16) – Size and lacing
  - (UL) Ultra-Life



Engineered to maximize bearing area and wear life

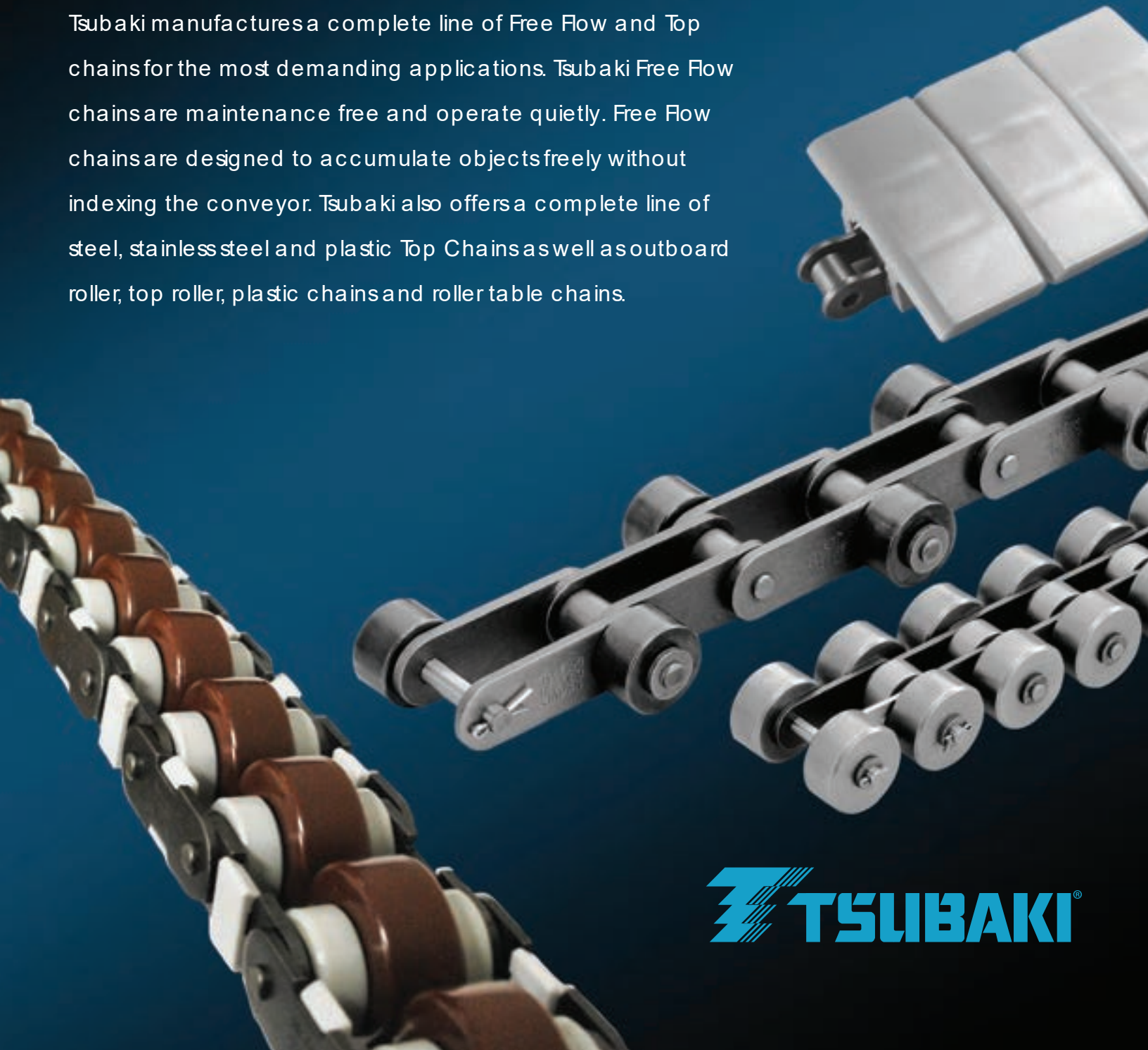


Specially coated plates for additional corrosion resistance



# FREE FLOW & TOP CHAINS

Along with a complete line of roller chains and specialty chains, Tsubaki manufactures a complete line of Free Flow and Top chains for the most demanding applications. Tsubaki Free Flow chains are maintenance free and operate quietly. Free Flow chains are designed to accumulate objects freely without indexing the conveyor. Tsubaki also offers a complete line of steel, stainless steel and plastic Top Chains as well as outboard roller, top roller, plastic chains and roller table chains.



 **TSUBAKI**<sup>®</sup>

# FREE FLOW & TOP CHAINS



Double Plus®



Plastic Chain



Top Plate Chain



Top Roller Chain



Outboard Roller

Tsubaki has developed the most advanced chains for Free Flow conveyors.

**Tsubaki Free Flow chains have numerous advantages including:**

- Maintenance-free, long life
- Economical
- Quiet operation
- Clean and anti-corrosive
- Wide selection

A Free Flow conveyor is a system where the speed of the conveyed objects can be freely controlled and stopped at any time and at any position for accumulation, or for indexing without stopping the conveyor.

**Many of the Free Flow items Tsubaki offers include:**

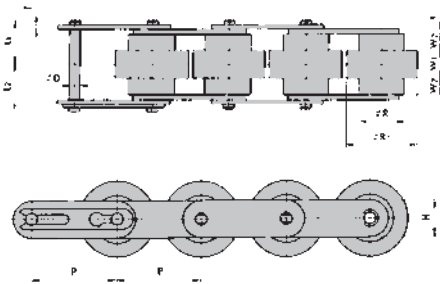
- Double Plus® complete systems
- Outboard roller chains – with plastic and steel rollers.
- Top Roller chains – steel or plastic rollers
- Complete line of Top Chains
- Full line of plastic chains
- Cross rod, and roller table chains
- All above listed chains available in anti-corrosion and lube-free offerings.

# DOUBLE PLUS® CHAINS

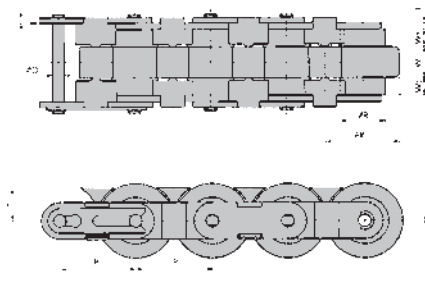
Choose the right rollers for your operation

Series	Color: Feature:	Size of Roller		Series Benefits
		Small	Large	
A	Color: Feature:	Gray Standard	Brown Standard	Maximum Allowable Tension
B	Color: Feature:	Off-White High-friction Plastic	Brown Standard	Quick Start-up
C	Color: Feature:	Gray Standard	Black Electro-conductive plastic	Volume Resistivity of $10^6 \Omega \times \text{cm}$
D	Color: Feature:	Off-white High-friction plastic	Black Electro-conductive plastic	Quick Start-up and Volume Resistivity of $10^6 \Omega \times \text{cm}$

In addition to carbon steel, Double-Plus® chain is available in Titan®, Neptune® and stainless steel.



Standard DOUBLE PLUS® CHAIN



DOUBLE PLUS® CHAIN with SNAP COVERS

**Note: For Double Plus® chain with snap covers**

- The base chains are specialized for snap covers
- Snap Covers cannot be attached to standard Double Plus® chain
- Offset links are not available for Double Plus® with snap covers

## Double Plus Chain®

Chain No.		P	R	R1	W1	W2	t	T	H	D	L1	L2	Approx. Weight lbs/ft.
<b>Steel Roller</b>	<b>Snap Covers</b>												<b>Steel Rollers</b>
C2030VR	C2030VR-SC	0.750	0.469	0.720	0.315	0.157	0.060	0.060	0.354	0.141	0.474	0.522	0.94
C2040VR	C2040VR-SC	1.000	0.625	0.969	0.406	0.224	0.080	0.060	0.472	0.156	0.622	0.669	1.68
C2050VR	C2050VR-SC	1.250	0.750	1.205	0.512	0.280	0.094	0.080	0.591	0.200	0.770	0.837	2.49
C2060VR	C2060VR-SC	1.500	0.875	1.441	0.610	0.335	0.125	0.125	0.677	0.234	0.964	1.039	3.76
C2080VR	C2080VR-SC	2.000	1.125	1.890	0.787	0.591	0.156	0.156	0.906	0.312	1.409	1.496	
<b>Plastic Roller</b>	<b>Snap Covers</b>												<b>Plastic Rollers</b>
C2030VRP	C2030VRP-SC	0.750	0.469	0.720	0.315	0.157	0.060	0.060	0.354	0.141	0.474	0.522	0.40
C2040VRP	C2040VRP-SC	1.000	0.625	0.969	0.406	0.224	0.080	0.060	0.472	0.156	0.622	0.669	0.67
C2050VRP	C2050VRP-SC	1.250	0.750	1.205	0.512	0.280	0.094	0.080	0.591	0.200	0.770	0.837	0.94
C2060VRP	C2060VRP-SC	1.500	0.875	1.441	0.610	0.335	0.125	0.125	0.677	0.234	0.964	1.039	1.34
C2080VRP	C2080VRP-SC	2.000	1.125	1.890	0.787	0.591	0.156	0.156	0.906	0.312	1.409	1.496	2.62

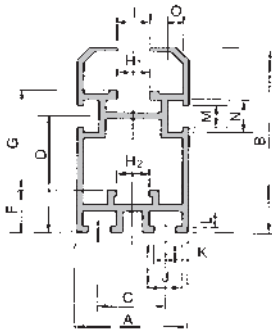
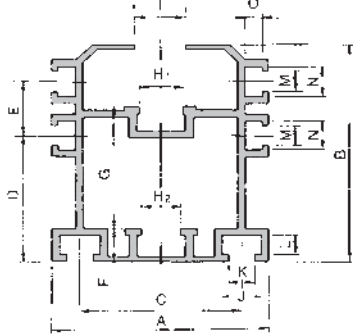
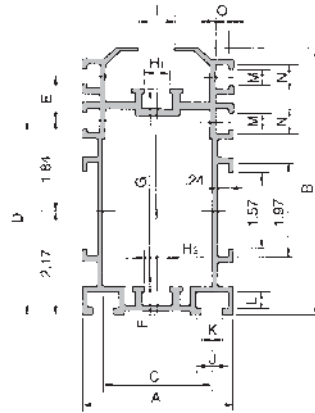
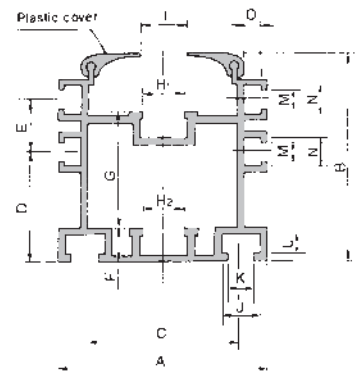
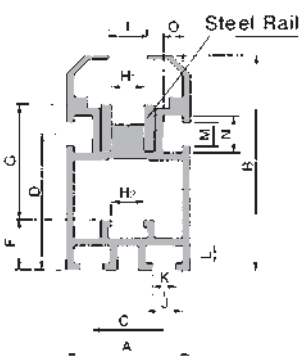
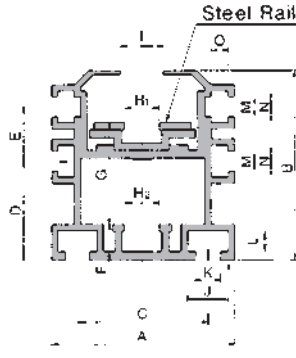
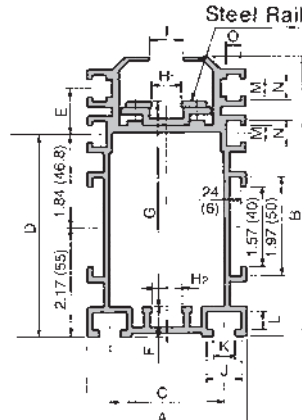
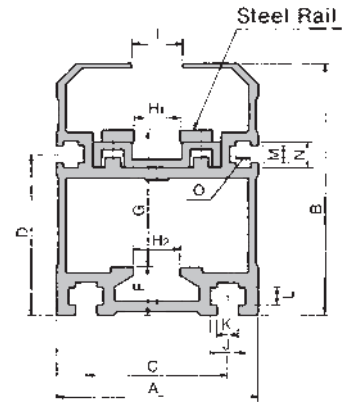
- Note:
1. Steel Roller type (VR series) is available for temp range 14°F - 302°F.
  2. Plastic roller type (VRP Series) is available for temp range 14°F - 140°F.
  3. C2080VRP has a cottered connecting link.

## Sprockets for Double Plus® Chain (For Double Plus® VR, VRP, VR-SC, VRP-SC)

			Pitch Dia.	Outer Dia.	Tooth Thickness	Stock Bore	Hub Dia	Hub Length	Approx. Weight lbs/ft.	
Sprocket No.	Hub Type	No. of Teeth	Dp	Do	T	d	Dh	L	M	
C2030VRP-10T-SC	B	10	2.427	2.480	0.118	0.500	1.457	0.984	0.602	0.44
C2040VRP-10T-SC	B	10	3.236	3.346	0.157	0.630	2.047	1.575	0.803	1.76
C2050VRP-10T-SC	B	10	4.045	4.213	0.197	0.630	2.598	1.772	1.004	3.31
C2060VRP-10T-SC	B	10	4.854	5.039	0.236	0.748	3.189	1.969	1.201	5.52
C2080VRP-10T-SC	B	10	6.472	6.772	0.472	0.906	4.331	2.638	1.870	15.40

# DOUBLE PLUS® GUIDE RAILS

FREE FLOW CHAINS

**C2030VRP-R3L**

**C2040VRP-R4L**  
**C2050VRP-R4L**  
**C2060VRP-R4L**

**C2050VRP-R3H**

**C2060VRP-R4K**

**C2030VRP-R3LS**

**C2040VRP-R4LS**  
**C2050VRP-R4LS**  
**C2060VRP-R4LS**

**C2050VRP-R3HS**

**C2080VRP-R3LS**


## Aluminum Guide Rail Dimensional Data - standard and Steel Insert Styles (Includes VR, VRP, and Snap Cover Styles)

Guide Rail No.	A	B	C	D	E	F	G	H1	H2	I	J	K	L	M	N	O	Standard Length (FT)	Approx Weight Lbs/Ft
<b>C2030VRP-R3L</b>	1.38	2.36	0.807	1.494		0.550	1.268	0.350	0.366	0.390	0.413	0.256	0.197	0.256	0.413	0.197	9.84	0.94
<b>C2030VRP-R3LS</b>	1.38	2.36	0.807	1.494		0.550	1.268	0.350	0.366	0.390	0.413	0.256	0.197	0.256	0.413	0.197	9.84	1.48
<b>C2040VRP-R4L</b>	2.48	2.60	1.752	1.388	0.728	0.510	1.374	0.449	0.472	0.531	0.531	0.335	0.295	0.256	0.413	0.197	13.12	1.75
<b>C2040VRP-R4LS</b>	2.48	2.60	1.752	1.388	0.728	0.510	1.374	0.449	0.472	0.531	0.531	0.335	0.295	0.256	0.413	0.197	13.12	2.49
<b>C2050VRP-R4L</b>	3.07	3.15	2.185	1.644	0.906	0.590	1.669	0.560	0.590	0.650	0.689	0.413	0.35	0.335	0.531	0.295	13.12	2.42
<b>C2050VRP-R4LS</b>	3.07	3.15	2.185	1.644	0.906	0.590	1.693	0.560	0.590	0.650	0.689	0.413	0.35	0.335	0.531	0.295	13.12	3.36
<b>C2050VRP-R3H</b>	3.15	5.51	2.260	4.010	0.906	0.590	4.060	0.560	0.590	0.650	0.689	0.413	0.35	0.335	0.531	0.295	9.84	3.36
<b>C2050VRP-R3HS</b>	3.15	5.51	2.260	4.010	0.906	0.590	4.060	0.560	0.590	0.650	0.689	0.413	0.35	0.335	0.531	0.295	9.84	4.23
<b>C2060VRP-R4L</b>	3.74	3.58	2.854	2.018	0.925	0.590	1.988	0.677	0.709	0.768	0.689	0.413	0.354	0.335	0.531	0.295	13.12	2.82
<b>C2060VRP-R4LS</b>	3.74	3.58	2.854	2.018	0.925	0.590	1.988	0.677	0.709	0.768	0.689	0.413	0.354	0.335	0.531	0.295	13.12	3.96
<b>C2060VRP-R4K</b>	3.74	3.58	2.854	1.821	0.925	0.590	1.988	0.677	0.709	0.768	0.689	0.413	0.354	0.335	0.531	0.295	13.12	2.69
<b>C2080VRP-R3LS</b>	3.94	4.92	2.760	3.150	0.470	0.940	2.680	0.910	0.910	0.980	0.689	0.413	0.35	0.335	0.531	0.295	9.84	6.65

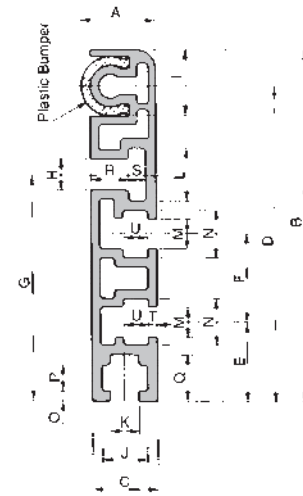
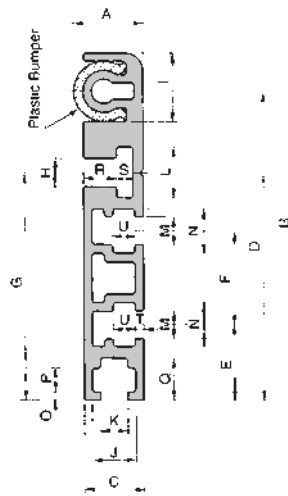
Steel inserts are fixed to the inside of the frame.

# PALLET GUIDE RAILS

C2030VRP-PGR

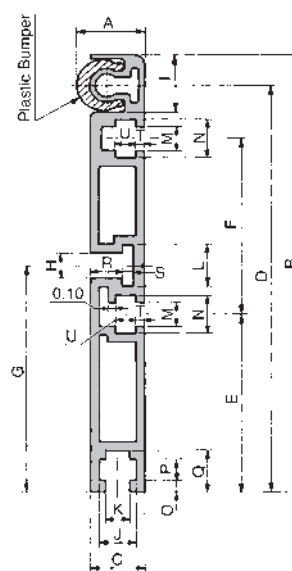
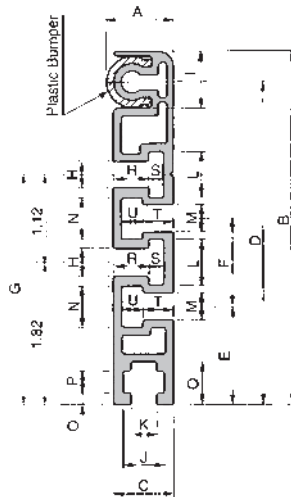
C2040VRP-PGR

C2050VRP-PGR



C2060VRP-PGR

C2080VRP-PGR

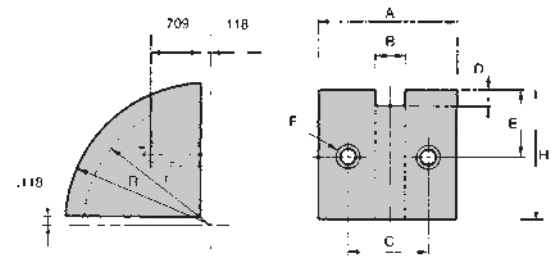
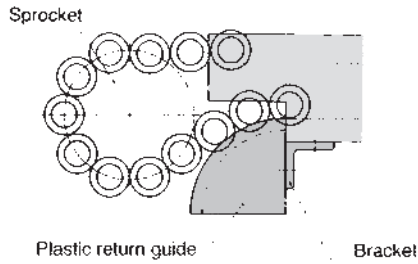


## Pallet Guide Rail Dimensional Data

Guide Rail No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	S	T	U	Standard Length	Approx. Weight
C2030VRP-PGR	0.60	2.89	0.49	2.51	1.02	0.94	1.50	0.280	0.70	0.33	0.22	0.47	0.22	0.33	0.08	0.37	0.18	0.24		0.20	9.84	0.60
C2040VRP-PGR	0.68	3.27	0.57	2.88	0.71	0.87	2.12	0.280	0.71	0.41	0.26	0.47	0.26	0.41	0.08	0.39	0.26	0.22	0.08	0.22	13.12	1.00
C2050VRP-PGR	0.88	3.94	0.77	3.50	0.91	0.98	2.55	0.350	0.81	0.53	0.33	0.59	0.33	0.53	0.12	0.53	0.45	0.20	0.10	0.30	13.12	1.50
C2060VRP-PGR	0.88	4.57	0.77	4.13	1.26	1.12	2.40	0.350	0.81	0.53	0.33	0.59	0.33	0.53	0.14	0.55	0.45	0.20	0.39	0.28	13.12	1.70
C2080VRP-PGR	0.88	6.10	0.77	5.67	2.46	2.46	3.15	0.350	0.81	0.53	0.33	0.59	0.33	0.53	0.16	0.57	0.45	0.16	0.12	0.30	9.84	2.40

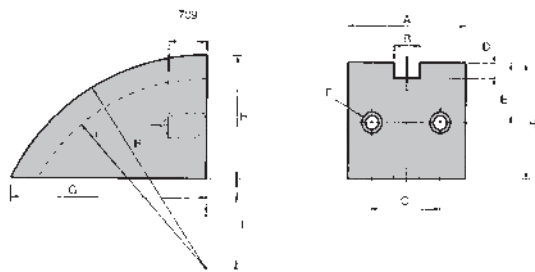
Plastic bumpers must be ordered separately.

# PLASTIC RETURN GUIDES AND BRACKET

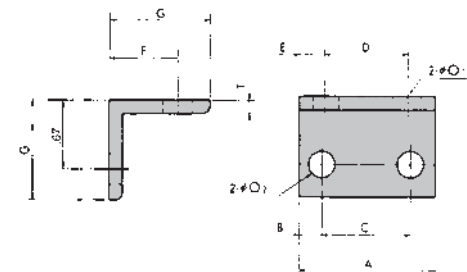


Plastic Return Guides and Brackets

Plastic Return Guides



Plastic Return Guides for DOUBLE PLUS® with Snap Covers



Bracket

## Plastic Return Guide Dimensional Data

Guide No.	A	B	C	D	E	F	G	H	I	r	R
C2030VRP-RG	1.34	0.35	0.87	0.24	1.22	M6		2.24		2.13	2.6
C2040VRP-RG	1.97	0.47	1.18	0.31	1.18	M8		2.24		2.05	2.36
C2050VRP-RG	2.20	0.59	1.38	0.39	1.26	M8		2.24		1.97	2.36
C2050VRP-RG-SC	2.20	0.59	1.38	0.39	1.26	M8	3.56	2.24	1.69	3.54	3.94
C2060VRP-RG	2.36	0.71	1.54	0.49	1.26	M8		2.24		1.87	2.36
C2060VRP-RG-SC	2.36	0.71	1.54	0.49	1.26	M8	3.56	2.24	1.69	3.44	3.94
C2080VRP-RG	2.76	0.91	1.77	0.59	1.61	M8		3.03		2.56	3.15
C2080VRP-RG-SC	2.76	0.91	1.77	0.59	1.61	M8	5.5	3.03	3.46	5.91	6.5

Note: Specify SC type for use with Snap Cover Double Plus®.  
For chain sizes C2030VRP-SC and C2040VRP-SC, use standard plastic return guide.

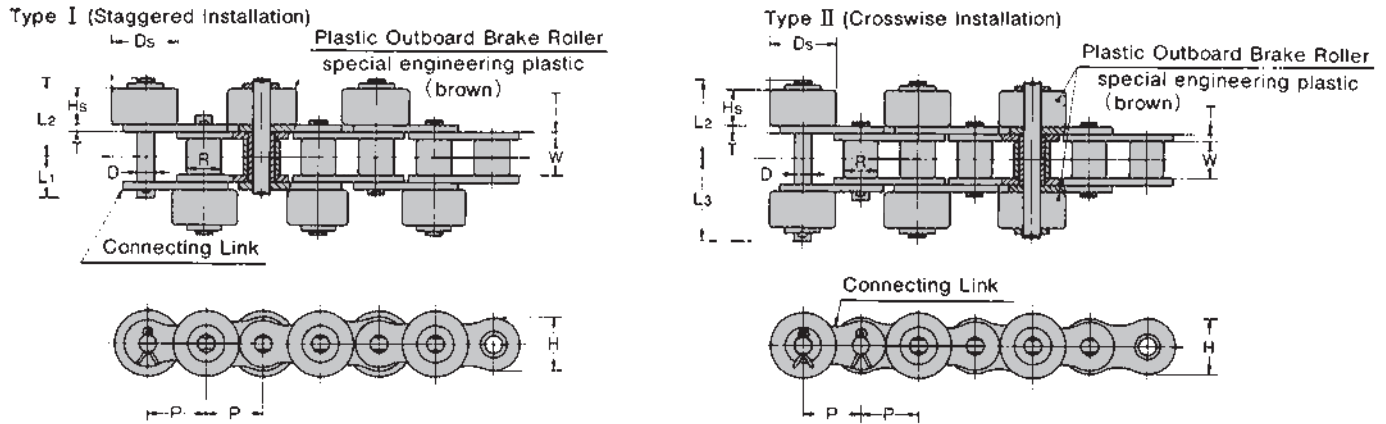
## Bracket Dimensional Data

Chain No.	A	B	C	D	E	F	G	O1	O2	T	Mounting Bolt Size
C2030VRP-GB	1.34	0.236	0.87	0.807	0.26	0.71	0.98	0.256	0.256	0.12	M6 X 20
C2040VRP-GB	2.36	0.591	1.18	1.752	0.30	0.79	1.18	0.335	0.335	0.12	M8 X 20
C2050VRP-GB	2.99	0.807	1.38	2.185	0.40	0.94	1.38	0.413	0.335	0.16	M8 X 20
C2060VRP-GB	3.70	1.083	1.54	2.854	0.42	0.94	1.38	0.413	0.335	0.16	M8 X 20
C2080VRP-GB	3.94	1.083	1.77	2.756	0.59	0.94	1.38	0.413	0.335	0.16	M8 X 20

# POLY & GUIDE ATTACHMENTS

## Poly-Steel Series

This is a light-weight, low-noise chain. In addition, it is maintenance-free since no lubrication is required. Outboard roller construction makes for a highly compact conveyor. The ability to flex backwards adds to this by allowing easy layout on the return side to save space. All parts are made of stainless steel except the outboard rollers and inner links.



## Poly Steel OBR

Tsubaki Chain No.	Pitch	Roller Diameter	Width between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight Lbs/Ft
				T	H	D	L1	L2	L3	Ds	Hs	
<b>Regular Series</b>	<b>P</b>	<b>R</b>	<b>W</b>	<b>T</b>	<b>H</b>	<b>D</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>Ds</b>	<b>Hs</b>	
40PCPSR	0.500	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.46
50PCPSR	0.625	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.65
60PCPSR	0.750	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	0.94

Tsubaki Chain No.	Pitch	Roller Dia.	Width between Roller Link Plates	Link Plate		Pin			Outboard Roller		Guide Attachment		Approx. Weight Lbs/Ft.	
				T	H	D	L1	L2	Ds	Hs	N	Ha	Plastic Roller	Steel Roller
<b>Regular Series</b>	<b>P</b>	<b>R</b>	<b>W</b>	<b>T</b>	<b>H</b>	<b>D</b>	<b>L1</b>	<b>L2</b>	<b>Ds</b>	<b>Hs</b>	<b>N</b>	<b>Ha</b>	<b>Plastic Roller</b>	<b>Steel Roller</b>
C2042SG	1.000	0.625	0.312	0.060	0.472	0.156	0.380	0.909	0.906	0.512	0.650	0.748	0.71	1.15
C2052SG	1.250	0.750	0.375	0.080	0.591	0.200	0.469	0.996	1.063	0.512	0.787	0.945	1.01	1.49
C2062HSG	1.500	0.875	0.500	0.094	0.713	0.234	0.600	1.167	1.181	0.496	1.000	1.063	1.62	2.12

# OUTBOARD ROLLER CHAINS

## Outboard Roller Series (Side Roller) without brake roller

- Highly compact
- Wide selection
- Quick start up



### Side Roller Chain Series

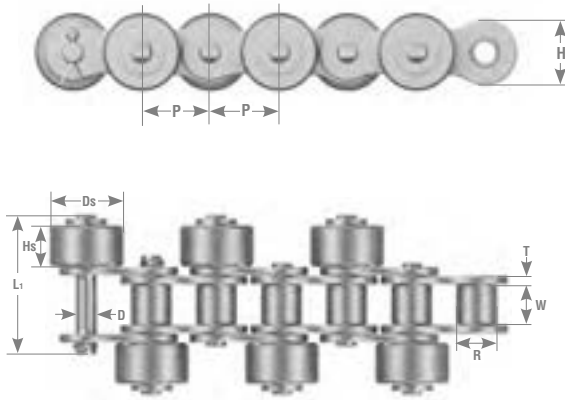
Standard Specifications			Variations
Series	Base Chain	Side Roller	Base Chain
Regular Series	Carbon Steel Chain	Carbon Steel	Stainless Steel
	Carbon steel chain with plastic oversized rollers	Engineered plastic (white) plus special engineered plastic brake (brown)	Nickel-plated and Neptune®
Electro-Conductive Series	Carbon steel chain	Special engineered plastic (black)	Stainless Steel
	Carbon steel chain with plastic oversized rollers	Special engineered plastic (black) plus special engineered plastic brake (brown)	Nickel-plated and Neptune®
Poly-steel series	Stainless steel and engineered plastic (white)	Special engineered plastic (white)	Chemical resistant
		Engineered plastic (white) plus special engineered plastic brake (brown)	Electro-conductive
Guide Attachment Series	Carbon Steel Chain	Can be made with any of the above options	Stainless Steel
	Carbon steel chain with plastic oversized rollers		Nickel-plated and Neptune®

Note: Consult the factory when using plastic brake outboard rollers on plated chains.

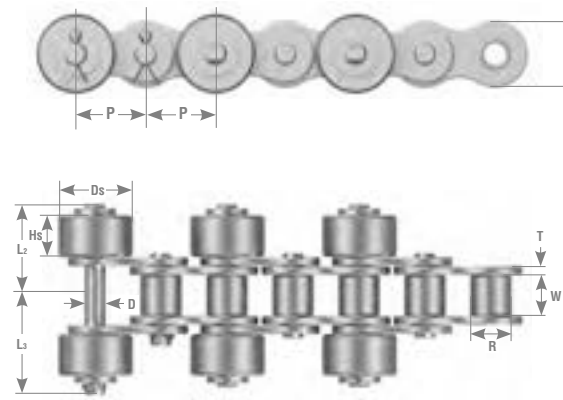


# OUTBOARD ROLLER CHAINS

### Type I Staggered Installation



### Type II Crosswise Installation



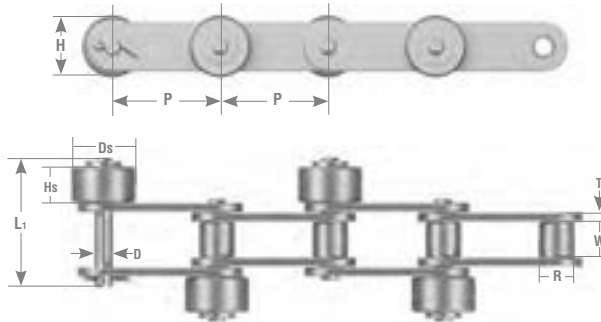
## Single Pitch Type

Tsubaki Chain No.		Pitch	Roller Dia	Width between Roller Link Plates	Link Plate		Pin			Outboard Roller		Approx. Weight Lbs/Ft.		
Regular Series	Electro-Conductive Series	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	Plastic Roller	Steel Roller
40PSR	40PSRE	0.500	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.63	1.12
50PSR	50PSRE	0.625	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.95	1.63
60PSR	60PSRE	0.750	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	1.42	2.44
80PSR	80PSRE	1.000	0.625	0.625	0.125	0.949	0.312	0.758	1.380	1.494	1.125	0.622	2.40	3.98
100PSR		1.250	0.750	0.750	0.156	1.185	0.375	0.900	1.675	1.797	1.563	0.748	3.74	6.73

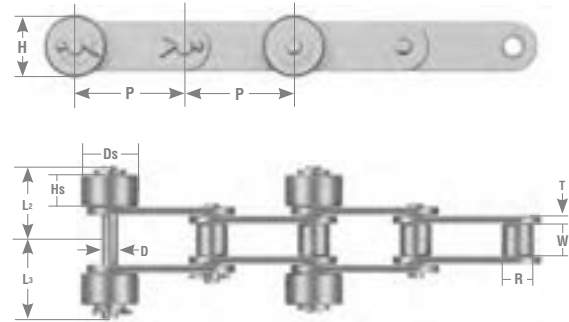
Note:

- Weights are for staggered outboard roller installation every link or crosswise outboard roller installation every second link.
- Cottered type connecting links will be provided.

### Type I Staggered Installation



### Type II Crosswise Installation



## Double Pitch Type

Tsubaki Chain No.		Pitch	Roller Dia.	Width between Roller Link Plates	Link Plate		Pin			Outboard Roller		Approx. Weight Lbs/ft.			
Regular Series	Electro-Conductive Series	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	Carbon w/ plastic outboard roller	Plastic Roller Chain Plastic Outboard roller	Carbon steel chain w/steel outboard roller
<b>Standard Roller</b>															
C2040PSR	C2040PSRE	1.000	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.44		0.69
C2050PSR	C2050PSRE	1.250	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.69		1.03
C2060HPSR	C2060HPSRE	1.500	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	1.21		1.72
C2080HPSR	C2080HPSRE	2.000	0.625	0.625	0.125	0.949	0.312	0.758	1.380	1.494	1.125	0.622	2.10		2.89
C2100HPSR		2.500	0.750	0.750	0.156	1.185	0.375	0.900	1.675	1.797	1.563	0.748	3.21		4.70
<b>Oversized Roller</b>															
C2042PSR	C2042PSRE	1.000	0.625	0.312	0.060	0.472	0.156	0.380	0.909	0.965	0.906	0.512	0.83	0.60	
C2052PSR	C2052PSRE	1.250	0.750	0.375	0.080	0.591	0.200	0.469	0.996	1.063	1.063	0.512	1.14	0.83	
C2062HPSR	C2062HPSRE	1.500	0.875	0.500	0.125	0.677	0.234	0.667	1.167	1.262	1.181	0.496	1.77	1.30	

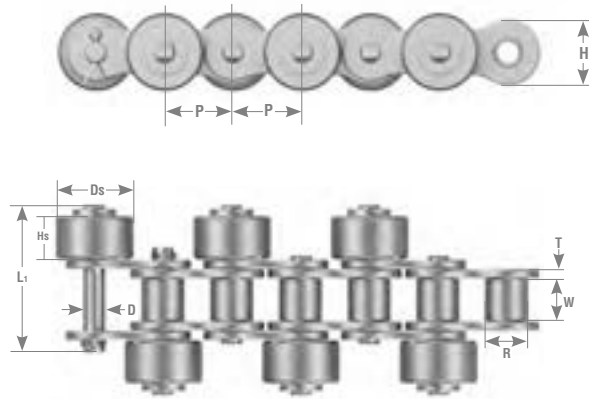
Note:

- Weights listed are for staggered outboard roller installation every pitch or crosswise outboard roller every second pitch.
- Cottered type connecting links will be provided.

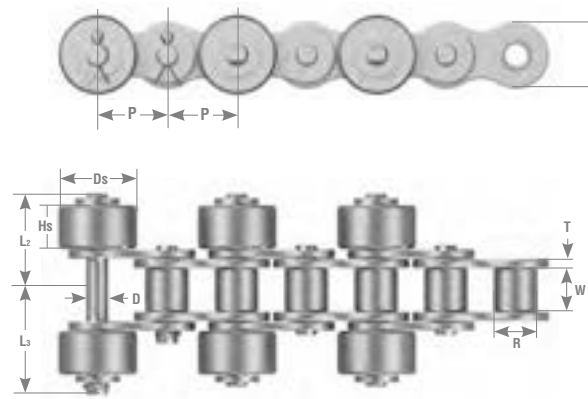
# OUTBOARD ROLLERS

## Regular and Electro-Conductive Series with brake roller

**Type I Staggered Installation**



**Type II Crosswise Installation**



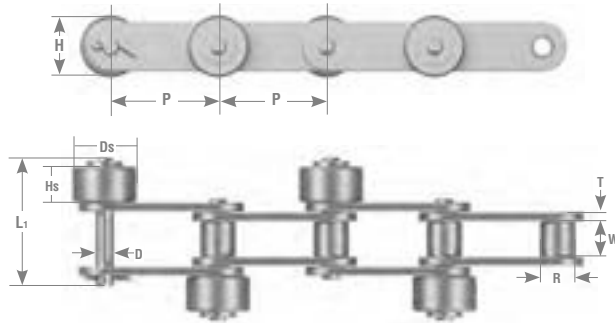
### Single Pitch Type

Tsubaki Chain No.		Pitch	Roller Dia.	Width between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight Lbs/Ft.	
Regular Series	Plastic Series	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	Plastic Roller	Steel Roller
40SR	40PSR	0.500	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.63	1.12
50SR	50PSR	0.625	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.95	1.63
60SR	60PSR	0.750	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	1.42	2.44

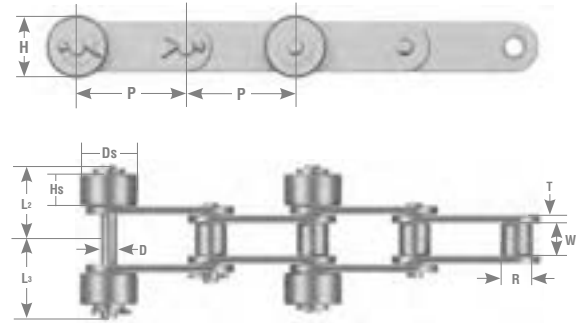
Note

- Weights listed are for staggered construction at every link or crosswise construction at every second pitch.
- For staggered construction, the plastic brake rollers are spaced every third pitch alternating right side and left side. For crosswise construction, they are spaced every 6th pitch. These configurations are standard.

**Type I Staggered Installation**



**Type II Crosswise Installation**



### Double Pitch Type

Tsubaki Chain No.		Pitch	Roller Dia.	Width between Roller Link Plates	Link Plate		Pin				Outboard Roller		Approx. Weight Lbs/Ft.		
Regular Series	Plastic Series	P	R	W	T	H	D	L1	L2	L3	Ds	Hs	Carbon with plastic outboard roller	Plastic Roller Chain Plastic Outboard roller	Carbon steel chain w/steel outboard roller
<b>Standard Roller</b>															
C2040SR	C2040PSR	1.000	0.312	0.312	0.060	0.472	0.156	0.380	0.705	0.760	0.625	0.307	0.44		0.69
C2050SR	C2050PSR	1.250	0.400	0.375	0.080	0.591	0.200	0.469	0.850	0.913	0.750	0.370	0.69		1.03
C2060HSR	C2060HPSR	1.500	0.469	0.500	0.094	0.713	0.234	0.600	1.100	1.195	0.875	0.496	1.21		1.72
<b>Oversized Roller</b>															
C2042SR	C2042PSR	1.000	0.625	0.312	0.060	0.472	0.156	0.380	0.909	0.965	0.906	0.512	0.83	0.60	
C2052SR	C2052PSR	1.250	0.750	0.375	0.080	0.591	0.200	0.469	0.996	1.063	1.063	0.512	1.14	0.83	
C2062HSR	C2062HPSR	1.500	0.875	0.500	0.125	0.677	0.234	0.667	1.167	1.262	1.181	0.496	1.77	1.30	

Note

- Weights listed are for staggered construction at every link or crosswise construction at every second pitch.
- For staggered construction, the plastic brake rollers are spaced every third pitch alternating right side and left side. For crosswise construction, they are spaced every 6th pitch. These configurations are standard.

# SINGLE PITCH ROLLER CHAINS



## Top Roller Chain

Standardized Specifications			Variations
Series	Base Chain	Top Roller	Base Chain
Regular Series	Steel	Steel	Stainless Steel Nickel-Plated Neptune®
Plastic Top Roller	Steel	Engineered Plastic	
Plastic Roller	Steel + Plastic Oversized Roller	Engineered Plastic	
Double Strand Top Roller	Steel	Steel	
Guide Attachment	Steel	Steel or Engineered Plastic	

For more information, please contact Tsubaki engineering.

### When top rollers are spaced more than every second pitch:

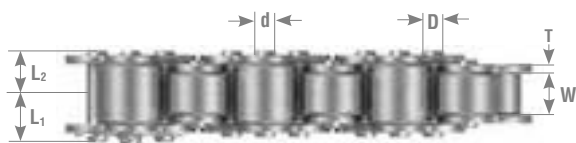
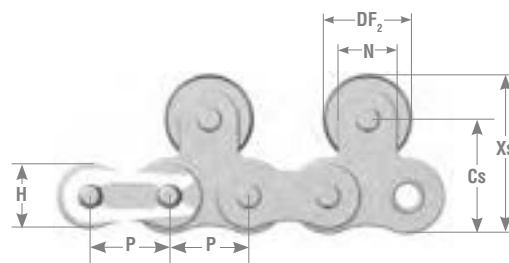
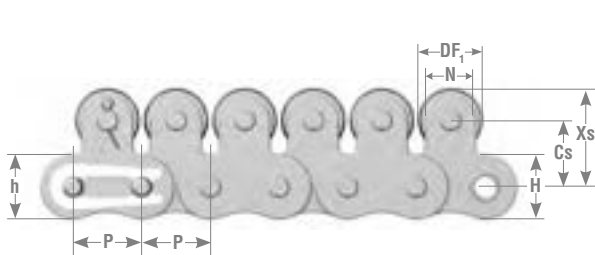


### When top rollers are spaced every pitch:



- Top rollers are heat-treated
- Spring clip type connecting links for sizes 40-60 unless specified.

# SINGLE PITCH TOP ROLLER CHAINS

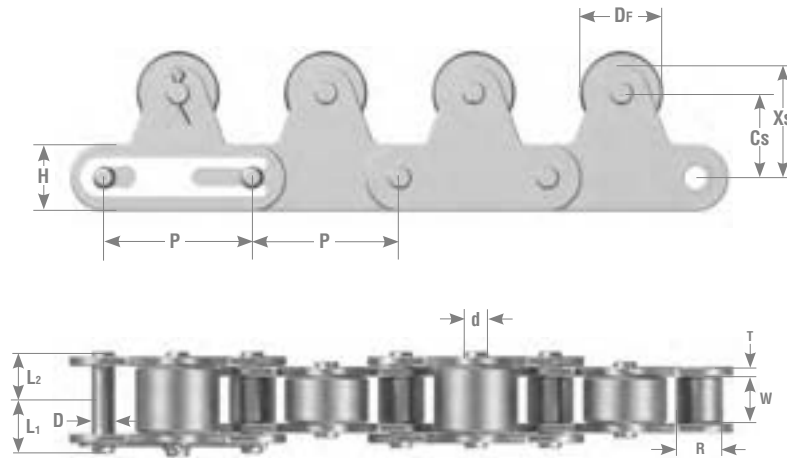


Chain Number		Pitch	Roller Dia.	Width between Roller Link Plates	Link Plate		Pin			Approximate Weight Steel Series		Approximate Weight Plastic Series	
Steel Series	Plastic Series	P	R	W	T	H	D	L1	L2	Every Pitch	Every 2nd	Every Pitch	Every 2nd
40TR	40TRP	0.500	0.312	0.312	0.060	0.472	0.156	0.325	0.392	1.23	0.95	0.62	0.57
50TR	50TRP	0.625	0.400	0.375	0.080	0.591	0.200	0.406	0.472	1.61	1.46	1.05	0.93
60TR	60TRP	0.750	0.469	0.500	0.090	0.713	0.234	0.506	0.581	2.42	2.14	1.55	1.36
80TR	80TRP	1.000	0.625	0.625	0.125	0.949	0.312	0.640	0.758	4.09	3.54	2.62	2.31
100TR	100TRP	1.250	0.750	0.750	0.156	1.185	0.375	0.778	0.900	6.25	5.95	4.07	3.64

Chain Number		Attachment Dimensions								
Steel Series	Plastic Series	DF1	DF2	Cs	N	Xs	L	L1	L2	d
40TR	40TRP	0.433	0.625	0.500	0.374	0.687	0.520	0.325	0.380	0.156
50TR	50TRP	0.591	0.750	0.626	0.500	0.876	0.638	0.406	0.469	0.200
60TR	60TRP	0.709	0.875	0.720	0.626	1.033	0.811	0.506	0.600	0.234
80TR	80TRP	0.945	1.125	0.969	0.752	1.344	1.012	0.640	0.758	0.312
100TR	100TRP	1.181	1.563	1.252	1.000	1.752	1.220	0.778	0.900	0.376

# DOUBLE PITCH TOP ROLLER CHAINS

## Single Strand Double Pitch Type



Chain Number		Pitch	Roller Diameter		Width between Roller Link Plates	Link Plate			Pin			Approximate Weight Steel Series		Approximate Weight Plastic Series	
Steel Series	Plastic Series	P	"S" Roller	"R" Roller	W	T	H	D	L1	L2	"S" Roller	"R" Roller	"S" Roller	"R" Roller	
C2040TR	C2040TRP	1.000	0.312	0.625	0.312	0.060	0.472	0.156	0.325	0.392	0.89	1.14	0.61	0.62	
C2050TR	C2050TRP	1.250	0.400	0.750	0.375	0.080	0.591	0.200	0.406	0.472	1.37	1.68	0.97	0.96	
C2060HTR	C2060HTRP	1.500	0.469	0.875	0.500	0.125	0.677	0.234	0.573	0.652	2.47	2.93	1.86	1.85	
C2080HTR	C2080HTRP	2.000	0.625	1.125	0.625	0.156	0.906	0.312	0.720	0.823	3.80	4.54	2.88	3.04	
C2100HTR	C2100HTRP	2.500	0.750	1.563	0.750	0.187	1.126	0.375	0.858	0.965	6.12	7.64	4.37	4.44	

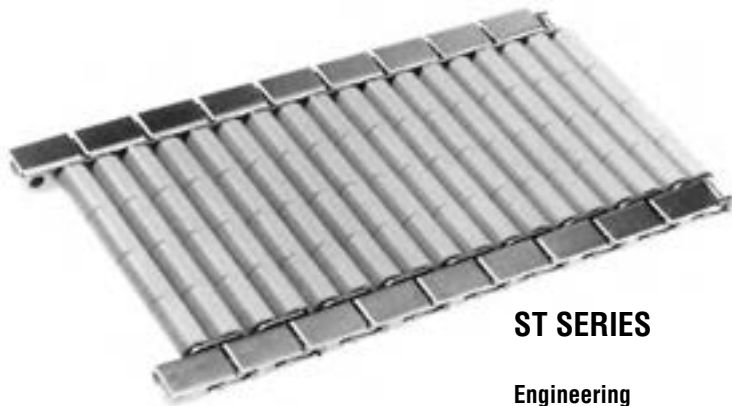
- Note: 1. "R" rollers are oversized, "S" rollers are standard.  
 2. Spring clip type connecting links will be provided for C2040-C2060H.  
 3. Dimensions except roller diameter, are the same for "S" and "R" roller types.  
 4. For even spacing, top rollers will be fitted on roller link unless otherwise specified.

Chain Number		Attachment Dimensions					
Steel Series	Plastic Series	DF1	Cs	Xs	L1	L2	d
C2040TR	C2040TRP	0.625	0.591	0.827	0.325	0.380	0.156
C2050TR	C2050TRP	0.750	0.748	1.043	0.406	0.469	0.200
C2060HTR	C2060HTRP	0.875	0.906	1.244	0.573	0.667	0.234
C2080HTR	C2080HTRP	1.125	1.142	1.594	0.728	0.839	0.446
C2100HTR	C2100HTRP	1.563	1.394	1.957	0.870	1.071	0.572

Note: Weights listed apply to top rollers every pitch. For additional configuration weights consult Tsubaki engineering.

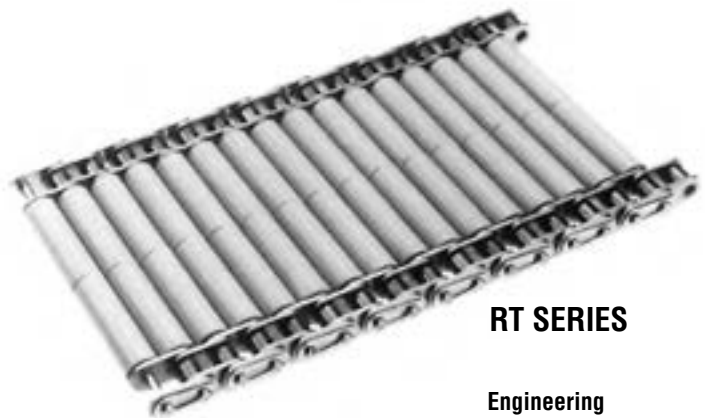
# ROLLER TABLE CHAINS

- Does not damage conveyed materials
- Transfers materials smoothly to other lines
- Wide selection available
- Easy to assemble and disassemble
- RT type Roller Table chain provides a low friction alternative to table top chain
- ST type Roller Table chain allows your product to be loaded and unloaded at right angles to conveyor flow.
- Standard roller chain sprockets can be used.



**ST SERIES**

Engineering  
Plastic Rollers



**RT SERIES**

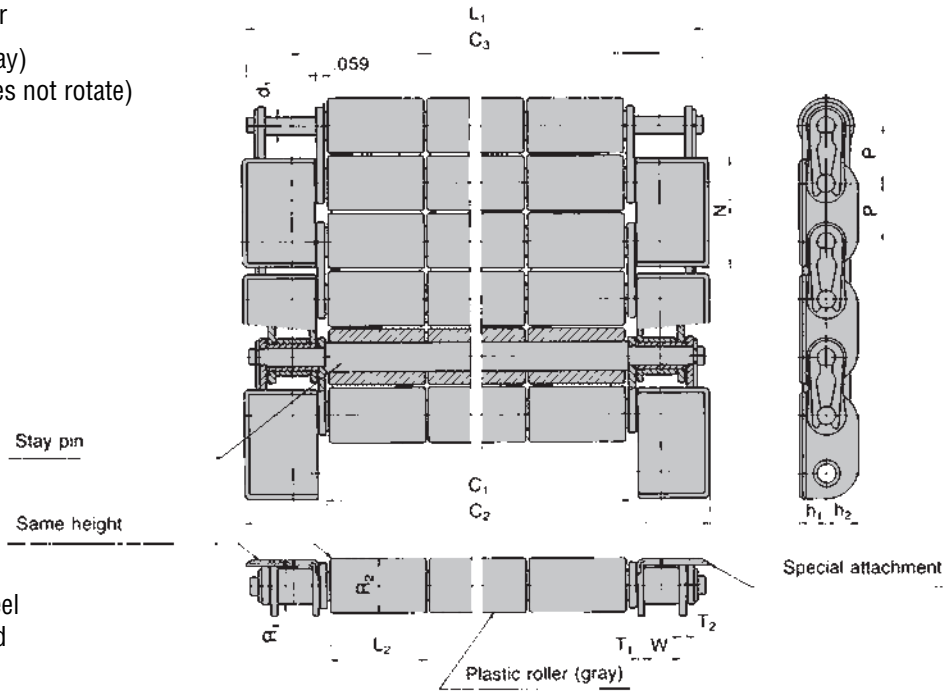
Engineering  
Plastic Rollers

# ST ROLLER TABLE CHAINS

The special attachment is bent to height of roller

Plastic roller (gray)

Stay pin (pin does not rotate)



SS: Stainless steel  
NP: Nickel-plated

## Common Dimensions

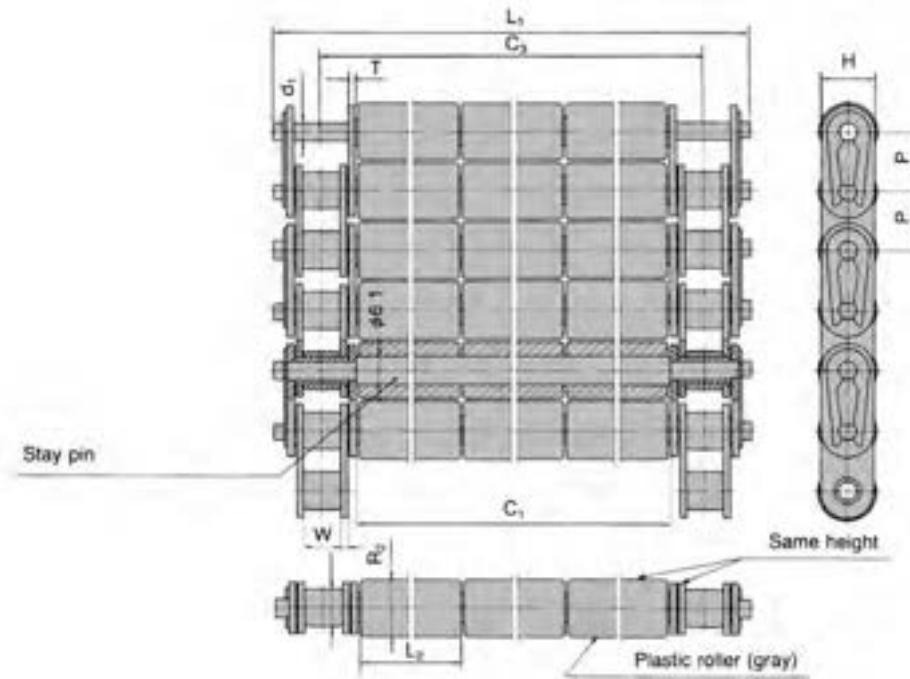
Series	P	W	R1	h1	h2	N	T1	T2	d1	R2	L2	51
<b>ST400</b>	0.500	0.313	0.313	0.224	0.276	0.961	0.047	0.059	0.154	0.472	0.984	51
<b>ST500</b>	0.625	0.375	0.400	0.280	0.335	1.201	0.059	0.079	0.200	0.591	0.984	72

Note: Please use sprockets that have more than 23 teeth.

## Dimensions

Series	Effective Width	Overall Width	Center Distance Between Two Chains	Pin Overall Length	Approximate Weight Lbs/Ft
Series	C1	C2	C3	L1	
<b>400 Series</b>					
<b>ST404SS</b>	3.984	5.433	4.551	5.339	2.97
<b>ST406SS</b>	5.953	7.402	6.520	7.307	3.88
<b>ST408SS</b>	7.921	9.370	8.488	9.276	4.79
<b>ST410SS</b>	9.890	11.339	10.457	11.244	5.70
<b>ST412SS</b>	11.858	13.307	12.425	13.213	6.60
<b>ST414SS</b>	13.827	15.276	14.393	15.181	7.51
<b>ST416SS</b>	15.795	17.244	16.362	17.150	8.41
<b>500 Series</b>					
<b>ST504SS</b>	3.984	5.717	4.685	5.622	4.14
<b>ST506SS</b>	5.953	7.658	6.654	7.591	5.43
<b>ST508SS</b>	7.921	9.654	8.622	9.559	6.64
<b>ST510SS</b>	9.890	11.622	10.591	11.528	7.89
<b>ST512SS</b>	11.858	13.591	12.559	13.496	9.14
<b>ST514SS</b>	13.827	15.559	14.528	15.465	10.39
<b>ST516SS</b>	15.795	17.528	16.496	17.433	11.63
<b>ST518SS</b>	17.764	19.496	18.465	19.402	12.89
<b>ST520SS</b>	19.320	21.465	20.433	21.370	14.14
<b>ST522SS</b>	21.701	23.433	22.402	23.339	15.39
<b>ST524SS</b>	23.669	25.402	24.37	25.307	16.64

# RT ROLLER TABLE CHAINS



Roller Table No.	Pitch P	Width Between Roller Link Plates W	Roller Diameter R1	Link Plate		Pin		Plastic Roller		Effective Width C1	Center Distance Between Two Chains C3	Maximum Allowable Conveying Load LBS/FT	Approximate Weight LBS/FT
				H	T	d1	L1	R2	L2				
RT404SS	0.500	0.313	0.313	0.437	0.06	0.154	5.339	0.48	1.969	3.984	4.551	41	2.71
RT408SS							9.276			7.921	8.488		4.54
RT412SS							13.213			11.858	12.425		6.37
RT416SS							17.15			15.795	16.362		8.21
RT504SS	0.625	0.375	0.400	0.547	0.08	0.200	5.622	0.598	1.969	3.984	4.685	61	3.90
RT508SS							9.559			7.921	8.622		6.37
RT512SS							13.496			11.858	12.559		8.85
RT516SS							17.433			15.796	16.496		11.35
RT520SS							21.370			19.732	20.433		13.80
RT524SS						25.307			23.669	24.370		16.28	
RT604SS	0.75	0.500	0.469	0.661	0.094	0.235	6.047	0.72	1.969	3.984	4.882	61	4.52
RT608SS							9.984			7.921	8.819		6.98
RT612SS							13.921			11.858	12.756		9.43
RT616SS							17.858			15.795	16.693		11.88
RT620SS							21.795			19.732	20.630		14.33
RT624SS							25.735			23.669	24.567		16.78



# TOP CHAIN - TS SERIES

Tsubaki Top Chain is ideal for continuous conveying applications such as bottling, canning, packaging of beverages, food, medicines, chemicals and cosmetics, and for conveying machine parts.

Tsubaki Top Chain is available in a wide variety of material types and designs to meet the needs of your conveying applications.

## TS Top Chain Linear Movement

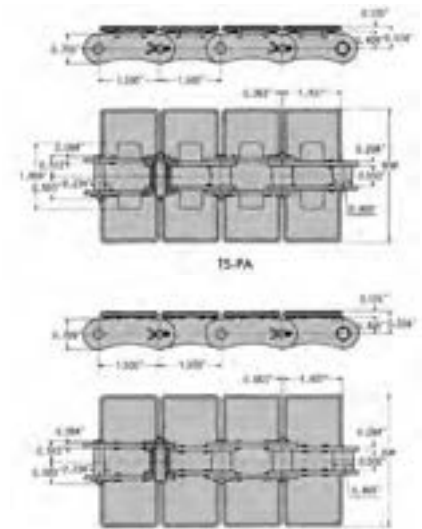
Tsubaki TS Top Chain consists of top plates made of 430 stainless steel, and steel roller chain identical to A2060. The top plates are projection welded to the link plate of the chain. The welded strength provides reliable operation.

- Installation horizontally over vertical sprockets.
- Chain can be disconnected at any joint for easy installation and maintenance
- Provides dependable trouble-free service
- Wear-resistant
- Sprockets for C2060H chain can be used.

### TS-PA Type

- TS-PA-SS All Stainless steel construction
- TS-PA-CS carbon steel chain with 430 SS Top Plate

Tsubaki Chain No.	Slat Width XW	Approx. Weight (Lbs/ft)
TS635-PA	2.50	2.10
TS762-PA	3.00	2.20
TS826-PA	3.25	2.40
TS950-PA	3.74	2.60
TS1016-PA	4.00	2.80
TS1100-PA	4.33	2.90
TS1143-PA	4.50	3.00
TS1270-PA	5.00	3.10
TS1524-PA	6.00	3.50
TS1905-PA	7.50	4.10



### TS-P Type

- TS-P-SS All Stainless steel construction
- TS-P-CS carbon steel chain with 430 SS Top Plate

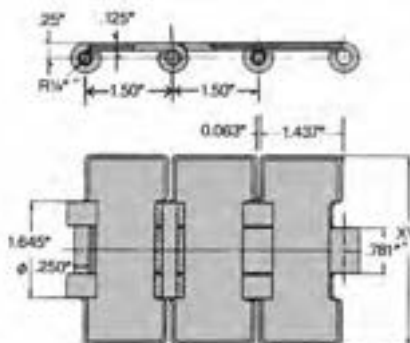
Tsubaki Chain No.	Slat Width XW	Approx. Weight (Lbs/ft)
TS550-P	2.16	1.7
TS635-P	2.50	2.10
TS762-P	3.00	2.20
TS826-P	3.25	2.40
TS950-P	3.74	2.60
TS1016-P	4.00	2.80
TS1100-P	4.33	2.90
TS1143-P	4.50	3.00
TS1270-P	5.00	3.10
TS1524-P	6.00	3.50
TS1905-P	7.50	4.10



# TOP CHAIN - TT & TP SERIES

## TT Top Chain Linear Movement

TT Top chain is made of only two parts - stainless steel top plates with rolled hinges, and pins. This extremely simple construction ensures high strength and a long service life. In addition, the chains pick up fewer impurities and remain clean longer. The result is highly simplified handling and maintenance.



### TT-N

Top plates are made of 431 stainless steel and pins are made of 304 stainless.

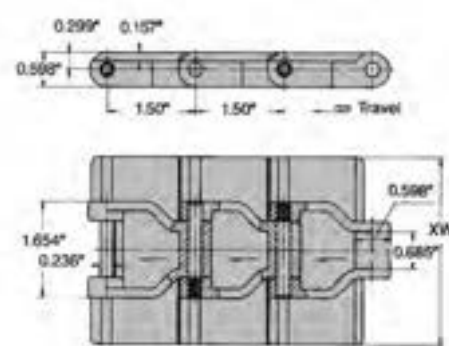
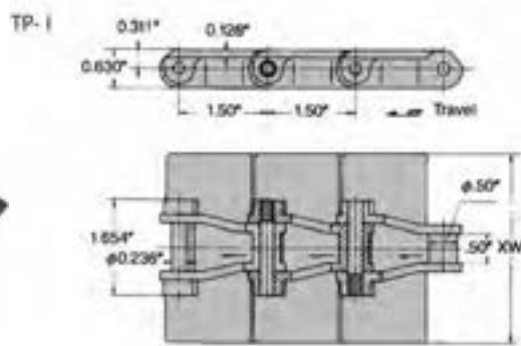
### TT-SS

All parts are made of 304 stainless.

Tsubaki	Slat Width	Approx. Weight (Lbs/ft)
<b>Chain No.</b>	<b>XW</b>	
TT635-SS	2.50	1.50
TT762-SS	3.00	1.70
TT826-SS	3.25	1.80
TT1016-SS	4.00	2.10
TT1143-SS	4.50	2.40
TT1270-SS	5.00	2.60
TT1524-SS	6.00	3.00
TT1905-SS	7.50	3.60

## TP Top Chain Linear Movement

Tsubaki TP Top chain consists of polyacetal resin top plates formed with each link and 304 stainless steel pins. The uniquely shaped top plate along with Tsubaki technology ensures the high strength and maximum chain life. Tsubaki TP Top Chain can be easily assembled and disassembled thus making maintenance minimal.



### TS-P Type

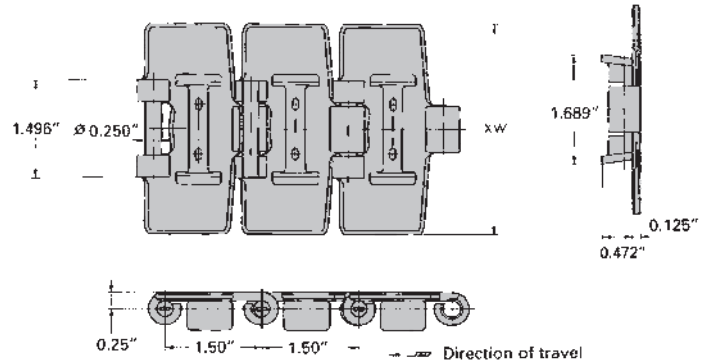
- TS-P-SS All Stainless steel construction
- TS-P-CS carbon steel chain with 430 SS Top Plate

Tsubaki	Slat Width	Approx. Weight		
<b>Chain No.</b>	<b>XW</b>	<b>Lbs/Ft.</b>	<b>Type</b>	<b>Color</b>
TP762	3.00	0.54	1	Gray
TP826	3.25	0.54	1	
TP1016	4.00	0.60	2	
TP1143	4.50	0.67	2	
TP1270	5.00	0.74	2	

# TOP PLATE - TTU & TPU SERIES

## TTU Top Chain Curved Movement

Tsubaki TTU Top chain consists of top plates, connecting pins and guide-plates for float-prevention around curves. All parts are made of martensitic stainless steel which ensures strong resistance to rust and clean handling.

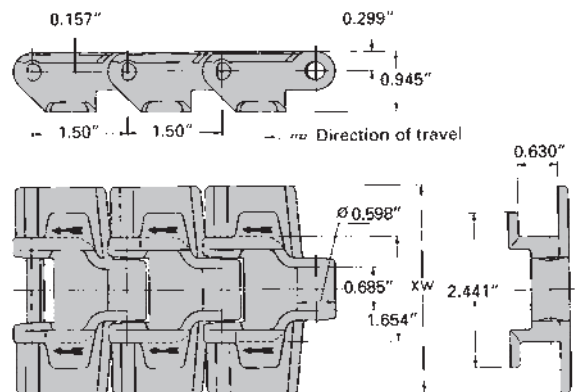


Tsubaki Chain No.	Slat Width XW	Minimum Radius R	Approx. Weight (Lbs/ft)
TTU826	3.25		2.10
TTU1143	4.50		2.20



## TPU Top Chain Curved Movement

Tsubaki TPU Top chain consists of polyacetal resin top plates fitted with float-prevention tabs and 304 stainless steel pins.

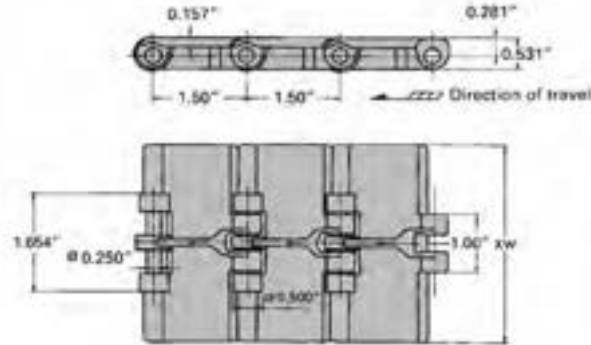


Tsubaki Chain No.	Slat Width XW	Approx. Weight Lbs/Ft	Color of Top Plate
TPU826	3.25	0.67	Gray

# TOP CHAIN - TTP & TN SERIES

## TTP Top Chain Linear Movement

Tsubaki TTP Top chain has a simple design of polyacetal resin top plates and 304 stainless steel pins. Maximum allowable load is lower than the TP type, but they are economical when replacement is required.



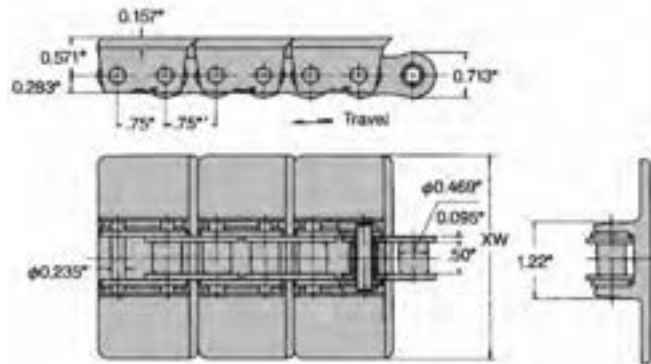
### TTP and TTPF

Plates are made of polyacetal plastic. Pins are made of 304 stainless.

Tsubaki Chain No.	Slat Width XW	Approx. Weight lbs/Ft	Color
TTP826	3.25	0.60	TTP: Gray
TTPF826			
TTP1143	4.50	0.67	
TTPF1143			
TTP1270	5.00	0.74	TTPF: Brown low Friction
TTPF1270			
TTP1905	7.50	0.94	
TTPF1905			

## TN Top Chain Linear Movement

Tsubaki TN Top chain consists of polyacetal resin top plates snapped onto special chain identical in size to 60 roller chain. The chain is available in three types: carbon steel, stainless and nickel-plated. The top plate can be correctly and firmly snapped on to the special pins and the chain with ease.



### TN, TN-NP, TN-SS

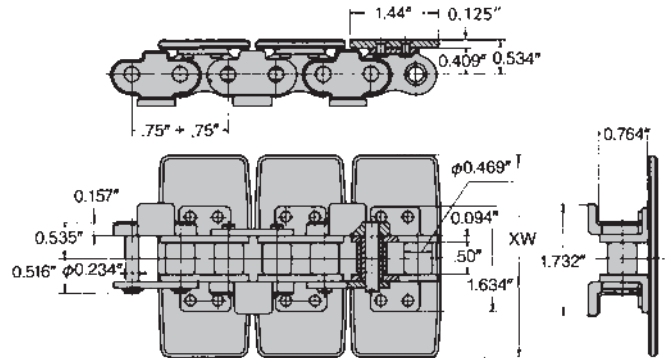
Top plates are polyacetal plastic. Chains are available in carbon steel nickel-plated or 304 stainless steel.

Tsubaki Chain No.	Slat Width XW	Approx. Weight Lbs/Ft	Color of Top Plate
TN826	3.25	1.41	Gray
TN1016	4.00	1.48	
TN1143	4.50	1.55	
TN1270	5.00	1.61	
TN1905	7.50	1.88	

# TOP PLATE - TRU & TKU SERIES

## TRU Top Chain Curved Movement

Tsubaki TRU Top chain uses a top-plate-riveted 60 roller chain as its base with special provisions for curving. A float-prevention tab prevents floating at corners to allow the creation of curved conveyors. The same tab may also be used for inclined conveyors to keep the chain in position.



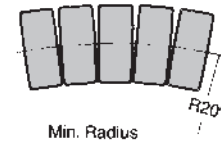
### TRU

Top plates are made of 430 stainless steel. Base chain is carbon steel

### TRUSS

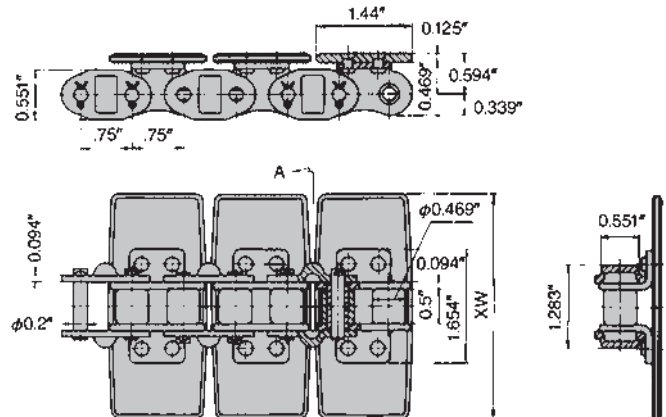
All parts are 304 stainless steel

Tsubaki	Slat Width	Approx. Weight (Lbs/ft)
Chain No.	XW	
TRU826	3.25	2.80
TRU1143	4.50	3.30
TRU1270	5.00	3.50



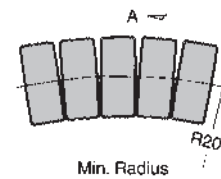
## TKU Top Chain Curved Movement

Tsubaki TKU top chain uses a top-plate riveted 60 roller chain as its base with special provisions for curving. As the chain has no float-prevention tab, it is suggested that slow and simple curved running be used.



### TKU

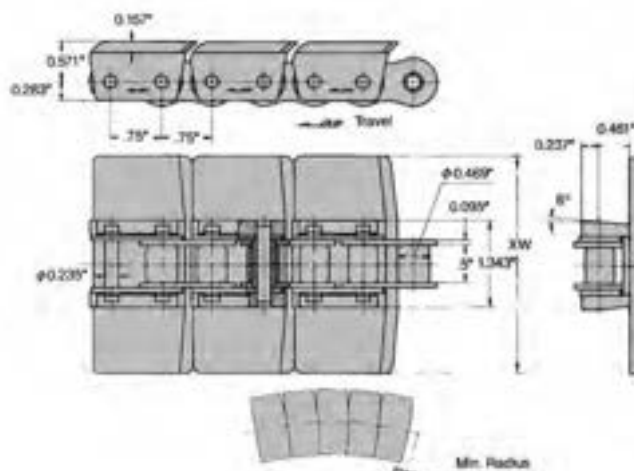
Tsubaki	Slat Width	Approx. Weight (Lbs/ft/ft)
Chain No.	XW	
T550-P	3.25	2.60
TS635-P	4.33	3.00



# TOP CHAIN - TNU & TO SERIES

## TNU Top Chain Curved Movement

TNU Top chain consists of polyacetal resin top plates snapped onto a special chain the same size as 60 chain and made of carbon steel or nickel-plated. The outside surface of the snap is tapered for float prevention.



### TNU and TNU-NP

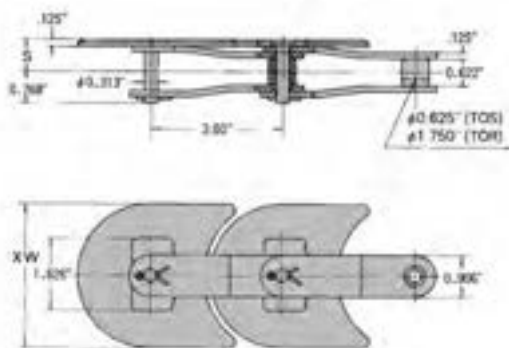
Top plates are made of polyacetal. Plastic Chains are carbon steel or nickel plated.

Tsubaki	Slat Width	Approx. Weight	Color of Top Plate
Chain No.	XW	Lbs/Ft	
<b>TNU826</b>	3.25	1.48	Gray
<b>TNU1143</b>	4.50	1.55	
<b>TNU1270</b>	5.00	1.68	

## TO Top Chain Curved Movement

Tsubaki TO Crescent Plate chain is used to convey containers and materials in the bottling and canning industries. It is especially useful when the length of the conveyor must be long and the load factor high.

- Stronger than TS Top Plate Chain.
- Can follow any horizontal route.
- A turn-table and guide roller are unnecessary on the return side.
- Standard carbon steel chain with 430 stainless crescent shaped top plates are provided unless otherwise specified.
- Minimum radius of TO Crescent Plate chain is 4-inches.



### TOS

Top plates are made of 430 stainless steel. Chain is carbon steel

Tsubaki	Slat Width		Approx. Weight (Lbs/ft)
Chain No.	XW	S	
<b>TOS826</b>	2.16	0.705	2.80
<b>TOS1143</b>	2.50	0.705	3.20
<b>TOS1778*</b>	3.00	0.831	4.20

### TOR

Top plates are made of 430 Stainless steel. Chain is carbon steel.

Tsubaki	Slat Width		Approx. Weight (Lbs/ft)
Chain No.	XW	S	
<b>TOR826</b>	3.25	0.705	4.00
<b>TOR1143</b>	4.50	0.705	4.60
<b>TOR1778*</b>	7.00	0.831	5.40

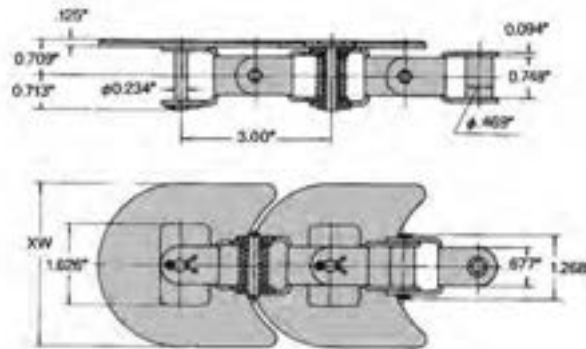
Note: When ordering TOS1778 and TOR1778, please consult factory.

# TOP CHAIN - TU SERIES

## TU Top Chain Universal Movement

Tsubaki TU Crescent Plate chain is similar to other styles of Tsubaki Top chain, but it is designed for multi-plane operation. It conveys cans, bottles or packages in a straight or curved line on a horizontal plane and the return can travel in any path best suited to conditions.

- Can follow any horizontal and vertical route
- Standard carbon steel chain with 430 stainless steel crescent
- Crescent shaped top plates will be provided unless otherwise specified



Chain	Slat Width	Approx. Weight
Number	XW	Lbs/Ft
TU826	3.25	2.60
TU1143	4.50	3.00

# PLASTIC CHAINS

## Standard Series ("P" Series)

Plastic chain consists of polyacetal chain links and 304 stainless steel pins. Plastic chain can operate on standard carbon steel sprockets. Plastic chain has a flat top side for power transmission or conveying purposes.

## "E" Series (Electro-Conductive Series)

The special plastic used in the "E" series is electro-conductive and permits electrical charge. These chains are suitable for applications where electric noise and electric sparks exist. Also in areas where dust collects due to static electricity, Volume resistivity: 106Ω cm.

## "Y" & "SY" Series (Anti-Chemical Series)

The "Y" and "SY" series utilizes an engineered plastic which permits the chain to perform well even where chloride, acid, alkaline, oxidizers, and most organic solvents are present. "SY" series is a combination of "Y" series plastic block links and titanium pins and performs well even in environments where sulfuric and hydrochloric acid exists.

## "K" Series (Heat Resistant Series)

For warmer operating conditions, the "K" series is the Tsubaki offering. This plastic chain is made from engineered plastic capable of handling temperatures up to 284°F. Because of its material combination, the "K" series will not lose its properties in higher temperatures.

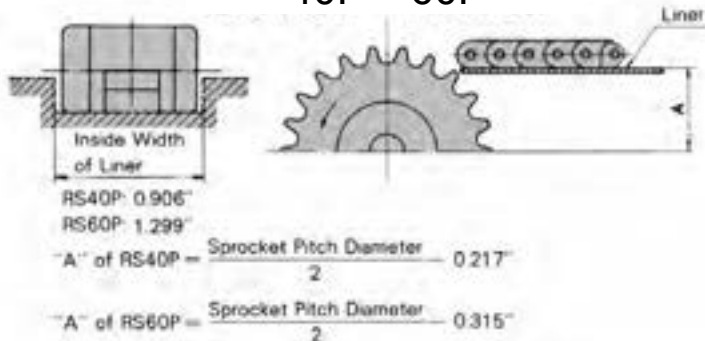
Chain No.	P	Maximum Allowable Tension (Lbs)				Ambient Temperature Range F		Maximum Speed	Allowable Chain Ft/Min	Coefficient of Sliding Friction
		Std.	"E"	"Y" "SY"	"K"	Std "E" "Y" "SY"	H			
35P	0.375	40	30	20	40	(-4) to 176F	(-4) to 284F	200	164	0.25
40P	0.500	100	77	55	55	(-4) to 176F	(-4) to 284F	200	164	0.25
50P	0.625	154	110	90		(-4) to 176F	(-4) to 284F	200	164	0.25
60P	0.750	200	143	110	110	(-4) to 176F	(-4) to 284F	200	164	0.25
C2040P	1.000	100	77	55	55	(-4) to 176F	(-4) to 284F	200	164	0.25

Note:

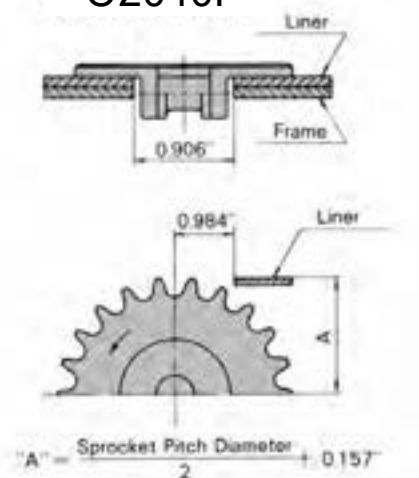
1. More detailed selections available in the Engineered Plastic Chain Catalog. Please consult the factory.
2. "K" Series chain is clip-type construction and has a slightly longer pin.

## Location of guide rails and sprocket

### 40P • 60P



### C2040P



Note: The Engineered plastic chain catalog is also available upon request. For details consult U.S. Tsubaki.



# PLASTIC CHAINS

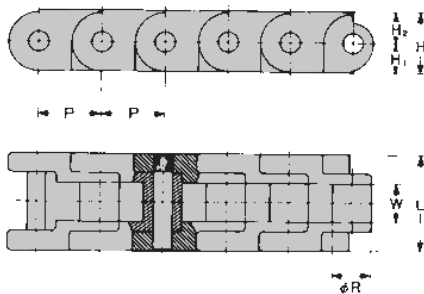
## Corrosion Resistance Guide

The corrosion resistance guide given below should be referred to when selecting chains. The table presents Tsubaki laboratory tests at 68°F. Humidity and other conditions should also be considered as well as concentration of chemical and time of exposure.

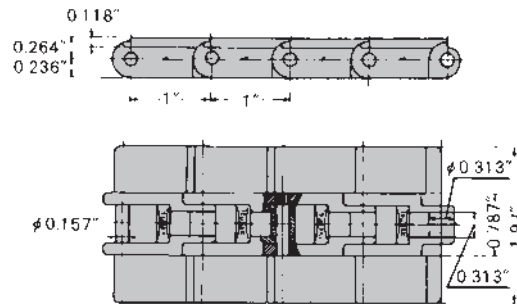
“E”: Electro-Conductive series, “Y”: Anti-chemical series, “K”: heat resistant series, “N”: Low noise series

Material	“E” “N” “K” Standard	“Y”	“SY”	Material	“E” “N” “K” Standard	“Y”	“SY”
Acetone	1	3	3	Carbon Tetrachloride	2	2	1
Oil (Vegetable)	1	1	1	Nitric Acid (5%)	3	1	1
Vegetable	1	1	1	Vinegar	2	2	2
Ammonia	1	2	2	Hypochloride	3	2	1
Sodium Chloride	2	2	1	Postassium Hydroxide	3		1
Hydrochloric Acid	3	3	1	Sodium Hydroxide (20%)	3	1	1
Sea Water	2	1	1	Soapy Water	1	1	1
Hydrogen Peroxide	3	1	1	Paraffin	1	1	1
Caustic Soda (25%)	3	1	1	Beer	1	1	1
Gasoline	1	1	1	Fruit Juice	1	1	1
Chloric Acid (10%)	3	2	2	Wine	1	1	1
Formic Acid	3	3	1	Whiskey	1	1	1
Aldehyde Formate	1	1	1	Vegetable Juice	1	1	1
Milk	1	1	1	Iodine	3	3	1
Lactic Acid	1	1	1	Sulfuric Acid	3	3	1
Citric Acid	2	1	1	Phosphoric Acid (10%)	3	2	1
Acetic Acid (5%)	3	1	1	Soda Pop	1	1	1

### RS Type



### RS Double Pitch Type



#### Double Pitch Plastic made with 304SS Pins

Chain No.	P	Slat Width	Approx. Weight Lbs/Ft	Color
C2040P	1.00	1.97	0.28	White

#### Single Pitch Plastic made with 304SS Pins

Chain No.	P	R	W	L	H1	H2	H	Approx. Weight Lbs/Ft	Color
40P	0.500	0.313	0.310	0.787	0.236	0.264	0.500	0.24	White
60P	0.750	0.469	0.500	1.181	0.335	0.346	0.681	0.48	White



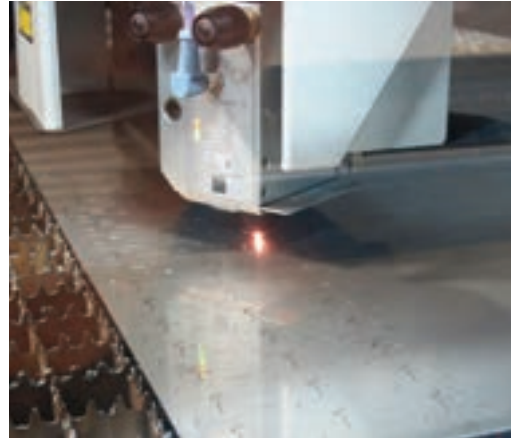
# SPECIALTY CHAINS

From the unique to OEM replacement chains, Tsubaki can produce even the most complex chains to fit virtually any applications. Tsubaki's Laser-Express™ provides state-of-the-art precision and custom attachment manufacturing for even the most complex attachments. Tsubaki manufactures a complete line of chains for Thermoforming, vacuum sealing and packaging and also produces chains for the can-coating and roller conveyor applications. Tsubaki's specialty chains are unlike any other in the industry.



 **TSUBAKI**®

## Specialty Attachment Chain Capabilities



Tsubaki's state-of-the-art Laser-Express™ cutting machine is designed to meet the toughest made-to-order requests. Located at the Tsubaki roller chain manufacturing plant in Holyoke, Massachusetts, the increased capabilities now allow for a quicker turn around on even the most complicated made-to-order requests.

### Wider Made-to-order capabilities

- Variety of complex bent attachments
- Plate sizes up to 2x8-feet.
- Cutting range thickness range:
  - Carbon chain – 35 through 240H, C2040 - C2160
  - Stainless chain – 35 -160, C2040 - C2120H



### Improved Lead-time

- No special tooling required
- Lead time improvement up to 4-weeks depending on complexity and job size.



# MADE-TO-ORDER SPECIALS

Tsubaki will design and manufacture special attachment chains to meet the needs of your application. This section shows some of the specialty and industry specific roller chains Tsubaki can supply.

1. Bottle Conveying



2. Can Seamer



3. Candy Making



4. Citrus Chain



5. Forestry End-dogger chain



6. Electrical Resistor Manufacturing



7. Ice Cream Chains



8. Produce Sizer Chains



9. Paint and Powder coating



10. Forest Sharp Top



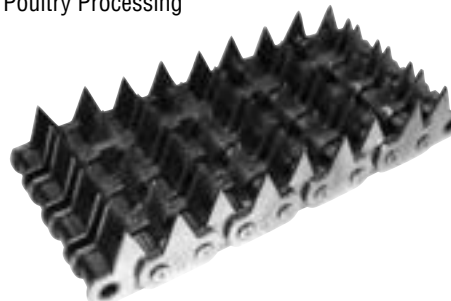
11. Refrigerator Coil Production



12. Lumber Processing



13. Poultry Processing



# MADE-TO-ORDER SPECIALS

14. Shot Peen Drive Chain



15. Smokehouse chains



16. Tobacco Processing



17. Printing/Bindery Chains



18. Pipe Cutting chains



19. Pin Oven Chains



20. Vacuum Packaging



21. Vacuum Wrapping



22. Thermoforming Chains



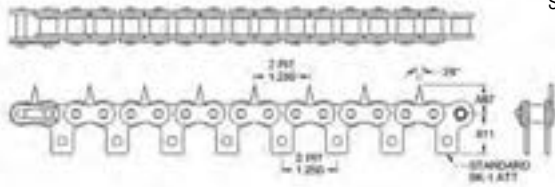
# THERMOFORMING

Whether off-the-shelf or made to order, Tsubaki and its capabilities in attachment chain extend to the Thermoforming industry.

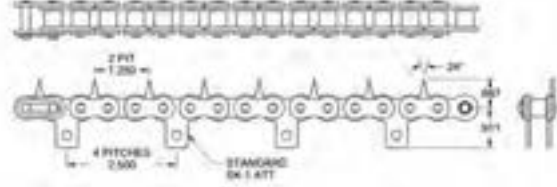
From the drawings listed below, Tsubaki stocks several of the commonly used sticker chains in a wide variety of attachment configurations.



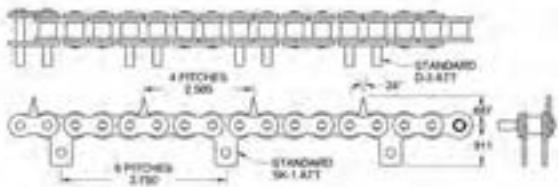
## Common Stock Sticker Chains



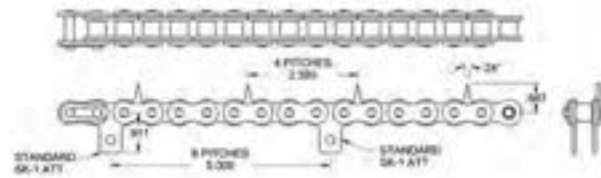
**50STK2LSK12L**  
STD AND LAMBDA®



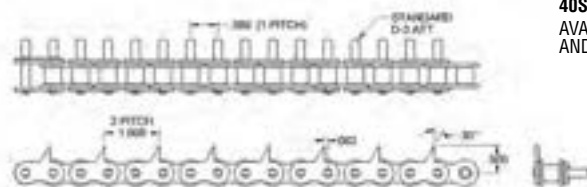
**50STK2LSK14L**



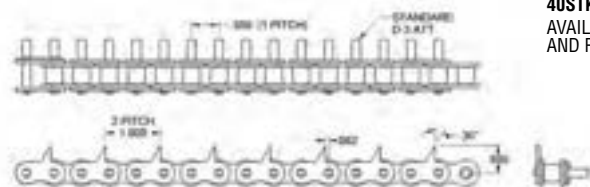
**50STKD34LSK16L**



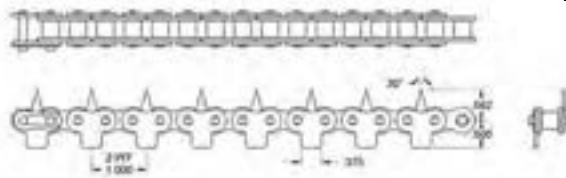
**50STK4LSK18L**



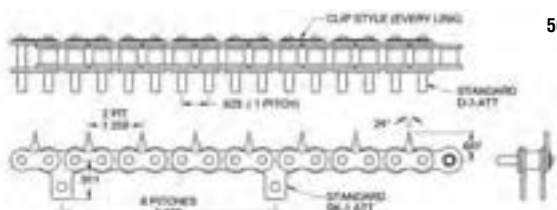
**40STKD32L01LH**  
**40STKD32L01RH**  
AVAILABLE LEFT  
AND RIGHT HAND



**40STKD32L01LH**  
**40STKD32L01RH**  
AVAILABLE LEFT  
AND RIGHT HAND



**40STKSA02L**



**50STKD32LSK18L**

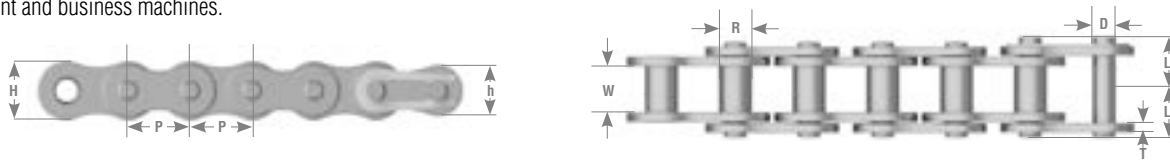
# MINIATURE CHAINS

Ultra Miniature chain from Tsubaki is specially designed for applications with extremely limited space. Chains are manufactured to the most exacting specifications and are perfect for applications that require quiet, compact, lightweight chain with minimal polygon action. Ultra Miniature chains provide superior performance in a variety of demanding applications such as: business machines, check-weighing equipment, medical equipment, photographic equipment and small electro-mechanical devices. Ultra Miniature chains are available in a wide-range of sizes to meet your specific application needs.

Maximum Allowable Load		Average Tensile Strength	
180 lbs		<b>BF25H</b>	1,170 lbs
140 Lbs		<b>25RB</b>	1,050 lbs
70 Lbs		<b>RS15</b>	510 lbs
11 Lbs		<b>11SS</b>	175 lbs

## 11SS

Tsubaki Miniature chain 11SS is made of 304 stainless steel throughout. This provides superior corrosion resistance and high temperature resistance. The chain is specifically designed for use where space is limited such as: communication equipment, medical equipment and business machines.

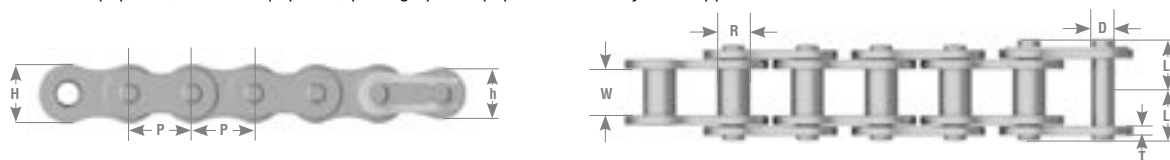


Chain No.	Pitch	Bushing Diameter	Width Between Inner Link Plates	Link Plate		Pin			Average Tensile Strength	Maximum Allowable Load	Approx. Weight Lbs/ft	Number of Links per 10 ft.	
				T	H	D	L1	L2					L1 + L2
<b>11SS</b>	0.148	0.09	0.072	0.015	0.138	0.062	0.090	0.125	0.214	175	11	0.035	814

Note: No offset links are available for 11SS chain.

## RS15

Tsubaki RS15 bushed chain is sized between 25 and 11SS in size and is economical for compact applications. Strong and precise, the chain is manufactured the same as standard roller chain. Lightweight and compact, it is only half the weight of 25 chain which is the smallest ASME/ANSI roller chain. All parts are heat-treated for better strength and wear resistance. Suitable for industrial data equipment, medical equipment, photographic equipment and many other applications.



Chain No.	Pitch	Bushing Diameter	Width Between Inner Link Plates	Link Plate		Pin			Average Tensile Strength	Maximum Allowable Load	Approx. Weight Lbs/ft	Number of Links per 10 ft.	
				T	H	D	L1	L2					L1 + L2
<b>RS15</b>	0.188	0.098	0.094	0.024	0.169	0.064	0.120	0.152	0.272	510	70	0.05	640

Note: No offset links are available for RS15 chain.

# BINDERY CHAINS



Tsubaki has been a manufacturer of Bindery chains for over 25 years. Manufactured in our Holyoke, Massachusetts facility, Tsubaki now offers two styles of Bindery chain to fit seamlessly in many of the common bindery equipment.

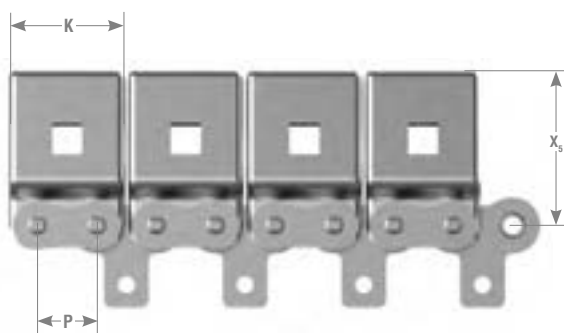
**40NPENTTYPE1** - Utilized in machines made by Goss® and Heidelberg®

**40NPENTTYPE2** - Utilized in machines made by Muller Martini®

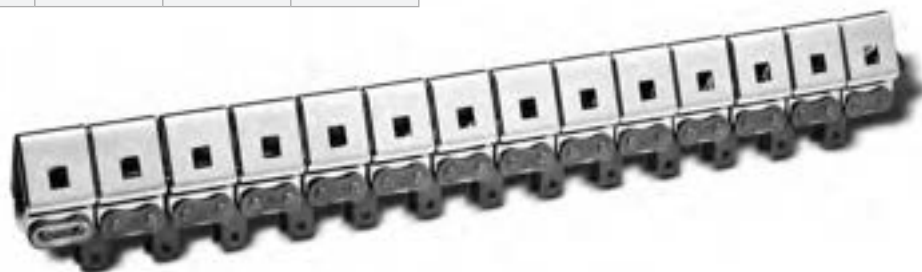
Both styles of chain are manufactured from hardened steel components with nickel plating on the tents to provide a clean, smooth surface.

## Features and Benefits of Tsubaki Bindery Chains

- Available in cut-to-length sections, ready-to-install
- Heat-treated carbon steel
- Nickel-plated tents for cleanliness and smooth operating surface
- Close-ended connecting links for secure connection to adjoining sections
- Precision accuracy of bend radius allowing for clean and smooth flow through chain guide rails.



Tsubaki	Pitch				Wt
Part No.	P	Xs	K	N	Lbs/ft
<b>40NPENTTYPE1</b>	0.500	1.354	0.988	0.858	1.2
<b>40NPENTTYPE2</b>	0.500	1.300	0.988	0.920	1.2



Heidelberg is a registered trade mark of Heidelberg Druckmaschinen AG.  
 Goss is a registered trademark of Goss International.  
 Muller Martini is a registered trade mark of Muller Martini Manufacturing Company.

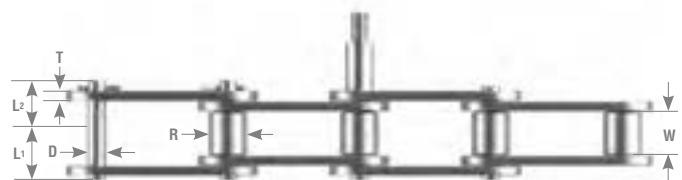
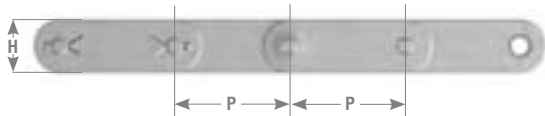


# VACUUM WRAPPING CHAINS

Tsubaki again has perfected OEM replacement chains for your aftermarket needs. The vacuum wrapper chain from Tsubaki maximizes performance in your vacuum wrapping equipment. Tsubaki stocks a complete line of vacuum wrapping chains to handle immediate needs.



Base Chain Number	Chain Pitch	OEM Machine Number	Description (Pin Spacing)	Length in Pitches
<b>C2100HNP</b>	2.50	8600-14	Special D1 pin every 3rd and 8th pitch	154
		8600-14E	Special D1 pin every 3rd and 10th pitch	156
		8600-14EL	Special D1 pin every 3rd and 12th pitch	150
<b>C2120HNP</b>	3.00	8300-18	Special D1 pin every 3rd and 9th pitch	144
		8600-18	Special D1 pin every 3rd and 10th pitch	130
<b>C2160HNP</b>	4.00	8300-24	Special D1 pin every 3rd and 10th pitch	130



Base Chain Number	Chain Pitch	Roller Diameter	Width Between Roller Link Plates	Pin						Link Plate		Approx. Weight (lbs/Ft)	
				D	L1	Thread	Thread Length	Shaft Diameter	Shaft Length	T	H	No. of Links per 10 ft.	
<b>C2100HNP</b>	P	R	W	D	L1	Thread	Thread Length	Shaft Diameter	Shaft Length	T	H		
<b>C2100HNP</b>	2.50	0.750	0.750	0.375	0.858	M8	0.630	0.506	1.000	0.187	1.126	2.38	48
<b>C2120HNP</b>	3.00	0.875	1.000	0.437	1.061	M10	0.700	0.629	1.090	0.219	1.354	3.41	40
<b>C2160HNP</b>	4.00	1.125	1.250	0.562	1.337	M10	0.750	0.787	1.060	0.281	1.898	6.02	30

**How to Order:**

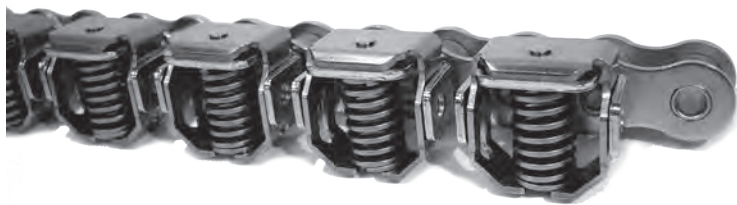
Step 1 - Identify chain size (pitch).

Step 2 - Count the number of links between the extended carrier pins. Typical configurations are every 3rd and 8th pitch, 3rd and 9th pitch, 3rd and 10th pitch or 3rd and 12th pitch.

Step 3 - Determine the overall length of the chain, including the connecting link.

Step 4 - Contact Tsubaki to place a purchase order.

# GRIPPER CHAINS™

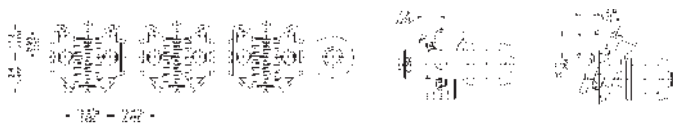


- Tsubaki high-performance roller chains combined with special “M” and “S” Type gripper heads for form, fill and vacuum seal applications
- FDA approved food-grade lubrication (H3) applied at the factory to ensure uniform coverage and protection of each key component.
- Nickel-plated and stainless steel options available in cut-to-length options from stock.

RS08BNPKUTM and RS08BLKUTM Gripper Chain™



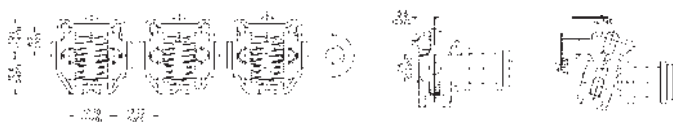
RS10BNPKUTM and RS10BLKUTM Gripper Chain™



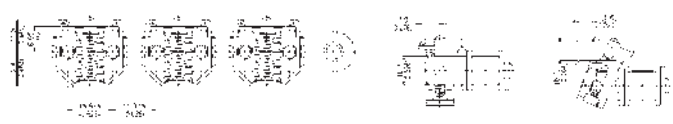
RS08BNPKUTS and RS08BLKUTS Gripper Chain™



RS08BSSKUTM and RS08BASKUTM Gripper Chain™



RS10BSSKUTM and RS10BASKUTM Gripper Chain™



RS08BSSKUTS and RS08BASKUTS Gripper Chain™



Chain Number	Connecting Link	Pitch		Roller Diameter		Inside Width		Clamp Type	Clamping Force	Materials		
		MM	Inches	MM	Inches	MM	Inches			N	Base Chain	Clamp
<b>RS08BNPKUTM</b>	<b>RS08BNPKUTMCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Type M	50	NP	304SS	SA
<b>RS10BNPKUTM</b>	<b>RS10BNPKUTMCL</b>	15.9	0.625	10.16	0.400	9.65	0.380	Type M	70	NP	304SS	SA
<b>RS08BNPKUTS</b>	<b>RS08BNPKUTSCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Standard	55	NP	304SS	SA
<b>RS08BLKUTM</b>	<b>RS08BLKUTMCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Type M	50	NP Lambda®	304SS	SA
<b>RS10BLKUTM</b>	<b>RS10BLKUTMCL</b>	15.9	0.625	10.16	0.400	9.65	0.380	Type M	70	NP Lambda®	304SS	SA
<b>RS08BLKUTS</b>	<b>RS08BLKUTSCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Standard	55	NP Lambda®	304SS	SA
<b>RS08BSSKUTM</b>	<b>RS08BSSKUTMCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Type M	50	SS	304SS	SA
<b>RS10BSSKUTM</b>	<b>RS10BSSKUTMCL</b>	15.9	0.625	10.16	0.400	9.65	0.380	Type M	70	SS	304SS	SA
<b>RS08BSSKUTS</b>	<b>RS08BSSKUTSCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Standard	55	SS	304SS	SA
<b>RS08BASKUTM</b>	<b>RS08BASKUTMCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Type M	50	SS	304SS	SA
<b>RS10BASKUTM</b>	<b>RS10BASKUTMCL</b>	15.9	0.625	10.16	0.400	9.65	0.380	Type M	70	SS	304SS	SA
<b>RS08BASKUTS</b>	<b>RS08BASKUTSCL</b>	12.7	0.500	8.51	0.335	7.75	0.305	Standard	55	SS	304SS	SA

Note: Chains can be supplied in cut-to-length sections. NP = Nickel Plated, SS = 304 Stainless Steel, SA = 600 Stainless Steel Do not twist chain. Use care not to damage attachment when unwinding chain from reel.

# PIN OVEN CHAINS

For the last 30 years, Tsubaki has been manufacturing Pin Oven chains for industrial applications worldwide. Tsubaki has worked directly with can manufacturers to develop chain and pin designs to maximize operational excellence.

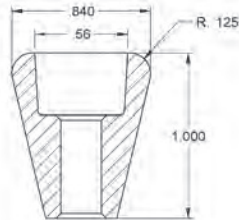
Some of the features and benefits of Tsubaki Pin Oven chain include:

**FEATURES:**

- All chains are pre-stressed
- Bushings for Tsubaki Pin Oven chain are of solid construction
- Extended pins are precision aligned.
- Peek material tips with .125 radius are standard

**BENEFITS:**

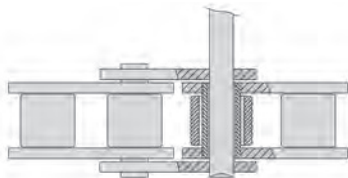
- Solid bushing provides extended life with good lubrication
- Prestressing minimizes initial chain elongation (stretch)
- Precision aligning holds cans straight during high speed production
- Peek tips for high temperature resistance



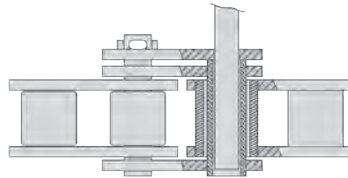
**Standard Tip Dimension**



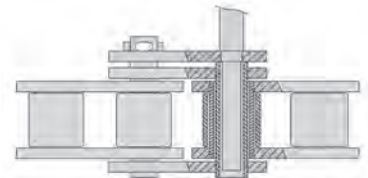
**Standard Peek Tips**  
(Nylon tips available as MTO)



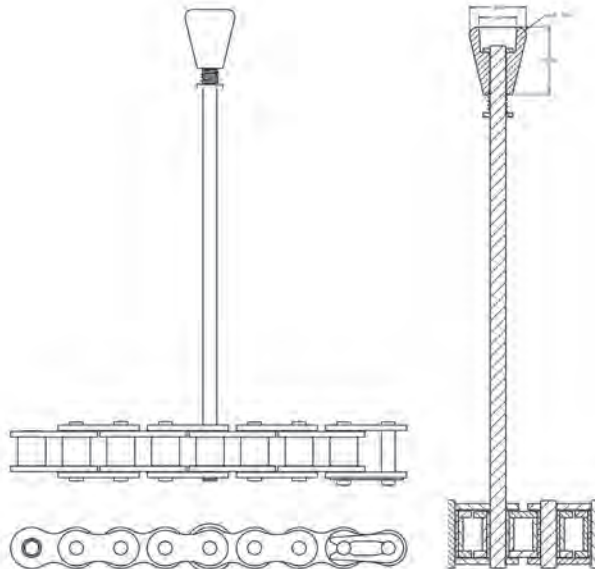
**No. 60 Integral Pin**  
Standard Pin Oven Chain



**No. 60 Plug-in Pin**  
Allows for easy change out of pins without having to break the chain



**No. 6028 Plug-In Pin**  
Features an Extra large dia. pin with extra bearing area for longer life and easy tip change

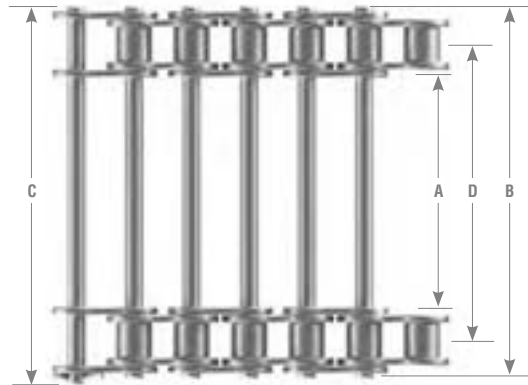


# CROSSROD CHAINS

Crossrod conveyor chain consists of two parallel strands of standard 40 or 50 roller chains, joined by crossrods on every link. 40 chain is used for light loads such as conveying bread through coolers, wrappers or slicers. 50 chain is used in heavier loads. When sanitary, non-corrosive qualities are desired, stainless steel crossrods are available. Connecting pins have milled flat ends and fit into a D-shaped hole in the link plate to prevent pin rotation and to provide longer life. Chains are furnished in five-foot sections and run on standard roller chain sprockets. Removeable two-pitch link sections are available for repair and replacement needs.

## How to Order:

Chains are available in carbon steel and stainless. Crossrods may be ordered in carbon steel or stainless. One connecting pin is supplied with each chain section for connection. Additional pins may be ordered separately. Specify chain number and material combination needed. All sprockets should be keyed in line in pairs to evenly distribute loads to both chains.



### 40 Roller chain with .500 pitch and .156 pin diameter

Chain Number	Nominal Width	Plate to Plate Width	Overall Riveted	Pin Head to end	Roller CL to CL	Average Weight Lbs/ft
P329-12	12	11.25	12.44	12.51	11.812	2.0
P329-15	15	14.25	15.44	15.51	14.812	2.6
P329-18	18	17.25	18.44	18.51	17.812	3.1
P329-21	21	20.25	21.44	21.51	20.812	3.4
P329-24	24	23.25	24.44	24.51	23.812	3.8
P329-30	30	29.25	30.44	30.51	29.812	4.7

Dimensions in inches

### 50 roller chain with .625 pitch and .200 pin diameter

Chain Number	Nominal Width	Plate to Plate Width	Overall Riveted	Pin Head to end	Roller CL to CL	Average Weight Lbs/ft
P800-12	12	11.10	12.60	12.67	11.812	2.2
P800-15	15	14.10	15.60	15.67	14.812	2.8
P800-18	18	17.10	18.60	18.67	17.812	3.3
P800-21	21	20.10	21.60	21.67	20.812	3.6
P800-24	24	23.10	24.60	24.67	23.812	4.1
P800-30	30	29.10	30.60	30.67	29.812	4.9

Dimensions in inches

### Single Cottered Connecting Pins

40 Chain	50 Chain	Nominal Width
P329-CP12	P800-CP12	12
P329-CP15	P800-CP15	15
P329-CP18	P800-CP18	18
P329-CP21	P800-CP21	21
P329-CP24	P800-CP24	24
P329-CP30	P800-CP30	30

Dimensions in inches

### Two-Pitch Connecting Links

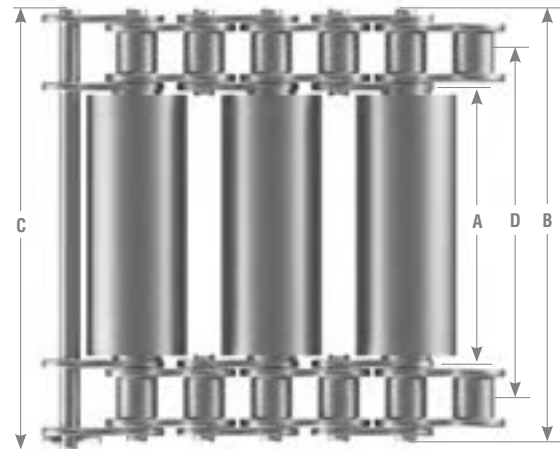
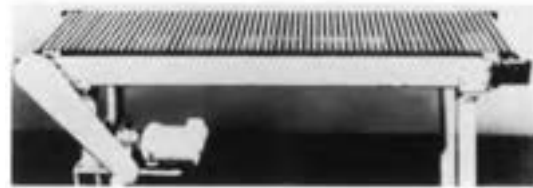
40 Chain	50 Chain	Nominal Width
P329-RS12	P800-RS12	12
P329-RS15	P800-RS15	15
P329-RS18	P800-RS18	18
P329-RS21	P800-RS21	21
P329-RS24	P800-RS24	24
P329-RS30	P800-RS30	30

Dimensions in inches

# LIVE TUBULAR CHAINS

The chain consists of two parallel strands of 40 chain with 3/4" diameter live tubular rollers on 1" (every second pitch) spacing. The chains can be placed at the end of any intermediate point of a line where speed variations of conveyed goods may occur. Placed next to slicing or wrapping machines, they act as accumulators.

Each chain is assembled with connecting pins acting as tie bars every 12". The pins have milled flats and fit into a D-shaped hole in the link plate to prevent pin rotation and give longer life. Chains are furnished in 10' sections. The tubular rollers rotate on either oil impregnated iron or plastic bearings. Removeable two-pitch connecting links are available.



## How to order:

Chains, connecting links and rollers are also available in nickle plated or stainless steel. Either a plastic or an oil-impregnated bearing must also be specified. Chains and connecting links are ordered separately. One connecting pin is supplied with each chain section or connecting link. Additional pins may be ordered separately. Specify chain number and the material/bearing combion desired.

## RS40 chain with .500 pitch, .750" Roller Diameter

Chain No.	Nominal Width	Plate to Plate Width A	Overall Riveted B	Pin Head to End C	Roller CL to CL D	Average Weight Lbs/Ft
TP329-12	12	11.25	12.44	12.51	11.812	4.3
TP329-15	15	14.25	15.44	15.51	14.812	5.3
TP329-18	18	17.25	18.44	18.51	17.812	6.2
TP329-21	21	20.25	21.44	21.51	20.812	7.2
TP329-24	24	23.25	24.44	24.51	23.812	7.6
TP329-30	30	29.25	30.44	30.51	29.812	9.1

Dimensions in inches

### Single Cottered Connecting Pins

Chain No.	Nominal Width
TP329-CP12	12
TP329-CP15	15
TP329-CP18	18
TP329-CP21	21
TP329-CP24	24
TP329-CP30	30

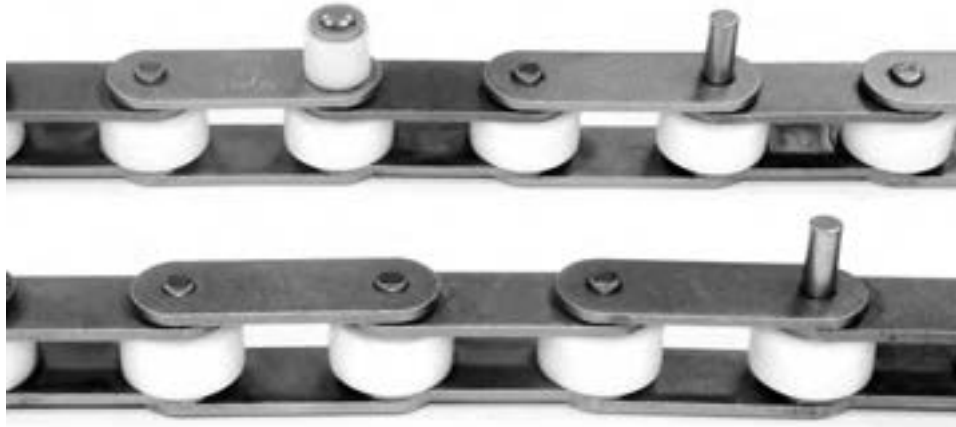
Dimensions in inches

### Two-Pitch Connecting Links

Chain No.	Nominal Width
TP329-RS12	12
TP329-RS15	15
TP329-RS18	18
TP329-RS21	21
TP329-RS24	24
TP329-RS30	30

Dimensions in inches

# BUCKET ELEVATOR CHAINS



Bucket elevator chains from Tsubaki are designed for carrying bulk materials in food and light weight material handling applications. The features and benefits of Tsubaki bucket elevator chains include:

- Lube-free construction
- Hardened carbon steel pins, plates, and bushings
- Delrin rollers for greater durability
- Prestressed chains to allow for proper set-up and alignment

## Chain information:

- C2052 – Delrin roller chain (1.25" pitch)
- Pin projection - .468"
- Pin Diameter - .199"
- Pin spacing – Every 5"
- Outboard roller diameter - .438"

## B100-9035 Bucket Support Chain



## B100-9036 Bucket Pin Chain

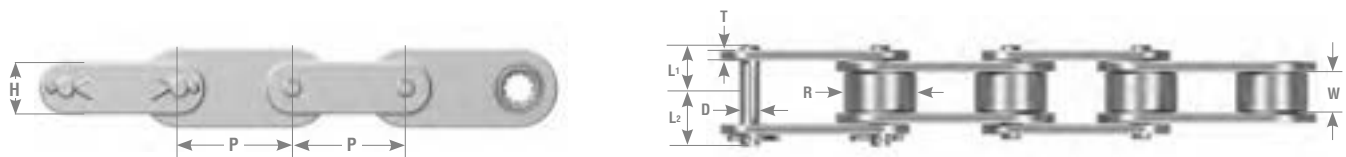


# BEARING BUSHED CHAINS



Tsubaki Bearing Bushed chain virtually eliminates initial stretch by placing a needle bearing in between the pin and bushing area. Bearing Bushed chain offers excellent wear without the need for additional lubrication.

Major dimensions of the chain are the same as standard ANSI double-pitch chains. Tsubaki Bearing Bushed chains work perfectly with standard over-sized roller sprockets. Bearing Bushed chains are suggested for applications where precision accuracy positioning of the conveyed material is required.



Chain No.	Pitch	Roller Diameter	Width Between Roller Plates	Link Plate			Pin			Maximum Allowable Load	Allowable Roller Load LBS/Roller	Approx. Weight lbs/Ft
	P	R	w	T	H	h	D	L1	L2			
<b>CN2042</b>	1.000	0.625	0.312	0.060	0.689	0.473	0.156	0.325	0.380	176	33	0.660
<b>CN2052</b>	1.250	0.750	0.375	0.080	0.827	0.591	0.200	0.406	0.472	287	44	1.160
<b>CN2062H</b>	1.500	0.875	0.500	0.125	1.024	0.677	0.234	0.573	0.667	396	66	1.720
<b>CN2082H</b>	2.000	1.125	0.625	0.156	1.378	0.906	0.312	0.720	0.823	660	121	2.600

Chain No.	Attachment							Additional Weight per Attachment	
	S	C	X	N	K	T	O	A-2 Att.	K-2 Att.
<b>CN2042</b>	1.000	0.625	0.312	0.060	0.689	0.473	0.156	33	0.660
<b>CN2052</b>	1.250	0.750	0.375	0.080	0.827	0.591	0.200	44	1.160
<b>CN2062H</b>	1.500	0.875	0.500	0.125	1.024	0.677	0.234	66	1.720
<b>CN2082H</b>	2.000	1.125	0.625	0.156	1.378	0.906	0.312	121	2.600

- Note:
1. Spring clip type connecting links for CN2042-CN2062H.
  2. Offset links are not available.
  3. Chain available in 304SS.
  4. Link plates can be nickel-plated.

# SPROCKETS

Tsubaki produces a broad range of sprockets to satisfy all your application requirements. Stock product offerings are readily available and can be supplied in a multitude of pitch ranges and configurations. Extensive design, engineering and manufacturing capabilities allow Tsubaki to produce a wide variety of made-to-order sprocket products for a multitude of applications. From one-off customer designs to high volume OEM and Smart Tooth® sprocket requirements, Tsubaki has you covered.



 **TSUBAKI**®



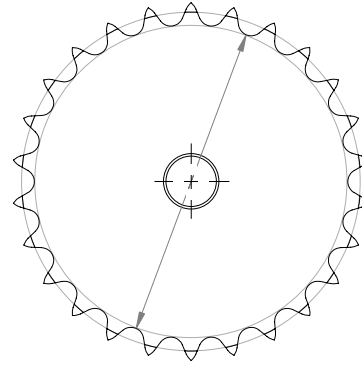
# SPROCKETS 101

The following defines terminology and provides guidance to help select the best sprocket for a given application. In the event that further assistance is required, please call Tsubaki customer service at (800) 323-7790.

## Basics of Sprockets

### 1. Caliper Diameter:

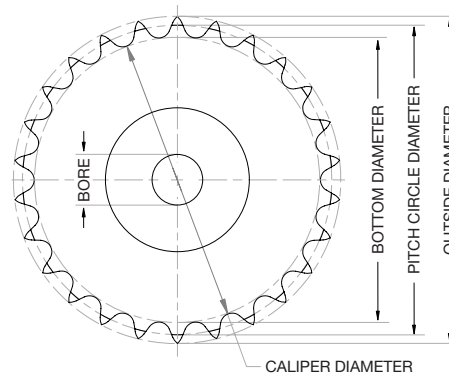
Caliper Diameter refers to the dimension measured from sprocket tooth valley to sprocket tooth valley on the opposite side (180°) of the sprocket. This dimension is used to measure the diameter of the sprocket plate (not including sprocket teeth). On sprockets that have an odd number of teeth, the measurement would be taken from the valley of one tooth to the valley as close to 180° on the opposite side of the sprocket.



Measuring caliper diameter

### 2. Sprocket Outside Diameter:

Sprocket outside diameter is the measurement from sprocket tooth peak to sprocket tooth peak on the opposite (180°) side of the sprocket. For sprockets with an odd number of teeth, the measurement would be taken from the peak of one sprocket tooth to the peak of a tooth as close to 180° as possible.



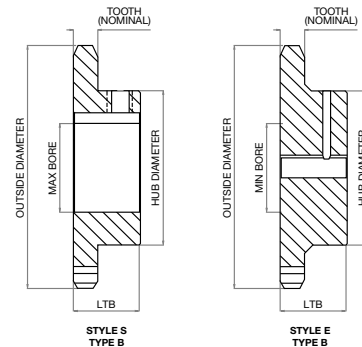
Measuring sprocket outside diameter

### 3. Maximum Bore Diameter:

Refers to the maximum bore size diameter a sprocket can be machined to without compromising structural integrity. This term is associated with both “B” and “C” style sprockets.

### 4. Length Thru Bore:

“LTB” Refers to the inside hub diameter and the length to which it was machined. This machined length must be long enough to accommodate the proper size keyway to withstand shear and torque stress induced by the rotating shaft.

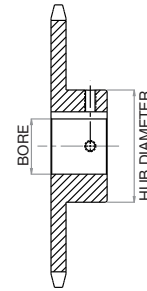


Maximum bore diameter and thru bore

# SPROCKETS 101

## 5. Plain Bore:

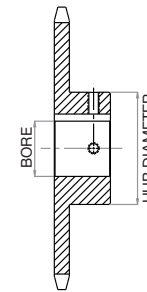
Associated with "A," "B" and "C" style sprockets where there is no special machining performed to accommodate keyways or set screws, only a hole to accommodate shaft diameter.



Plain bore sprocket

## 6. Finished Bore:

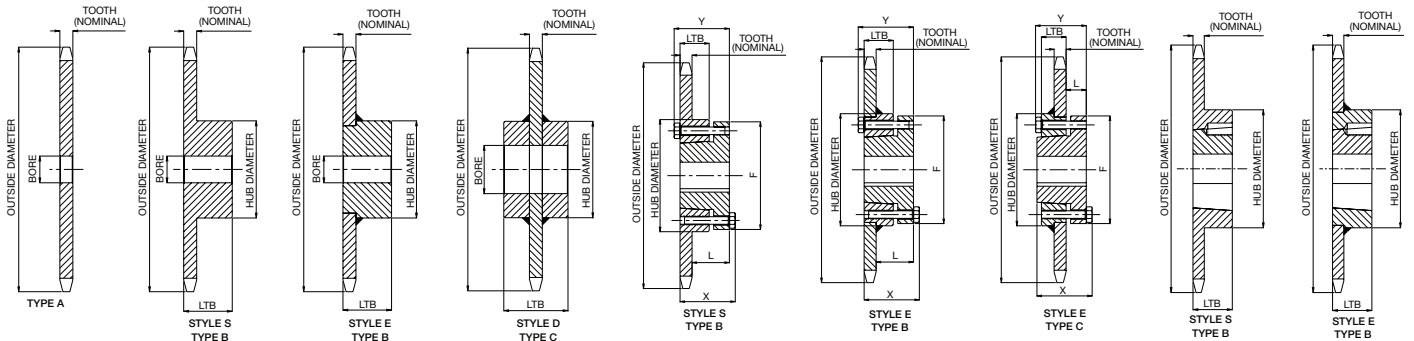
Associated with "B" and "C" style sprockets where the inside diameter of the hub is machined with a standard keyway and two set screws. Finished bore hubs can also be machined to specific requirements depending on the needs of the application.



Finished bore sprocket

## 7. Sprocket Hub Style:

Tsubaki manufactures various sprocket hub styles to meet the application requirements of our customers.

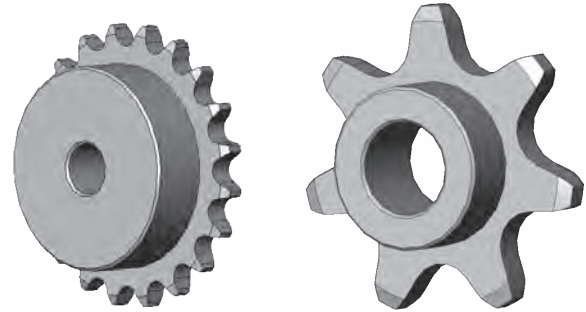


Stock sprocket hub styles

# SPROCKETS 101

## 8. Small and Large Roller Double Pitch Sprockets:

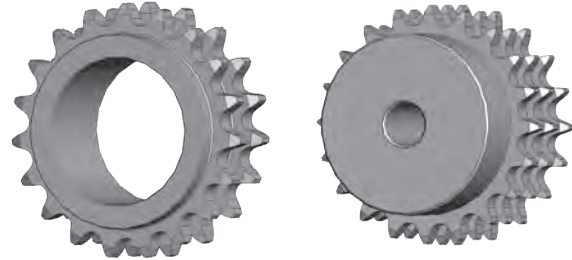
Used with double pitch conveyor series roller chains. These chains are available with either the standard small roller diameter (i.e.: 2040, 2050, 2060, 2080, 2100) or a larger diameter chain roller style (i.e.: 2042, 2052, 2062, 2082, 2102). Sprockets are available from stock to accommodate either style. This type of sprocket is primarily used in conveying applications where torque requirements are lower, and long service life is critical.



Small and large roller double pitch sprockets

## 9. Multiple-Strand Sprockets:

This type of sprocket is commonly used in applications where higher torque and power requirements are needed. The spacing between the rows of teeth corresponds with the center-line of chain strands. Due to the added width of chain, the “LTB” of multiple strand sprockets is correspondingly longer. This style of sprocket is available in 40 through 160 chain pitch with plain, finished or TAPER-LOCK®/QD® style hubs.



Multiple-Strand sprockets

## 10. DOUBLE PLUS® Sprockets:

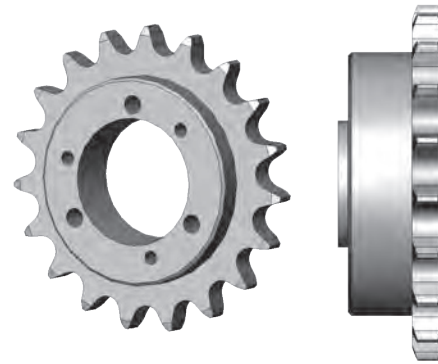
This type of sprocket is specifically designed to work with DOUBLE PLUS® chain. This style of sprocket is used in conveyor applications where product on the conveyor is propelled at twice speed of the drive system powering the conveyor. The main benefit of incorporating DOUBLE PLUS® chain and sprockets is less noise and longer chain life.



DOUBLE PLUS® sprockets

## 11. QD® Sprockets:

This type of sprocket is used in applications where higher working loads are prevalent, and high clamp loading on the drive shaft is desirable. Sprockets with tapered bushings will fall into the QD®, Split-Taper or TAPER-LOCK® family. QD® bushings are flanged, and most commonly utilize large anchor bolts around the circumference of the flange to retain itself to the sprocket. However, this style of bushing is also available in a weld on hub configuration. One of the primary advantages the QD® bushing offers is its ease of installation and removal. It also provides superior clamp force, and aligns the sprocket 90° to the drive shaft to assure proper alignment.



QD® sprocket

## 12. TAPER-LOCK® Sprockets:

TAPER-LOCK® bushings are similar to QD® style bushings in that they both utilize a split through the taper and flange to provide a true clamp on the shaft that is equivalent to a shrink fit. This type of bushing is retained to the sprocket with a series of set screws on the outside diameter of the bushing running parallel to the shaft, or can be welded to the sprocket itself. With TAPER-LOCK® bushings, there is no need for a set screw over the drive shaft key. TAPER-LOCK® bushings offer flexibility in that they allow multiple sized bores for a single bushing size.



TAPER-LOCK® sprocket

## 13. Steel Split Sprockets:

Split sprockets are slit through the entire diameter of the sprocket to allow ease of installation and removal. The sprocket halves are held together by bolts located on either side of the hub. This particular style is available in chain pitch sizes of 40 through 240, and bore diameters of 3/4" through 6" depending on chain pitch selected.

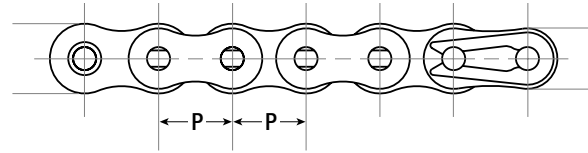


Steel Split sprocket

# SPROCKETS 101

## 14. British Standard Sprockets:

This style of sprocket is similar to an ANSI style sprocket with the exception of the fact that it is designed to propel British Standard Chain. British Standard Chain has slightly different dimensions with regard to chain pitch and roller diameter. ANSI Standard chain pitch is measured in 1/8" increments (pin to pin), whereas British Standard follows a 1/16" pin to pin spacing.



Measuring British Standard Chain

## 15. Double Single Sprockets:

This type of sprocket is commonly used in applications where two or more items are powered by a common drive shaft. The space between the sprocket plates is wider than a multi-strand sprocket, and allows two separate strands of chain to engage without contacting each other. With this type of sprocket, one strand of chain may exit in a different direction than the other. For example, one strand exiting towards the ceiling and the other running parallel to the floor.



Double Single Sprocket

## 16. Idler Sprockets:

This type of sprocket is used in applications where the drive chain may experience slack due to long lengths, non-adjustability of the driven shaft, or where the chain has to be guided around an obstruction. Use of Idler Sprockets prevents chain whipping and uneven distribution of load. This type of sprocket can also be used in applications where the drive chain may experience direction reversal, or in applications where the chain may experience whipping. Having idler sprockets touching the outside of the chain would be beneficial.



Idler Sprocket

# SPROCKETS 101

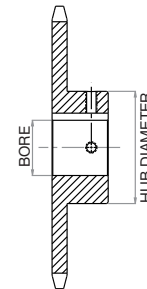
## 17. How to Order Code:

The following decodes the model number for a given Tsubaki Stock Sprocket product. The following example should be used to decipher the characteristics and features associated with a given sprocket.

<b>A</b>	<b>35</b>	<b>B</b>	<b>TL</b>	<b>18</b>		
Altered <sup>!!</sup>	Chain Pitch in Inches	Hub Type	TAPER-LOCK <sup>®</sup>	Number of Teeth		
<b>A:</b> Alteration Required	<b>35:</b> 3/8" Pitch	<b>B:</b> Hub Extension One Side	TAPER-LOCK <sup>®</sup> hub	18	22	26
				19	23	28
				20	24	30
				21	25	32

## 18. Altered Sprockets:

Altered sprockets require a minor modification to the standard configuration to fulfill the requirements of the application at hand. Some examples of common alterations include: rebores to a different size than standard, different set screw location than standard, drilling of holes into sprocket plate for accessory mounting, non-standard keyway size, etc. A complete list of common alterations is available in the engineering section of this catalog. It should be noted that adding the prefix "A" is used only when an alteration is required. It is not necessary for standard products and only applies when a non-standard feature is required.



Altered Bore Sprocket

## 19. Fraction Legend for Hub Bore Size:

The following table should be used to define the hub bore size associated with "Finished Bore" stock sprocket product. Note that a letter designator is used to represent a fractional dimension. For example: a 1B hub bore equates to a sprocket bore of 1.125" inside diameter.

Letter Designator	Fractional Size	Decimal Size
A	1/16"	0.0625"
B	1/8"	0.1250"
C	3/16"	0.1875"
D	1/4"	0.2500"
E	5/16"	0.3125"
F	3/8"	0.3750"
G	7/16"	0.4375"
H	1/2"	0.5000"
I	9/16"	0.5625"
J	5/8"	0.6250"
K	11/16"	0.6875"
L	3/4"	0.7500"
M	13/16"	0.8125"
P	7/8"	0.8750"
R	15/16"	0.9375"

## PLAIN BORE

Chain Data	
Size	25
Pitch	1/4"
Inside Width	1/8"
Roller Diameter	0.130"
Nominal Tooth Width:	0.110"

All dimensions in inches unless noted.

25 Plain Bore Sprocket Diameters				Type "A" Plain Bore		Type "B" Plain Bore					
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore*	Hub Diameter	LTB	Style	Wt. Lbs.
9	0.837	0.731	0.591	NS	NS	0.250	0.250	0.438	0.500	S	0.03
10	0.919	0.809	0.679	NS	NS	0.250	0.250	0.500	0.500	S	0.03
11	1.002	0.870	0.748	NS	NS	0.250	0.313	0.563	0.500	S	0.04
12	1.083	0.996	0.836	NS	NS	0.250	0.375	0.625	0.500	S	0.06
13	1.167	1.045	0.907	NS	NS	0.250	0.438	0.781	0.500	S	0.07
14	1.246	1.124	0.994	NS	NS	0.250	0.563	0.813	0.500	S	0.08
15	1.326	1.203	1.066	0.250	0.040	0.250	0.563	0.891	0.500	S	0.10
16	1.407	1.282	1.152	0.250	0.040	0.250	0.563	0.969	0.500	S	0.12
17	1.487	1.361	1.225	0.250	0.040	0.250	0.625	1.031	0.500	S	0.14
18	1.568	1.440	1.310	0.250	0.040	0.250	0.750	1.125	0.500	S	0.16
19	1.648	1.519	1.383	0.250	0.040	0.250	0.813	1.219	0.500	S	0.19
20	1.729	1.598	1.468	0.250	0.040	0.250	0.875	1.281	0.625	S	0.25
21	1.809	1.678	1.543	0.375	0.040	0.250	0.875	1.375	0.625	S	0.28
22	1.889	1.757	1.627	0.375	0.060	0.250	0.938	1.438	0.625	S	0.31
23	1.969	1.836	1.702	0.375	0.060	0.250	1.000	1.500	0.625	S	0.32
24	2.049	1.915	1.785	0.375	0.080	0.375	1.000	1.500	0.625	S	0.33
25	2.129	1.995	1.861	0.375	0.080	0.375	1.000	1.500	0.625	S	0.34
26	2.209	2.074	1.944	0.375	0.090	0.375	1.000	1.500	0.625	S	0.35
28	2.369	2.233	2.103	0.375	0.100	0.375	1.000	1.500	0.625	S	0.36
30	2.529	2.392	2.262	0.375	0.120	0.375	1.000	1.500	0.625	S	0.38
32	2.688	2.551	2.421	0.375	0.140	0.375	1.000	1.500	0.625	S	0.40
35	2.928	2.789	2.656	0.375	0.160	0.375	1.000	1.500	0.625	S	0.46
36	3.008	2.889	2.739	0.375	0.180	0.375	1.000	1.500	0.750	S	0.50
40	3.327	3.187	3.057	0.500	0.200	0.500	1.375	2.000	0.750	E	0.53
45	3.725	3.584	3.452	0.500	0.250	0.500	1.375	2.000	0.750	E	0.56
48	3.964	3.823	3.693	0.500	0.320	0.500	1.375	2.000	0.750	E	0.56
54	4.442	4.300	4.170	0.500	0.380	0.500	1.375	2.000	0.750	E	1.00
60	4.920	4.777	4.647	0.500	0.540	0.500	1.375	2.000	0.750	E	1.10
72	5.876	5.732	5.602	0.500	0.740	0.500	1.375	2.000	0.750	E	1.30

\* Dimensions shown allow for standard keyway with set screw at 90 degrees NS = Non Stock

## STAINLESS STEEL PLAIN BORE

Chain Data	
Size	25SS
Pitch	1/4"
Inside Width	1/8"
Roller Diameter	0.130"
Nominal Tooth Width:	0.110"

All dimensions in inches unless noted.

25 Stainless Steel Sprocket Diameters				Type "B" Plain Bore					
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	MAX Bore*	Hub Diameter	LTB	Wt. Lbs.	
9	0.837	0.731	0.591	0.250	0.250	0.438	0.500	0.03	
10	0.919	0.809	0.679	0.250	0.250	0.500	0.500	0.03	
11	1.002	0.870	0.748	0.250	0.313	0.563	0.500	0.03	
12	1.083	0.996	0.836	0.250	0.375	0.625	0.500	0.06	
13	1.167	1.045	0.907	0.250	0.438	0.719	0.500	0.07	
14	1.246	1.124	0.994	0.250	0.563	0.813	0.500	0.08	
15	1.326	1.203	1.066	0.250	0.563	0.891	0.500	0.10	
16	1.407	1.282	1.152	0.250	0.563	0.969	0.500	0.12	
17	1.487	1.361	1.225	0.250	0.625	1.031	0.500	0.14	
18	1.568	1.440	1.310	0.250	0.750	1.125	0.500	0.16	
19	1.648	1.519	1.383	0.250	0.813	1.219	0.500	0.19	
20	1.729	1.598	1.468	0.250	0.875	1.281	0.625	0.25	
21	1.809	1.678	1.543	0.250	0.875	1.375	0.625	0.28	
22	1.889	1.757	1.627	0.250	0.938	1.438	0.625	0.31	
23	1.969	1.836	1.702	0.250	1.000	1.500	0.625	0.32	
24	2.049	1.915	1.785	0.375	1.000	1.500	0.625	0.33	
25	2.129	1.995	1.861	0.375	1.000	1.500	0.625	0.34	
26	2.209	2.074	1.944	0.375	1.000	1.500	0.625	0.35	
28	2.369	2.233	2.103	0.375	1.000	1.500	0.625	0.36	
30	2.529	2.392	2.262	0.375	1.000	1.500	0.625	0.38	
36	3.008	2.889	2.739	0.375	1.000	1.500	0.750	0.50	
40	3.327	3.187	3.057	0.500	1.375	2.000	0.750	0.53	
45	3.725	3.584	3.452	0.500	1.375	2.000	0.750	0.56	
60	4.920	4.777	4.647	0.500	1.375	2.000	0.750	1.10	

\* Dimensions shown allow for standard keyway with set screw at 90 degrees

For more information on Sprockets see pages 132-137.

# PLAIN BORE

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore*	Hub Dia.	LTB	Style	Wt. Lbs.
8	1.130	0.980	0.780	NS	NS	0.375	0.375	0.750	0.750	S	0.07
9	1.260	1.097	0.880	NS	NS	0.375	0.375	0.844	0.750	S	0.09
10	1.380	1.214	1.014	NS	NS	0.375	0.563	0.969	0.750	S	0.14
11	1.500	1.331	1.117	NS	NS	0.375	0.563	1.063	0.750	S	0.17
12	1.630	1.449	1.249	NS	NS	0.500	0.563	1.219	0.750	S	0.20
13	1.750	1.567	1.356	NS	NS	0.500	0.688	1.250	0.750	S	0.23
14	1.870	1.685	1.485	NS	NS	0.500	0.875	1.250	0.750	S	0.25
15	1.990	1.804	1.594	0.500	0.110	0.500	0.875	1.344	0.750	S	0.29
16	2.110	1.922	1.722	0.500	0.120	0.500	0.938	1.469	0.750	S	0.35
17	2.230	2.041	1.832	0.500	0.140	0.500	1.063	1.594	0.750	S	0.42
18	2.350	2.160	1.960	0.500	0.160	0.500	1.188	1.719	0.750	S	0.48
19	2.470	2.279	2.071	0.500	0.170	0.500	1.250	1.844	0.750	S	0.54
20	2.590	2.397	2.197	0.500	0.190	0.500	1.313	1.938	0.750	S	0.59
21	2.710	2.516	2.309	0.500	0.210	0.500	1.375	2.000	0.875	S	0.80
22	2.830	2.635	2.435	0.500	0.240	0.500	1.375	2.000	0.875	S	0.80
23	2.950	2.754	2.548	0.500	0.260	0.500	1.375	2.000	0.875	S	0.82
24	3.070	2.873	2.673	0.500	0.280	0.500	1.375	2.000	0.875	S	0.88
25	3.190	2.992	2.786	0.500	0.310	0.500	1.375	2.000	0.875	S	0.88
26	3.310	3.111	2.911	0.500	0.330	0.500	1.375	2.000	0.875	E	0.90
27	3.430	3.230	3.025	0.500	0.360	0.500	1.375	2.000	0.875	E	0.94
28	3.550	3.349	3.149	0.500	0.380	0.500	1.375	2.000	0.875	E	0.94
30	3.790	3.588	3.388	0.500	0.440	0.500	1.375	2.000	0.875	E	1.02
32	4.030	3.826	3.626	0.625	0.500	0.500	1.375	2.000	0.875	E	1.24
35	4.390	4.184	3.979	0.625	0.610	0.625	1.500	2.250	0.875	E	1.50
36	4.510	4.303	4.103	0.625	0.640	0.625	1.500	2.250	0.875	E	1.56
40	4.990	4.780	4.580	0.594	0.790	0.625	1.500	2.250	1.000	E	1.62
42	5.230	5.018	4.818	0.594	0.900	0.625	1.500	2.250	1.000	E	1.68
45	5.590	5.376	5.173	0.594	1.000	0.625	1.500	2.250	1.000	E	1.78
48	5.950	5.734	5.534	0.594	1.100	0.625	1.500	2.250	1.000	E	1.88
54	6.660	6.449	6.249	0.594	1.400	0.625	1.500	2.250	1.000	E	2.20
60	7.380	7.165	6.965	0.594	1.800	0.750	1.500	2.250	1.000	E	2.48
70	8.580	8.358	8.158	0.719	2.400	0.750	1.500	2.250	1.000	E	3.12
72	8.810	8.597	8.397	0.719	2.600	0.750	1.500	2.250	1.000	E	3.42
80	9.770	9.552	9.352	0.719	3.200	0.750	1.500	2.250	1.000	E	3.82
84	10.250	10.029	9.829	0.719	3.500	0.750	1.500	2.250	1.000	E	4.24
96	11.680	11.461	11.261	0.719	4.600	0.750	1.500	2.250	1.000	E	5.16
112	13.590	13.371	13.171	0.719	6.300	0.750	1.500	2.250	1.000	E	6.70

\* Dimensions shown allow for standard keyway with set screw at 90 degrees  Has recessed groove in hub for chain clearance NS = Non Stock

# STAINLESS STEEL PLAIN BORE

Chain Data	
Size	35SS
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 Stainless Steel Sprocket Diameters				Type "B" Plain Bore					
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	MAX Bore*	Hub Dia.	LTB	Hub Style	Wt. Lbs.
9	1.260	1.097	0.880	0.375	0.375	0.844	0.750	S	0.10
10	1.380	1.214	1.014	0.375	0.563	0.969	0.750	S	0.15
11	1.500	1.331	1.117	0.375	0.563	1.063	0.750	S	0.20
12	1.630	1.449	1.249	0.500	0.563	1.219	0.750	S	0.22
13	1.750	1.567	1.356	0.500	0.688	1.250	0.750	S	0.25
14	1.870	1.685	1.485	0.500	0.875	1.250	0.750	S	0.26
15	1.990	1.804	1.594	0.500	0.875	1.344	0.750	S	0.30
16	2.110	1.922	1.722	0.500	0.938	1.469	0.750	S	0.40
17	2.230	2.041	1.832	0.500	1.063	1.594	0.750	S	0.43
18	2.350	2.160	1.960	0.500	1.188	1.719	0.750	S	0.50
19	2.470	2.279	2.071	0.500	1.250	1.844	0.750	S	0.56
20	2.590	2.397	2.197	0.500	1.313	1.938	0.750	S	0.68
21	2.710	2.516	2.309	0.500	1.375	2.000	0.875	S	0.80
22	2.830	2.635	2.435	0.500	1.375	2.000	0.875	S	0.82
23	2.950	2.754	2.548	0.500	1.375	2.000	0.875	S	0.87
24	3.070	2.873	2.673	0.500	1.375	2.000	0.875	S	0.89
25	3.190	2.992	2.786	0.500	1.375	2.000	0.875	S	0.91
26	3.310	3.111	2.911	0.500	1.375	2.000	0.875	S	0.93
28	3.550	3.349	3.149	0.500	1.375	2.000	0.875	E	1.00
30	3.790	3.588	3.388	0.500	1.375	2.000	0.875	E	1.06
35	4.390	4.184	3.979	0.625	1.500	2.250	0.875	E	1.56
40	4.990	4.780	4.580	0.625	1.500	2.250	1.000	E	1.70
45	5.590	5.376	5.173	0.625	1.500	2.250	1.000	E	2.18
60	7.380	7.165	6.965	0.750	1.500	2.250	1.000	E	3.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees  Has recessed groove in hub for chain clearance

For more information on Sprockets see pages 132-137.



## FINISHED BORE

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 Finished Bore Sprocket Dia.				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)**									
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	.375**	.500**	.625"	.750"	.875"	1.000"	1.125"	1.1875"	1.250"	
9	1.260	1.097	0.880	•									
10	1.380	1.214	1.014	•									
11	1.500	1.331	1.117	•		•	■						
12	1.630	1.449	1.249	•		•	■						
13	1.750	1.567	1.356			•	•						
14	1.870	1.685	1.485			•	•						
15	1.990	1.804	1.594			•	•	•					
16	2.110	1.922	1.722			•	•	•	•				
17	2.230	2.041	1.832			•	•	•	•	•			
18	2.350	2.160	1.960			•	•	•	•	•			
19	2.470	2.278	2.071			•	•	•	•	•			
20	2.590	2.397	2.197			•	•	•	•	•			
21	2.710	2.516	2.309			•	•	•	•	•			
22	2.830	2.635	2.435			•	•	•	•	•			
23	2.950	2.754	2.548			•	•	•	•	•			
24	3.070	2.873	2.673			•	•	•	•	•			
25	3.190	2.992	2.786			•	•	•	•	•			
26	3.310	3.111	2.911		•		•						
27	3.430	3.230	3.025			•	•	•					
28	3.550	3.349	3.149			•	•	•	•				
30	3.790	3.588	3.388			•	•	•	•	•			
32	4.030	3.826	3.626			•	•	•	•	•			
35	4.390	4.184	3.979			•	•	•	•	•			
36	4.510	4.303	4.103			•	•	•	•	•			
40	4.990	4.780	4.580			•	•	•	•	•			
42	5.230	5.018	4.818			•	•	•	•	•			
45	5.590	5.376	5.173			•	•	•	•	•			
48	5.950	5.734	5.534			•	•	•	•	•			
54	6.660	6.449	6.249			•	•	•	•	•			
60	7.380	7.165	6.965			•	•	•	•	•			
70	8.580	8.358	8.158			•	•	•	•	•			
72	8.810	8.597	8.397			•	•	•	•	•			
80	9.770	9.552	9.352			•	•	•	•	•			
84	10.250	10.029	9.829			•	•	•	•	•			
96	11.680	11.461	11.261			•	•	•	•	•			
112	13.590	13.371	13.171			•	•	•	•	•			

• Denotes stocking item    \*\* Furnished without keyway    ■ Indicates set screw at 90 degrees and 180 degrees from keyway

## MULTI-STRAND

Chain Data	
Size	35-2
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.162"

All dimensions in inches unless noted.

35 Multi-Strand Sprocket Diameters			Dimensional Data				
No. Teeth	Outside Dia.	Plain Bore	Hub Diameter	LTB	MAX Bore*	Style	Weight Lbs.
13	1.750	0.500	1.109	1.250	0.688	S	0.36
14	1.870	0.500	1.250	1.250	0.875	S	0.44
15	1.990	0.500	1.406	1.250	0.938	S	0.56
16	2.110	0.500	1.469	1.250	0.938	S	0.64
17	2.230	0.500	1.594	1.250	1.063	S	0.74
18	2.350	0.500	1.719	1.250	1.188	S	0.84
19	2.470	0.500	1.875	1.250	1.313	S	0.96
20	2.590	0.750	1.938	1.375	1.313	S	1.08
21	2.710	0.750	2.063	1.375	1.375	S	1.24
22	2.883	0.750	2.188	1.375	1.438	S	1.42
23	2.954	0.750	2.250	1.375	1.500	S	1.54
24	3.074	0.750	2.250	1.375	1.500	S	1.62
25	3.194	0.750	2.250	1.375	1.500	S	1.66
26	3.314	0.750	2.500	1.375	1.750	S	1.98
30	3.793	0.750	2.500	1.375	1.750	S	2.34
36	4.510	0.750	2.500	1.375	1.750	S	3.00
42	5.230	0.750	2.500	1.375	1.750	S	3.80
48	5.950	0.750	2.500	1.375	1.750	S	4.66
60	8.810	0.750	2.500	1.375	1.750	S	6.84
72	10.250	0.750	3.500	1.500	2.375	S	11.04
84	11.560	0.750	3.500	1.500	2.375	S	14.98
96	11.560	1.000	3.500	1.500	2.375	S	17.42

\* Dimensions shown allow for standard keyway with set screw at 90 degrees

For more information on Sprockets see pages 132-137.

# TAPER-LOCK®

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 TAPER-LOCK® Sprockets Dia.			Dimensional Data			
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	LTB	Hub Diameter	Weight Lbs.
18	2.352	1008	1.000	0.875	1.875 □	0.40
19	2.472	1008	1.000	0.875	1.813	0.50
20	2.593	1008	1.000	0.875	1.938	0.60
21	2.713	1008	1.000	0.875	2.063	0.70
22	2.883	1210	1.250	1.000	2.375 □	0.80
23	2.954	1210	1.250	1.000	2.438	0.90
24	3.074	1210	1.250	1.000	2.438	0.90
25	3.194	1210	1.250	1.000	2.438	1.20
26	3.314	1610	1.688	1.000	2.875 □	1.10
28	3.553	1610	1.688	1.000	2.875	1.20
30	3.793	1610	1.688	1.000	3.125	1.20
32	4.032	1610	1.688	1.000	3.250	1.30

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.  
 □ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199. QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

# QD®

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 QD® Sprockets Dia.			Dimensional Data							
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	Hub Diameter	LTB	X	Y	L	F	Weight Lbs.
19	2.472	JA	1.250	2.063	0.625	1.000	1.125	0.828	2.063	0.28
20	2.593	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.32
21	2.713	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.33
24	3.074	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.40
25	3.194	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.44
26	3.314	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.45
27	3.434	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.48
28	3.550	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.52
30	3.793	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.56
40	4.990	SH	1.688	2.688	0.563	1.438	1.438	1.078	2.688	1.18
42	5.230	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.26
45	5.590	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.40
48	5.946	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.58
54	6.660	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.88
60	7.380	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	2.28
70	8.580	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	2.94
72	8.810	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.14
80	9.770	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.68
84	10.250	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.96

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

# TAPER-LOCK®

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 TAPER-LOCK® Sprockets Dia.			Dimensional Data			
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	LTB	Hub Diameter	Weight Lbs.
18	2.352	1008	1.000	0.875	1.875 □	0.40
19	2.472	1008	1.000	0.875	1.813	0.50
20	2.593	1008	1.000	0.875	1.938	0.60
21	2.713	1008	1.000	0.875	2.063	0.70
22	2.883	1210	1.250	1.000	2.375 □	0.80
23	2.954	1210	1.250	1.000	2.438	0.90
24	3.074	1210	1.250	1.000	2.438	0.90
25	3.194	1210	1.250	1.000	2.438	1.20
26	3.314	1610	1.688	1.000	2.875 □	1.10
28	3.553	1610	1.688	1.000	2.875	1.20
30	3.793	1610	1.688	1.000	3.125	1.20
32	4.032	1610	1.688	1.000	3.250	1.30

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

□ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199. QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

# QD®

Chain Data	
Size	35
Pitch	3/8"
Inside Width	3/16"
Roller Diameter	0.200"
Nominal Tooth Width:	0.168"

All dimensions in inches unless noted.

35 QD® Sprockets Dia.			Dimensional Data							
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	Hub Diameter	LTB	X	Y	L	F	Weight Lbs.
19	2.472	JA	1.250	2.063	0.625	1.000	1.125	0.828	2.063	0.28
20	2.593	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.32
21	2.713	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.33
24	3.074	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.40
25	3.194	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.44
26	3.314	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.45
27	3.434	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.48
28	3.550	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.52
30	3.793	JA	1.250	2.063	0.625	1.125	1.125	0.828	2.063	0.56
40	4.990	SH	1.688	2.688	0.563	1.438	1.438	1.078	2.688	1.18
42	5.230	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.26
45	5.590	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.40
48	5.946	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.58
54	6.660	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	1.88
60	7.380	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	2.28
70	8.580	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	2.94
72	8.810	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.14
80	9.770	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.68
84	10.250	SH	1.688	2.688	0.813	1.438	1.438	1.078	2.688	3.96

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

# PLAIN BORE

Chain Data	
Size	41
Pitch	1/2"
Inside Width	1/4"
Roller Diameter	0.306"
Nominal Tooth Width:	0.227"

All dimensions in inches unless noted.

41 Plain Bore Sprocket Diameters				Type "A" Plain Bore		Type "B" Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Style	Wt. Lbs.
8	1.510	1.307	1.002	NS	NS	0.500	0.500	0.984 □	0.875	S	0.19
9	1.670	1.462	1.134	NS	NS	0.500	0.625	1.125 □	0.875	S	0.20
10	1.840	1.618	1.312	NS	NS	0.500	0.750	1.250 □	0.875	S	0.27
11	2.000	1.775	1.451	NS	NS	0.500	0.875	1.438 □	0.875	S	0.35
12	2.170	1.932	1.626	NS	NS	0.500	0.938	1.563 □	0.875	S	0.44
13	2.330	2.089	1.768	NS	NS	0.500	1.000	1.563 □	0.875	S	0.50
14	2.490	2.247	1.941	NS	NS	0.500	1.250	1.750	0.875	S	0.57
15	2.650	2.405	2.086	0.625	0.28	0.500	1.313	1.906	0.875	S	0.72
16	2.810	2.563	2.257	0.625	0.34	0.625	1.375	2.063	0.875	S	0.91
17	2.980	2.721	2.403	0.625	0.36	0.625	1.500	2.234	1.000	S	1.09
18	3.140	2.879	2.573	0.625	0.44	0.625	1.625	2.375	1.000	S	1.25
19	3.300	3.038	2.722	0.625	0.46	0.625	1.750	2.469	1.000	S	1.49
20	3.460	3.355	2.890	0.625	0.52	0.625	1.875	2.750	1.000	S	1.64
21	3.620	3.513	3.040	0.625	0.60	0.625	1.875	2.875	1.000	E	1.81
22	3.780	3.672	3.207	0.625	0.66	0.625	2.000	3.000	1.000	E	1.93
23	3.940	3.672	3.357	0.625	0.72	0.625	2.250	3.188	1.000	E	2.25
24	4.100	3.831	3.525	0.625	0.82	0.625	2.250	3.250	1.000	E	2.33
25	4.200	3.989	3.675	0.625	0.88	0.625	2.250	3.250	1.000	E	2.46
26	4.418	4.148	3.842	0.625	0.94	0.625	2.250	3.250	1.000	E	2.50
27	4.580	4.307	3.994	0.625	1.00	0.625	2.250	3.250	1.000	E	2.56
28	4.740	4.465	4.159	0.625	1.08	0.625	2.250	3.250	1.000	E	2.64
30	5.060	4.783	4.477	0.594	1.20	0.625	2.250	3.250	1.000	E	2.80
32	5.380	5.101	4.794	0.594	1.44	0.625	2.250	3.250	1.000	E	2.96
35	5.860	5.578	5.266	0.594	1.70	0.625	2.375	3.250	1.000	E	3.12
36	6.020	5.737	5.431	0.594	1.84	0.625	2.375	3.250	1.000	E	3.32
40	6.650	6.373	6.067	0.719	2.22	0.750	2.375	3.250	1.063	E	4.06
42	6.970	6.691	6.385	0.719	2.50	0.750	2.375	3.500	1.063	E	4.10
45	7.450	7.168	6.858	0.719	2.52	0.750	2.375	3.500	1.063	E	4.18
48	7.930	7.645	7.339	0.719	2.92	0.750	2.375	3.500	1.063	E	4.92
54	8.880	8.599	8.294	0.719	3.54	0.750	2.375	3.500	1.063	E	5.68
60	9.840	9.544	9.246	0.719	4.60	0.750	2.375	3.500	1.063	E	6.78
70	11.430	11.145	10.840	0.719	6.22	0.750	2.750	4.000	1.188	E	9.54
72	11.750	11.463	11.156	0.719	6.32	0.750	2.750	4.000	1.188	E	9.64
80	13.030	12.736	12.430	0.719	8.46	0.750	2.750	4.000	1.188	E	11.54
84	13.660	13.372	13.067	0.719	9.12	0.750	2.750	4.000	1.188	E	12.20
96	15.570	15.282	14.976	0.938	11.84	1.000	2.750	4.000	1.188	E	14.86
112	18.120	17.827	17.522	0.938	15.84	1.000	2.750	4.000	1.188	E	19.16

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance. NS = Non Stock

# FINISHED BORE

Chain Data	
Size	41
Pitch	1/2"
Inside Width	1/4"
Roller Diameter	0.306"
Nominal Tooth Width:	0.227"

All dimensions in inches unless noted.

41 Finished Bore Sprocket Diameters				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)											Hub Style	Wt. Lbs.
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	.500**	.625	.750	1.000	1.125	1.1888	1.250	1.375	1.438	1.500			
9	1.670	1.462	1.134	•	•									S	0.20	
10	1.840	1.618	1.312	•	•									S	0.27	
11	2.000	1.775	1.451	•	•	•								S	0.35	
12	2.170	1.932	1.626	•	•	•								S	0.44	
13	2.330	2.089	1.768	•	•	•	•							S	0.50	
14	2.490	2.247	1.941	•	•	•	•							S	0.57	
15	2.650	2.405	2.086	•	•	•	•	•						S	0.72	
16	2.810	2.563	2.257		•	•	•	•						S	0.91	
17	2.980	2.721	2.403		•	•	•	•						S	1.09	
18	3.140	2.879	2.573		•	•	•	•						S	1.25	
19	3.300	3.038	2.722		•	•	•	•						S	1.49	
20	3.460	3.196	2.890		•	•	•	•						S	1.64	
21	3.620	3.355	3.040		•	•	•	•						E	1.81	
22	3.780	3.513	3.207		•	•	•	•						E	1.93	
23	3.940	3.672	3.357		•	•	•	•						E	2.25	
24	4.100	3.831	3.525		•	•	•	•						E	2.33	
25	4.200	3.989	3.675		•	•	•	•						E	2.46	
26	4.418	4.148	3.842		•	•	•	•						E	2.50	
27	4.580	4.307	3.994		•	•	•	•						E	2.56	
28	4.740	4.465	4.159		•	•	•	•						E	2.64	
30	5.060	4.783	4.477		•	•	•	•						E	2.80	
32	5.380	5.101	4.794		•	•	•	•						E	2.96	
35	5.860	5.578	5.266		•	•	•	•						E	3.12	
36	6.020	5.737	5.431	•	•	•	•	•						E	3.32	
40	6.650	6.373	6.067		•	•	•	•	•					E	4.06	
42	6.970	6.691	6.385		•	•	•	•	•	•				E	4.10	
45	7.450	7.168	6.858		•	•	•	•	•	•				E	4.18	
48	7.930	7.645	7.339		•	•	•	•	•	•				E	4.92	
54	8.880	8.599	8.294		•	•	•	•	•	•				E	5.68	
60	9.840	9.544	9.246		•	•	•	•	•	•				E	6.78	
70	11.430	11.145	10.840		•	•	•	•	•	•				E	9.54	
72	11.750	11.463	11.156		•	•	•	•	•	•				E	9.64	
80	13.030	12.736	12.430		•	•	•	•	•	•				E	11.54	
84	13.660	13.372	13.067		•	•	•	•	•	•				E	12.20	
96	15.570	15.282	14.976		•	•	•	•	•	•				E	14.86	
112	18.120	17.827	17.522		•	•	•	•	•	•				E	19.16	

• Denotes stocking item \*\* Furnished without keyway  
For more information on Sprockets see pages 132-137.

## TAPER-LOCK®

Chain Data	
Size	41
Pitch	1/2"
Inside Width	1/4"
Roller Diameter	0.306"
Nominal Tooth Width:	0.227"

All dimensions in inches unless noted.

41 TAPER-LOCK® Sprockets Dia.			Dimensional Data				
No. Teeth	Outside Dia.	Bushing #	MAX Bore*	LTB	Hub Diameter	Hub Style	Weight Lbs.
14	2.490	1008	1.000	0.875	1.875	S	0.40
15	2.650	1008	1.000	0.875	1.875	S	0.50
16	2.810	1008	1.000	0.875	2.000	S	0.60
17	2.970	1210	1.250	1.000	2.375	S	0.70
18	3.140	1210	1.250	1.000	2.375	S	0.90
19	3.300	1210	1.250	1.000	2.500	S	1.10
20	3.460	1610	1.688	1.000	2.875	S	1.10
21	3.620	1610	1.688	1.000	3.000	S	1.20
22	3.780	1610	1.688	1.000	3.000	S	1.30
23	3.940	1610	1.688	1.000	3.000	S	1.40
24	4.100	1610	1.688	1.000	3.000	S	1.40
25	4.200	1610	1.688	1.000	3.000	S	1.50
26	4.420	1610	1.688	1.000	3.000	S	1.50
28	4.740	1610	1.688	1.000	3.000	E	1.70
30	5.060	1610	1.688	1.000	3.000	E	1.80
32	5.380	1610	1.688	1.000	3.000	E	1.90
35	5.860	1610	1.688	1.000	3.000	E	2.30
36	6.020	1610	1.688	1.000	3.000	E	2.40
40	6.650	1610	1.688	1.000	3.000	E	2.70
45	7.450	1610	1.688	1.000	3.000	E	3.50
48	7.930	1610	1.688	1.000	3.000	E	4.10
54	8.880	1610	1.688	1.000	3.000	E	4.90
60	9.840	1610	1.688	1.000	3.000	E	5.70
70	11.430	1610	1.688	1.000	3.000	E	7.40
72	11.750	1610	1.688	1.000	3.000	E	8.20
80	13.030	1610	1.688	1.000	3.000	E	9.60
96	15.570	1610	1.688	1.000	3.000	E	13.10

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. " Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"
SDS	0.500 - 2.000"
SK	0.500 - 2.625"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

## QD®

Chain Data	
Size	41
Pitch	1/2"
Inside Width	1/4"
Roller Diameter	0.306"
Nominal Tooth Width:	0.227"

All dimensions in inches unless noted.

41 QD® Sprockets Dia.			Dimensional Data								
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	Hub Diameter	LTB	X	Y	L	F	Hub Style	Weight Lbs.
15	2.650	JA	1.250	2.063	0.625	1.125	1.125	0.766	2.063	S	0.32
16	2.810	JA	1.250	2.063	0.625	1.125	1.125	0.766	2.063	S	0.40
17	2.970	JA	1.250	2.063	0.625	1.125	1.125	0.766	2.063	S	0.50
18	3.140	JA	1.250	2.063	0.625	1.125	1.125	0.766	2.063	S	0.60
19	3.300	JA	1.250	2.063	0.625	1.125	1.125	0.766	2.063	S	0.68
20	3.460	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	0.78
21	3.620	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	0.82
22	3.780	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.06
23	3.940	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.14
24	4.100	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.16
25	4.200	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.22
26	4.420	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.26
27	4.580	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.40
28	4.740	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.54
30	5.060	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.58
32	5.380	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	1.68
35	5.860	SH	1.688	2.688	0.813	1.438	1.438	1.031	2.688	S	2.47
36	6.020	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	1.92
40	6.650	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	2.32
42	6.970	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	2.44
45	7.450	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	2.76
48	7.930	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	3.36
54	8.880	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	3.98
60	9.840	SDS	2.000	3.188	0.750	1.500	1.500	1.094	3.188	E	5.54
70	11.430	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	7.42
72	11.750	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	8.02
80	13.030	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	9.64
84	13.660	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	10.40
96	15.570	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	12.82
112	18.120	SK	2.625	3.875	1.250	2.125	2.125	1.641	3.875	E	17.28

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data. For more information on Sprockets see pages 132-137.

# PLAIN BORE

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Style	Wt. Lbs.	
8	1.510	1.307	0.995	NS	NS	0.500	0.500	0.984	□	0.875	S	0.18
9	1.670	1.462	1.127	NS	NS	0.500	0.563	1.063	□	0.875	S	0.20
10	1.840	1.618	1.305	NS	NS	0.500	0.750	1.250	□	0.875	S	0.27
11	2.000	1.775	1.444	NS	NS	0.500	0.875	1.375	□	0.875	S	0.35
12	2.170	1.932	1.620	0.500	0.18	0.500	1.000	1.563	□	0.875	S	0.45
13	2.330	2.089	1.761	0.500	0.22	0.500	1.063	1.563	□	0.875	S	0.50
14	2.490	2.247	1.934	0.500	0.25	0.500	1.125	1.688	□	0.875	S	0.59
15	2.650	2.405	2.079	0.625	0.30	0.500	1.250	1.813	□	0.875	S	0.70
16	2.810	2.563	2.250	0.625	0.34	0.625	1.375	2.000	□	0.875	S	0.79
17	2.980	2.721	2.397	0.625	0.36	0.625	1.438	2.125	□	1.000	S	1.04
18	3.140	2.879	2.567	0.625	0.44	0.625	1.500	2.313	□	1.000	S	1.22
19	3.300	3.038	2.715	0.625	0.46	0.625	1.750	2.500	□	1.000	S	1.43
20	3.460	3.196	2.883	0.625	0.56	0.625	1.875	2.625	□	1.000	S	1.56
21	3.620	3.355	3.033	0.625	0.58	0.625	1.875	2.750	□	1.000	S	1.73
22	3.780	3.513	3.201	0.625	0.66	0.625	1.875	2.875	□	1.000	E	1.96
23	3.940	3.672	3.351	0.625	0.72	0.625	2.000	3.000	□	1.000	E	2.13
24	4.100	3.831	3.518	0.625	0.82	0.625	2.250	3.250	□	1.000	E	2.41
25	4.260	3.989	3.669	0.625	0.88	0.625	2.250	3.250	□	1.000	E	2.54
26	4.420	4.148	3.835	0.625	0.94	0.625	2.250	3.250	□	1.000	E	2.58
27	4.580	4.307	3.987	0.625	0.98	0.625	2.250	3.250	□	1.000	E	2.66
28	4.740	4.465	4.153	0.625	1.10	0.625	2.250	3.250	□	1.000	E	2.73
29	4.900	4.625	4.305	0.594	1.22	0.625	2.250	3.250	□	1.000	E	2.80
30	5.060	4.783	4.471	0.594	1.25	0.625	2.250	3.250	□	1.000	E	2.98
31	5.220	4.942	4.623	0.594	1.40	0.625	2.250	3.250	□	1.000	E	3.10
32	5.380	5.101	4.788	0.594	1.48	0.625	2.250	3.250	□	1.000	E	3.16
33	5.540	5.260	4.941	0.594	1.56	0.625	2.250	3.250	□	1.000	E	3.22
34	5.700	5.419	5.107	0.594	1.64	0.625	2.250	3.250	□	1.000	E	3.30
35	5.860	5.578	5.260	0.594	1.70	0.625	2.250	3.250	□	1.000	E	3.46
36	6.020	5.737	5.425	0.594	1.84	0.625	2.250	3.250	□	1.000	E	3.58
37	6.180	5.896	5.578	0.594	1.92	0.625	2.250	3.250	□	1.000	E	3.62
38	6.330	6.055	5.742	0.594	2.00	0.625	2.250	3.250	□	1.000	E	3.70
39	6.490	6.214	5.896	0.594	2.02	0.625	2.250	3.250	□	1.000	E	3.76
40	6.660	6.373	6.061	0.719	2.22	0.750	2.375	3.500	□	1.125	E	4.69
41	6.810	6.532	6.214	0.719	2.42	0.750	2.375	3.500	□	1.125	E	4.76
42	6.970	6.691	6.379	0.719	2.50	0.750	2.375	3.500	□	1.125	E	4.82
43	7.130	6.850	6.532	0.719	2.80	0.750	2.375	3.500	□	1.125	E	5.12
44	7.290	7.009	6.696	0.719	2.85	0.750	2.375	3.500	□	1.125	E	5.15
45	7.450	7.168	6.851	0.719	3.15	0.750	2.375	3.500	□	1.125	E	5.30
46	7.610	7.327	7.014	0.719	3.25	0.750	2.375	3.500	□	1.125	E	5.57
47	7.770	7.486	7.169	0.719	3.32	0.750	2.375	3.500	□	1.125	E	5.44
48	7.930	7.645	7.332	0.719	3.22	0.750	2.375	3.500	□	1.125	E	5.84
49	8.090	7.804	7.487	0.719	3.44	0.750	2.375	3.500	□	1.125	E	5.90
50	8.250	7.963	7.650	0.719	3.62	0.750	2.375	3.500	□	1.125	E	5.95
51	8.410	8.124	7.805	0.719	3.94	0.750	2.375	3.500	□	1.125	E	6.08
52	8.570	8.281	7.968	0.719	4.08	0.750	2.375	3.500	□	1.125	E	6.28
53	8.730	8.440	8.124	0.719	4.24	0.750	2.375	3.500	□	1.125	E	6.33
54	8.890	8.599	8.286	0.719	4.44	0.750	2.375	3.500	□	1.125	E	6.42
55	9.040	8.758	8.442	0.719	4.54	0.750	2.375	3.500	□	1.125	E	6.46
56	9.200	8.917	8.605	0.719	4.84	0.750	2.375	3.500	□	1.125	E	6.89
57	9.360	9.077	8.760	0.719	5.00	0.750	2.375	3.500	□	1.125	E	7.02
58	9.520	9.235	8.924	0.719	5.12	0.750	2.375	3.500	□	1.125	E	7.35
59	9.680	9.395	9.078	0.719	5.30	0.750	2.375	3.500	□	1.125	E	7.45
60	9.840	9.554	9.241	0.719	5.48	0.750	2.375	3.500	□	1.125	E	7.86
70	11.430	11.145	10.832	0.719	7.24	0.750	2.750	4.000	□	1.250	E	11.00
72	11.750	11.463	11.151	0.719	7.74	0.750	2.750	4.000	□	1.250	E	11.50
80	13.030	12.736	12.423	0.719	10.20	0.750	2.750	4.000	□	1.250	E	13.40
84	13.660	13.372	13.059	0.719	10.07	0.750	2.750	4.000	□	1.250	E	14.04
96	15.570	15.282	14.969	0.938	12.15	1.000	2.750	4.000	□	1.250	E	17.56
112	18.120	17.827	17.515	0.938	20.00	1.000	2.750	4.000	□	1.250	E	22.56

\* Dimensions shown allow for standard keyway with set screw at 90 degrees □ Has recessed groove in hub for chain clearance NS = Non Stock

# STAINLESS STEEL PLAIN BORE

Chain Data	
Size	40SS
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 Stainless Steel Sprocket Diameters				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Style	Wt. Lbs.	
10	1.840	1.618	1.305	N/A	N/A	0.500	0.750	1.250	□	0.875	S	0.28
11	2.000	1.775	1.444	N/A	N/A	0.500	0.813	1.375	□	0.875	S	0.36
12	2.170	1.932	1.620	N/A	N/A	0.500	0.938	1.563	□	0.875	S	0.44
13	2.330	2.089	1.761	N/A	N/A	0.500	1.063	1.563	□	0.875	S	0.50
14	2.490	2.247	1.934	N/A	N/A	0.500	1.125	1.688	□	0.875	S	0.60
15	2.650	2.405	2.079	N/A	N/A	0.500	1.250	1.813	□	0.875	S	0.68
16	2.810	2.563	2.250	N/A	N/A	0.625	1.375	2.000	□	0.875	S	0.82
17	2.980	2.721	2.397	N/A	N/A	0.625	1.438	2.125	□	1.000	S	1.06
18	3.140	2.879	2.567	N/A	N/A	0.625	1.500	2.313	□	1.000	S	1.24
19	3.300	3.038	2.715	N/A	N/A	0.625	1.750	2.500	□	1.000	S	1.42
20	3.460	3.196	2.883	N/A	N/A	0.625	1.875	2.625	□	1.000	S	1.60
21	3.620	3.355	3.033	N/A	N/A	0.625	1.875	2.750	□	1.000	S	1.68
22	3.780	3.513	3.201	N/A	N/A	0.625	1.875	2.875	□	1.000	S	1.81
23	3.940	3.672	3.351	N/A	N/A	0.625	2.000	3.000	□	1.000	S	2.18
24	4.100	3.831	3.518	0.594	0.80	0.625	2.250	3.250	□	1.000	D	2.20
25	4.260	3.989	3.669	N/A	N/A	0.625	2.250	3.250	□	1.000	D	2.39
26	4.420	4.148	3.835	0.594	1.31	0.625	2.250	3.250	□	1.000	D	2.40
28	4.740	4.465	4.153	0.594	1.35	0.625	2.250	3.250	□	1.000	D	2.75
30	5.060	4.783	4.471	0.594	1.39	0.625	2.250	3.250	□	1.000	D	2.88
35	5.860	5.578	5.260	0.594	1.92	0.625	2.250	3.250	□	1.000	D	3.32
40	6.650	6.373	6.061	0.719	2.36	0.750	2.375	3.500	□	1.000	D	4.28
45	7.450	7.168	6.851	0.719	3.13	0.750	2.375	3.500	□	1.000	D	4.68
60	9.840	9.554	9.241	0.719	5.50	0.750	2.375	3.500	□	1.000	D	7.00

\* Dimension depicted allows for standard keyway with set screw at 90 degrees □ Has recessed groove in hub for chain clearance N/A = Not Available For more information on Sprockets see pages 132-137.

## FINISHED BORE

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 Sprocket Diameters				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)												Hub Style	Wt. Lbs.
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	.500" **	.625"	.750"	.875"	1.000"	1.125"	1.187"	1.250"	1.375"	1.438"	1.500"			
9	1.674	1.462	1.127	•	•										S	0.20	
10	1.839	1.618	1.305	•	•	•									S	0.27	
11	2.003	1.775	1.444	•	•	•	•								S	0.35	
12	2.166	1.932	1.620	•	•	•	•	•							S	0.45	
13	2.328	2.089	1.761	•	•	•	•	•	•						S	0.50	
14	2.490	2.247	1.934	•	•	•	•	•	•						S	0.59	
15	2.652	2.405	2.079	•	•	•	•	•	•	•	■	■			S	0.70	
16	2.814	2.563	2.250		•	•	•	•	•	•	•				S	0.79	
17	2.974	2.721	2.397		•	•	•	•	•	•	•	•			S	1.04	
18	3.136	2.879	2.567		•	•	•	•	•	•	•	•	•	■	S	1.22	
19	3.292	3.038	2.715		•	•	•	•	•	•	•	•	•	•	S	1.43	
20	3.457	3.196	2.883		•	•	•	•	•	•	•	•	•	•	S	1.56	
21	3.618	3.355	3.033		•	•	•	•	•	•	•	•	•	•	S	1.73	
22	3.778	3.513	3.201		•	•	•	•	•	•	•	•	•	•	E	1.96	
23	3.938	3.672	3.351		•	•	•	•	•	•	•	•	•	•	E	2.13	
24	4.098	3.831	3.518		•	•	•	•	•	•	•	•	•	•	E	2.41	
25	4.258	3.989	3.669		•	•	•	•	•	•	•	•	•	•	E	2.54	
26	4.418	4.148	3.835		•	•	•	•	•	•	•	•	•	•	E	2.58	
27	4.578	4.307	3.987		•	•	•	•	•	•	•	•	•	•	E	2.66	
28	4.738	4.465	4.153		•	•	•	•	•	•	•	•	•	•	E	2.73	
29	4.900	4.625	4.305		•	•	•	•	•	•	•	•	•	•	E	2.80	
30	5.057	4.783	4.471		•	•	•	•	•	•	•	•	•	•	E	2.98	
31	5.220	4.942	4.623		•	•	•	•	•	•	•	•	•	•	E	3.10	
32	5.376	5.101	4.788		•	•	•	•	•	•	•	•	•	•	E	3.16	
33	5.540	5.260	4.941		•	•	•	•	•	•	•	•	•	•	E	3.22	
34	5.696	5.419	5.107		•	•	•	•	•	•	•	•	•	•	E	3.30	
35	5.856	5.578	5.260		•	•	•	•	•	•	•	•	•	•	E	3.46	
36	6.015	5.737	5.425		•	•	•	•	•	•	•	•	•	•	E	3.58	
37	6.170	5.896	5.578		•	•	•	•	•	•	•	•	•	•	E	3.62	
38	6.334	6.055	5.742		•	•	•	•	•	•	•	•	•	•	E	3.70	
39	6.490	6.214	5.896		•	•	•	•	•	•	•	•	•	•	E	3.76	
40	6.653	6.373	6.061			•	•	•	•	•	•	•	•	•	E	4.69	
41	6.810	6.532	6.214			•	•	•	•	•	•	•	•	•	E	4.76	
42	6.972	6.691	6.379			•	•	•	•	•	•	•	•	•	E	4.82	
43	7.130	6.850	6.532			•	•	•	•	•	•	•	•	•	E	5.12	
44	7.290	7.009	6.696			•	•	•	•	•	•	•	•	•	E	5.15	
45	7.450	7.168	6.851			•	•	•	•	•	•	•	•	•	E	5.30	
46	7.610	7.327	7.014			•	•	•	•	•	•	•	•	•	E	5.57	
47	7.770	7.486	7.169			•	•	•	•	•	•	•	•	•	E	5.44	
48	7.930	7.645	7.332			•	•	•	•	•	•	•	•	•	E	5.84	
49	8.090	7.804	7.487			•	•	•	•	•	•	•	•	•	E	5.90	
50	8.250	7.963	7.650			•	•	•	•	•	•	•	•	•	E	5.95	
51	8.410	8.122	7.805			•	•	•	•	•	•	•	•	•	E	6.08	
52	8.570	8.281	7.968			•	•	•	•	•	•	•	•	•	E	6.28	
53	8.730	8.440	8.124			•	•	•	•	•	•	•	•	•	E	6.33	
54	8.890	8.599	8.286			•	•	•	•	•	•	•	•	•	E	6.42	
55	9.040	8.758	8.442			•	•	•	•	•	•	•	•	•	E	6.46	
56	9.200	8.917	8.605			•	•	•	•	•	•	•	•	•	E	6.89	
57	9.360	9.077	8.760			•	•	•	•	•	•	•	•	•	E	7.02	
58	9.520	9.235	8.924			•	•	•	•	•	•	•	•	•	E	7.35	
59	9.680	9.395	9.078			•	•	•	•	•	•	•	•	•	E	7.45	
60	9.840	9.554	9.241			•	•	•	•	•	•	•	•	•	E	7.86	
70	11.430	11.145	10.832			•	•	•	•	•	•	•	•	•	E	11.00	
72	11.750	11.463	11.151			•	•	•	•	•	•	•	•	•	E	11.50	
80	13.030	12.736	12.423			•	•	•	•	•	•	•	•	•	E	13.40	
84	13.660	13.372	13.059			•	•	•	•	•	•	•	•	•	E	14.04	
96	15.570	15.282	14.969					•	•	•	•	•	•	•	E	17.56	
112	18.120	17.827	17.515					•	•	•	•	•	•	•	E	22.56	

• Denotes stocked item ■ Indicates ser screw at 90 degrees and 180 degrees from keyway \*\* Furnished without keyway

# MULTI-STRAND

Chain Data	
Size	40-2, 40-3
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.275"

All dimensions in inches unless noted.

40 Multi Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets				
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore +	Hub Style	Weight Lbs.
11	2.003	0.500	1.438 □	1.500	0.750	S	0.62
12	2.166	0.500	1.563 □	1.500	0.938	S	0.76
13	2.328	0.500	1.500	1.500	1.000	S	0.86
14	2.490	0.500	1.688	1.500	1.125	S	1.08
15	2.652	0.500	1.813	1.500	1.250	S	1.24
16	2.814	0.625	2.000	1.500	1.375	S	1.42
17	2.974	0.625	2.125	1.500	1.438	S	1.64
18	3.136	0.625	2.313	1.500	1.500	S	1.92
19	3.292	0.625	2.500	1.500	1.750	S	2.22
20	3.457	0.625	2.625	1.625	1.875	S	2.64
21	3.618	0.625	2.750	1.625	1.875	S	2.94
22	3.778	0.625	2.875	1.625	1.875	S	3.18
23	3.938	0.625	3.000	1.625	2.000	S	3.52
24	4.098	0.625	3.250	1.625	2.250	S	4.04
25	4.258	0.625	3.250	1.625	2.250	S	4.26
26	4.418	0.625	3.250	1.625	2.250	S	4.48
30	5.057	0.875	3.250	1.625	2.250	S	5.34
35	5.856	0.875	3.250	1.625	2.250	S	6.80
36	6.015	0.938	3.750	1.625	2.500	S	7.20
40	6.653	0.938	3.750	1.750	2.500	S	9.40
42	6.972	0.938	3.750	1.750	2.500	S	10.20
45	7.450	0.938	3.750	1.750	2.500	S	11.36
48	7.930	0.938	3.750	1.750	2.500	S	12.66
52	8.570	0.938	3.750	1.750	2.500	S	14.46
54	8.890	0.938	3.750	1.750	2.500	S	15.48
60	9.840	0.938	3.750	1.750	2.500	S	18.60

+ Dimension depicted allows for standard keyway with set screw at 90 degrees.  
 □ Has recessed groove in hub for chain clearance.

40 Multi Strand Sprocket Dia.			Dimensional Data: Triple Strand Sprockets				
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore +	Hub Style	Weight Lbs.
11	2.003	0.500	1.438 □	2.125	0.750	S	0.80
12	2.166	0.500	1.563 □	2.125	0.938	S	1.10
13	2.328	0.500	1.500	2.125	1.000	S	1.24
14	2.490	0.500	1.688	2.125	1.125	S	1.50
15	2.652	0.500	1.813	2.125	1.250	S	1.76
16	2.814	0.625	2.000	2.125	1.375	S	2.04
17	2.974	0.625	2.125	2.125	1.438	S	2.34
18	3.136	0.625	2.313	2.125	1.500	S	2.72
19	3.292	0.625	2.500	2.125	1.750	S	3.10
20	3.457	0.625	2.625	2.250	1.875	S	3.72
21	3.618	0.625	2.750	2.250	1.875	S	4.06
22	3.778	0.625	2.875	2.250	1.875	S	4.52
23	3.938	0.625	3.000	2.250	2.000	S	4.96
24	4.098	0.625	3.250	2.250	2.250	S	5.64
25	4.258	0.625	3.250	2.250	2.250	S	6.02
26	4.418	0.625	3.250	2.250	2.250	S	6.36
30	5.057	0.875	3.250	2.250	2.250	S	7.84
35	5.856	0.875	3.250	2.250	2.250	S	10.30
36	6.015	0.938	3.750	2.375	2.500	S	11.72

+ Dimension depicted allows for standard keyway with set screw at 90 degrees.  
 □ Has recessed groove in hub for chain clearance.

For more information on Sprockets see pages 132-137.



# No. 40

## DOUBLE SINGLE

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 Double Single Sprocket Dia.			Dimensional Data				
No. Teeth	Outside Diameter	Plain Bore	LTB	C	D	MAX Bore +	Weight Lbs.
15	2.650	0.500	1.406	1.125	1.813	1.250	1.20
16	2.810	0.500	1.406	1.125	2.000	1.250	1.40
17	2.980	0.500	1.406	1.125	2.125	1.313	1.60
18	3.140	0.500	1.406	1.125	2.313	1.500	1.80
19	3.300	0.625	1.406	1.125	2.500	1.688	2.20
20	3.460	0.625	1.406	1.125	2.625	1.750	2.60
21	3.620	0.625	1.406	1.125	2.781	1.750	2.90
22	3.780	0.625	1.406	1.125	2.938	1.938	3.00
23	3.940	0.625	1.406	1.125	3.094	2.063	3.50
24	4.100	0.625	1.406	1.125	3.266	2.250	4.00

+ Dimension depicted allows for standard keyway with set screw at 90 degrees.

## DOUBLE SINGLE

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1215	0.500 - 1.250"
1615	0.500 - 1.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

40 Double Single TAPER-LOCK® Sprocket Diameters			Dimensional Data				
No. Teeth	Outside Diameter	Plain Bore	LTB	C	Bushing #	MAX Bore*	Weight Lbs.
19	3.300	0.500	1.406	1.125	1215	1.250	1.10
20	3.460	0.500	1.406	1.125	1215	1.250	1.30
21	3.620	0.500	1.406	1.125	1615	1.688	1.30
23	3.940	0.500	1.406	1.125	1615	1.688	1.50
24	4.100	0.500	1.406	1.125	1615	1.688	1.70

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

# No. 40

## TAPER-LOCK®

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 TAPER-LOCK® Sprockets Dia.			Dimensional Data TAPER-LOCK® Sprockets				
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	LTB	Hub Diameter	Hub Style	Weight Lbs.
14	2.491	1008	1.000	0.875	1.813 □	S	0.30
15	2.652	1008	1.000	0.875	1.813	S	0.40
16	2.814	1008	1.000	0.875	1.938	S	0.50
17	2.975	1210	1.250	1.000	2.375 □	S	0.50
18	3.135	1210	1.250	1.000	2.469 □	S	0.60
19	3.296	1210	1.250	1.000	2.469	S	0.70
20	3.457	1610	1.688	1.000	2.781 □	S	0.70
21	3.617	1610	1.688	1.000	2.781	S	0.80
22	3.778	1610	1.688	1.000	2.781	S	0.90
23	3.938	1610	1.688	1.000	3.094	S	1.00
24	4.098	1610	1.688	1.000	3.250	S	1.40
25	4.258	1610	1.688	1.000	3.406	S	1.50
26	4.418	1610	1.688	1.000	3.500	S	1.70
28	4.738	1610	1.688	1.000	3.500	E	1.80
30	5.057	1610	1.688	1.000	3.500	E	1.90
32	5.377	1610	1.688	1.000	3.500	E	1.90
35	5.855	1610	1.688	1.000	3.500	E	2.30
36	6.015	1610	1.688	1.000	3.000	E	2.40
40	6.653	1610	1.688	1.000	3.000	E	2.80
42	6.970	1610	1.688	1.000	3.000	E	2.90
45	7.450	1610	1.688	1.000	3.000	E	3.50
48	7.928	1610	1.688	1.000	3.000	E	4.00
54	8.885	1610	1.688	1.000	3.000	E	4.90
60	9.841	1610	1.688	1.000	3.000	E	6.00
70	11.434	2012	2.125	1.250	3.563	E	8.20
72	11.752	2012	2.125	1.250	3.563	E	9.00
80	13.026	2012	2.125	1.250	3.563	E	10.80
84	13.663	2012	2.125	1.250	3.563	E	11.30
96	15.573	2012	2.125	1.250	3.563	E	14.60

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. □ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"
2012	0.500" - 2.125"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"
SDS	0.500 - 2.000"
SK	0.500" - 2.625"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

## QD®

Chain Data	
Size	40
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

40 QD® Sprockets Dia.			Dimensional Data								
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	Hub Diameter	LTB	X	Y	L	F	Hub Style	Weight Lbs.
15	2.650	JA	1.250	2.063 □	0.625	1.125	1.125	0.719	2.063	S	0.34
16	2.810	JA	1.250	2.063 □	0.625	1.125	1.125	0.719	2.063	S	0.40
17	2.980	JA	1.250	2.188 □	0.625	1.125	1.125	0.719	2.063	S	0.48
18	3.140	JA	1.250	2.250 □	0.625	1.125	1.125	0.719	2.063	S	0.54
19	3.300	JA	1.250	2.250 □	0.625	1.125	1.125	0.719	2.063	S	0.60
20	3.460	SH	1.688	2.750 □	0.813	1.438	1.438	0.969	2.688	S	0.76
21	3.620	SH	1.688	2.750 □	0.813	1.438	1.438	0.969	2.688	S	0.84
22	3.780	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	0.92
23	3.940	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.14
24	4.100	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.22
25	4.260	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.30
26	4.420	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.44
27	4.580	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.46
28	4.740	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.54
30	5.060	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.72
32	5.360	SH	1.688	3.000	0.813	1.438	1.438	0.969	2.688	S	1.90
35	5.860	SH	1.688	3.000	0.813	1.438	1.438	0.969	3.000	S	2.22
36	6.020	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	2.20
40	6.660	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	2.72
42	6.970	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	2.92
45	7.450	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	3.32
48	7.930	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	3.70
54	8.890	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	4.78
60	9.840	SDS	2.000	3.500	0.750	1.500	1.500	1.032	3.188	E	5.86
70	11.430	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	8.68
72	11.750	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	8.84
80	13.030	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	11.20
84	13.660	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	11.56
96	15.570	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	15.76
112	18.120	SK	2.625	4.250	1.250	2.125	2.125	1.594	3.875	E	20.28

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data. □ Has recessed groove in hub for chain clearance.

For more information on Sprockets see pages 132-137.

# MULTI-STRAND TAPER-LOCK®

Chain Data	
Size	40 - 2
Pitch	1/2"
Inside Width	5/16"
Roller Diameter	0.312"
Nominal Tooth Width:	0.275"

All dimensions in inches unless noted.

Double Strand 40 TAPER-LOCK® Sprockets			Dimensional Data					
No. Teeth	Outside Diameter	Bushing #	MAX Bore*	LTB	Hub Diameter	Hub Type	Hub Style	Weight Lbs.
15	2.652	1008	1.000	0.875	1.266	A	S	0.50
16	2.814	1008	1.000	0.875	1.266	A	S	0.60
17	2.975	1008	1.000	0.875	1.266	A	S	0.70
18	3.135	1210	1.250	1.000	2.313	B	S	0.70
19	3.296	1210	1.250	1.000	2.500	B	S	0.90
20	3.457	1610	1.688	1.000	2.625	B	S	0.90
21	3.617	1610	1.688	1.000	2.750	B	S	1.00
23	3.938	1610	1.688	1.000	3.000	B	S	1.30
25	4.258	2012	2.125	1.250	3.406	B	S	1.60
30	5.057	2012	2.125	1.250	4.234	B	S	3.40
36	6.015	2012	2.125	1.250	5.156	B	S	5.90
42	6.972	2517	2.688	1.750	4.250	C	S	7.00
48	7.928	2517	2.688	1.750	4.250	C	S	9.60
52	8.566	2517	2.688	1.750	4.250	C	S	11.40
60	9.841	2517	2.688	1.750	4.250	C	S	15.40
84	13.663	2517	2.688	1.750	4.250	C	S	31.60

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

# PLAIN BORE

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

50 Plain Bore Sprocket Diameters				Type "A" Plain Bore		Type "B" Plain Bore					
No. Teeth	Outside Dia.	Pitch Diameter	Caliper Diameter	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Style	Wt. Lbs.
8	1.880	1.633	1.233	NS	NS	0.625	0.625	1.125 □	1.000	S	0.25
9	2.090	1.828	1.400	NS	NS	0.625	0.750	1.375 □	1.000	S	0.36
10	2.300	2.023	1.623	NS	NS	0.625	0.875	1.313 □	1.000	S	0.48
11	2.500	2.219	1.796	NS	NS	0.625	1.000	1.750 □	1.000	S	0.64
12	2.710	2.415	2.015	0.625	0.34	0.625	1.250	1.984 □	1.000	S	0.83
13	2.910	2.612	2.193	0.625	0.42	0.625	1.313	1.875	1.000	S	0.88
14	3.110	2.809	2.409	0.625	0.50	0.625	1.438	2.125	1.000	S	1.13
15	3.320	3.006	2.590	0.625	0.54	0.625	1.500	2.375	1.000	S	1.34
16	3.520	3.204	2.804	0.625	0.68	0.625	1.750	2.500	1.000	S	1.51
17	3.720	3.401	2.987	0.625	0.76	0.625	1.875	2.688	1.000	S	1.74
18	3.920	3.599	3.199	0.625	0.86	0.625	1.875	2.875	1.000	S	2.00
19	4.120	3.798	3.384	0.625	0.94	0.625	2.000	3.000	1.000	S	2.22
20	4.320	3.995	3.595	0.750	1.06	0.750	2.000	3.000	1.000	S	2.23
21	4.520	4.194	3.782	0.750	1.12	0.750	2.000	3.000	1.000	E	2.40
22	4.720	4.392	3.992	0.750	1.30	0.750	2.000	3.000	1.000	E	2.56
23	4.920	4.590	4.179	0.750	1.44	0.750	2.000	3.000	1.000	E	2.66
24	5.120	4.788	4.388	0.719	1.50	0.750	2.000	3.000	1.250	E	3.30
25	5.320	4.987	4.577	0.719	1.62	0.750	2.000	3.000	1.250	E	3.40
26	5.520	5.185	4.785	0.719	1.72	0.750	2.000	3.000	1.250	E	3.44
27	5.720	5.384	4.975	0.719	1.96	0.750	2.000	3.000	1.250	E	3.74
28	5.920	5.582	5.182	0.719	2.04	0.750	2.000	3.000	1.250	E	3.80
29	6.120	5.781	5.371	0.719	2.36	0.750	2.000	3.000	1.250	E	4.06
30	6.320	5.979	5.579	0.719	2.54	0.750	2.250	3.250	1.250	E	4.56
31	6.520	6.178	5.770	0.719	2.72	0.750	2.250	3.250	1.250	E	4.74
32	6.720	6.376	5.976	0.719	2.80	0.750	2.250	3.250	1.250	E	4.96
33	6.920	6.575	6.168	0.719	3.14	0.750	2.250	3.250	1.250	E	5.20
34	7.120	6.774	6.374	0.719	3.20	0.750	2.250	3.250	1.250	E	5.14
35	7.320	6.973	6.565	0.719	3.34	0.750	2.250	3.250	1.250	E	5.44
36	7.520	7.171	6.771	0.719	3.82	0.750	2.250	3.250	1.250	E	5.64
37	7.720	7.370	6.963	0.719	3.98	0.750	2.250	3.250	1.250	E	5.90
38	7.920	7.569	7.169	0.719	4.14	0.750	2.250	3.250	1.250	E	6.08
39	8.120	7.768	7.361	0.719	4.42	0.750	2.250	3.250	1.250	E	6.30
40	8.320	7.966	7.566	0.719	4.46	0.750	2.250	3.250	1.250	E	6.50
41	8.520	8.165	7.759	0.719	4.86	0.750	2.250	3.250	1.250	E	6.64
42	8.720	8.364	7.964	0.719	4.98	0.750	2.250	3.250	1.250	E	6.96
43	8.910	8.563	8.157	0.719	5.24	0.750	2.250	3.250	1.250	E	7.06
44	9.110	8.761	8.361	0.719	5.42	0.750	2.250	3.250	1.250	E	7.58
45	9.310	8.960	8.554	0.719	5.92	0.750	2.500	3.750	1.250	E	8.58
46	9.510	9.159	8.759	0.938	6.42	1.000	2.500	3.750	1.250	E	8.22
47	9.710	9.358	8.952	0.938	6.50	1.000	2.500	3.750	1.250	E	8.48
48	9.910	9.556	9.156	0.938	6.58	1.000	2.500	3.750	1.250	E	9.28
49	10.110	9.755	9.350	0.938	7.06	1.000	2.500	3.750	1.250	E	9.22
50	10.310	9.954	9.554	0.938	7.10	1.000	2.500	3.750	1.250	E	9.88
51	10.510	10.153	9.748	0.938	7.32	1.000	2.500	3.750	1.250	E	9.70
52	10.710	10.351	9.951	0.938	7.98	1.000	2.500	3.750	1.250	E	10.24
53	10.910	10.550	10.146	0.938	8.08	1.000	2.500	3.750	1.250	E	10.48
54	11.110	10.749	10.349	0.938	8.30	1.000	2.500	3.750	1.250	E	11.00
55	11.310	10.948	10.543	0.938	8.56	1.000	2.500	3.750	1.250	E	10.93
56	11.500	11.147	10.747	0.938	8.90	1.000	2.500	3.750	1.250	E	11.50
57	11.700	11.346	10.941	0.938	9.38	1.000	2.500	3.750	1.250	E	12.00
58	11.900	11.544	11.144	0.938	10.30	1.000	2.500	3.750	1.250	E	11.82
59	12.100	11.743	11.339	0.938	10.50	1.000	2.500	3.750	1.250	E	12.32
60	12.300	11.942	11.542	0.938	10.80	1.000	2.500	3.750	1.250	E	13.00
70	14.290	13.931	13.531	0.938	14.00	1.000	2.500	3.750	1.750	E	18.16
72	14.690	14.329	13.929	0.938	15.24	1.000	2.500	3.750	1.750	E	19.48
80	16.280	15.919	15.519	0.938	21.00	1.000	2.750	4.250	1.750	E	24.74
84	17.080	16.715	16.315	0.938	22.08	1.000	2.750	4.250	1.750	E	25.50
96	19.470	19.102	18.702	0.938	27.40	1.000	2.750	4.250	1.750	E	32.92
112	22.650	22.284	21.884	0.938	37.70	1.000	2.750	4.250	1.750	E	42.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

□ Has recessed groove in hub for chain clearance.

NS = Non Stock

For more information on Sprockets see pages 132-137.

## FINISHED BORE

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

50 Finished Bore Sprocket Diameters				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)												
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	.625"	.750"	.875"	1.000"	1.125"	1.188"	1.250"	1.375"	1.438"	1.500"	1.625"	1.750"	1.938"
9	2.090	1.828	1.400	•	•											
10	2.300	2.023	1.623	•	•	•	• ■									
11	2.500	2.219	1.796	•	•	•	•									
12	2.710	2.415	2.015	•	•	•	•	•	•	•						
13	2.910	2.612	2.193	•	•	•	•	•	•	•						
14	3.110	2.809	2.409	•	•	•	•	•	•	•						
15	3.320	3.006	2.590	•	•	•	•	•	•	•	•	•	•			
16	3.520	3.204	2.804	•	•	•	•	•	•	•	•	•	•	•		
17	3.720	3.401	2.987	•	•	•	•	•	•	•	•	•	•	•	•	
18	3.920	3.599	3.199	•	•	•	•	•	•	•	•	•	•	•	•	
19	4.120	3.798	3.384	•	•	•	•	•	•	•	•	•	•	•	•	
20	4.320	3.995	3.595		•	•	•	•	•	•	•	•	•	•	•	
21	4.520	4.194	3.782		•	•	•	•	•	•	•	•	•	•	•	
22	4.720	4.392	3.992		•	•	•	•	•	•	•	•	•	•	•	
23	4.920	4.590	4.179		•	•	•	•	•	•	•	•	•	•	•	
24	5.120	4.788	4.388		•	•	•	•	•	•	•	•	•	•	•	
25	5.320	4.987	4.577		•	•	•	•	•	•	•	•	•	•	•	
26	5.520	5.185	4.785		•	•	•	•	•	•	•	•	•	•	•	
27	5.720	5.384	4.975		•	•	•	•	•	•	•	•	•	•	•	
28	5.920	5.582	5.182		•	•	•	•	•	•	•	•	•	•	•	
29	6.120	5.781	5.371		•	•	•	•	•	•	•	•	•	•	•	
30	6.320	5.979	5.579		•	•	•	•	•	•	•	•	•	•	•	
31	6.520	6.178	5.770		•	•	•	•	•	•	•	•	•	•	•	•
32	6.720	6.376	5.976		•	•	•	•	•	•	•	•	•	•	•	•
33	6.920	6.575	6.168		•	•	•	•	•	•	•	•	•	•	•	•
34	7.120	6.774	6.374		•	•	•	•	•	•	•	•	•	•	•	•
35	7.320	6.937	6.565		•	•	•	•	•	•	•	•	•	•	•	•
36	7.520	7.171	6.771		•	•	•	•	•	•	•	•	•	•	•	•
37	7.720	7.370	6.963		•	•	•	•	•	•	•	•	•	•	•	•
38	7.920	7.569	7.169		•	•	•	•	•	•	•	•	•	•	•	•
39	8.120	7.768	7.361		•	•	•	•	•	•	•	•	•	•	•	•
40	8.320	7.966	7.566		•	•	•	•	•	•	•	•	•	•	•	•
41	8.520	8.165	7.759		•	•	•	•	•	•	•	•	•	•	•	•
42	8.720	8.364	7.964		•	•	•	•	•	•	•	•	•	•	•	•
43	8.910	8.563	8.157		•	•	•	•	•	•	•	•	•	•	•	•
44	9.110	8.761	8.361		•	•	•	•	•	•	•	•	•	•	•	•
45	9.310	8.960	8.554		•	•	•	•	•	•	•	•	•	•	•	•
46	9.510	9.159	8.759			•	•	•	•	•	•	•	•	•	•	•
47	9.710	9.358	8.952			•	•	•	•	•	•	•	•	•	•	•
48	9.910	9.556	9.156			•	•	•	•	•	•	•	•	•	•	•
49	10.110	9.755	9.350			•	•	•	•	•	•	•	•	•	•	•
50	10.310	9.954	9.554			•	•	•	•	•	•	•	•	•	•	•
51	10.510	10.153	9.748			•	•	•	•	•	•	•	•	•	•	•
52	10.710	10.351	9.951			•	•	•	•	•	•	•	•	•	•	•
53	10.910	10.550	10.146			•	•	•	•	•	•	•	•	•	•	•
54	11.110	10.749	10.349			•	•	•	•	•	•	•	•	•	•	•
55	11.310	10.948	10.543			•	•	•	•	•	•	•	•	•	•	•
56	11.500	11.147	10.747			•	•	•	•	•	•	•	•	•	•	•
57	11.700	11.346	10.941			•	•	•	•	•	•	•	•	•	•	•
58	11.900	11.544	11.144			•	•	•	•	•	•	•	•	•	•	•
59	12.100	11.743	11.339			•	•	•	•	•	•	•	•	•	•	•
60	12.300	11.942	11.542			•	•	•	•	•	•	•	•	•	•	•
70	14.290	13.931	13.531			•	•	•	•	•	•	•	•	•	•	•
72	14.690	14.329	13.929			•	•	•	•	•	•	•	•	•	•	•
80	16.280	15.919	15.519			•	•	•	•	•	•	•	•	•	•	•
84	17.080	16.715	16.315			•	•	•	•	•	•	•	•	•	•	•
96	19.470	19.102	18.702			•	•	•	•	•	•	•	•	•	•	•
112	22.650	22.284	21.884			•	•	•	•	•	•	•	•	•	•	•

• Denotes stocking item. ■ Indicates set screw at 90 degrees and 180 degrees from keyway.

For more information on Sprockets see pages 132-137.

# STAINLESS STEEL PLAIN BORE

Chain Data	
Size	50SS
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

50 Stainless Steel Sprocket Diameters				Type "B" Plain Bore					
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	MAX Bore *	Hub Diameter	LTB	Hub Style	Wt. Lbs.
10	2.300	2.023	1.623	0.625	0.875	1.563 □	1.000	S	0.50
11	2.500	2.219	1.796	0.625	1.000	1.750 □	1.000	S	0.60
12	2.710	2.415	2.015	0.625	1.250	1.984 □	1.000	S	0.70
13	2.910	2.612	2.193	0.625	1.313	1.875	1.000	S	0.80
14	3.110	2.809	2.409	0.625	1.438	2.125	1.000	S	1.00
15	3.320	3.006	2.590	0.625	1.500	2.375	1.000	S	1.30
16	3.520	3.204	2.804	0.625	1.750	2.500	1.000	S	1.50
17	3.720	3.401	2.987	0.625	1.875	2.688	1.000	S	1.80
18	3.920	3.599	3.199	0.625	1.875	2.875	1.000	S	2.00
19	4.120	3.798	3.384	0.625	1.750	2.500	1.000	S	2.30
20	4.320	3.995	3.595	0.750	1.750	2.500	1.000	S	2.50
21	4.520	4.194	3.782	0.750	2.000	3.000	1.000	D	2.70
22	4.720	4.392	3.992	0.750	2.000	3.000	1.000	D	3.30
23	4.920	4.590	4.179	0.750	2.000	3.000	1.000	D	3.80
24	5.120	4.788	4.388	0.750	2.000	3.000	1.250	D	4.10
25	5.320	4.987	4.577	0.750	2.000	3.000	1.250	D	4.30
26	5.520	5.185	4.785	0.750	2.000	3.000	1.250	D	4.60
28	5.920	5.582	5.182	0.750	2.000	3.000	1.250	D	5.00
30	6.320	5.979	5.579	0.750	2.250	3.250	1.250	D	5.20
35	7.320	6.973	6.565	0.750	2.250	3.250	1.250	D	6.50
40	8.320	7.966	7.566	0.750	2.250	3.250	1.250	D	7.80
45	9.310	8.960	8.554	0.750	2.500	3.750	1.250	D	8.50
60	12.300	11.942	11.542	1.000	2.500	3.750	1.250	D	14.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance.

## MULTI-STRAND

Chain Data	
Size	50-2, 50-3
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.332"

All dimensions in inches unless noted.

50 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets				
No. Teeth	Outside Dia.	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Style	Wt. Lbs.
11	2.500	0.625	1.469	1.750	0.938	S	0.96
12	2.710	0.625	1.688	1.750	1.125	S	1.25
13	2.910	0.625	1.875	1.750	1.313	S	1.56
14	3.110	0.625	2.063	1.750	1.375	S	1.86
15	3.320	0.750	2.313	1.750	1.500	S	2.22
16	3.520	0.750	2.500	1.750	1.750	S	2.62
17	3.720	0.750	2.688	1.750	1.875	S	3.04
18	3.920	0.750	2.938	1.750	1.938	S	3.58
19	4.120	1.000	3.125	1.750	2.125	S	3.90
20	4.320	1.000	3.250	1.750	2.250	S	4.25
21	4.520	1.000	3.500	1.750	2.375	S	4.90
22	4.720	1.000	3.563	1.875	2.375	S	5.58
23	4.920	1.000	3.625	1.875	2.500	S	6.10
24	5.120	1.000	3.625	1.875	2.500	S	6.50
25	5.320	1.000	3.625	1.875	2.500	S	6.94
26	5.520	1.000	3.750	1.875	2.500	S	7.54
30	6.320	1.000	3.750	1.875	2.500	S	9.40
32	6.720	1.000	3.750	1.875	2.500	S	10.46
35	7.320	1.000	3.750	1.875	2.500	S	12.28
36	7.520	1.188	4.000	2.125	2.750	S	13.94
40	8.320	1.188	4.000	2.125	2.750	S	16.54
42	8.720	1.188	4.000	2.125	2.750	S	17.92
45	9.310	1.188	4.000	2.125	2.750	S	20.30
48	9.910	1.188	4.250	2.375	2.750	S	24.08
52	10.710	1.188	4.250	2.375	2.750	D	27.42
54	11.110	1.188	4.250	2.375	2.750	D	29.16
60	12.300	1.313	4.500	2.375	3.000	D	35.88
72	14.690	1.313	4.500	2.375	3.000	D	50.22
84	17.080	1.313	4.500	2.375	3.000	D	51.64
96	19.470	1.313	4.500	2.375	3.000	D	67.42
112	22.650	1.313	5.250	2.375	3.313	D	90.22

50 Multi-Strand Sprocket Dia.			Dimensional Data: Triple Strand Sprockets				
No. Teeth	Outside Dia.	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Style	Wt. Lbs.
11	2.500	0.625	1.469	2.500	0.938	S	1.42
12	2.710	0.625	1.688	2.500	1.125	S	1.84
13	2.910	0.625	1.875	2.500	1.313	S	2.28
14	3.110	0.625	2.063	2.500	1.375	S	2.72
15	3.320	0.750	2.313	2.500	1.500	S	3.24
16	3.520	0.750	2.500	2.500	1.750	S	3.75
17	3.720	0.750	2.688	2.500	1.875	S	4.38
18	3.920	0.750	2.938	2.500	1.938	S	5.10
19	4.120	1.000	3.125	2.500	2.125	S	5.60
20	4.320	1.000	3.250	2.625	2.250	S	6.42
21	4.520	1.000	3.500	2.625	2.375	S	7.42
22	4.720	1.000	3.563	2.625	2.375	S	7.92
23	4.920	1.000	3.625	2.625	2.500	S	8.80
24	5.120	1.000	3.625	2.625	2.500	S	9.42
25	5.320	1.000	3.625	2.625	2.500	S	10.16
26	5.520	1.000	3.750	2.625	2.500	S	11.02
30	6.320	1.000	3.750	2.625	2.500	S	14.24
35	7.320	1.000	3.750	2.625	2.500	S	18.96
36	7.520	1.188	4.000	2.750	2.750	S	20.60

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.  
For more information on Sprockets see pages 132-137.

# DOUBLE SINGLE

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

50 Double Single Sprocket Dia.			Dimensional Data: Double Single Sprockets				
No. Teeth	Outside Diameters	Plain Bore	LTB	C	D	MAX Bore *	Weight Lbs.
15	3.320	0.625	1.656	1.313	2.375	1.500	2.10
16	3.520	0.625	1.656	1.313	2.500	1.688	2.40
17	3.720	0.625	1.656	1.313	2.688	1.750	2.90
18	3.920	0.625	1.656	1.313	2.891	1.875	3.30
19	4.120	0.625	1.656	1.313	3.078	2.063	3.70
20	4.320	0.625	1.656	1.313	3.281	2.250	4.20
21	4.520	0.625	1.656	1.313	3.484	2.250	4.80
22	4.720	0.625	1.656	1.313	3.688	2.438	5.30
23	4.920	0.625	1.656	1.313	3.891	2.625	5.80
24	5.120	0.625	1.656	1.313	4.078	2.750	6.30

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

# DOUBLE SINGLE

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1610	0.500 - 1.688"
2012	0.500 - 2.125"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

50 Double Single TAPER-LOCK® Sprocket Dia.			Dimensional Data: Double Single TAPER-LOCK® Sprockets				
No. Teeth	Outside Diameters	Bushing #	LTB	C	D	MAX Bore *	Weight Lbs.
17	3.720	1610	1.656	1.313	2.688	1.688	1.80
18	3.920	1610	1.656	1.313	2.891	1.688	2.20
19	4.120	1610	1.656	1.313	3.078	1.688	2.70
21	4.520	2012	1.656	1.313	3.469	2.125	3.30
23	4.920	2012	1.656	1.313	3.891	2.125	3.70
24	5.120	2012	1.656	1.313	4.078	2.125	4.10

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.



## TAPER-LOCK®

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

50 TAPER-LOCK® Sprocket Dia.			Dimensional Data TAPER-LOCK® Sprockets				
No. Teeth	Outside Diameter	Bushing #	MAX Bore *	LTB	Hub Diameter	Hub Style	Weight Lbs.
12	2.710	1008	1.000	0.875	1.938 □	S	0.50
13	2.910	1008	1.000	0.875	1.813	S	0.50
14	3.110	1008	1.000	0.875	1.938	S	0.60
15	3.320	1210	1.250	1.000	2.469 □	S	0.70
16	3.520	1610	1.688	1.000	2.781 □	S	0.70
17	3.720	1610	1.688	1.000	2.781 □	S	0.80
18	3.920	1610	1.688	1.000	2.781	S	0.90
19	4.120	1610	1.688	1.000	3.000	S	1.30
20	4.320	1610	1.688	1.000	3.250	S	1.60
21	4.520	1610	1.688	1.000	3.500	S	1.60
22	4.720	1610	1.688	1.000	3.500	S	1.60
23	4.920	2012	2.125	1.250	3.875	S	2.00
24	5.120	2012	2.125	1.250	4.000	S	2.20
25	5.320	2012	2.125	1.250	4.000	S	2.40
26	5.520	2012	2.125	1.250	4.000	E	2.50
27	5.720	2012	2.125	1.250	4.000	E	2.60
28	5.920	2012	2.125	1.250	4.000	E	2.80
30	6.320	2012	2.125	1.250	3.563	E	3.20
32	6.720	2012	2.125	1.250	3.563	E	3.60
35	7.320	2012	2.125	1.250	3.563	E	4.20
36	7.520	2012	2.125	1.250	3.563	E	4.30
40	8.320	2012	2.125	1.250	3.563	E	5.20
42	8.720	2012	2.125	1.250	3.563	E	5.90
45	9.310	2012	2.125	1.250	3.563	E	6.50
48	9.910	2012	2.125	1.250	3.563	E	7.30
54	11.110	2012	2.125	1.250	3.563	E	9.00
60	12.300	2012	2.125	1.250	3.563	E	10.80
70	14.290	2517	2.688	1.750	4.250	E	14.00
72	14.690	2517	2.688	1.750	4.250	E	15.50
80	16.280	2517	2.688	1.750	4.250	E	19.50
84	17.080	2517	2.688	1.750	4.250	E	22.50
96	19.470	2517	2.688	1.750	4.250	E	29.00
112	22.650	2517	2.688	1.750	4.250	E	38.70

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. □ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

## MULTI-STRAND TAPER-LOCK®

Chain Data	
Size	50-2
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.332"

All dimensions in inches unless noted.

50 Multi-Strand TAPER-LOCK® Sprocket Dia.			Dimensional Data Double Strand TAPER-LOCK® Sprockets					
No. Teeth	Outside Diameter	Bushing #	MAX Bore *	LTB	Hub Diameter	Hub Type	Hub Style	Weight Lbs.
14	3.110	1008	1.000	0.875	N/A	A	S	0.80
15	3.320	1210	1.250	1.000	N/A	A	S	0.90
16	3.520	1210	1.250	1.000	N/A	A	S	1.10
17	3.720	1610	1.688	1.000	N/A	A	S	1.10
18	3.920	1610	1.688	1.000	N/A	A	S	1.30
19	4.120	1610	1.688	1.000	N/A	A	S	1.60
20	4.320	2012	2.125	1.250	3.250	B	S	1.50
21	4.520	2012	2.125	1.250	3.500	B	S	1.90
25	5.320	2012	2.125	1.250	4.281	B	S	3.80
30	6.320	2517	2.688	1.750	5.281	B	S	7.50
36	7.520	2517	2.688	1.750	4.250	C	S	9.40
42	8.720	2517	2.688	1.750	4.250	C	S	13.40
48	9.910	2517	2.688	1.750	4.250	C	S	18.60
52	10.710	2517	2.688	1.750	4.375	C	S	22.20
60	12.300	2517	2.688	1.750	4.375	C	S	30.30
84	17.080	2517	2.688	1.750	4.375	C	S	45.30

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

## QD®

Chain Data	
Size	50
Pitch	5/8"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"
SDS	0.500 - 2.000"
SK	0.500 - 2.625"
SF	0.500 - 2.938"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

All dimensions in inches unless noted.

50 QD® Sprocket Dia.			Dimensional Data QD® Sprockets									
No. Teeth	Outside Diameter	QD® Bushing #	MAX Bore *	Hub Diameter	LTB	X	Y	L	F	Hub Type	Hub Style	Weight Lbs.
12	2.710	JA	1.250	1.922	0.625	1.125	1.125	0.656	2.063	B	S	0.34
13	2.910	JA	1.250	2.063	0.625	1.125	1.125	0.656	2.063	B	S	0.40
14	3.110	JA	1.250	2.125	0.625	1.125	1.125	0.656	2.063	B	S	0.52
15	3.320	JA	1.250	2.250	0.625	1.125	1.125	0.656	2.063	B	S	0.60
16	3.520	JA	1.250	2.250	0.625	1.125	1.125	0.656	2.063	B	S	0.68
17	3.720	SH	1.688	2.750	0.813	1.437	1.437	0.906	2.688	B	S	0.84
18	3.920	SH	1.688	2.875	0.813	1.437	1.437	0.906	2.688	B	S	1.04
19	4.120	SH	1.688	3.000	0.813	1.437	1.437	0.906	2.688	B	S	1.24
20	4.320	SDS	2.000	3.313	0.750	1.500	1.500	0.969	3.188	B	S	1.20
21	4.520	SDS	2.000	3.500	0.750	1.500	1.500	0.969	3.188	B	S	1.32
22	4.720	SDS	2.000	3.500	0.750	1.500	1.500	0.969	3.188	B	S	1.42
23	4.920	SDS	2.000	3.500	0.750	1.500	1.500	0.969	3.188	B	S	1.58
24	5.120	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	1.70
25	5.320	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	1.86
26	5.520	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	2.00
27	5.720	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	2.12
28	5.920	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	2.32
30	6.320	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	2.64
32	6.720	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	2.98
35	7.320	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	3.62
36	7.520	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	3.64
40	8.320	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	4.74
42	8.720	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	5.40
45	9.310	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	5.90
48	9.910	SDS	2.000	3.625	0.750	1.500	1.500	0.969	3.188	B	E	6.66
54	11.110	SK	2.625	3.625	1.250	2.125	2.125	1.531	3.875	B	E	9.68
60	12.300	SK	2.625	4.250	1.250	2.125	2.125	1.531	3.875	B	E	11.88
70	14.290	SK	2.625	4.250	1.250	2.125	2.125	1.531	3.875	B	E	15.52
72	14.690	SK	2.625	4.250	1.250	2.125	2.125	1.531	3.875	B	E	16.44
80	16.280	SF **	2.938	5.000	1.250	2.250	2.250	1.656	4.625	B	E	19.90
84	17.080	SF **	2.938	5.000	1.250	2.250	2.250	1.656	4.625	B	E	22.98
96	19.470	SF **	2.938	5.000	1.250	2.250	2.250	1.656	4.625	B	E	29.88
112	22.650	SF **	2.938	5.000	1.250	2.250	2.250	1.656	4.625	B	E	40.10

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data. \*\* = Max Bore with shallow key

## PLAIN BORE

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore					
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Diameter	LTB	Hub Style	Wt. Lbs.
8	2.260	1.959	1.491	NS	NS	0.625	0.625	1.469 □	1.250	S	0.54
9	2.510	2.193	1.691	NS	NS	0.750	0.875	1.563 □	1.250	S	0.64
10	2.760	2.427	1.958	0.750	0.44	0.750	1.125	1.938 □	1.250	S	0.99
11	3.000	2.663	2.166	0.750	0.54	0.750	1.313	2.063 □	1.250	S	1.15
12	3.250	2.898	2.429	0.750	0.68	0.750	1.438	2.375 □	1.250	S	1.47
13	3.490	3.134	2.642	0.750	0.80	0.750	1.500	2.344	1.250	S	1.66
14	3.740	3.371	2.902	0.750	0.94	0.750	1.750	2.563	1.250	S	2.00
15	3.980	3.608	3.119	0.750	1.08	0.750	1.875	2.875	1.250	S	2.51
16	4.220	3.845	3.375	0.750	1.24	0.750	2.000	3.063	1.250	S	2.81
17	4.460	4.082	3.595	0.750	1.44	0.750	2.250	3.250	1.250	S	3.22
18	4.700	4.319	3.850	0.750	1.62	0.750	2.375	3.500	1.250	E	3.72
19	4.950	4.557	4.072	0.750	1.84	0.750	2.375	3.500	1.250	E	3.92
20	5.190	4.794	4.325	0.750	2.12	0.750	2.625	3.875	1.250	E	4.63
21	5.430	5.033	4.549	0.750	2.28	0.750	2.750	4.000	1.250	E	5.00
22	5.670	5.270	4.801	0.750	2.48	0.750	2.750	4.000	1.250	E	5.25
23	5.910	5.508	5.026	0.750	2.68	0.750	2.750	4.000	1.250	E	5.48
24	6.150	5.746	5.277	0.719	3.00	0.750	2.750	4.000	1.250	E	5.78
25	6.390	5.984	5.503	0.719	3.34	0.750	2.750	4.000	1.250	E	6.13
26	6.630	6.222	5.753	0.719	3.54	0.750	2.750	4.000	1.250	E	6.38
27	6.870	6.461	5.980	0.719	3.96	0.750	2.750	4.000	1.250	E	6.72
28	7.110	6.698	6.229	0.719	4.14	0.750	2.750	4.000	1.250	E	6.88
29	7.350	6.937	6.458	0.719	4.40	0.750	2.750	4.000	1.250	E	7.28
30	7.590	7.175	6.706	0.719	4.78	0.750	2.750	4.000	1.250	E	7.58
31	7.830	7.413	6.935	0.719	5.24	0.750	2.750	4.000	1.250	E	7.72
32	8.070	7.652	7.183	0.719	5.52	0.750	2.750	4.000	1.250	E	8.26
33	8.300	7.890	7.412	0.938	5.86	1.000	2.750	4.000	1.250	E	8.42
34	8.540	8.129	7.660	0.938	6.16	1.000	2.750	4.000	1.250	E	8.80
35	8.780	8.367	7.889	0.938	6.78	1.000	2.750	4.000	1.250	E	9.04
36	9.020	8.606	8.137	0.938	6.82	1.000	2.750	4.000	1.250	E	9.60
37	9.260	8.844	8.367	0.938	7.52	1.000	2.750	4.000	1.250	E	10.24
38	9.500	9.083	8.614	0.938	7.84	1.000	2.750	4.250	1.250	E	10.84
39	9.740	9.321	8.844	0.938	8.28	1.000	2.750	4.250	1.250	E	11.36
40	9.980	9.560	9.091	0.938	8.56	1.000	2.750	4.250	1.250	E	11.50
41	10.220	9.798	9.321	0.938	9.10	1.000	2.750	4.250	1.250	E	12.14
42	10.460	10.037	9.568	0.938	9.74	1.000	2.750	4.250	1.250	E	12.74
43	10.700	10.275	9.799	0.938	9.84	1.000	2.750	4.250	1.250	E	13.00
44	10.940	10.514	10.045	0.938	10.76	0.938	2.750	4.250	1.250	E	13.88
45	11.180	10.752	10.276	0.938	11.08	0.938	2.750	4.250	1.250	E	13.98
46	11.420	10.991	10.522	0.938	11.50	0.938	2.750	4.250	1.250	E	14.60
47	11.650	11.229	10.754	0.938	12.32	0.938	2.750	4.250	1.250	E	15.00
48	11.890	11.468	10.999	0.938	12.42	0.938	2.750	4.250	1.250	E	15.82
49	12.130	11.706	11.231	0.938	12.92	0.938	2.750	4.250	1.250	E	15.90
50	12.370	11.945	11.476	0.938	13.98	0.938	2.750	4.250	1.250	E	16.98
51	12.610	12.183	11.708	0.938	14.58	0.938	2.750	4.250	1.250	E	17.66
52	12.850	12.422	11.953	0.938	14.60	0.938	2.750	4.250	1.250	E	17.93
53	13.090	12.660	12.186	0.938	15.84	0.938	2.750	4.250	1.250	E	17.99
54	13.330	12.889	12.430	0.938	15.92	0.938	2.750	4.250	1.750	E	21.60
55	13.570	13.137	12.663	1.250	16.96	1.250	2.750	4.250	1.750	E	21.14
56	13.810	13.376	12.907	1.250	17.60	1.250	2.750	4.250	1.750	E	21.88
57	14.040	13.615	13.140	1.250	17.62	1.250	2.750	4.250	1.750	E	22.25
58	14.280	13.853	13.384	1.250	19.00	1.250	2.750	4.250	1.750	E	22.80
59	14.520	14.092	13.618	1.250	19.20	1.250	2.750	4.250	1.750	E	23.86
60	14.760	14.330	13.861	1.250	20.02	1.250	2.750	4.250	1.750	E	25.22
70	17.150	16.717	16.248	1.250	27.20	1.250	2.750	4.250	1.750	E	31.98
72	17.630	17.195	16.726	1.250	28.90	1.250	2.750	4.250	1.750	E	34.18
80	19.540	19.103	18.634	1.250	40.18	1.250	2.750	4.250	2.000	E	41.88
84	20.490	20.058	19.589	1.250	45.50	1.250	3.250	4.750	2.000	E	46.46
96	23.360	22.922	22.453	1.250	52.02	1.250	3.750	5.500	2.250	E	63.08
112	27.180	26.741	26.272	1.250	70.80	1.250	3.750	5.500	2.250	E	81.78

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance. NS = Non Stock  
 For more information on Sprockets see pages 132-137.

# FINISHED BORE

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 Finished Bore Sprocket Diameter				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)														
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	.750"	.875"	1.000"	1.125"	1.188"	1.250"	1.375"	1.438"	1.500"	1.625"	1.750"	1.938"	2.000"	2.188"	2.438"
9	2.510	2.193	1.691	•	•	•												
10	2.760	2.427	1.958	•	•	•	•	•	•	■								
11	3.000	2.663	2.166	•	•	•	•	•	•	■								
12	3.250	2.898	2.429	•	•	•	•	•	•	■	■	■						
13	3.490	3.134	2.642	•	•	•	•	•	•	■	■	■	■					
14	3.740	3.371	2.902	•	•	•	•	•	•	■	■	■	■	■				
15	3.980	3.608	3.119	•	•	•	•	•	•	•	•	•	•	■				
16	4.220	3.845	3.375	•	•	•	•	•	•	•	•	•	•	•	■	■		
17	4.460	4.082	3.595			•	•	•	•	•	•	•	•	•	■	■		
18	4.700	4.319	3.850			•	•	•	•	•	•	•	•	•	•	•		
19	4.950	4.557	4.072			•	•	•	•	•	•	•	•	•	•	•		
20	5.190	4.794	4.325			•	•	•	•	•	•	•	•	•	•	•		
21	5.430	5.033	4.549			•	•	•	•	•	•	•	•	•	•	•		
22	5.670	5.270	4.801			•	•	•	•	•	•	•	•	•	•	•		
23	5.910	5.508	5.026			•	•	•	•	•	•	•	•	•	•	•		
24	6.150	5.746	5.277			•	•	•	•	•	•	•	•	•	•	•		
25	6.390	5.984	5.503			•	•	•	•	•	•	•	•	•	•	•		
26	6.630	6.222	5.753			•	•	•	•	•	•	•	•	•	•	•		
27	6.870	6.461	5.98			•	•	•	•	•	•	•	•	•	•	•		
28	7.110	6.698	6.229			•	•	•	•	•	•	•	•	•	•	•		
29	7.350	6.937	6.458			•	•	•	•	•	•	•	•	•	•	•		
30	7.590	7.175	6.706			•	•	•	•	•	•	•	•	•	•	•		
31	7.830	7.413	6.935			•	•	•	•	•	•	•	•	•	•	•		
32	8.070	7.652	7.183			•	•	•	•	•	•	•	•	•	•	•		
33	8.300	7.890	7.412			•	•	•	•	•	•	•	•	•	•	•		
34	8.540	8.129	7.660			•	•	•	•	•	•	•	•	•	•	•		
35	8.780	8.367	7.889			•	•	•	•	•	•	•	•	•	•	•		
36	9.020	8.606	8.137			•	•	•	•	•	•	•	•	•	•	•	•	•
37	9.260	8.844	8.367			•	•	•	•	•	•	•	•	•	•	•	•	•
38	9.500	9.083	8.614			•	•	•	•	•	•	•	•	•	•	•	•	•
39	9.740	9.321	8.844			•	•	•	•	•	•	•	•	•	•	•	•	•
40	9.980	9.560	9.091			•	•	•	•	•	•	•	•	•	•	•	•	•
41	10.220	9.798	9.321			•	•	•	•	•	•	•	•	•	•	•	•	•
42	10.460	10.037	9.568			•	•	•	•	•	•	•	•	•	•	•	•	•
43	10.700	10.275	9.799			•	•	•	•	•	•	•	•	•	•	•	•	•
44	10.940	10.514	10.045			•	•	•	•	•	•	•	•	•	•	•	•	•
45	11.180	10.752	10.276			•	•	•	•	•	•	•	•	•	•	•	•	•
46	11.420	10.991	10.522			•	•	•	•	•	•	•	•	•	•	•	•	•
47	11.650	11.229	10.754			•	•	•	•	•	•	•	•	•	•	•	•	•
48	11.890	11.468	10.999			•	•	•	•	•	•	•	•	•	•	•	•	•
49	12.130	11.706	11.231			•	•	•	•	•	•	•	•	•	•	•	•	•
50	12.370	11.945	11.476			•	•	•	•	•	•	•	•	•	•	•	•	•
51	12.610	12.183	11.708			•	•	•	•	•	•	•	•	•	•	•	•	•
52	12.850	12.422	11.953			•	•	•	•	•	•	•	•	•	•	•	•	•
53	13.090	12.660	12.186			•	•	•	•	•	•	•	•	•	•	•	•	•
54	13.330	12.899	12.430			•	•	•	•	•	•	•	•	•	•	•	•	•
55	13.570	13.137	12.663							•	•	•	•	•	•	•	•	•
56	13.810	13.376	12.907							•	•	•	•	•	•	•	•	•
57	14.040	13.615	13.140							•	•	•	•	•	•	•	•	•
58	14.280	13.853	13.384							•	•	•	•	•	•	•	•	•
59	14.520	14.092	13.618							•	•	•	•	•	•	•	•	•
60	14.760	14.330	13.861							•	•	•	•	•	•	•	•	•
70	17.150	16.717	16.248							•	•	•	•	•	•	•	•	•
72	17.630	17.195	16.726							•	•	•	•	•	•	•	•	•
80	19.540	19.103	18.634							•	•	•	•	•	•	•	•	•
84	20.490	20.058	19.589							•	•	•	•	•	•	•	•	•
96	23.360	22.922	22.453							•	•	•	•	•	•	•	•	•
112	27.180	26.741	26.272							•	•	•	•	•	•	•	•	•

• Denotes stocking item. ■ Indicates set screw at 90 degrees and 180 degrees from keyway.

For more information on Sprockets see pages 132-137.

## STAINLESS STEEL PLAIN BORE

Chain Data	
Size	60SS
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 Stainless Steel Sprocket Diameters				Type "B" Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	MAX Bore*	Hub Dia.	LTB	Hub Style	Wt. Lbs.
12	3.250	2.898	2.429	0.750	1.375	2.375 □	1.250	S	1.50
13	3.490	3.134	2.642	0.750	1.500	2.344	1.250	S	1.80
14	3.740	3.371	2.902	0.750	1.750	2.563	1.250	S	2.00
15	3.980	3.608	3.119	0.750	1.875	2.875	1.250	S	2.40
16	4.220	3.845	3.375	0.750	2.000	3.063	1.250	S	2.80
17	4.460	4.082	3.595	0.750	2.250	3.250	1.250	E	3.30
18	4.700	4.319	3.850	0.750	2.375	3.500	1.250	E	3.80
19	4.950	4.557	4.072	0.750	2.375	3.500	1.250	E	4.00
20	5.190	4.794	4.325	0.750	2.625	3.875	1.250	E	4.60
21	5.430	5.033	4.549	0.750	2.750	4.000	1.250	E	5.00
22	5.670	5.270	4.801	0.750	2.750	4.000	1.250	E	5.30
23	5.910	5.508	5.026	0.750	2.750	4.000	1.250	E	5.70
24	6.150	5.746	5.277	0.750	2.750	4.000	1.250	E	5.90
25	6.390	5.984	5.503	0.750	2.750	4.000	1.250	E	6.10
26	6.630	6.222	5.753	0.750	2.750	4.000	1.250	E	6.30
28	7.110	6.698	6.229	0.750	2.750	4.000	1.250	E	6.70
30	7.590	7.175	6.706	0.750	2.750	4.000	1.250	E	7.00
35	8.780	8.367	7.889	1.000	2.750	4.000	1.250	E	9.00
40	9.980	9.560	9.091	1.000	2.750	4.250	1.250	E	11.70
45	11.180	10.752	10.276	1.000	2.750	4.250	1.250	E	14.50
60	14.760	14.330	13.861	1.250	2.750	4.250	1.750	E	25.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

□ Has recessed groove in hub for chain clearance.

# MULTI-STRAND

Chain Data	
Size	60-2, 60-3
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.444"

All dimensions in inches unless noted.

60 Multi-Strand Sprocket Diameters			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
11	3.000	1.000	1.813	2.125	1.250	B	S	1.62
12	3.250	1.000	2.125	2.125	1.438	B	S	2.20
13	3.490	1.000	2.250	2.125	1.500	B	S	2.60
14	3.740	1.000	2.500	2.125	1.750	B	S	3.24
15	3.980	1.000	2.813	2.125	1.875	B	S	3.96
16	4.220	1.000	3.000	2.125	2.000	B	S	4.62
17	4.460	1.000	3.250	2.125	2.250	B	S	5.40
18	4.700	1.000	3.500	2.125	2.375	B	S	6.24
19	4.950	1.000	3.688	2.125	2.500	B	S	7.00
20	5.190	1.000	3.750	2.125	2.500	B	S	7.72
21	5.430	1.000	4.125	2.125	2.750	B	S	8.82
22	5.670	1.000	4.250	2.125	2.750	B	S	9.68
23	5.910	1.000	4.250	2.125	2.750	B	S	10.30
24	6.150	1.000	4.250	2.125	2.750	B	S	11.14
25	6.390	1.000	4.250	2.125	2.750	B	S	11.96
26	6.630	1.000	4.250	2.125	2.750	B	S	12.70
30	7.590	1.000	4.250	2.125	2.750	B	S	16.36
32	8.070	1.250	4.500	2.375	3.000	B	S	19.52
35	8.780	1.250	4.500	2.375	3.000	B	S	22.80
36	9.020	1.250	4.500	2.375	3.000	B	S	23.82
40	9.980	1.250	4.750	2.750	3.250	B	S	30.84
45	11.180	1.250	4.750	2.750	3.250	B	S	37.08
48	11.890	1.250	4.750	2.750	3.250	B	D	44.90
60	14.760	1.250	4.750	2.750	3.250	B	D	63.10

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

60 Multi-Strand Sprocket Diameters			Dimensional Data: Triple Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
11	3.000	1.000	1.813	3.000	1.250	B	S	2.50
12	3.250	1.000	2.125	3.000	1.438	B	S	3.30
13	3.490	1.000	2.250	3.000	1.500	B	S	3.90
14	3.740	1.000	2.500	3.000	1.750	B	S	4.50
15	3.980	1.000	2.688	3.000	1.875	B	S	5.40
16	4.220	1.000	3.000	3.000	2.000	B	S	6.50
17	4.460	1.000	3.250	3.000	2.250	B	S	7.70
18	4.700	1.000	3.500	3.000	2.375	B	S	8.50
19	4.950	1.000	3.688	3.000	2.500	B	S	10.00
20	5.190	1.000	3.750	3.000	2.500	B	S	11.20
21	5.430	1.000	4.125	3.000	2.750	B	S	12.50
22	5.670	1.000	4.250	3.000	2.750	B	S	13.20
23	5.910	1.000	4.250	3.000	2.750	B	S	14.60
24	6.150	1.000	4.250	3.000	2.750	B	S	15.80
25	6.390	1.000	4.250	3.000	2.750	B	S	17.00
26	6.630	1.000	4.250	3.000	2.750	B	S	18.60
30	7.590	1.000	4.250	3.000	2.750	B	S	23.20
35	8.780	1.250	4.500	3.250	3.000	B	S	34.50
36	9.020	1.250	4.500	3.250	3.000	B	S	37.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

For more information on Sprockets see pages 132-137.

## DOUBLE SINGLE

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 Double Single Sprocket Diameters			Dimensional Data: Double Single Sprockets				
No. Teeth	Outside Dia.	Plain Bore	LTB	C	D	MAX Bore *	Weight Lbs.
13	3.490	0.750	1.938	1.484	2.344	1.500	2.60
14	3.740	0.750	1.938	1.484	2.563	1.750	3.20
15	3.980	0.750	1.938	1.484	2.875	1.875	3.80
16	4.220	0.750	1.938	1.484	3.047	2.000	4.50
17	4.460	0.750	1.938	1.484	3.250	2.250	5.30
18	4.700	0.750	1.938	1.484	3.500	2.375	6.50
19	4.950	0.750	1.938	1.484	3.703	2.500	6.80
20	5.190	0.750	1.938	1.484	3.953	2.750	7.00
21	5.430	0.750	1.938	1.484	4.188	2.875	7.50

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

## DOUBLE SINGLE

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 Double Single TAPER-LOCK® Sprocket Diameters			Dimensional Data: Double Single TAPER-LOCK® Sprockets				
No. Teeth	Outside Dia.	Bushing #	LTB	C	D	MAX Bore *	Weight Lbs.
17	4.460	1615	1.938	1.484	3.218	1.688	4.50
18	4.700	2012	1.938	1.484	3.469	2.125	5.00
19	4.950	2012	1.938	1.484	3.703	2.125	5.80
20	5.190	2517	1.938	1.484	3.953	2.688	5.60
21	5.430	2517	1.938	1.484	4.188	2.688	6.40
23	5.910	2517	1.938	1.484	4.672	2.688	7.30
24	6.150	2517	1.938	1.484	4.906	2.688	8.20

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1615	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

## QD®

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Weight Lbs.
11	3.000	JA	1.250	2.063	0.625	1.125	1.125	0.547	2.063	B	S	0.46
12	3.250	JA	1.250	2.063	0.625	1.125	1.125	0.547	2.063	B	S	0.60
13	3.490	JA	1.250	2.250	0.625	1.125	1.125	0.547	2.063	B	S	0.75
14	3.740	SH	1.688	2.688	0.813	1.437	1.437	0.797	2.688	B	S	0.88
15	3.980	SH	1.688	2.750	0.813	1.437	1.437	0.797	2.688	B	S	1.08
16	4.220	SH	1.688	3.000	0.813	1.437	1.437	0.797	2.688	B	S	1.25
17	4.460	SDS	2.000	3.250	0.750	1.500	1.500	0.859	3.188	B	S	1.38
18	4.700	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	S	1.56
19	4.950	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	S	1.76
20	5.190	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	S	2.00
21	5.430	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	S	2.20
22	5.670	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	S	2.44
23	5.910	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	E	2.70
24	6.150	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	E	2.94
25	6.390	SDS	2.000	3.500	0.750	1.500	1.500	0.859	3.188	B	E	3.24
26	6.630	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	4.18
27	6.870	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	4.52
28	7.110	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	4.72
30	7.590	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	5.34
32	8.070	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	6.10
35	8.780	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	7.42
36	9.020	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	7.70
40	9.980	SK	2.625	4.250	1.250	2.125	2.125	1.422	3.875	B	E	9.56
42	10.460	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	10.78
45	11.180	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	12.40
48	11.890	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	14.25
54	13.330	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	17.02
60	14.760	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	20.76
70	17.150	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	28.60
72	17.630	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	29.58
80	19.540	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	38.24
84	20.490	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	40.94
96	23.360	SF	2.938	5.000	1.250	2.250	2.250	1.547	4.625	B	E	52.40

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

QD® Bushings	
Bushing #	Bore Range
JA	0.500 - 1.250"
SH	0.500 - 1.688"
SDS	0.500 - 2.000"
SK	0.500 - 2.625"
SF	0.500 - 2.938"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.



## DOUBLE SINGLE

Chain Data	
Size	60
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

60 TAPER-LOCK® Sprockets			Dimensional Data TAPER-LOCK® Sprockets						
No. Teeth	Outside Dia.	Bushing #	MAX Bore *	LTB	Hub Dia.	Hub Type	Hub Style	Weight Lbs.	
11	3.000	1008	1.000	0.875	1.813 □	B	S	0.60	
12	3.250	1008	1.000	0.875	1.938	B	S	0.80	
13	3.490	1210	1.250	1.000	2.469 □	B	S	0.80	
14	3.740	1210	1.250	1.000	2.469	B	S	1.00	
15	3.980	1610	1.688	1.000	2.781	B	S	1.00	
16	4.220	1610	1.688	1.000	3.000	B	S	1.40	
17	4.460	1610	1.688	1.000	3.250	B	S	1.80	
18	4.700	1610	1.688	1.000	3.500	B	S	1.90	
19	4.950	1610	1.688	1.000	3.500	B	S	2.20	
20	5.190	2012	2.125	1.250	3.938	B	S	2.20	
21	5.430	2012	2.125	1.250	4.000	B	S	2.50	
22	5.670	2012	2.125	1.250	4.000	B	E	2.80	
23	5.910	2012	2.125	1.250	4.000	B	E	3.10	
24	6.150	2012	2.125	1.250	3.563	B	E	3.40	
25	6.390	2012	2.125	1.250	3.563	B	E	3.70	
26	6.630	2012	2.125	1.250	3.563	B	E	4.00	
28	7.110	2012	2.125	1.250	3.563	B	E	4.60	
30	7.590	2012	2.125	1.250	3.563	B	E	5.20	
32	8.070	2012	2.125	1.250	3.563	B	E	5.60	
35	8.780	2012	2.125	1.250	3.563	B	E	6.40	
36	9.020	2012	2.125	1.250	3.563	B	E	6.60	
40	9.980	2012	2.125	1.250	3.563	B	E	8.30	
42	10.460	2012	2.125	1.250	3.563	B	E	10.00	
45	11.180	2012	2.125	1.250	3.563	B	E	11.50	
48	11.890	2012	2.125	1.250	3.563	B	E	13.20	
54	13.330	2517	2.688	1.750	4.250	B	E	17.10	
60	14.760	2517	2.688	1.750	4.250	B	E	21.00	
70	17.150	2517	2.688	1.750	4.250	B	E	27.60	
72	17.630	2517	2.688	1.750	4.250	B	E	30.00	
80	19.540	2517	2.688	1.750	4.250	B	E	36.30	

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

□ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1008	0.500 - 1.000"
1210	0.500 - 1.250"
1610	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1215	0.500 - 1.250"
1615	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

## MULTI-STRAND TAPER-LOCK®

Chain Data	
Size	60-2
Pitch	3/4"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.444"

All dimensions in inches unless noted.

Double Strand 60 TAPER-LOCK® Sprockets			Dimensional Data Multi-Strand TAPER-LOCK® Sprockets					
No. Teeth	Outside Diameter	Bushing #	MAX Bore *	LTB	Hub Diameter	Hub Type	Hub Style	Weight Lbs.
13	3.490	1215	1.250	1.500	2.250	B	S	1.20
14	3.740	1215	1.250	1.500	2.500	B	S	1.60
15	3.980	1615	1.688	1.500	2.813	B	S	1.30
16	4.220	1615	1.688	1.500	3.000	B	S	2.20
17	4.460	1615	1.688	1.500	3.250	B	S	2.50
18	4.700	2012	2.125	1.250	-	A	S	3.00
19	4.950	2012	2.125	1.250	-	A	S	3.50
20	5.190	2517	2.688	1.750	3.688	B	S	4.00
21	5.430	2517	2.688	1.750	4.188	B	S	5.00
25	6.390	2517	2.688	1.750	5.156	B	S	7.50
30	7.590	2517	2.688	1.750	6.344	B	S	13.50
36	9.020	2517	2.688	1.750	4.250	C	S	17.50
42	10.460	2517	2.688	1.750	4.250	C	S	25.50
45	11.180	2517	2.688	1.750	4.250	C	S	29.50
52	12.850	2517	2.688	1.750	4.250	C	S	41.00
60	14.760	2517	2.688	1.750	4.250	C	S	55.30

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

# PLAIN BORE

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Diameter	LTB	Hub Type	Hub Style	Wt. Lbs.
8	3.010	2.613	1.988	N/A	N/A	1.000	1.000	1.938 □	1.625	B	S	1.40
9	3.350	2.924	2.254	0.938	0.80	1.000	1.313	2.250 □	1.625	B	S	1.60
10	3.680	3.236	2.611	0.938	1.00	1.000	1.500	2.563 □	1.625	B	S	2.20
11	4.010	3.549	2.888	0.938	1.30	1.000	1.625	2.813 □	1.625	B	S	3.20
12	4.330	3.864	3.239	0.938	1.50	1.000	1.875	3.125 □	1.625	B	S	3.40
13	4.660	4.179	3.523	0.938	1.80	1.000	2.000	3.000	1.500	B	S	3.50
14	4.980	4.494	3.869	0.938	2.20	1.000	2.250	3.250	1.500	B	S	4.10
15	5.300	4.810	4.158	0.938	2.50	1.000	2.500	3.813	1.500	B	S	5.30
16	5.630	5.126	4.501	0.938	2.90	1.000	2.750	4.000	1.500	B	S	5.90
17	5.950	5.442	4.794	0.938	3.30	1.000	2.750	4.000	1.500	B	S	6.60
18	6.270	5.759	5.134	0.938	3.70	1.000	2.750	4.250	1.500	B	S	7.30
19	6.590	6.076	5.430	0.938	4.10	1.000	2.750	4.250	1.500	B	S	7.80
20	6.910	6.392	5.767	0.938	4.70	1.000	2.750	4.250	1.500	B	S	8.40
21	7.240	6.710	6.066	0.938	4.900	1.000	2.750	4.250	1.750	B	S	9.40
22	7.560	7.027	6.402	0.938	5.500	1.000	2.750	4.250	1.750	B	S	10.00
23	7.880	7.344	6.702	0.938	6.300	1.000	2.750	4.250	1.750	B	S	10.70
24	8.200	7.661	7.036	0.938	6.700	1.000	2.750	4.250	1.750	B	S	11.30
25	8.520	7.979	7.338	0.938	7.200	1.000	2.750	4.250	1.750	B	S	11.90
26	8.840	8.296	7.671	1.188	7.800	1.250	3.250	4.750	2.000	B	D	14.30
27	9.160	8.614	7.974	1.188	8.600	1.250	3.250	4.750	2.000	B	D	15.40
28	9.480	8.931	8.306	1.188	9.300	1.250	3.250	4.750	2.000	B	D	16.00
29	9.800	9.249	8.611	1.188	9.800	1.188	3.250	4.750	2.000	B	D	17.10
30	10.110	9.567	8.942	1.188	10.70	1.188	3.250	4.750	2.000	B	D	17.40
31	10.430	9.884	9.247	1.188	11.30	1.188	3.250	4.750	2.000	B	D	18.70
32	10.750	10.202	9.577	1.188	12.10	1.188	3.250	4.750	2.000	B	D	19.50
33	11.070	10.520	9.883	1.188	13.60	1.188	3.250	4.750	2.000	B	D	19.60
34	11.390	10.838	10.213	1.188	14.30	1.188	3.250	4.750	2.000	B	D	21.30
35	11.710	11.156	10.520	1.188	14.80	1.188	3.250	4.750	2.000	B	D	22.10
36	12.030	11.474	10.849	1.188	16.10	1.188	3.250	4.750	2.000	B	D	23.10
37	12.350	11.792	11.156	1.188	16.80	1.188	3.250	4.750	2.000	B	D	23.80
38	12.670	12.110	11.485	1.188	17.20	1.188	3.250	4.750	2.000	B	D	24.70
39	12.990	12.428	11.792	1.188	17.90	1.188	3.250	4.750	2.000	B	D	25.60
40	13.310	12.746	12.121	1.188	18.90	1.188	3.250	4.750	2.000	B	D	26.70
41	13.630	13.064	12.429	1.250	21.00	1.250	3.250	4.750	2.000	B	D	27.80
42	13.940	13.382	12.757	1.250	21.80	1.250	3.250	4.750	2.000	B	D	28.70
43	14.260	13.700	13.065	1.250	23.60	1.250	3.250	4.750	2.000	B	D	29.40
44	14.580	14.018	13.393	1.250	24.30	1.250	3.250	4.750	2.000	B	D	29.90
45	14.900	14.336	13.702	1.250	25.20	1.250	3.250	4.750	2.000	B	D	31.40
46	15.220	14.654	14.029	1.250	26.60	1.250	3.250	4.750	2.000	B	D	33.10
47	15.540	14.972	14.338	1.250	26.40	1.250	3.250	4.750	2.000	B	D	34.00
48	15.860	15.290	14.665	1.250	27.80	1.250	3.250	4.750	2.000	B	D	35.50
49	16.180	15.608	14.975	1.250	28.90	1.250	3.250	4.750	2.000	B	D	35.80
50	16.500	15.926	15.301	1.250	30.90	1.250	3.250	4.750	2.000	B	D	37.30
51	16.810	16.244	15.611	1.250	32.20	1.250	3.250	4.750	2.000	B	D	38.50
52	17.130	16.562	15.937	1.250	33.00	1.250	3.250	4.750	2.000	B	D	39.40
53	17.450	16.880	16.248	1.250	34.90	1.250	3.250	4.750	2.000	B	D	41.30
54	17.770	17.198	16.573	1.250	36.60	1.250	3.500	5.250	2.000	B	D	44.70
55	18.090	17.516	16.884	1.250	37.50	1.250	3.500	5.250	2.000	B	D	45.60
56	18.410	17.835	17.210	1.250	39.40	1.250	3.500	5.250	2.000	B	D	47.50
57	18.730	18.153	17.521	1.250	40.40	1.250	3.500	5.250	2.000	B	D	48.50
58	19.040	18.471	17.846	1.250	41.30	1.250	3.500	5.250	2.000	B	D	50.50
59	19.360	18.789	18.157	1.250	42.90	1.250	3.500	5.250	2.000	B	D	52.10
60	19.680	19.107	18.482	1.250	45.30	1.250	3.500	5.250	2.000	B	D	54.50
65	21.270	20.698	20.067	1.250	52.20	1.250	3.500	5.250	2.000	B	D	61.80
70	22.870	22.289	21.644	1.500	59.80	1.500	4.250	6.250	3.500	C	D	75.70
72	23.500	22.926	22.301	1.500	65.70	1.500	4.250	6.250	3.500	C	D	81.40
80	26.050	25.471	24.846	1.500	79.60	1.500	4.250	6.250	3.500	C	D	89.90
84	27.330	26.744	26.119	1.500	86.10	1.500	4.250	6.250	3.500	C	D	99.20
96	31.150	30.563	29.938	1.500	120.00	1.500	4.250	6.250	3.500	C	D	117.00
112	36.240	35.655	35.030	1.500	166.00	1.500	4.250	6.250	3.500	C	D	154.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

□ Has recessed groove in hub for chain clearance.

For more information on Sprockets see pages 132-137.

## FINISHED BORE

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 Finished Bore Sprocket Dia.				Type "F" Bored to Shaft Size (includes standard keyway and two set screws)														
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	1.000"	1.125"	1.188"	1.250"	1.375"	1.438"	1.500"	1.625"	1.750"	1.875"	1.938"	2.000"	2.188"	2.438"	2.938"
9	3.350	2.924	2.254	•	•	•	•											
10	3.680	3.236	2.611	•	•	•	•											
11	4.010	3.550	2.888	•	•	•	•	•			•	■						
12	4.330	3.864	3.239	•	•	•	•	•	•	•		•						
13	4.660	4.179	3.523	•	•	•	•	•	•	•	•	•	•	•	•	•		
14	4.980	4.494	3.869	•	•	•	•	•	•	•	•	•	•	•	•	•		
15	5.300	4.810	4.158	•	•	•	•	•	•	•	•	•	•	•	•	•		
16	5.630	5.126	4.501	•		•	•	•	•	•	•	•	•	•	•	•	•	
17	5.950	5.442	4.794	•		•	•	•	•	•	•	•	•	•	•	•	•	•
18	6.270	5.759	5.134	•		•	•	•	•	•	•	•	•	•	•	•	•	•
19	6.590	6.076	5.430	•		•	•	•	•	•	•	•	•	•	•	•	•	•
20	6.910	6.392	5.767	•		•	•	•	•	•	•	•	•	•	•	•	•	•
21	7.240	6.710	6.066	•		•	•	•	•	•	•	•	•	•	•	•	•	•
22	7.560	7.027	6.402	•		•	•	•	•	•	•	•	•	•	•	•	•	•
23	7.880	7.344	6.702	•		•	•	•	•	•	•	•	•	•	•	•	•	•
24	8.200	7.661	7.036	•		•	•	•	•	•	•	•	•	•	•	•	•	•
25	8.520	7.979	7.338	•		•	•	•	•	•	•	•	•	•	•	•	•	•
26	8.840	8.296	7.671				•	•	•	•	•	•	•	•	•	•	•	•
27	9.160	8.614	7.974				•	•	•	•	•	•	•	•	•	•	•	•
28	9.480	8.931	8.306				•	•	•	•	•	•	•	•	•	•	•	•
29	9.800	9.249	8.611				•	•	•	•	•	•	•	•	•	•	•	•
30	10.110	9.567	8.942				•	•	•	•	•	•	•	•	•	•	•	•
31	10.430	9.884	9.247				•	•	•	•	•	•	•	•	•	•	•	•
32	10.750	10.202	9.577				•	•	•	•	•	•	•	•	•	•	•	•
33	11.070	10.520	9.883				•	•	•	•	•	•	•	•	•	•	•	•
34	11.390	10.838	10.213				•	•	•	•	•	•	•	•	•	•	•	•
35	11.710	11.156	10.520				•	•	•	•	•	•	•	•	•	•	•	•
36	12.030	11.474	10.849				•	•	•	•	•	•	•	•	•	•	•	•
37	12.350	11.792	11.156				•	•	•	•	•	•	•	•	•	•	•	•
38	12.670	12.110	11.485				•	•	•	•	•	•	•	•	•	•	•	•
39	12.990	12.428	11.792				•	•	•	•	•	•	•	•	•	•	•	•
40	13.310	12.746	12.121				•	•	•	•	•	•	•	•	•	•	•	•
41	13.630	13.064	12.429					•	•	•	•	•	•	•	•	•	•	•
42	13.940	13.382	12.757					•	•	•	•	•	•	•	•	•	•	•
43	14.260	13.700	13.065					•	•	•	•	•	•	•	•	•	•	•
44	14.580	14.018	13.393					•	•	•	•	•	•	•	•	•	•	•
45	14.900	14.336	13.702					•	•	•	•	•	•	•	•	•	•	•
46	15.220	14.654	14.029					•	•	•	•	•	•	•	•	•	•	•
47	15.540	14.972	14.338					•	•	•	•	•	•	•	•	•	•	•
48	15.860	15.290	14.665					•	•	•	•	•	•	•	•	•	•	•
49	16.180	15.608	14.975					•	•	•	•	•	•	•	•	•	•	•
50	16.500	15.926	15.301					•	•	•	•	•	•	•	•	•	•	•
51	16.810	16.244	15.611					•	•	•	•	•	•	•	•	•	•	•
52	17.130	16.562	15.937					•	•	•	•	•	•	•	•	•	•	•
53	17.450	16.880	16.248					•	•	•	•	•	•	•	•	•	•	•
54	17.770	17.198	16.573					•	•	•	•	•	•	•	•	•	•	•
55	18.090	17.516	16.884					•	•	•	•	•	•	•	•	•	•	•
56	18.410	17.835	17.210					•	•	•	•	•	•	•	•	•	•	•
57	18.730	18.153	17.521					•	•	•	•	•	•	•	•	•	•	•
58	19.040	18.471	17.846					•	•	•	•	•	•	•	•	•	•	•
59	19.360	18.789	18.157					•	•	•	•	•	•	•	•	•	•	•
60	19.680	19.107	18.482					•	•	•	•	•	•	•	•	•	•	•

• Denotes stocking item. ■ Indicates ser screw at 90 degrees and 180 degrees from keyway.

# STAINLESS STEEL PLAIN BORE

Chain Data	
Size	80SS
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 Stainless Steel Sprocket Diameters				Type "B" Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Style	Wt. Lbs.
10	3.680	3.236	2.611	1.000	1.500	2.563 □	1.625	S	2.20
11	4.010	3.550	2.888	1.000	1.625	2.813 □	1.625	S	3.20
12	4.330	3.864	3.239	1.000	1.875	3.125 □	1.625	S	3.40
13	4.660	4.179	3.523	1.000	2.000	3.000	1.500	S	3.50
14	4.980	4.494	3.869	1.000	2.250	3.250	1.500	S	4.10
15	5.300	4.810	4.158	1.000	2.500	3.813	1.500	S	5.30
16	5.630	5.126	4.501	1.000	2.750	4.000	1.500	S	5.90
18	6.270	5.759	5.134	1.000	2.750	4.250	1.500	S	7.30
19	6.590	6.076	5.430	1.000	2.750	4.250	1.500	S	7.80
20	6.910	6.392	5.767	1.000	2.750	4.250	1.500	S	8.40
22	7.560	7.027	6.402	1.000	2.750	4.250	1.750	E	10.00
23	7.880	7.344	6.702	1.000	2.750	4.250	1.750	E	10.70
24	8.200	7.661	7.036	1.000	2.750	4.250	1.750	E	11.30

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance.

# MULTI-STRAND

Chain Data	
Size	80-2, 80-3
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.557"

All dimensions in inches unless noted.

80 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Dia.	Plain Bore	Hub Dia.	LTB	MAX Bore *	Hub Type	Hub Style	Wt. Lbs.
10	3.680	1.000	2.563 □	2.750	1.500	B	S	3.50
11	4.010	1.000	2.500	2.500	1.750	B	S	4.00
12	4.330	1.000	2.844	2.500	1.875	B	S	5.10
13	4.660	1.000	3.156	2.500	2.250	B	S	6.30
14	4.980	1.000	3.469	2.500	2.375	B	S	7.60
15	5.300	1.000	3.797	2.500	2.500	B	S	9.00
16	5.630	1.000	4.000	2.750	2.750	B	S	11.00
17	5.950	1.000	4.422	2.750	3.000	B	S	13.20
18	6.270	1.000	4.734	2.750	3.250	B	S	15.00
19	6.590	1.000	5.000	2.750	3.313	B	S	17.00
20	6.910	1.000	5.000	2.750	3.313	B	S	18.20
21	7.240	1.000	5.000	2.750	3.313	B	S	19.50
22	7.560	1.000	5.000	2.750	3.313	B	S	21.00
23	7.880	1.000	5.000	2.750	3.313	B	S	22.80
24	8.200	1.000	5.250	2.750	3.500	B	S	25.10
25	8.520	1.000	5.250	3.000	3.500	B	S	28.30
30	10.110	1.250	5.750	3.000	3.750	B	S	39.50
36	12.030	1.250	5.750	3.125	3.750	B	D	54.20
45	14.900	1.250	5.750	3.125	3.750	B	D	73.50

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance.

80 Multi-Strand Sprocket Dia.			Dimensional Data: Triple Strand Sprockets					
No. Teeth	Outside Dia.	Plain Bore	Hub Dia.	LTB	MAX Bore *	Hub Type	Hub Style	Wt. Lbs.
11	4.010	1.000	2.500	3.625	1.750	B	S	5.90
12	4.330	1.000	2.844	3.625	1.875	B	S	7.50
13	4.660	1.000	3.156	3.625	2.250	B	S	9.20
14	4.980	1.000	3.469	3.625	2.375	B	S	11.00
15	5.300	1.000	3.797	3.625	2.500	B	S	13.10
16	5.630	1.000	4.000	3.875	2.750	B	S	15.80
17	5.950	1.000	4.422	3.875	3.000	B	S	18.60
18	6.270	1.000	4.734	3.875	3.250	B	S	21.20
19	6.590	1.000	5.000	3.875	3.313	B	S	23.70
20	6.910	1.000	5.000	3.875	3.313	B	S	26.00
21	7.240	1.000	5.000	3.875	3.313	B	S	28.40
22	7.560	1.000	5.000	3.875	3.313	B	S	31.00
23	7.880	1.000	5.000	3.875	3.313	B	S	33.60
24	8.200	1.000	5.250	3.875	3.500	B	S	37.10
25	8.520	1.000	5.250	3.875	3.500	B	S	40.10
30	10.110	1.250	5.750	4.250	3.750	B	S	54.50
36	12.030	1.250	5.750	4.250	3.750	B	D	83.90
45	14.900	1.250	6.000	4.500	3.813	B	D	92.40

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

For more information on Sprockets see pages 132-137.

## DOUBLE SINGLE

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 Double Single Sprocket Diameters			Dimensional Data: Double Single Sprockets				
No. Teeth	Outside Dia.	Plain Bore	LTB	C	D	MAX Bore *	Weight Lbs.
13	4.660	1.000	2.188	1.625	3.016	2.000	6.50
14	4.980	1.000	2.188	1.625	3.344	2.250	7.70
15	5.300	1.000	2.188	1.625	3.813	2.375	9.10
16	5.630	1.000	2.188	1.625	4.000	2.688	9.50
17	5.950	1.000	2.188	1.625	4.313	2.813	10.80
18	6.270	1.000	2.188	1.625	4.641	3.125	12.10
19	6.590	1.000	2.188	1.625	4.953	3.250	12.80
20	6.910	1.000	2.188	1.625	5.281	3.500	14.00
21	7.240	1.000	2.188	1.625	5.594	3.750	16.50
22	7.560	1.000	2.188	1.625	5.922	3.750	18.40

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

## DOUBLE SINGLE

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
2517	0.500 - 2.688"
3020	0.875 - 3.225"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

80 Double Single TAPER-LOCK® Sprocket Diameters			Dimensional Data: Double Single TAPER-LOCK® Sprockets				
No. Teeth	Outside Dia.	Bushing #	LTB	C	D	MAX Bore *	Weight Lbs.
17	5.950	2517	2.188	1.625	4.313	2.688	7.60
18	6.270	2517	2.188	1.625	4.641	2.688	8.70
19	6.590	3020	2.188	1.625	4.953	3.250	9.70
20	6.910	3020	2.188	1.625	5.281	3.250	10.00
21	7.240	3020	2.188	1.625	5.594	3.250	12.00
23	7.880	3020	2.188	1.625	6.234	3.250	14.50

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

# TAPER-LOCK®

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 TAPER-LOCK® Sprockets			Dimensional Data TAPER-LOCK® Sprockets				
No. Teeth	Outside Diameter	Bushing #	Hub Diameter	LTB	MAX Bore *	Hub Style	Weight Lbs.
10	3.680	1215	2.375 □	1.500	1.250	S	1.10
11	4.010	1215	2.469 □	1.500	1.250	S	1.50
12	4.330	1615	3.000 □	1.500	1.688	S	1.80
13	4.660	1615	3.000	1.500	1.688	S	2.30
14	4.980	1615	3.343	1.500	1.688	S	2.50
15	5.300	1615	3.500	1.500	1.688	S	2.70
16	5.630	2012	4.000	1.250	2.125	S	2.80
17	5.950	2012	4.000	1.250	2.125	E	3.10
18	6.270	2012	3.563	1.250	2.125	E	3.60
19	6.590	2012	3.563	1.250	2.125	E	4.10
20	6.910	2517	4.250	1.750	2.688	E	5.50
21	7.240	2517	4.250	1.750	2.688	E	6.00
22	7.560	2517	4.250	1.750	2.688	E	6.50
23	7.880	2517	4.250	1.750	2.688	E	7.00
24	8.200	2517	4.250	1.750	2.688	E	7.50
25	8.520	2517	4.250	1.750	2.688	E	8.10
26	8.840	2517	4.250	1.750	2.688	E	8.80
27	9.160	2517	4.250	1.750	2.688	E	9.00
28	9.480	2517	4.250	1.750	2.688	E	9.50
30	10.110	2517	4.250	1.750	2.688	E	11.50
32	10.750	2517	4.250	1.750	2.688	E	12.00
35	11.710	2517	4.250	1.750	2.688	E	15.20
36	12.030	2517	4.250	1.750	2.688	E	17.00
40	13.310	2517	4.250	1.750	2.688	E	21.00
45	14.900	2517	4.250	1.750	2.688	E	26.50
48	15.860	2517	4.250	1.750	2.688	E	29.50
54	17.770	2517	4.250	1.750	2.688	E	38.50
60	19.680	2517	4.250	1.750	2.688	E	45.20
70	22.870	3020	5.250	2.000	3.250	E	52.30
80	26.050	3020	5.250	2.000	3.250	E	69.20

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. □ Has recessed groove in hub for chain clearance.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1215	0.500 - 1.250"
1615	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"
3020	0.500 - 3.250"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

# MULTI-STRAND TAPER-LOCK®

Chain Data	
Size	80-2
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.557"

All dimensions in inches unless noted.

80 Multi-Strand TAPER-LOCK® Sprockets			Dimensional Data Multi-Strand TAPER-LOCK® Sprockets					
No. Teeth	Outside Dia.	Bushing #	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
13	4.660	1615	N/A	1.500	1.688	A	S	3.40
14	4.980	2012	N/A	1.250	2.125	A	S	3.50
15	5.300	2012	N/A	1.250	2.125	A	S	4.30
16	5.630	2517	3.125	1.750	2.688	A	S	3.80
17	5.950	2517	3.125	1.750	2.688	A	S	5.10
18	6.270	2517	3.125	1.750	2.688	A	S	6.40
19	6.590	3020	5.000	2.000	3.250	B	S	5.60
20	6.910	3020	5.250	2.000	3.250	B	S	7.10
21	7.240	3020	5.563	2.000	3.250	B	S	8.90
25	8.520	3020	6.875	2.000	3.250	B	S	16.50
30	10.110	3020	5.250	2.000	3.250	C	S	25.10
36	12.030	3020	5.250	2.000	3.250	C	S	39.40
42	13.940	3020	5.250	2.000	3.250	C	S	36.40
45	14.900	3020	5.250	2.000	3.250	C	S	41.40
52	17.130	3020	5.250	2.000	3.250	C	W	56.20
60	19.680	3020	5.250	2.000	3.250	C	W	66.30

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. For more information on Sprockets see pages 132-137.

## QD®

Chain Data	
Size	80
Pitch	1"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

80 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Wt Lbs.
11	4.010	SH	1.688	2.688	0.813	1.437	1.437	0.656	2.688	B	S	1.00
12	4.330	SH	1.688	2.750	0.813	1.437	1.437	0.656	2.688	B	S	1.40
13	4.660	SDS	2.000	3.188	0.750	1.500	1.500	0.734	3.188	B	S	1.50
14	4.980	SDS	2.000	3.375	0.750	1.500	1.500	0.734	3.188	B	S	1.80
15	5.300	SK	2.625	3.875	1.250	2.125	2.125	1.297	3.875	B	S	2.50
16	5.630	SK	2.625	4.125	1.250	2.125	2.125	1.297	3.875	B	S	3.10
17	5.950	SK	2.625	4.375	1.250	2.125	2.125	1.297	3.875	B	S	3.50
18	6.270	SK	2.625	4.375	1.250	2.125	2.125	1.297	3.875	B	S	3.90
19	6.590	SK	2.625	4.375	1.250	2.125	2.125	1.297	3.875	B	S	4.40
20	6.910	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	S	5.30
21	7.240	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	S	5.70
22	7.560	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	S	6.30
23	7.880	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	6.80
24	8.200	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	7.50
25	8.520	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	8.00
26	8.840	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	8.60
27	9.160	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	9.40
28	9.480	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	10.20
30	10.110	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	11.30
32	10.750	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	13.00
33	11.070	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	13.50
34	11.390	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	14.10
35	11.710	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	15.50
36	12.030	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	16.90
40	13.310	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	20.60
42	13.940	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	22.40
45	14.900	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	25.10
48	15.860	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	28.60
54	17.770	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	36.80
60	19.680	SF	2.938	5.000	1.250	2.250	2.250	1.422	4.625	B	E	45.80

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

QD® Bushings	
Bushing #	Bore Range
SH	0.500 - 1.688"
SDS	0.500 - 2.000"
SK	0.500 - 2.625"
SF	0.500 - 2.938"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

## PLAIN BORE

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

All dimensions in inches unless noted.

100 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore*	Hub Diameter	LTB	Hub Type	Hub Style	Wt. Lbs.
8	3.770	3.266	2.516	1.000	1.40	1.000	1.250	2.438 □	1.875	B	S	2.30
9	4.180	3.655	2.849	1.000	1.60	1.000	1.625	2.813 □	1.875	B	S	3.20
10	4.600	4.045	3.295	1.000	2.00	1.000	1.875	3.250 □	1.875	B	S	4.10
11	5.010	4.438	3.642	1.250	2.50	1.000	2.250	3.563 □	1.875	B	S	5.30
12	5.420	4.830	4.080	1.250	3.00	1.000	2.250	4.000 □	1.875	B	S	6.40
13	5.820	5.224	4.435	1.250	3.50	1.000	2.375	3.875	1.625	B	S	6.50
14	6.230	5.618	4.868	1.250	4.10	1.250	2.750	4.188	1.625	B	S	7.40
15	6.630	6.013	5.229	1.250	4.70	1.250	3.000	4.500	1.750	B	D	9.20
16	7.030	6.408	5.658	1.250	5.40	1.313	3.000	4.500	1.750	B	D	9.90
17	7.440	6.803	6.024	1.250	6.10	1.313	3.000	4.500	1.750	B	D	10.80
18	7.840	7.199	6.449	1.250	7.00	1.313	3.000	4.500	1.750	B	D	11.50
19	8.240	7.595	6.819	1.250	7.80	1.313	3.000	4.500	2.000	B	D	13.10
20	8.640	7.990	7.240	1.250	8.80	1.313	3.000	4.500	2.000	B	D	14.20
21	9.040	8.388	7.613	1.250	9.80	1.313	3.000	4.500	2.000	B	D	15.30
22	9.440	8.784	8.034	1.250	10.50	1.313	3.000	4.500	2.000	B	D	16.10
23	9.840	9.180	8.409	1.250	11.80	1.250	3.000	4.500	2.000	B	D	17.20
24	10.250	9.576	8.826	1.250	12.80	1.250	3.000	4.500	2.000	B	D	19.20
25	10.660	9.974	9.204	1.250	13.90	1.250	3.000	4.500	2.000	B	D	19.50
26	11.050	10.370	9.620	1.250	15.00	1.250	3.313	5.000	2.000	B	D	21.70
27	11.440	10.768	9.999	1.250	16.00	1.250	3.313	5.000	2.000	B	D	23.00
28	11.840	11.164	10.414	1.250	17.40	1.250	3.313	5.000	2.000	B	D	24.40
30	12.640	11.959	11.209	1.250	20.10	1.250	3.313	5.000	2.000	B	D	26.90
32	13.440	12.753	12.003	1.250	22.60	1.250	3.313	5.000	2.000	B	D	29.80
35	14.640	13.945	13.181	1.250	27.20	1.250	3.313	5.000	2.500	B	D	36.90
36	15.040	14.343	13.593	1.250	30.00	1.250	3.313	5.000	2.500	B	D	38.60
40	16.630	15.933	15.183	1.250	36.00	1.250	3.313	5.000	2.500	B	D	46.90
42	17.430	16.728	15.978	1.250	40.00	1.250	3.313	5.000	2.500	B	D	50.40
45	18.630	17.920	17.159	1.500	47.00	1.500	3.313	5.000	2.500	B	D	54.00
48	19.820	19.113	18.363	1.500	54.00	1.500	4.000	6.000	2.500	B	D	66.00
54	22.210	21.498	20.748	1.500	68.00	1.500	4.000	6.000	3.250	C	D	78.00
60	24.600	23.884	23.134	1.500	80.00	1.500	4.000	6.000	3.250	C	D	89.00
70	28.580	27.861	27.111	1.500	113.00	1.500	5.250	7.000	3.750	C	D	125.00
72	29.380	28.657	27.908	1.500	119.00	1.500	5.250	7.000	3.750	C	D	134.00
80	32.570	31.839	31.089	1.500	146.00	1.500	5.250	7.000	3.750	C	D	151.00
84	34.160	33.430	32.680	1.500	162.00	1.500	5.250	7.000	3.750	C	D	170.00
90	36.550	35.817	35.068	1.500	193.00	1.500	5.250	7.000	3.750	C	D	184.00
96	38.930	38.204	37.454	1.500	215.00	1.500	5.250	7.000	4.500	C	D	203.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.  
 □ Has recessed groove in hub for chain clearance.



## FINISHED BORE

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

All dimensions in inches unless noted.

No. Teeth	100 Finished Bore Sprocket Dia.			Type "F" Bored to Shaft Size (includes standard keyway and two set screws)								
	Outside Diameter	Pitch Diameter	Caliper Diameter	1.000"	1.188"	1.250"	1.438"	1.938"	2.000"	2.188"	2.438"	2.938"
8	3.770	3.266	2.516	•	•	•						
9	4.180	3.655	2.849	•	•	•	•					
10	4.600	4.045	3.295	•	•	•	•					
11	5.010	4.438	3.642	•	•	•	•	•	•	•		
12	5.420	4.830	4.080	•	•	•	•	•	•	•		
13	5.820	5.224	4.435	•	•	•	•	•	•	•		
14	6.230	5.618	4.868			•	•	•	•	•		
15	6.630	6.013	5.229			•	•	•	•	•		
16	7.030	6.408	5.658				•	•	•	•	•	•
17	7.440	6.803	6.024				•	•	•	•	•	•
18	7.840	7.199	6.449				•	•	•	•	•	•
19	8.240	7.595	6.819				•	•	•	•	•	•
20	8.640	7.990	7.240				•	•	•	•	•	•
21	9.040	8.388	7.613				•	•	•	•	•	•
22	9.440	8.784	8.034				•	•	•	•	•	•
23	9.840	9.180	8.409				•	•	•	•	•	•
24	10.250	9.576	8.826				•	•	•	•	•	•
25	10.660	9.974	9.204				•	•	•	•	•	•

• Denotes stocking item

# MULTI-STRAND

Chain Data	
Size	100-2, 100-3
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.669"

All dimensions in inches unless noted.

100 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Dia.	Plain Bore	Hub Dia.	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
9	4.180	1.000	2.375	2.875	1.625	B	S	4.60
10	4.600	1.000	2.375	2.875	1.875	B	S	6.20
11	5.010	1.000	3.125	2.875	2.125	B	S	7.90
12	5.420	1.125	3.375	2.875	2.250	B	S	9.30
13	5.820	1.125	3.813	2.875	2.500	B	S	11.40
14	6.230	1.125	4.188	2.875	2.750	B	S	13.60
15	6.630	1.250	4.625	3.125	3.125	B	S	17.10
16	7.030	1.250	5.000	3.125	3.313	B	S	20.10
17	7.440	1.250	5.250	3.125	3.500	B	S	23.10
18	7.840	1.250	5.250	3.125	3.500	B	S	25.40
19	8.240	1.250	5.500	3.375	3.750	B	S	29.60
20	8.640	1.250	5.500	3.375	3.750	B	S	32.40
21	9.040	1.250	5.500	3.375	3.750	B	S	35.30
22	9.440	1.250	5.500	3.375	3.750	B	D	38.40
23	9.840	1.250	5.500	3.375	3.750	B	D	41.30
24	10.250	1.250	5.750	3.375	3.750	B	D	45.10
25	10.660	1.250	5.750	3.375	3.750	B	D	48.50
26	11.050	1.500	5.750	3.375	3.750	B	D	51.50
30	12.640	1.500	5.750	3.375	3.750	B	D	65.00
32	13.440	1.500	5.750	3.375	3.750	B	D	69.00
35	14.640	1.500	6.000	4.250	3.813	B	D	75.00
36	15.038	1.500	6.000	4.500	4.000	B	D	90.80

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

100 Multi-Strand Sprocket Dia.			Dimensional Data: Triple Strand Sprockets					
No. Teeth	Outside Dia.	Plain Bore	Hub Dia.	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
12	5.420	1.125	3.375	4.250	2.250	B	S	13.70
13	5.820	1.125	3.813	4.250	2.500	B	S	16.90
14	6.230	1.125	4.188	4.250	2.750	B	S	20.20
15	6.630	1.250	4.625	4.500	3.125	B	S	25.00
16	7.030	1.250	5.000	4.500	3.313	B	S	29.30
17	7.440	1.250	5.250	4.500	3.500	B	S	33.80
18	7.840	1.250	5.250	4.750	3.500	B	S	38.60
19	8.240	1.250	5.500	4.750	3.750	B	D	43.30
20	8.640	1.250	5.500	4.750	3.750	B	D	47.90
21	9.040	1.250	5.500	4.750	3.750	B	D	52.30
22	9.440	1.250	5.500	4.750	3.750	B	D	57.50
23	9.840	1.250	5.500	4.750	3.750	B	D	62.50
24	10.250	1.250	5.750	4.750	3.750	B	D	69.00
25	10.660	1.250	5.750	4.750	3.750	B	D	73.00
26	11.050	1.500	5.750	4.750	3.813	B	D	79.00
30	12.640	1.500	5.750	4.750	3.813	B	D	103.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

For more information on Sprockets see pages 132-137.

# No. 100

## DOUBLE SINGLE

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

All dimensions in inches unless noted.

100 Double Single Sprocket Diameters			Dimensional Data: Double Single Sprockets				
No. Teeth	Outside Dia.	Plain Bore	LTB	C	D	MAX Bore *	Weight Lbs.
13	5.820	1.000	2.688	2.000	3.781	2.500	11.20
14	6.230	1.250	2.688	2.000	4.188	2.750	13.50
15	6.630	1.250	2.688	2.000	4.594	3.063	16.80
16	7.030	1.250	2.688	2.000	4.500	3.250	19.30
17	7.440	1.250	2.688	2.000	4.906	3.625	21.50
18	7.840	1.250	2.688	2.000	5.281	3.750	23.00
19	8.240	1.250	2.688	2.000	6.203	4.188	25.00
20	8.640	1.250	2.688	2.000	6.609	4.813	26.50
21	9.040	1.250	2.688	2.000	7.000	5.250	29.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

## DOUBLE SINGLE

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
2517	0.500 - 2.688"
3020	0.875 - 3.250"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

100 Double Single TAPER-LOCK® Sprocket Diameters			Dimensional Data: Double Single TAPER-LOCK® Sprockets				
No. Teeth	Outside Dia.	Bushing #	LTB	C	D	MAX Bore *	Weight Lbs.
16	7.030	2517	2.688	2.000	5.000	2.688	13.00
17	7.440	3020	2.688	2.000	5.469	3.250	14.00
18	7.840	3020	2.688	2.000	5.797	3.250	16.00
19	8.240	3020	2.688	2.000	6.203	3.250	20.00
20	8.640	3020	2.688	2.000	6.906	3.250	24.00
21	9.040	3020	2.688	2.000	7.000	3.250	27.50

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

### TAPER-LOCK®

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

All dimensions in inches unless noted.

100 TAPER-LOCK® Sprockets			Dimensional Data TAPER-LOCK® Sprockets					
No. Teeth	Outside Diameter	Bushing #	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
11	5.010	1615	3.000	1.500	1.688	B	S	2.70
12	5.420	1615	3.250	1.500	1.688	B	S	3.50
13	5.820	2012	3.563	1.250	2.125	B	S	3.60
14	6.230	2012	3.563	1.250	2.125	B	S	3.90
15	6.630	2517	4.250	1.750	2.688	B	S	5.00
16	7.030	2517	4.500	1.750	2.688	B	E	6.40
17	7.440	2517	4.500	1.750	2.688	B	E	7.10
18	7.840	2517	4.500	1.750	2.688	B	E	7.80
19	8.240	2517	4.500	1.750	2.688	B	E	8.70
20	8.640	2517	4.500	1.750	2.688	B	E	9.60
21	9.040	2517	4.500	1.750	2.688	B	E	10.60
22	9.440	2517	4.500	1.750	2.688	B	E	11.00
24	10.250	2517	4.500	1.750	2.688	B	E	13.00
26	11.050	2517	5.250	1.750	2.688	B	E	15.00
28	11.840	3020	5.250	2.000	3.250	B	E	16.50
30	12.640	3020	5.250	2.000	3.250	B	E	22.00
32	13.440	3020	5.250	2.000	3.250	B	E	23.00
35	14.640	3020	5.250	2.000	3.250	B	E	28.00
36	15.040	3020	5.250	2.000	3.250	B	E	31.00
40	16.630	3020	5.250	2.000	3.250	B	E	37.00

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data.

TAPER-LOCK® Bushings	
Bushing #	Bore Range
1615	0.500 - 1.688"
2012	0.500 - 2.125"
2517	0.500 - 2.688"
3020	0.500 - 3.250"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

QD® Bushings	
Bushing #	Bore Range
SDS	0.500 - 2.000"
SK	0.500 - 2.625"
SF	0.500 - 2.938"
E	0.875 - 3.500"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

### QD®

Chain Data	
Size	100
Pitch	1 1/4"
Inside Width	3/4"
Roller Diameter	0.750"
Nominal Tooth Width:	0.692"

All dimensions in inches unless noted.

100 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Weight Lbs.
11	5.010	SDS	2.000	3.188	0.750	1.500	1.500	0.625	3.188	B	S	2.00
12	5.420	SDS	2.000	3.500	0.750	1.500	1.500	0.625	3.188	B	S	2.60
13	5.820	SK	2.625	3.938	1.250	2.125	2.125	1.203	3.875	B	S	3.30
14	6.230	SK	2.625	4.250	1.250	2.125	2.125	1.203	3.875	B	S	4.10
15	6.630	SF	2.938	4.625	1.250	2.250	2.250	1.234	4.625	B	S	4.80
16	7.030	SF	2.938	5.000	1.250	2.250	2.250	1.234	4.625	B	S	5.60
17	7.440	SF	2.938	5.000	1.250	2.250	2.250	1.234	4.625	B	S	6.50
18	7.840	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	S	9.00
19	8.240	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	S	10.20
20	8.640	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	S	11.60
21	9.040	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	S	12.50
22	9.440	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	13.50
23	9.840	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	14.60
24	10.250	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	15.70
25	10.660	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	16.80
26	11.050	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	18.10
27	11.440	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	19.20
28	11.840	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	20.70
30	12.640	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	23.20
32	13.440	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	25.40
35	14.640	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	30.50
36	15.040	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	32.30
40	16.630	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	39.10
42	17.430	E	3.500	6.250	1.625	2.938	2.625	1.813	6.000	B1	E	43.40
45	17.920	E	3.500	6.250	1.625	2.958	2.625	1.813	6.000	B1	E	48.90
48	19.112	E	3.500	6.250	1.625	2.958	2.625	1.813	6.000	B1	E	54.00
54	21.498	E	3.500	6.250	1.625	2.958	2.625	1.813	6.000	B1	E	62.00
60	23.884	E	3.500	6.250	1.625	2.958	2.625	1.813	6.000	B1	E	74.00

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

For more information on Sprockets see pages 132-137.

# PLAIN BORE

Chain Data	
Size	120
Pitch	1 1/2"
Inside Width	1.00"
Roller Diameter	0.875"
Nominal Tooth Width:	0.924"

All dimensions in inches unless noted.

120 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
9	5.020	4.386	3.444	1.250	3.00	1.375	1.813	3.375 □	2.250	B	S	5.30
10	5.520	4.854	3.979	1.250	3.80	1.375	2.250	3.750 □	2.250	B	S	7.10
11	6.010	5.325	4.395	1.250	4.80	1.375	2.375	3.563	2.125	B	S	7.60
12	6.500	5.796	4.921	1.250	5.80	1.375	2.750	4.125	2.125	B	S	9.90
13	6.990	6.269	5.347	1.250	6.70	1.375	3.000	4.563	2.250	B	S	12.40
14	7.470	6.741	5.866	1.250	8.00	1.375	3.250	4.750	2.250	B	D	14.40
15	7.960	7.215	6.300	1.250	9.10	1.250	3.250	4.750	2.375	B	D	16.70
16	8.440	7.689	6.814	1.250	10.60	1.250	3.500	5.250	2.375	B	D	19.90
17	8.920	8.163	7.254	1.250	12.60	1.250	3.500	5.250	2.375	B	D	20.80
18	9.410	8.639	7.764	1.250	13.60	1.250	3.500	5.250	2.375	B	D	22.20
19	9.890	9.114	8.207	1.250	15.10	1.250	3.500	5.250	2.375	B	D	24.80
20	10.370	9.588	8.713	1.250	16.90	1.250	3.500	5.250	2.375	B	D	25.80
21	10.850	10.065	9.161	1.250	18.70	1.250	3.500	5.250	2.375	B	D	26.70
22	11.330	10.541	9.666	1.250	20.00	1.250	3.500	5.250	2.375	B	D	28.20
23	11.810	11.016	10.115	1.250	22.10	1.250	3.500	5.250	2.375	B	D	30.30
24	12.290	11.492	10.617	1.250	24.80	1.250	3.500	5.250	2.375	B	D	32.10
25	12.770	11.969	11.070	1.250	26.80	1.250	3.500	5.250	2.375	B	D	34.60
26	13.250	12.444	11.569	1.500	28.30	1.500	4.000	6.000	2.500	B	D	40.00
27	13.730	12.921	12.024	1.500	30.90	1.500	4.000	6.000	2.500	B	D	43.15
28	14.210	13.397	12.522	1.500	33.60	1.500	4.000	6.000	2.500	B	D	44.90
30	15.170	14.351	13.476	1.500	39.00	1.500	4.000	6.000	2.500	B	D	50.20
32	16.130	15.303	14.428	1.500	43.90	1.500	4.000	6.000	2.500	B	D	56.00
35	17.570	16.734	15.842	1.500	52.00	1.500	4.000	6.000	2.500	B	D	62.40
36	18.050	17.211	16.336	1.500	56.00	1.500	4.000	6.000	2.500	B	D	66.40
40	19.960	19.119	18.244	1.500	71.00	1.500	4.000	6.000	3.750	C	D	92.00
42	20.920	20.073	19.198	1.500	75.00	1.500	4.000	6.000	3.750	C	D	98.00
45	22.350	21.504	20.615	1.500	88.00	1.500	4.000	6.000	3.750	C	D	99.20
48	23.790	22.935	22.060	1.500	103.00	1.500	4.000	6.000	4.000	C	D	113.00
54	26.650	25.797	24.922	1.500	140.00	1.500	4.000	6.000	4.000	C	D	133.00
60	29.520	28.661	27.786	1.500	160.00	1.500	5.250	7.000	4.000	C	D	160.00
70	34.300	33.434	32.559	1.500	216.00	1.500	5.375	7.500	4.500	C	D	206.00
80	39.080	38.207	37.332	1.500	284.00	1.500	5.375	7.500	4.500	C	D	254.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

□ Has recessed groove in hub for chain clearance.

# MULTI-STRAND

Chain Data	
Size	120
Pitch	1 1/2"
Inside Width	1.00"
Roller Diameter	0.875"
Nominal Tooth Width:	0.824"

All dimensions in inches unless noted.

120 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
11	6.010	1.500	3.563	3.750	2.375	B	S	13.60
12	6.500	1.500	4.063	3.750	2.375	B	S	17.30
13	6.990	1.500	4.500	3.750	3.000	B	S	21.10
14	7.470	1.500	5.000	3.750	3.313	B	S	25.60
15	7.960	1.500	5.250	3.750	3.500	B	S	29.90
16	8.440	1.500	5.250	3.750	3.500	B	S	33.80
17	8.920	1.500	5.250	3.750	3.500	B	S	36.90
18	9.410	1.500	5.250	3.750	3.500	B	S	41.90
19	9.890	1.500	5.250	3.750	3.500	B	S	46.50
20	10.370	1.500	5.500	3.750	3.500	B	S	50.20
21	10.850	1.500	5.500	3.750	3.500	B	S	55.60
22	11.330	1.500	5.750	4.000	3.813	B	S	64.00
23	11.810	1.500	6.500	4.000	4.500	B	S	75.00
24	12.290	1.500	6.500	4.000	4.500	B	D	79.00
25	12.770	1.500	6.500	4.000	4.500	B	D	84.00
26	13.250	1.500	6.500	4.000	4.500	B	D	90.00
30	15.170	1.500	6.500	4.000	4.500	B	D	119.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

# TAPER-LOCK®

Chain Data	
Size	120
Pitch	1 1/2"
Inside Width	1.00"
Roller Diameter	0.875"
Nominal Tooth Width:	0.924"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
2012	0.500 - 2.125"
2517	0.500 - 2.688"
3020	0.875 - 3.250"
3030	0.938 - 3.250"
3535	1.188 - 3.938"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

120 TAPER-LOCK® Sprockets			Dimensional Data TAPER-LOCK® Sprockets					
No. Teeth	Outside Diameter	Bushing #	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
12	6.500	2012	3.563	1.250	2.125	B	S	5.50
13	6.990	2517	4.250	1.750	2.688	B	S	6.00
14	7.470	2517	4.250	1.750	2.688	B	E	7.00
15	7.960	2517	4.250	1.750	2.688	B	E	8.00
16	8.440	3020	5.250	2.000	3.250	B	E	10.00
17	8.920	3020	5.250	2.000	3.250	B	E	11.00
18	9.410	3020	5.250	2.000	3.250	B	E	12.00
19	9.890	3020	5.250	2.000	3.250	B	E	14.00
20	10.370	3020	5.250	2.000	3.250	B	E	15.50
21	10.850	3020	5.250	2.000	3.250	B	E	17.50
24	12.290	3020	5.250	2.000	3.250	B	E	23.50
26	13.250	3020	5.250	2.000	3.250	B	E	28.50
35	17.570	3020	5.250	2.000	3.250	C	E	33.50
36	18.050	3020	5.250	2.000	3.250	C	E	54.00
45	22.350	3030	5.875	3.000	3.250	C	E	82.00
60	29.520	3535	6.500	3.500	3.938	C	E	140.00
70	34.300	3535	6.500	3.500	3.938	C	E	175.00
80	39.080	3535	6.500	3.500	3.938	C	E	220.00

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. For more information on Sprockets see pages 132-137.

## QD®

Chain Data	
Size	120
Pitch	1 1/2"
Inside Width	1.00"
Roller Diameter	0.875"
Nominal Tooth Width:	0.924"

All dimensions in inches unless noted.

120 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Weight Lbs.
12	6.500	SF	2.938	4.375	1.250	2.250	2.250	1.078	4.625	B	S	4.70
13	6.990	SF	2.938	4.625	1.250	2.250	2.250	1.078	4.625	B	S	6.10
14	7.470	SF	2.938	5.000	1.250	2.250	2.250	1.078	4.625	B	S	7.40
15	7.960	SF	2.938	5.000	1.250	2.250	2.250	1.078	4.625	B	S	8.00
16	8.440	E	3.500	6.125	1.625	2.938	2.625	1.563	6.000	B1	S	11.20
17	8.920	E	3.500	6.125	1.625	2.938	2.625	1.563	6.000	B1	S	13.40
18	9.410	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	14.80
19	9.890	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	16.50
20	10.370	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	19.20
21	10.850	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	19.90
22	11.330	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	21.60
23	11.810	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	23.80
24	12.290	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	25.80
25	12.770	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	28.10
26	13.250	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	29.90
28	14.210	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	34.70
30	15.170	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	39.40
32	16.130	F	4.000	7.000	2.500	4.000	2.625	1.000	6.625	C	E	50.50
35	17.570	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	59.50
36	18.050	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	63.40
40	19.960	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	77.00
42	20.920	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	83.00
45	22.350	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	84.00
48	23.790	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	92.00
54	26.650	F	4.000	8.000	2.500	4.000	3.625	1.000	6.625	C	E	114.00
60	29.520	J	4.500	8.000	3.188	5.000	4.500	1.1875	7.250	C	E	140.00
70	34.300	J	4.500	8.000	3.188	5.000	4.500	1.1875	7.250	C	E	177.00
80	39.080	J	4.500	8.000	3.188	5.000	4.500	1.1875	7.250	C	E	222.00

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

QD® Bushings	
Bushing #	Bore Range
SF	0.500 - 2.938"
E	0.875 - 3.500"
F	1.000 - 4.000"
J	1.500 - 4.500"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

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# PLAIN BORE

Chain Data	
Size	140
Pitch	1 3/4"
Inside Width	1.000"
Roller Diameter	1.000"
Nominal Tooth Width:	0.924"

All dimensions in inches unless noted.

140 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
11	7.010	6.213	5.148	1.500	5.00	1.500	2.750	4.250	2.250	B	S	11.30
12	7.580	6.762	5.762	1.500	7.80	1.500	3.000	4.500	2.250	B	D	13.20
13	8.150	7.313	6.259	1.500	8.20	1.500	3.563	5.313	2.375	B	D	18.90
14	8.720	7.865	6.865	1.500	10.00	1.500	3.750	5.500	2.375	B	D	20.40
15	9.280	8.418	7.371	1.500	11.00	1.500	4.250	6.250	2.375	B	D	25.10
16	9.850	8.971	7.971	1.500	14.00	1.500	4.250	6.250	2.500	B	D	27.90
17	10.410	9.524	8.483	1.500	16.00	1.500	4.250	6.250	2.500	B	D	29.80
18	10.980	10.078	9.078	1.500	18.00	1.500	4.250	6.250	2.500	B	D	32.00
19	11.540	10.633	9.596	1.500	21.00	1.500	4.250	6.250	2.500	B	D	34.10
20	12.100	11.186	10.186	1.500	23.00	1.500	4.250	6.250	2.500	B	D	36.00
21	12.660	11.743	10.709	1.500	25.00	1.500	4.250	6.250	2.500	B	D	38.70
22	13.220	12.297	11.297	1.500	28.00	1.500	4.250	6.250	2.500	B	D	40.60
23	13.780	12.852	11.822	1.500	30.00	1.500	4.250	6.250	2.500	B	D	42.10
24	14.340	13.407	12.407	1.500	33.00	1.500	4.250	6.250	2.500	B	D	46.20
25	14.900	13.963	12.935	1.500	34.00	1.500	4.250	6.250	2.500	B	D	47.80
26	15.460	14.518	13.518	1.500	39.00	1.500	4.250	6.250	3.000	B	D	57.20
28	16.580	15.629	14.629	1.500	45.00	1.500	4.250	6.250	3.000	B	D	62.20
30	17.700	16.742	15.742	1.500	52.00	1.500	4.250	6.250	3.000	B	D	69.80
32	18.820	17.854	16.854	1.500	60.00	1.500	4.250	6.250	3.000	B	D	76.30
35	20.490	19.523	18.503	1.500	73.00	1.500	5.250	7.000	4.000	C	D	108.00
36	21.050	20.080	19.080	1.500	77.00	1.500	5.250	7.000	4.000	C	D	115.00
40	23.290	22.306	21.306	1.500	93.00	1.500	5.250	7.000	4.000	C	D	121.00
45	26.080	25.088	24.072	1.500	131.00	1.500	5.250	7.000	4.000	C	D	142.00
48	27.750	26.758	25.758	1.500	134.00	1.500	5.250	7.000	4.000	C	D	150.00
54	31.100	30.097	29.097	1.500	173.00	1.500	5.250	7.000	4.000	C	D	177.00
60	34.400	33.437	32.437	1.500	219.00	1.500	5.250	7.000	5.000	C	D	220.00
70	40.020	39.006	38.006	1.500	292.00	1.500	5.375	7.500	5.000	C	D	282.00
80	45.590	44.574	43.574	1.500	402.00	1.500	5.375	7.500	5.000	C	D	331.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.



## MULTI-STRAND

Chain Data	
Size	140
Pitch	1 3/4"
Inside Width	1.000"
Roller Diameter	1.000"
Nominal Tooth Width:	0.824"

All dimensions in inches unless noted.

140 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
13	8.150	1.625	5.000	3.750	3.313	B	S	29.00
14	8.720	1.625	5.500	3.750	3.750	B	S	34.80
15	9.280	1.625	6.500	3.750	4.500	B	S	42.50
16	9.850	1.625	7.000	4.000	5.250	B	S	48.10
17	10.410	1.625	7.000	4.000	5.250	B	S	57.50
18	10.980	1.750	7.000	4.000	5.250	B	S	65.60
19	11.540	1.750	7.000	4.000	5.250	B	D	72.00
20	12.100	1.750	7.000	4.000	5.250	B	D	76.00
21	12.660	1.750	7.000	4.000	5.250	B	D	82.00
22	13.220	1.750	7.000	4.000	5.250	B	D	94.00
23	13.780	1.750	7.000	4.000	5.250	B	D	100.00
24	14.340	1.750	7.000	4.000	5.250	B	D	104.00
25	14.900	1.750	7.000	4.000	5.250	B	D	120.00
26	15.460	1.750	7.000	4.000	5.250	B	D	128.00
30	17.700	1.750	7.000	4.000	5.250	B	D	163.50

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

140 Multi-Strand Sprocket Dia.			Dimensional Data: Triple Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
15	9.283	1.625	6.500	5.688	4.500	B	S	70.00
18	10.980	1.750	7.000	5.938	5.250	B	S	90.00
20	12.100	1.750	7.000	5.938	5.250	B	S	110.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

## TAPER-LOCK®

Chain Data	
Size	140
Pitch	1 3/4"
Inside Width	1.000"
Roller Diameter	1.000"
Nominal Tooth Width:	0.924"

TAPER-LOCK® Bushings	
Bushing #	Bore Range
3020	0.875 - 3.250"
3535	1.188 - 3.938"
4040	1.438 - 4.438"

TAPER-LOCK® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 194.

All dimensions in inches unless noted.

140 TAPER-LOCK® Sprockets			Dimensional Data TAPER-LOCK® Sprockets					
No. Teeth	Outside Diameter	Bushing #	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
14	8.720	3020	5.250	2.000	3.250	B	S	10.00
15	9.280	3020	5.250	2.000	3.250	B	S	12.00
16	9.850	3020	5.250	2.000	3.250	B	E	14.00
17	10.410	3020	5.250	2.000	3.250	B	E	16.00
18	10.980	3020	5.250	2.000	3.250	B	E	18.00
19	11.540	3020	5.250	2.000	3.250	B	E	20.00
21	12.660	3020	5.250	2.000	3.250	B	E	24.00
26	15.460	3020	5.250	2.000	3.250	B	E	40.00
35	20.490	3535	6.500	3.500	3.938	C	E	78.00
36	21.050	3535	6.500	3.500	3.938	C	E	83.00
45	26.080	4040	7.750	4.000	4.438	C	E	118.00
60	34.400	4040	7.750	4.000	4.438	C	E	188.00
70	40.020	4040	7.750	4.000	4.438	C	E	241.00

\* Please reference TAPER-LOCK® bushing dimension table on page 194 for specific information on MAX Bore and keyway data. For more information on Sprockets see pages 132-137.

### QD®

Chain Data	
Size	140
Pitch	1 3/4"
Inside Width	1.000"
Roller Diameter	1.000"
Nominal Tooth Width:	0.924"

All dimensions in inches unless noted.

140 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Weight Lbs.
11	7.010	SF	2.938	4.438	1.250	2.250	2.250	1.098	4.625	B	S	5.60
12	7.580	SF	2.938	4.875	1.250	2.250	2.250	1.098	4.625	B	S	7.40
13	8.150	SF	2.938	5.000	1.250	2.250	2.250	1.098	4.625	B	S	8.90
14	8.720	E	3.500	6.125	1.625	2.938	2.625	1.563	6.000	B1	S	11.60
15	9.280	E	3.500	6.125	1.625	2.938	2.625	1.563	6.000	B1	S	14.20
16	9.850	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	15.90
17	10.410	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	18.00
18	10.980	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	19.60
19	11.540	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	22.00
20	12.100	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	24.60
21	12.660	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	27.60
22	13.220	E	3.500	6.250	1.625	2.938	2.625	1.563	6.000	B1	E	29.50
23	13.780	F	4.000	7.000	2.500	4.000	3.625	2.563	6.625	B1	E	36.40
24	14.340	F	4.000	7.000	2.500	4.000	3.625	2.563	6.625	B1	E	40.10
25	14.900	F	4.000	7.000	2.500	4.000	3.625	2.563	6.625	B1	E	42.30
26	15.460	F	4.000	7.000	2.500	4.000	3.625	2.563	6.625	B1	E	46.50
30	17.700	F	4.000	7.000	2.500	4.000	3.625	2.563	6.625	B1	E	60.40
35	20.490	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	78.00
36	21.050	F	4.000	7.000	2.500	4.000	3.625	1.000	6.625	C	E	84.00
40	23.290	J	4.500	8.000	3.188	5.000	4.500	1.188	7.250	C	E	98.00
45	26.080	J	4.500	8.000	3.188	5.000	4.500	1.188	7.250	C	E	120.00
48	27.750	J	4.500	8.000	3.188	5.000	4.500	1.188	7.250	C	E	129.00
54	31.100	J	4.500	8.000	3.188	5.000	4.500	1.188	7.250	C	E	149.00
60	34.440	J	4.500	8.000	3.188	5.000	4.500	1.188	7.250	C	E	185.00
70	40.020	M	5.500	10.000	5.188	6.750	6.750	2.906	9.000	C1	E	264.00
80	45.590	M	5.500	10.000	5.188	6.750	6.750	2.906	9.000	C1	E	348.00

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

QD® Bushings	
Bushing #	Bore Range
SF	0.500 - 2.938"
E	0.875 - 3.500"
F	1.000 - 4.000"
J	1.500 - 4.500"
M	2.000 - 5.500"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

### PLAIN BORE

Chain Data	
Size	160
Pitch	2"
Inside Width	1.250"
Roller Diameter	1.125"
Nominal Tooth Width:	1.156"

All dimensions in inches unless noted.

160 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
8	6.030	5.226	4.101	1.500	5.00	1.500	1.875	3.250	2.250	B	S	8.00
9	6.700	5.848	4.635	1.500	7.00	1.500	2.125	3.625	2.250	B	S	10.00
10	7.380	6.472	5.347	1.500	8.00	1.500	2.750	4.125	2.250	B	S	12.00
11	8.010	7.100	5.902	1.500	10.00	1.500	3.250	4.750	2.500	B	S	17.00
12	8.660	7.728	6.603	1.500	12.00	1.500	3.750	5.500	2.500	B	S	21.00
13	9.310	8.358	7.171	1.500	16.00	1.500	4.000	6.000	2.750	B	S	28.00
14	9.960	8.988	7.863	1.500	17.00	1.500	4.500	6.500	2.750	B	D	32.00
15	10.610	9.620	8.442	1.500	21.00	1.500	5.250	7.000	2.750	B	D	37.00
16	11.260	10.252	9.127	1.500	24.00	1.500	5.250	7.000	2.750	B	D	41.00
17	11.900	10.844	9.713	1.500	27.00	1.500	5.250	7.000	2.750	B	D	45.00
18	12.540	11.518	10.393	1.500	30.00	1.500	5.250	7.000	2.750	B	D	48.00
19	13.190	12.152	10.985	1.500	34.00	1.500	5.250	7.000	2.750	B	D	52.00
20	13.830	12.784	11.659	1.500	38.00	1.500	5.250	7.000	2.750	B	D	56.00
21	14.470	13.420	12.256	1.500	42.00	1.500	5.250	7.000	2.750	B	D	59.00
22	15.110	14.054	12.929	1.500	46.00	1.500	5.250	7.000	2.750	B	D	65.00
23	15.750	14.688	13.529	1.500	50.00	1.500	5.250	7.000	2.750	B	D	68.00
24	16.390	15.322	14.197	1.500	56.00	1.500	5.250	7.000	3.000	B	D	77.00
25	17.030	15.958	14.801	1.500	61.00	1.500	5.250	7.000	3.000	B	D	81.00
26	17.670	16.592	15.467	1.500	65.00	1.500	5.250	7.000	3.000	B	D	86.00
27	18.310	17.228	16.073	1.500	71.00	1.500	5.250	7.000	3.000	B	D	91.00
28	18.950	17.862	16.737	1.500	77.00	1.500	5.250	7.000	3.000	B	D	98.00
30	20.230	19.134	18.009	1.500	90.00	1.500	5.250	7.000	3.000	B	D	108.00
35	23.420	22.312	21.164	1.500	121.00	1.500	5.500	8.000	4.500	C	D	154.00
36	24.060	22.948	21.823	1.500	134.00	1.500	5.500	8.000	4.500	C	D	170.00
40	26.610	25.492	24.367	1.500	138.00	1.500	5.500	8.000	4.500	C	D	196.00
45	29.800	28.672	27.529	1.500	204.00	1.500	5.500	8.000	5.000	C	D	234.00
48	31.714	30.580	29.455	1.500	233.00	1.500	5.500	8.000	5.000	C	D	250.00
54	35.540	34.396	33.271	1.500	294.00	1.500	5.500	8.000	5.000	C	D	345.00
60	39.360	38.214	37.089	1.500	360.00	1.500	5.500	8.000	5.000	C	D	415.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

### MULTI-STRAND

Chain Data	
Size	160
Pitch	2"
Inside Width	1.250"
Roller Diameter	1.125"
Nominal Tooth Width:	1.119"

All dimensions in inches unless noted.

160 Multi-Strand Sprocket Dia.			Dimensional Data: Double Strand Sprockets					
No. Teeth	Outside Diameter	Plain Bore	Hub Diameter	LTB	MAX Bore *	Hub Type	Hub Style	Weight Lbs.
13	9.310	2.000	6.000	4.750	4.000	B	D	48.00
14	9.960	2.000	6.750	4.750	4.750	B	D	58.00
15	10.610	2.000	7.000	4.750	5.250	B	D	68.00
16	11.260	2.000	7.000	4.750	5.250	B	D	75.00
17	11.900	2.000	7.000	4.750	5.250	B	D	91.00
18	12.540	2.000	7.000	4.750	5.250	B	D	96.00
19	13.190	2.000	7.000	4.750	5.250	B	D	107.00
20	13.830	2.000	7.000	4.750	5.250	B	D	119.00
21	14.470	2.000	7.500	4.750	5.375	B	D	130.00
22	15.110	2.000	7.500	4.750	5.375	B	D	141.00
23	15.750	2.000	7.500	4.750	5.375	B	D	157.00
24	16.390	2.000	7.500	4.750	5.375	B	D	171.00
25	17.030	2.000	7.500	4.750	5.375	B	D	187.00
26	17.670	2.000	7.500	4.750	5.375	B	D	201.00
30	20.230	2.000	7.500	4.750	5.375	B	D	260.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

For more information on Sprockets see pages 132-137.

### QD®

Chain Data	
Size	160
Pitch	2"
Inside Width	1.250"
Roller Diameter	1.125"
Nominal Tooth Width:	1.156"

All dimensions in inches unless noted.

160 QD® Sprockets			Dimensional Data QD® Sprockets									
No. Teeth	Outside Dia.	QD® Bushing #	MAX Bore *	Hub Dia.	LTB	X	Y	L	F	Hub Type	Hub Style	Wt. Lbs.
13	9.310	E	3.500	6.000	1.625	2.625	2.937	1.313	6.000	B1	S	14.00
14	9.960	E	3.500	6.000	1.625	2.625	2.937	1.313	6.000	B1	S	15.00
15	10.610	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	24.00
16	11.260	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	27.00
17	11.900	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	31.00
18	12.540	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	35.00
19	13.190	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	38.00
20	13.830	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	42.00
21	14.740	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	45.00
22	15.110	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	51.00
23	15.750	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	55.00
24	16.390	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	59.00
25	17.030	F	4.000	6.625	2.500	3.625	4.000	2.313	6.625	B1	E	64.00
26	17.670	J	4.500	7.250	3.188	4.500	5.000	1.188	7.250	C	E	74.00
28	18.950	J	4.500	7.250	3.188	4.500	5.000	1.188	7.250	C	E	84.00
30	20.230	J	4.500	7.250	3.188	4.500	5.000	1.188	7.250	C	E	96.00
35	23.420	J	4.500	7.250	3.188	4.500	5.000	1.188	7.250	C	E	116.00
40	26.610	M	5.500	9.000	5.188	6.750	6.750	1.594	9.000	C1	E	174.00
45	29.800	M	5.500	9.000	5.188	6.750	6.750	1.594	9.000	C1	E	208.00
54	35.540	M	5.500	9.000	5.188	6.750	6.750	1.594	9.000	C1	E	262.00
60	39.360	M	5.500	9.000	5.188	6.750	6.750	1.594	9.000	C1	E	310.00

\* Please reference QD® bushing dimension table on page 200 for specific information on MAX Bore and keyway data.

QD® Bushings	
Bushing #	Bore Range
E	0.875 - 3.500"
F	1.000 - 4.000"
J	1.500 - 4.500"
M	2.000 - 5.500"

QD® bushing is not included with the sprocket. They are to be ordered separately. Please refer to the table below for general guidelines. Specific details are found in the Bushing Section of this catalog beginning on page 199.

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

### PLAIN BORE

Chain Data	
Size	180
Pitch	2 1/4"
Inside Width	1.406"
Roller Diameter	1.406"
Nominal Tooth Width:	1.301"

All dimensions in inches unless noted.

180 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
11	9.010	7.986	6.499	1.500	14.00	1.500	3.625	5.500	3.000	B	S	29.00
12	9.750	8.693	7.287	1.500	16.00	1.500	4.000	6.000	3.000	B	D	32.00
13	10.480	9.402	7.927	1.500	20.00	1.500	4.625	6.750	3.125	B	D	40.00
14	11.210	10.111	8.705	1.500	24.00	1.500	5.250	7.000	3.125	B	D	44.00
15	11.930	10.822	9.357	1.500	28.00	1.500	5.250	7.000	3.125	B	D	48.00
16	12.660	11.533	10.127	1.500	32.00	1.500	5.250	7.000	3.125	B	D	52.00
17	13.390	12.245	10.787	1.500	37.00	1.500	5.250	7.000	3.125	B	D	58.00
18	14.110	12.957	11.551	1.500	43.00	1.500	5.250	7.000	3.125	B	D	63.00
19	14.830	13.670	12.217	1.500	47.00	1.500	5.375	7.500	3.375	B	D	74.00
20	15.560	14.383	12.977	1.500	53.00	1.500	5.375	7.500	3.375	B	D	81.00
21	16.280	15.096	13.648	1.500	57.00	1.500	5.375	7.500	3.375	B	D	83.00
22	17.000	15.810	14.404	1.500	62.00	1.500	5.375	7.500	3.375	B	D	92.00
23	17.720	16.524	15.079	1.500	69.00	1.500	5.375	7.500	3.375	B	D	99.00
24	18.440	17.238	15.832	1.500	77.00	1.500	5.375	7.500	3.375	B	D	105.00
25	19.160	17.952	16.511	1.500	84.00	1.500	5.375	7.500	3.375	B	D	113.00
28	21.320	20.096	18.690	1.500	104.00	1.500	5.500	8.000	3.500	B	D	135.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

### PLAIN BORE

Chain Data	
Size	200
Pitch	2 1/2"
Inside Width	1.500"
Roller Diameter	1.562"
Nominal Tooth Width:	1.389"

All dimensions in inches unless noted.

200 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
10	9.200	8.090	6.528	1.500	16.00	1.500	3.750	5.500	3.000	B	S	26.00
11	10.020	8.872	7.219	1.500	20.00	1.500	4.000	6.000	3.000	B	D	33.00
12	10.830	9.660	8.098	1.500	24.00	1.500	4.500	6.500	3.000	B	D	37.00
13	11.640	10.447	8.808	1.500	30.00	1.500	5.250	7.000	3.000	B	D	46.00
14	12.460	11.235	9.673	1.500	32.00	1.500	5.375	7.500	3.500	B	D	59.00
15	13.260	12.025	10.397	1.500	40.00	1.500	5.375	7.500	3.500	B	D	64.00
16	14.070	12.815	11.253	1.500	46.00	1.500	5.375	7.500	3.500	B	D	72.00
17	14.870	13.605	11.985	1.500	51.00	1.500	5.375	7.500	3.500	B	D	76.00
18	15.680	14.397	12.835	1.500	57.00	1.500	5.375	7.500	3.500	B	D	84.00
19	16.480	15.190	13.576	1.500	65.00	1.500	5.375	7.500	3.500	B	D	91.00
20	17.290	15.982	14.420	1.500	72.00	1.500	5.375	7.500	3.500	B	D	98.00
21	18.090	16.775	15.166	1.500	82.00	1.500	5.375	7.500	3.500	B	D	106.00
25	20.490	19.152	17.590	1.500	113.00	1.500	5.750	8.500	4.000	B	D	153.00
30	25.290	23.917	22.355	1.500	167.00	1.500	5.750	8.500	4.500	C	D	212.00
35	29.280	27.890	26.300	1.500	227.00	1.500	5.750	8.500	4.500	C	D	254.00
40	33.270	31.865	30.303	1.500	301.00	1.500	6.000	9.000	5.000	C	D	320.00
45	37.250	35.840	34.256	1.500	356.00	1.500	6.000	9.000	5.000	C	D	390.00
54	44.420	42.995	41.433	1.500	479.00	1.500	6.500	9.500	5.500	C	D	555.00
60	49.200	47.767	46.205	1.500	654.00	1.500	6.500	9.500	5.500	C	D	692.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

For more information on Sprockets see pages 132-137.

# No. 240

## PLAIN BORE

Chain Data	
Size	240
Pitch	3"
Inside Width	1.875"
Roller Diameter	1.875"
Nominal Tooth Width:	1.738"

All dimensions in inches unless noted.

240 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" & "C" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
10	11.030	9.708	7.833	1.500	30.00	1.500	4.500	6.500	3.375	B	S	49.00
11	12.020	10.648	8.665	1.500	37.00	1.500	4.750	7.000	3.875	B	D	66.00
12	13.000	11.591	9.716	1.500	45.00	1.500	5.375	7.500	3.875	B	D	72.00
13	13.970	12.536	10.569	1.500	54.00	1.500	5.375	7.500	3.875	B	D	81.00
14	14.940	13.482	11.607	1.500	62.00	1.500	5.375	7.500	3.875	B	D	88.00
15	15.910	14.429	12.475	1.500	68.00	1.500	5.375	7.500	3.875	B	D	98.00
16	16.880	15.377	13.502	1.500	82.00	1.500	5.500	8.000	4.125	B	D	120.00
17	17.850	16.327	14.382	1.500	93.00	1.500	5.500	8.000	4.125	B	D	137.00
18	18.810	17.276	15.401	1.500	108.00	1.500	5.500	8.000	4.125	B	D	142.00
19	19.780	18.227	16.289	1.500	120.00	1.500	5.500	8.000	4.125	B	D	154.00
20	20.740	19.177	17.302	1.500	128.00	1.500	5.500	8.000	4.125	B	D	169.00
21	21.710	20.129	18.197	1.500	148.00	1.500	5.500	8.000	4.125	B	D	186.00
25	25.550	23.936	22.014	1.500	208.00	1.500	5.500	8.000	4.125	B	D	254.00
30	30.340	28.700	26.825	1.500	310.00	1.500	6.000	9.000	6.250	C	D	398.00
35	35.130	33.467	31.559	1.500	416.00	1.500	6.000	9.000	6.250	C	D	527.00
40	39.920	38.237	36.362	1.500	548.00	1.500	7.000	10.000	6.750	C	D	672.00
45	44.700	43.007	41.106	1.500	702.00	1.500	7.000	10.000	6.750	C	D	850.00
54	53.310	51.595	49.720	1.500	1022.00	1.500	7.000	10.000	6.750	C	D	1148.00
60	59.040	57.322	55.447	1.500	1268.00	1.500	7.000	10.000	6.750	C	D	1419.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees.

# No. 2040

## DOUBLE PITCH

Chain Data	
Size	2040
Pitch	1"
Inside Width	5/16"
Roller Diameter	0.313"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

2040 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
11	2.000	1.852	1.537	N/A	N/A	0.500	0.813	1.375 □	0.875	B	S	0.34
12	2.170	2.000	1.688	N/A	N/A	0.500	0.813	1.563 □	0.875	B	S	0.44
13	2.330	2.152	1.824	N/A	N/A	0.500	0.656	1.563 □	0.875	B	S	0.48
14	2.490	2.305	1.993	N/A	N/A	0.500	1.031	1.688 □	0.875	B	S	0.60
15	2.650	2.458	2.133	N/A	N/A	0.625	1.219	1.781	0.875	B	S	0.66
16	2.810	2.613	2.301	N/A	N/A	0.625	1.281	1.875	0.875	B	S	0.76
17	2.980	2.768	2.444	N/A	N/A	0.625	1.313	2.047	1.000	B	S	1.00
18	3.140	2.924	2.612	N/A	N/A	0.625	1.469	2.219	1.000	B	S	1.16
19	3.300	3.080	2.757	N/A	N/A	0.625	1.625	2.375	1.000	B	S	1.36
20	3.460	3.236	2.924	N/A	N/A	0.625	1.750	2.547	1.000	B	S	1.54
21	3.620	3.392	3.070	N/A	N/A	0.625	1.781	2.703	1.000	B	S	1.74
22	3.780	3.549	3.237	N/A	N/A	0.625	1.875	2.875	1.000	B	S	1.92
23	3.940	3.706	3.386	0.625	0.77	0.625	2.000	3.000	1.000	B	D	2.16
24	4.100	3.864	3.552	0.625	0.84	0.625	2.250	3.250	1.000	B	D	2.44
25	4.260	4.021	3.701	0.625	0.91	0.625	2.250	3.250	1.000	B	D	2.48
26	4.420	4.179	3.867	0.625	1.00	0.625	2.250	3.250	1.000	B	D	2.60
28	4.740	4.494	4.182	0.625	1.10	0.625	2.250	3.250	1.000	B	D	2.74
30	5.060	4.810	4.498	0.625	1.30	0.625	2.250	3.250	1.000	B	D	2.92

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance. N/A = Non applicable/Not Available as standard

For more information on Sprockets see pages 132-137.

## DOUBLE PITCH

Chain Data	
Size	2042
Pitch	1"
Inside Width	5/16"
Roller Diameter	0.625"
Nominal Tooth Width:	0.284"

All dimensions in inches unless noted.

2042 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt.Lbs.
8	3.010	2.613	1.988	N/A	N/A	0.625	1.281	1.875	0.875	B	S	0.72
9	3.350	2.924	2.255	N/A	N/A	0.625	1.469	2.219	0.875	B	S	1.02
10	3.680	3.236	2.611	N/A	N/A	0.625	1.750	2.547	1.000	B	S	1.50
11	4.000	3.549	2.888	N/A	N/A	0.625	1.875	2.625	1.000	B	S	1.68
12	4.330	3.864	3.239	N/A	N/A	0.625	2.250	3.063	1.000	B	S	2.22
13	4.660	4.179	3.523	N/A	N/A	0.625	2.250	3.250	1.000	B	S	2.56
14	4.980	4.494	3.869	N/A	N/A	0.625	2.250	3.250	1.000	B	S	2.72
15	5.300	4.810	4.158	N/A	N/A	0.625	2.250	3.250	1.000	B	S	2.90
16	5.630	5.126	4.501	0.594	1.38	0.625	2.250	3.250	1.000	B	D	3.10
17	5.950	5.442	4.794	0.594	1.66	0.625	2.250	3.250	1.000	B	D	3.40
18	6.270	5.759	5.134	0.594	1.88	0.625	2.250	3.250	1.000	B	D	3.56
19	6.590	6.076	5.430	0.594	2.06	0.625	2.250	3.250	1.000	B	D	3.72
20	6.910	6.392	5.768	0.719	2.40	0.750	2.375	3.500	1.125	B	D	4.72
21	7.240	6.710	6.066	0.719	2.62	0.750	2.375	3.500	1.125	B	D	4.84
22	7.560	7.027	6.402	0.719	2.88	0.750	2.375	3.500	1.125	B	D	5.04
23	7.880	7.344	6.702	0.719	3.14	0.750	2.375	3.500	1.125	B	D	5.18
24	8.200	7.661	7.036	0.719	3.22	0.750	2.375	3.500	1.125	B	D	5.58
25	8.520	7.979	7.338	0.719	3.50	0.750	2.375	3.500	1.125	B	D	5.96
26	8.840	8.296	7.671	0.719	3.74	0.750	2.375	3.500	1.125	B	D	6.22
28	9.480	8.931	8.307	0.719	4.76	0.750	2.375	3.500	1.125	B	D	6.78
30	10.110	9.567	8.942	0.719	5.08	0.750	2.375	3.500	1.125	B	D	7.56

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. N/A = Non applicable/Not Available as standard

## DOUBLE PITCH

Chain Data	
Size	2050
Pitch	1 1/4"
Inside Width	3/8"
Roller Diameter	0.400"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

2050 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt.Lbs.
11	2.500	2.315	1.912	N/A	N/A	0.625	0.938	1.750	1.000	B	S	0.62
12	2.710	2.500	2.100	N/A	N/A	0.625	1.000	1.984	1.000	B	S	0.80
13	2.910	2.690	2.270	N/A	N/A	0.625	1.219	1.719	1.000	B	S	0.82
14	3.110	2.881	2.481	N/A	N/A	0.625	1.281	1.938	1.000	B	S	1.00
15	3.320	3.073	2.656	N/A	N/A	0.625	1.406	2.156	1.000	B	S	1.22
16	3.520	3.266	2.866	N/A	N/A	0.625	1.594	2.359	1.000	B	S	1.44
17	3.720	3.460	3.046	N/A	N/A	0.625	1.750	2.563	1.000	B	S	1.68
18	3.920	3.655	3.255	N/A	N/A	0.625	1.781	2.781	1.000	B	S	1.94
19	4.120	3.850	3.436	N/A	N/A	0.625	1.969	2.984	1.000	B	S	2.24
20	4.320	4.045	3.645	N/A	N/A	0.750	2.000	3.000	1.000	B	D	2.30
21	4.520	4.241	3.829	0.719	1.20	0.750	2.000	3.000	1.000	B	D	2.40
22	4.720	4.437	4.037	0.719	1.30	0.750	2.000	3.000	1.000	B	S	2.54
23	4.920	4.633	4.222	0.719	1.40	0.750	2.000	3.000	1.000	B	D	2.66
24	5.120	4.830	4.430	0.719	1.58	0.750	2.000	3.000	1.250	B	D	3.30
25	5.320	5.026	4.616	0.719	1.68	0.750	2.000	3.000	1.250	B	D	3.42
26	5.520	5.223	4.823	0.719	1.88	0.750	2.000	3.000	1.250	B	D	3.62
28	5.920	5.617	5.217	0.719	2.20	0.750	2.000	3.000	1.250	B	D	3.78
30	6.320	6.012	5.612	0.719	2.54	0.750	2.250	3.250	1.250	B	D	4.58

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. N/A = Non applicable/Not Available as standard

For more information on Sprockets see pages 132-137.

# No. 2052

## DOUBLE PITCH

Chain Data	
Size	2052
Pitch	1 1/4"
Inside Width	3/8"
Roller Diameter	0.750"
Nominal Tooth Width:	0.343"

All dimensions in inches unless noted.

2052 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
8	3.770	3.266	2.516	N/A	N/A	0.625	1.594	2.359	1.000	B	S	1.38
9	4.190	3.655	2.850	N/A	N/A	0.625	1.781	2.781	1.000	B	S	1.92
10	4.600	4.045	3.295	N/A	N/A	0.625	2.000	3.000	1.000	B	S	2.30
11	5.010	4.437	3.642	N/A	N/A	0.625	2.000	3.000	1.000	B	S	2.54
12	5.420	4.830	4.080	0.719	1.58	0.750	2.000	3.000	1.250	B	D	3.20
13	5.820	5.223	4.435	0.719	1.82	0.750	2.000	3.000	1.250	B	D	3.48
14	6.230	5.617	4.867	0.719	2.28	0.750	2.000	3.000	1.250	B	D	3.88
15	6.630	6.012	5.229	0.719	2.46	0.750	2.250	3.250	1.250	B	D	4.46
16	7.030	6.407	5.657	0.719	2.88	0.750	2.250	3.250	1.250	B	D	4.80
17	7.440	6.803	6.024	0.719	3.28	0.750	2.250	3.250	1.250	B	D	5.34
18	7.840	7.198	6.448	0.719	3.64	0.750	2.250	3.250	1.250	B	D	5.64
19	8.240	7.595	6.819	0.719	4.12	0.750	2.250	3.250	1.250	B	D	6.04
20	8.640	7.991	7.241	0.719	4.72	0.750	2.250	3.250	1.250	B	D	6.48
21	9.040	8.387	7.614	0.719	5.08	0.750	2.250	3.250	1.250	B	D	7.00
22	9.440	8.783	8.033	0.719	5.20	0.750	2.250	3.250	1.250	B	D	7.30
23	9.850	9.180	8.409	0.938	5.84	1.000	2.750	3.750	1.250	B	D	8.66
24	10.250	9.577	8.827	0.938	6.70	0.938	2.750	3.750	1.250	B	D	9.32
25	10.650	9.973	9.204	0.938	7.54	0.938	2.750	3.750	1.250	B	D	10.30
26	11.050	10.370	9.620	0.938	8.24	0.938	2.750	3.750	1.250	B	D	11.00
28	11.840	11.164	10.414	0.938	8.70	0.938	2.750	3.750	1.250	B	D	11.70
30	12.640	11.958	11.208	0.938	9.92	0.938	2.750	3.750	1.250	B	D	12.90

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. N/A = Non applicable/Not Available as standard

# No. 2060

## DOUBLE PITCH

Chain Data	
Size	2060
Pitch	1 1/2"
Inside Width	1/2"
Roller Diameter	0.469"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

2060 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
11	3.000	2.773	2.276	N/A	N/A	0.750	1.000	2.063 □	1.250	B	S	1.14
12	3.250	3.000	2.531	N/A	N/A	0.750	1.250	2.375 □	1.250	B	S	1.46
13	3.490	3.228	2.735	N/A	N/A	0.750	1.313	2.078	1.250	B	S	1.52
14	3.740	3.457	2.988	N/A	N/A	0.750	1.563	2.328	1.250	B	S	1.86
15	3.980	3.688	3.199	N/A	N/A	0.750	1.750	2.594	1.250	B	S	2.24
16	4.220	3.920	3.451	N/A	N/A	0.750	1.844	2.844	1.250	B	S	2.64
17	4.460	4.152	3.666	N/A	N/A	0.750	2.094	3.094	1.250	B	S	3.08
18	4.700	4.386	3.917	N/A	N/A	0.750	2.281	3.344	1.250	B	S	3.56
19	4.940	4.620	4.135	0.719	2.10	0.750	2.344	3.500	1.250	B	D	3.94
20	5.190	4.854	4.385	0.719	2.40	0.750	2.563	3.875	1.250	B	D	4.50
21	5.430	5.089	4.606	0.719	2.50	0.750	2.750	4.000	1.250	B	D	5.02
22	5.670	5.324	4.855	0.719	2.70	0.750	2.750	4.000	1.250	B	D	5.26
23	5.910	5.560	5.077	0.719	3.00	0.750	2.750	4.000	1.250	B	D	5.54
24	6.150	5.796	5.327	0.719	3.02	0.750	2.750	4.000	1.250	B	D	5.90
25	6.390	6.032	5.551	0.719	3.36	0.750	2.750	4.000	1.250	B	D	6.08
26	6.630	6.268	5.799	0.719	3.58	0.750	2.750	4.000	1.250	B	D	6.36
28	7.110	6.741	6.272	0.719	4.12	0.750	2.750	4.000	1.250	B	D	7.02
30	7.590	7.215	6.746	0.719	4.88	0.750	2.750	4.000	1.250	B	D	7.54

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance. N/A = Non applicable/Not Available as standard  
For more information on Sprockets see pages 132-137.



## DOUBLE PITCH

Chain Data	
Size	2062
Pitch	1 1/2"
Inside Width	3/8"
Roller Diameter	0.875"
Nominal Tooth Width:	0.459"

All dimensions in inches unless noted.

2062 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
8	4.520	3.920	3.045	N/A	N/A	0.750	1.844	2.844	1.250	B	S	2.60
9	5.020	4.386	3.444	N/A	N/A	0.750	2.281	3.344	1.250	B	S	3.48
10	5.520	4.854	3.979	N/A	N/A	0.750	2.563	3.828	1.250	B	S	4.54
11	6.010	5.324	4.395	N/A	N/A	0.750	2.750	4.000	1.250	B	S	5.20
12	6.500	5.796	4.921	0.719	2.98	0.750	2.750	4.000	1.250	B	D	5.70
13	6.990	6.268	5.347	0.719	3.60	0.750	2.750	4.000	1.250	B	D	6.28
14	7.470	6.741	5.866	0.719	4.02	0.750	2.750	4.000	1.250	B	D	6.82
15	7.960	7.215	6.300	0.719	4.76	0.750	2.750	4.000	1.250	B	D	7.48
16	8.440	7.689	6.814	0.719	5.70	0.750	2.750	4.000	1.250	B	D	8.18
17	8.920	8.163	7.253	0.938	6.16	1.000	2.750	4.000	1.250	B	D	8.82
18	9.410	8.638	7.763	0.938	6.96	1.000	2.750	4.000	1.250	B	D	9.36
19	9.890	9.113	8.207	0.938	8.00	1.000	2.750	4.250	1.250	B	D	11.10
20	10.370	9.589	8.714	0.938	8.46	0.938	2.750	4.250	1.250	B	D	11.66
21	10.850	10.064	9.161	0.938	8.93	0.938	2.750	4.250	1.250	B	D	13.24
22	11.330	10.540	9.665	0.938	10.74	0.938	2.750	4.250	1.250	B	D	13.78
23	11.810	11.016	10.115	0.938	11.64	0.938	2.750	4.250	1.250	B	D	14.90
24	12.290	11.492	10.617	0.938	12.64	0.938	2.750	4.250	1.250	B	D	15.56
25	12.770	11.968	11.070	0.938	13.78	0.938	2.750	4.250	1.250	B	D	16.80
26	13.250	12.444	11.569	0.938	15.00	0.938	2.750	4.250	1.750	B	D	20.20
28	14.210	13.397	12.522	1.250	17.32	1.250	2.750	4.250	1.750	B	D	21.86
30	15.170	14.350	13.475	1.250	19.50	1.250	2.750	4.250	1.750	B	D	26.00

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. N/A = Non applicable/Not Available as standard

## DOUBLE PITCH

Chain Data	
Size	2080
Pitch	2"
Inside Width	5/8"
Roller Diameter	0.625"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

2080 Plain Bore Sprocket Dia.				Type "A" Plain Bore		Type "B" Plain Bore						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
11	4.010	3.694	3.074	N/A	N/A	1.000	1.500	2.813 □	1.625	B	S	2.50
12	4.330	4.000	3.375	N/A	N/A	1.000	1.688	3.125 □	1.625	B	S	3.20
13	4.660	4.304	3.647	N/A	N/A	1.000	1.781	2.781	1.500	B	S	3.20
14	4.980	4.610	3.985	N/A	N/A	1.000	2.125	3.125	1.500	B	S	4.00
15	5.300	4.917	4.265	N/A	N/A	1.000	2.281	3.453	1.500	B	S	4.80
16	5.630	5.226	4.601	0.938	3.10	1.000	2.531	3.797	1.500	B	D	5.70
17	5.960	5.536	4.888	0.938	3.40	1.000	2.750	4.000	1.500	B	D	6.40
18	6.270	5.848	5.223	0.938	3.80	1.000	2.750	4.250	1.500	B	D	7.40
19	6.590	6.160	5.513	0.938	4.30	1.000	2.750	4.250	1.500	B	D	7.70
20	6.910	6.472	5.845	0.938	4.80	1.000	2.750	4.250	1.500	B	D	8.30
21	7.230	6.785	6.141	0.938	5.30	1.000	2.750	4.250	1.750	B	D	9.40
22	7.560	7.099	6.474	0.938	5.80	1.000	2.750	4.250	1.750	B	D	10.00
23	7.880	7.413	6.770	0.938	6.40	1.000	2.750	4.250	1.750	B	D	10.50
24	8.200	7.727	7.102	0.938	7.10	1.000	2.750	4.250	1.750	B	D	11.10
25	8.520	8.042	7.401	0.938	7.50	1.000	2.750	4.250	1.750	B	D	12.00
26	8.840	8.357	7.732	1.188	8.30	1.250	3.250	4.750	2.000	B	D	14.80
28	9.480	8.988	8.363	1.188	9.20	1.188	3.250	4.750	2.000	B	D	16.60
30	10.110	9.620	8.995	1.188	10.70	1.188	3.250	4.750	2.000	B	D	17.80

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. □ Has recessed groove in hub for chain clearance. N/A = Non applicable/Not Available as standard  
For more information on Sprockets see pages 132-137.

# DOUBLE PITCH

Chain Data	
Size	2082
Pitch	2"
Inside Width	5/8"
Roller Diameter	1.125"
Nominal Tooth Width:	0.575"

All dimensions in inches unless noted.

No. Teeth	2082 Plain Bore Sprocket Dia.			Type "A" Plain Bore		Type "B" Plain Bore						
	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. Lbs.	Plain Bore	MAX Bore *	Hub Dia.	LTB	Hub Type	Hub Style	Wt. Lbs.
8	6.030	5.226	4.101	N/A	N/A	1.000	2.531	3.797	1.750	B	S	6.40
9	6.700	5.848	4.634	N/A	N/A	1.000	2.750	4.250	1.750	B	S	8.20
10	7.360	6.472	5.347	N/A	N/A	1.000	2.750	4.250	1.750	B	S	9.20
11	8.010	7.099	5.902	0.938	5.70	1.000	2.750	4.250	1.750	B	D	10.10
12	8.660	7.727	6.602	0.938	6.80	1.000	2.750	4.250	1.750	B	D	11.20
13	9.310	8.357	7.171	1.188	7.70	1.250	3.250	4.750	2.000	B	D	15.00
14	9.960	8.988	7.863	1.188	9.10	1.250	3.250	4.750	2.000	B	D	15.80
15	10.610	9.620	8.442	1.188	10.70	1.188	3.250	4.750	2.000	B	D	17.80
16	11.250	10.252	9.127	1.188	12.40	1.188	3.250	4.750	2.000	B	D	19.30
17	11.900	10.885	9.713	1.188	14.10	1.188	3.250	4.750	2.000	B	D	21.40
18	12.540	11.512	10.393	1.188	15.40	1.188	3.250	4.750	2.000	B	D	22.90
19	13.190	12.151	10.985	1.188	18.00	1.188	3.250	4.750	2.000	B	D	24.40
20	13.830	12.785	11.660	1.188	19.20	1.188	3.250	4.750	2.000	B	D	26.70
21	14.470	13.419	12.256	1.250	20.80	1.250	3.250	4.750	2.000	B	D	28.40
22	15.110	14.053	12.928	1.250	23.70	1.250	3.250	4.750	2.000	B	D	32.20
23	15.750	14.688	13.528	1.250	24.90	1.250	3.250	4.750	2.000	B	D	34.90
24	16.390	15.323	14.198	1.250	27.60	1.250	3.250	4.750	2.000	B	D	37.80
25	17.030	15.958	14.801	1.250	30.20	1.250	3.250	4.750	2.000	B	D	39.60
26	17.670	16.593	15.468	1.250	32.80	1.250	3.500	5.250	2.000	B	D	41.50
28	18.950	17.863	16.738	1.250	38.60	1.250	3.500	5.250	2.000	B	D	47.70
30	20.230	19.134	18.009	1.250	43.80	1.250	3.500	5.250	2.000	B	D	54.50

\* Dimensions shown allow for standard keyway with set screw at 90 degrees. N/A = Non applicable/Not Available as standard

# No. 06B BRITISH STANDARD

3/8" PITCH

Chain Data	
BS/DIN	06B
Pitch	0.375"
Inside Width	0.225"
Roller Diameter	0.25"
Nominal Tooth Width:	0.205"

06B Plain Sprocket Diameter				Type A Plain Bore		Type B "Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. LBS	Plain Bore	Max. Bore*	Hub Dia.**	LTB	Style	Wt. LBS
8	1.130	0.980	0.728			0.315	0.354	0.512	0.866	S	0.07
9	1.256	1.098	0.846			0.315	0.433	0.630	0.866	S	0.09
10	1.378	1.213	0.965			0.315	0.472	0.787	0.866	S	0.13
11	1.504	1.331	1.083			0.315	0.551	0.906	0.984	S	0.20
12	1.626	1.449	1.201			0.315	0.630	1.024	0.984	S	0.22
13	1.748	1.567	1.319			0.394	0.709	1.142	0.984	S	0.24
14	1.866	1.685	1.437			0.394	0.748	1.220	0.984	S	0.26
15	1.988	1.803	1.555	0.315	0.15	0.394	0.787	1.339	0.984	S	0.31
16	2.110	1.921	1.673	0.394	0.18	0.394	0.866	1.457	0.984	S	0.40
17	2.232	2.039	1.791	0.394	0.40	0.394	0.984	1.575	1.102	S	0.44
18	2.350	2.161	1.909	0.394	0.24	0.394	0.984	1.693	1.102	S	0.51
19	2.472	2.280	2.028	0.394	0.26	0.394	1.102	1.811	1.102	S	0.55
20	2.594	2.398	2.146	0.394	0.29	0.394	1.181	1.929	1.102	S	0.68
21	2.713	2.516	2.268	0.394	0.31	0.472	1.181	1.969	1.102	S	0.79
22	2.835	2.634	2.386	0.394	0.33	0.472	1.260	2.008	1.102	S	0.82
23	2.953	2.756	2.504	0.394	0.37	0.472	1.260	2.047	1.102	S	0.86
24	3.075	2.874	2.626	0.394	0.42	0.472	1.260	2.126	1.102	S	0.88
25	3.193	2.992	2.744	0.394	0.44	0.472	1.378	2.244	1.102	S	0.90
26	3.315	3.110	2.862	0.394	0.46	0.472	1.496	2.362	1.102	S	0.93
27	3.433	3.232	2.980	0.394	0.49	0.472	1.496	2.362	1.102	S	0.97
28	3.555	3.350	3.098	0.394	0.51	0.472	1.496	2.362	1.102	S	0.99
29	3.673	3.469	3.220	0.394	0.55	0.472	1.496	2.362	1.102	S	1.04
30	3.819	3.587	3.339	0.394	0.60	0.472	1.496	2.362	1.181	S	1.06
35	4.394	4.185	3.933	0.472	0.60	0.551	1.575	2.559	1.181	S	1.50
40	4.988	4.780	4.531	0.551	0.99	0.630	1.772	2.756	1.181	S	1.79
45	5.587	5.378	5.126	0.551	1.12	0.630	1.772	2.953	1.181	S	2.01
60	7.378	7.165	6.913	0.709	2.01	0.748	1.772	2.953	1.181	E	2.95

NOTE: For sprockets not listed, please consult factory \*Dimensions shown allow for std keyway with set screw at 90°. \*\*Hub Diameter may vary to suit bore size.

# No. 08B BRITISH STANDARD

1/2" PITCH

Chain Data	
BS/DIN	08B
Pitch	0.500"
Inside Width	0.305"
Roller Diameter	0.335"
Nominal Tooth Width:	0.290"

08B Plain Sprocket Diameter				Type A Plain Bore		Type B Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. LBS	Plain Bore	Max. Bore*	Hub Dia.**	LTB	Style	Wt. LBS
8	1.496	1.306	0.980			0.394	0.591	0.787	0.984	S	0.20
9	1.673	1.461	1.126			0.394	0.591	0.827	0.984	S	0.31
10	1.839	1.618	1.283			0.394	0.787	1.024	0.984	S	0.33
11	2.000	1.776	1.441			0.394	0.866	1.181	0.984	S	0.37
12	2.165	1.933	1.598	0.394	0.18	0.394	0.866	1.339	1.102	S	0.53
13	2.331	2.091	1.756	0.394	0.31	0.394	0.984	1.496	1.102	S	0.55
14	2.492	2.248	1.913	0.394	0.26	0.394	1.102	1.654	1.102	S	0.68
15	2.654	2.406	2.071	0.394	0.31	0.394	1.181	1.811	1.102	S	0.73
16	2.815	2.563	2.228	0.394	0.33	0.472	1.260	1.969	1.102	S	0.82
17	2.976	2.720	2.386	0.394	0.35	0.472	1.378	2.126	1.102	S	1.12
18	3.134	2.878	2.543	0.394	0.44	0.472	1.496	2.244	1.102	S	1.19
19	3.295	3.039	2.705	0.394	0.46	0.472	1.575	2.520	1.102	S	1.43
20	3.457	3.197	2.862	0.394	0.55	0.472	1.654	2.638	1.102	S	1.68
21	3.618	3.354	3.020	0.472	0.57	0.472	1.772	2.756	1.102	E	1.81
22	3.780	3.512	3.177	0.472	0.66	0.472	1.890	2.874	1.102	E	1.94
23	3.937	3.673	3.335	0.472	0.73	0.472	2.008	3.071	1.102	E	2.31
24	4.098	3.831	3.496	0.472	0.82	0.551	2.087	3.228	1.102	E	2.31
25	4.260	3.988	3.654	0.472	0.88	0.551	2.087	3.228	1.102	E	2.49
26	4.417	4.150	3.815	0.630	0.95	0.630	2.087	3.228	1.181	E	2.54
27	4.579	4.307	3.972	0.630	0.97	0.630	2.087	3.228	1.181	E	2.62
28	4.736	4.465	4.130	0.630	1.10	0.630	2.087	3.228	1.181	E	2.87
29	4.898	4.626	4.291	0.630	1.21	0.630	2.087	3.228	1.181	E	2.93
30	5.059	4.783	4.449	0.591	1.26	0.630	2.087	3.504	1.181	E	3.00
35	5.854	5.579	5.244	0.591	1.70	0.630	2.362	3.504	1.181	E	3.55
40	6.654	6.374	6.039	0.709	2.23	0.748	2.362	3.504	1.378	E	4.14
45	7.449	7.169	6.835	0.709	3.15	0.748	2.362	3.504	1.378	E	4.65
60	9.843	9.555	9.220	0.709	4.48	0.748	2.520	3.937	1.378	E	7.61

NOTE: For sprockets not listed, please consult factory \*Dimensions shown allow for std keyway with set screw at 90°. \*\*Hub Diameter may vary to suit bore size.

For more information on Sprockets see pages 132-137.

# No. 10B BRITISH STANDARD

5/8" PITCH

Chain Data	
BS/DIN	10B
Pitch	0.625"
Inside Width	0.380"
Roller Diameter	0.400"
Nominal Tooth Width:	0.361"

10B Plain Sprocket Diameter				Type A Plain Bore		Type B Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. LBS	Plain Bore	Max. Bore*	Hub Dia.**	LTB	Style	Wt. LBS
8	1.886	1.634	1.232			0.472	0.630	0.866	0.984	S	0.20
9	2.091	1.827	1.429			0.472	0.748	1.063	0.984	S	0.31
10	2.299	2.024	1.622			0.472	0.866	1.260	0.984	S	0.51
11	2.504	2.220	1.819			0.472	0.984	1.457	0.984	S	0.60
12	2.709	2.413	2.016	0.472	0.33	0.472	1.260	1.693	0.984	S	0.71
13	2.909	2.610	2.213	0.472	0.42	0.472	1.299	1.890	0.984	S	0.79
14	3.114	2.807	2.409	0.472	0.51	0.472	1.417	2.087	0.984	S	0.99
15	3.315	3.008	2.606	0.472	0.55	0.472	1.496	2.244	0.984	S	1.30
16	3.516	3.205	2.803	0.472	0.68	0.472	1.732	2.480	0.984	S	1.50
17	3.717	3.402	3.000	0.472	0.77	0.472	1.850	2.638	0.984	S	1.81
18	3.921	3.598	3.201	0.472	0.86	0.472	1.890	2.874	0.984	S	2.01
19	4.122	3.799	3.398	0.630	0.95	0.630	2.008	2.992	0.984	S	2.29
20	4.323	3.996	3.597	0.630	1.06	0.630	2.008	2.992	0.984	S	2.49
21	4.520	4.193	3.795	0.630	1.12	0.630	2.008	2.992	0.984	E	2.60
22	4.720	4.394	3.992	0.630	1.30	0.630	2.008	2.992	0.984	E	2.80
23	4.921	4.591	4.189	0.630	1.43	0.630	2.008	2.992	0.984	E	3.20
24	5.122	4.787	4.390	0.630	1.50	0.630	2.008	2.992	1.260	E	3.31
25	5.323	4.988	4.587	0.630	1.61	0.630	2.008	2.992	1.260	E	3.51
26	5.524	5.185	4.783	0.630	1.72	0.630	2.008	2.992	1.260	E	3.59
27	5.720	5.382	4.984	0.709	1.96	0.748	2.008	2.992	1.260	E	3.70
28	5.921	5.583	5.181	0.709	2.05	0.748	2.008	2.992	1.260	E	3.79
29	6.122	5.780	5.382	0.709	2.36	0.748	2.008	2.992	1.260	E	4.21
30	6.323	5.980	5.579	0.709	2.54	0.748	2.244	3.228	1.260	E	4.50
35	7.319	6.972	6.571	0.709	3.33	0.748	2.244	3.228	1.260	E	5.47
40	8.315	7.965	7.567	0.709	4.45	0.748	2.244	3.228	1.260	E	6.50
45	9.311	8.961	8.559	0.709	5.93	0.748	2.520	3.740	1.260	E	8.22
60	12.299	11.941	11.543	0.945	10.80	0.984	2.520	3.740	1.260	E	13.01

NOTE: For sprockets not listed, please consult factory \*Dimensions shown allow for std keyway with set screw at 90°. \*\*Hub Diameter may vary to suit bore size.

# No. 12B BRITISH STANDARD

3/4" PITCH

Chain Data	
BS/DIN	12B
Pitch	0.750"
Inside Width	0.460"
Roller Diameter	0.475"
Nominal Tooth Width:	0.437"

12B Plain Sprocket Diameter				Type A Plain Bore		Type B Plain Bore					
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. LBS	Plain Bore	Max. Bore*	Hub Dia.**	LTB	Style	Wt. LBS
11	3.083	2.661	2.189	0.551	0.79	0.472	1.260	1.850	1.378	S	1.17
12	3.248	2.898	2.421	0.551	0.93	0.472	1.378	2.087	1.378	S	1.48
13	3.492	3.134	2.657	0.551	1.06	0.472	1.496	2.323	1.378	S	1.65
14	3.736	3.370	2.894	0.551	1.19	0.472	1.654	2.520	1.378	S	2.01
15	4.012	3.606	3.134	0.551	1.32	0.472	1.772	2.756	1.378	S	2.51
16	4.220	3.846	3.370	0.551	1.50	0.630	1.969	2.953	1.378	S	2.80
17	4.461	4.083	3.606	0.551	1.70	0.630	2.047	3.150	1.378	S	3.22
18	4.705	4.319	3.843	0.551	1.87	0.630	2.047	3.150	1.378	S	3.73
19	4.945	4.555	4.083	0.551	2.09	0.630	2.362	3.543	1.378	E	3.92
20	5.185	4.795	4.319	0.551	2.38	0.630	2.520	3.543	1.378	E	4.63
21	5.425	5.031	4.559	0.630	2.54	0.787	2.520	3.937	1.575	E	5.00
22	5.665	5.272	4.795	0.630	2.73	0.787	2.520	3.937	1.575	E	5.25
23	5.906	5.508	5.031	0.630	2.93	0.787	2.638	3.937	1.575	E	5.49
24	6.146	5.748	5.272	0.748	3.24	0.787	2.638	3.937	1.575	E	5.78
25	6.386	5.984	5.508	0.748	3.59	0.787	2.638	3.937	1.575	E	6.13
26	6.626	6.220	5.709	0.748	3.79	0.787	2.638	3.937	1.575	E	6.37
27	6.866	6.461	5.984	0.748	4.21	0.787	2.638	3.937	1.575	E	6.72
28	7.106	6.697	6.224	0.748	4.39	0.787	2.638	3.937	1.575	E	6.88
29	7.346	6.937	6.472	0.748	5.38	0.787	2.638	3.937	1.575	E	7.28
30	7.587	7.177	6.701	0.748	5.03	0.787	2.638	3.937	1.575	E	7.58
35	8.783	8.366	7.894	0.748	7.03	0.787	2.638	3.937	1.575	E	9.04
40	9.980	9.559	9.083	0.945	8.82	0.984	2.756	4.213	1.575	E	11.51
45	11.177	10.752	10.276	0.984	11.33	0.984	2.756	4.213	1.575	E	13.98
60	14.760	14.331	13.854	1.260	20.26	1.260	2.756	4.331	1.772	E	25.22

NOTE: For sprockets not listed, please consult factory \*Dimensions shown allow for std keyway with set screw at 90°. \*\*Hub Diameter may vary to suit bore size. For more information on Sprockets see pages 132-137.

Chain Data	
BS/DIN	16B
Pitch	1.000"
Inside Width	0.670"
Roller Diameter	0.625"
Nominal Tooth Width:	0.637"

16B Plain Sprocket Diameter				Type A Plain Bore		Type B and C Styles						
No. Teeth	Outside Dia.	Pitch Dia.	Caliper Dia.	Plain Bore	Wt. LBS	Plain Bore	Max. Bore*	Hub Dia.**	LTB	Hub Style	Style	Wt. LBS
11	4.004	3.551	2.925	0.551	1.81	0.630	1.614	2.480	1.575	B	S	3.20
12	4.331	3.862	3.240	0.551	2.01	0.630	1.850	2.835	1.575	B	S	4.01
13	4.657	4.177	3.555	0.551	2.29	0.630	2.047	3.110	1.575	B	S	4.01
14	4.980	4.496	3.870	0.551	2.69	0.630	2.362	3.465	1.575	B	S	4.61
15	5.303	4.811	4.185	0.551	3.00	0.630	2.441	3.780	1.575	B	S	5.71
16	5.626	5.126	4.500	0.551	3.40	0.787	2.638	3.937	1.772	B	E	6.61
17	5.949	5.441	4.819	0.551	3.99	0.984	2.638	4.016	1.772	B	E	7.01
18	6.272	5.760	5.134	0.945	4.41	0.984	2.756	4.252	1.772	B	E	8.31
19	6.594	6.075	5.449	0.945	4.70	0.984	2.756	4.252	1.772	B	E	8.51
20	6.913	6.394	5.768	0.945	5.49	0.984	2.756	4.252	1.772	B	E	9.02
21	7.236	6.709	6.083	0.945	5.80	0.984	2.756	4.252	1.969	B	E	10.01
22	7.555	7.028	6.402	0.945	6.22	0.984	2.756	4.252	1.969	B	E	11.00
23	7.874	7.346	6.720	0.945	6.70	0.984	2.756	4.252	1.969	B	E	11.20
24	8.197	7.661	7.035	0.945	7.61	0.984	2.756	4.252	1.969	B	E	12.21
25	8.516	7.980	7.354	0.945	8.00	0.984	2.756	4.252	1.969	B	E	12.70
26	8.835	8.295	7.669	1.181	8.60	1.260	3.150	4.724	1.969	B	D	15.50
27	9.157	8.614	7.988	1.181	9.50	1.260	3.150	4.724	1.969	B	D	16.60
28	9.476	8.933	8.307	1.181	10.10	1.260	3.150	4.724	1.969	B	D	16.71
29	9.795	9.248	8.626	1.181	10.60	1.260	3.150	4.724	1.969	B	D	17.50
30	10.114	9.567	8.941	1.260	11.51	1.260	3.150	4.724	1.969	B	D	18.21
35	11.713	11.157	10.531	1.260	15.26	1.260	3.150	4.724	1.969	B	D	22.16
40	13.307	12.744	12.122	1.260	19.86	1.260	3.150	4.724	1.969	B	D	26.08
45	14.902	14.335	13.709	1.260	25.79	1.260	3.150	4.724	1.969	B	D	30.03
60	19.681	19.106	18.484	1.260	43.54	1.260	3.346	5.118	1.969	B	D	51.43

**NOTE: For sprockets not listed, please consult factory** \*Dimensions shown allow for std keyway with set screw at 90°. \*\*Hub Diameter may vary to suit bore size.

# DOUBLE PLUS® SPROCKETS

Dimensional data in inches unless noted.

No. Teeth	Chain Pitch	Outside Diameter (Do)	Pitch Diameter (Dp)	Plain Bore (d)	Hub Diameter (DH)	Hub Length (L)	Hub Type	Tooth Thickness (T)	M	Wt. Lbs.
10	C2030	2.480	2.427	0.500	1.457	0.984	B	0.118	0.602	0.44
10	C2040	3.346	3.326	0.630	2.047	1.575	B	0.157	0.803	1.76
10	C2050	4.213	4.045	0.630	2.598	1.772	B	0.197	1.004	3.31
10	C2060	5.039	4.854	0.748	3.189	1.969	B	0.236	1.201	5.52
10	C2080	6.772	6.472	0.906	4.331	2.638	B	0.472	1.870	15.40

# SPROCKETS

## TAPER-LOCK® BUSHINGS

All dimensions in inches unless noted.

Bushing No.	Bore Range				Torque Capacity (lb-in)	A	B	C	Wt. Lbs*
	Minimum	Max w/Standard Keyway	Max w/Shallow Keyway	Max w/No Keyway					
1008	0.500	0.875	1.000	1.000	1,200	1.386	0.875	1.328	0.20
1108	0.500	1.000	1.125	1.125	1,300	1.511	0.875	1.453	0.25
1210	0.500	1.250	1.250	1.250	3,600	1.875	1.000	1.750	0.55
1215	0.500	1.250	1.250	1.250	3,550	1.875	1.500	1.750	0.70
1310	0.500	1.375	1.438	1.438	3,850	2.000	1.000	1.875	0.70
1610	0.500	1.625	1.688	1.688	4,300	2.250	1.000	2.125	0.75
1615	0.500	1.625	1.688	1.688	4,300	2.250	1.500	2.125	1.00
2012	0.500	2.000	2.125	2.125	7,150	2.750	1.250	2.625	1.40
2517	0.500	2.438	2.688	2.688	11,600	3.375	1.750	3.250	3.20
2525	0.750	2.375	2.688	2.688	11,300	3.375	2.500	3.250	4.30
3020	0.875	3.000	3.250	3.250	24,000	4.250	2.000	4.000	5.80
3030	0.938	3.000	3.250	3.250	24,000	4.250	3.000	4.000	8.00
3535	1.188	3.500	3.938	3.938	44,800	5.000	3.500	4.830	11.00
4040	1.438	4.000	4.438	4.438	77,300	5.750	4.000	5.540	17.00
4545	1.938	4.500	4.938	4.938	110,000	6.375	4.500	6.130	24.00
5050	2.438	5.000	5.313	5.313	126,000	7.000	5.000	6.720	32.00

\* Bushing weight changes with bore size. Weight depicted reflects approximate weight.

NOTE: Torque Capacity shown is for light starting and steady running. For more sever applications apply Service Factor as needed.

All dimensions in inches unless noted.

Bushing No.	Locking Screws (F)		Clearance L*		Clearance M#		Hex Key Torque in./lbs
	Size	Qt.	Std. Hey Key	Short Hex Key	Std. Hey Key	Short Hex Key	
1008	.250 X .500	2	1.125	0.625	1.250	0.750	55
1108	.250 X .500	2	1.125	0.625	1.250	0.750	55
1210	.375 X .625	2	1.375	0.813	1.625	1.063	175
1215	.375 X .625	2	1.375	0.813	1.625	1.063	175
1310	.375 X .625	2	1.375	0.813	1.625	1.063	175
1610	.375 X .625	2	1.375	0.813	1.625	1.063	175
1615	.375 X .625	2	1.375	0.813	1.625	1.063	175
2012	.438 X .875	2	1.563	0.938	2.000	1.375	280
2517	.500 X 1.000	2	1.625	1.000	2.250	1.625	430
2525	.500 X 1.000	2	1.625	1.000	2.250	1.625	430
3020	.625 X 1.250	2	1.813	1.188	2.688	2.063	800
3030	.625 X 1.250	2	1.813	1.188	2.688	2.063	800
3535	.500 X 1.500	3	2.000	1.313	3.375	2.688	1000
4040	.625 X 1.750	3	2.375	1.625	4.125	3.375	1700
4545	.750 X 2.000	3	2.625	1.938	4.750	4.063	2450
5050	.875 X 2.250	3	2.813	2.313	5.250	4.813	3100

\* Space required to tighten bushing. Also space required to loosen screws to permit removal of hub by puller.

# Space required to remove bushing using jackscrews - no puller required.

Short Hex Key = Standard hex key cut to minimum usable length.

# TAPER-LOCK® BUSHINGS

Bore Size in Inches	Item Code	Bushing Number															
		1008	1108	1210	1215	1310	1610	1615	2012	2517	2525	3020	3030	3535	4040	4545	5050
1/2"	H	•	•	•	•	•	•	•	•	•							
9/16"	I	•	•	•	•	•	•	•	•								
5/8"	J	•	•	•	•	•	•	•	•								
11/16"	K	•	•	•	•	•	•	•	•								
3/4"	L	•	•	•	•	•	•	•	•	•							
13/16"	M	•	•	•	•	•	•	•	•	•							
7/8"	P	•	•	•	•	•	•	•	•	•	•						
15/16"	R	S	•	•	•	•	•	•	•	•	•	•					
1"	1	S	•	•	•	•	•	•	•	•	•	•	•				
1-1/16"	1A		S	•	•	•	•	•	•	•	•	•	•				
1-1/8"	1B		S	•	•	•	•	•	•	•	•	•	•				
1-3/16"	1C			•	•	•	•	•	•	•	•	•	•	•			
1-1/4"	1D			•	•	•	•	•	•	•	•	•	•	•			
1-5/16"	1E					•	•	•	•	•	•	•	•	•			
1-3/8"	1F					•	•	•	•	•	•	•	•	•			
1-7/16"	1G					S	•	•	•	•	•	•	•	•	•		
1-1/2"	1H						•	•	•	•	•	•	•	•	•		
1-9/16"	1I							S	S	•	•	•	•	•			
1-5/8"	1J							S	S	•	•	•	•	•	•		
1-11/16"	1K							S	S	•	•	•	•	•	•		
1-3/4"	1L									•	•	•	•	•	•		
1-13/16"	1M									•	•	•	•	•			
1-7/8"	1P									•	•	•	•	•	•		
1-15/16"	1R								S	•	•	•	•	•	•	•	
2"	2								S	•	•	•	•	•	•	•	
2-1/16"	2A									•	•	•	•	•	•		
2-1/8"	2B								S	•	•	•	•	•	•		
2-3/16"	2C									•	•	•	•	•	•		
2-1/4"	2D									•	•	•	•	•	•		
2-5/16"	2E										S	S	•	•			
2-3/8"	2F										S	S	•	•	•		
2-7/16"	2G										S	S	•	•	•	•	•
2-1/2"	2H										S	S	•	•	•		
2-9/16"	2I											•	•				
2-5/8"	2J										S		•	•	•		
2-11/16"	2K										S		•	•	•		
2-3/4"	2L											•	•	•	•		
2-13/16"	2M											S	•				
2-7/8"	2P											S	S	•	•	•	
2-15/16"	2R											S	S	•	•	•	•
3"	3											S	S	•	•	•	
3-1/8"	3B											S	S	•	•	•	
3-3/16"	3C											S	S	•	•	•	
3-1/4"	3D											S	S	•	•	•	
3-5/16"	3E													S			
3-3/8"	3F													S	•	•	
3-7/16"	3G													S	•	•	
3-1/2"	3H													S	•	•	
3-5/8"	3J													S	•	•	•
3-11/16"	3K													S	S		
3-3/4"	3L													S	S	•	
3-7/8"	3P													S	S	•	•
3-15/16"	3R													S	S	•	•
4"	4																
4-1/8"	4B														S	•	•
4-3/16"	4C														S	•	•
4-1/4"	4D														S	•	
4-3/8"	4F															•	•
4-7/16"	4G														S	•	•
4-1/2"	4H															S	•
4-3/4"	4P															S	S
4-15/16"	4R															S	S
5"	5																S

See page 194 for Shallow keyway dimensions.

• Denotes stocking item

S = Shallow keyway in hub



## BUSHING INSTALLATION AND REMOVAL

### TAPER-LOCK® Bushing Installation

- 1 Clean and degrease the bore and tapered surface of the bushing and the tapered bore of the pulley/hub/sprocket.
- 2 Insert the bushing into the pulley/hub/sprocket bore and line up the holes (Half threaded holes must line up the half straight non-threaded holes).
- 3 Lightly oil the locking screws and insert but do not tighten yet.
- 4 When using a key, it should be fitted to the shaft keyway. There should be a top clearance between the key and the keyway in the mating bushing.
- 5 Clean and degrease the shaft. Fit pulley/hub/sprocket onto the shaft and locate in the desired position.
- 6 Using a hexagon socket wrench, gradually tighten the locking screws in accordance with the required tightening torque.
- 7 When the drive has been operating under load for a short period, approximately 30 to 60 minutes, stop the equipment and check that the screws remain at the required tightening torque. Adjust if necessary.
- 8 To avoid the ingress of dirt, fill all empty holes with grease.

### TAPER-LOCK® Bushing Removal

- A Remove any loading to the equipment to enable a safe removal of components.
- B Slacken and remove all locking screws.
- C Add lubricant to the previously removed screws and insert into jack-out hole/holes in the bushing.
- D Tighten the screws uniformly and alternately until the bushing is loose and the pulley/hub/sprocket can be moved freely on the shaft.
- E Remove the bushing/pulley/hub/sprocket assembly from the shaft.

# SPROCKETS

## TAPER-LOCK® WELD-ON HUBS

Tsubaki offers the most complete line of TAPER-LOCK® weld-on hubs for insertion and welding to produce “B” type sprockets, sheaves, and other applications without hub protrusion. To provide greater strength for this type of shaft locking mechanism and to reduce heat distortion caused by welding, these hubs are dimensionally interchangeable with our sprocket items.

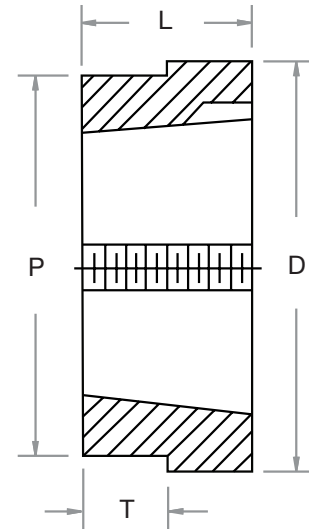
Special dimension hubs are available per your application requirements on a Made-To-Order basis. All stock Tsubaki hubs are made from 1045 steel bar stock. No powdered or sintered metal is used. The TAPER-LOCK® weld-on hubs listed below include the appropriate tapered bores and mounting holes to mate with Tsubaki sprockets and other U.S. sprocket manufacturers that conform to ANSI specifications.

### TAPER-LOCK® WELD-ON HUBS

All dimensions in inches unless noted.

Model #	Use with Bushing #	D	P	L	T	Wt. Lbs
35TL1	1610	3.000	2.875	1.000	0.141	0.80
41TL1	1610	3.000	2.875	1.000	0.219	0.80
40TL1	1610	3.000	2.875	1.000	0.250	0.80
40TL2	2012	3.625	3.438	1.250	0.250	1.50
40TL3	2517	4.250	4.125	1.750	0.250	2.70
50TL1	2012	3.625	3.438	1.250	0.313	1.50
50TL2	2517	4.250	4.125	1.750	0.313	2.70
60TL1	2012	3.625	3.438	1.250	0.438	1.50
60TL2	2517	4.250	4.125	1.750	0.438	2.70
80TL1	2012	3.625	3.438	1.250	0.563	1.50
80TL2	2517	4.250	4.125	1.750	0.563	2.70
80TL3	3020	5.250	5.000	2.000	0.563	4.30
100TL1	2517	4.500	4.125	1.750	0.688	2.70
100TL2	3020	5.250	5.000	2.000	0.688	4.30
120TL1	2517	4.250	4.000	1.750	0.875	2.60
120TL2	3020	5.250	5.000	2.000	0.875	4.20
120TL3	3535	6.500	6.500 *	3.500	-	13.00
140TL1	4040	7.750	7.750 *	4.000	-	25.00
160TL1	3020	5.250	5.000	2.000	1.125	4.00
160TL2	3535	6.500	6.250	3.500	1.125	12.60
160TL3	4545	8.750	8.750 *	4.500	-	42.00

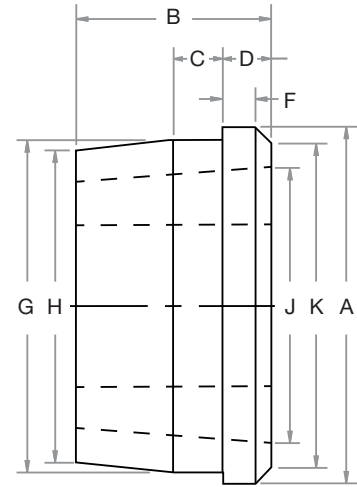
\* These items have no step on the hubs.



# SPROCKETS

## TAPER-LOCK® Type W Weld-On Hubs

TAPER-LOCK® type W weld-on hubs are designed for use in applications such as welding to plate sprockets, pulleys, and agitators. Each is made of steel, drilled, tapped, and taper bored for TAPER-LOCK® bushings. The W-series Weld-On Hubs are generally used for severe duty applications.



All dimensions in inches unless noted.

Hub Number	Use with Bushing #	A	B	C	D	F	G	H	J	K	Wt. Lbs
W12	1215	2.875	1.500	0.375	0.625	0.375	2.500	2.375	1.875	2.625	1.30
W16	1615	3.250	1.500	0.375	0.625	0.375	2.875	2.750	2.375	3.000	1.50
W25	2517	4.875	1.750	0.500	0.750	0.375	4.375	4.250	3.375	4.625	4.00
W30	3030	5.500	3.000	0.750	0.750	0.250	5.125	4.813	4.125	5.000	8.60
W35	3535	6.750	3.500	1.250	1.000	0.375	6.250	5.938	5.000	6.000	15.00
W40	4040	7.750	4.000	1.500	1.000	0.375	7.250	6.875	5.750	7.000	29.00
W45	4545	8.750	4.500	1.750	1.000	0.375	8.000	7.625	6.375	8.000	42.00

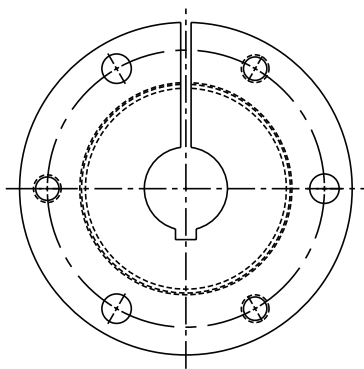
# SPROCKETS

## QD® BUSHINGS

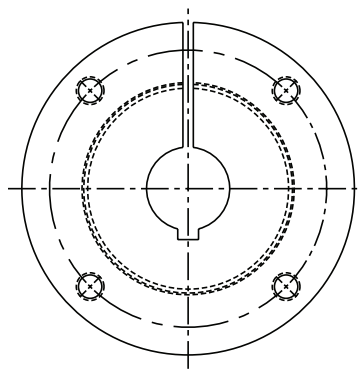
A	SDS	-1B		
Altered <sup>1)</sup>	QD® Bushing	Bore Size		
A: Alteration Required	JA	Blank = stock plain bore		
	SH	H	1/2"	(0.500")
	SDS	I	9/16"	(0.563")
	SDS	J	5/8"	(0.625")
	SK	K	11/16"	(0.688")
	SF	L	3/4"	(0.750")
	E	M	13/16"	(0.813")
	F	P	7/8"	(0.875")
	J	R	15/16"	(0.938")
	M	1	1"	(1.000")
	N	1A	1-1/16"	(1.063")
	P	1B	1-1/8"	(1.125")

Above are examples. There are more sizes available. Please see QD® Bushing selection chart on pages 201 and 202.

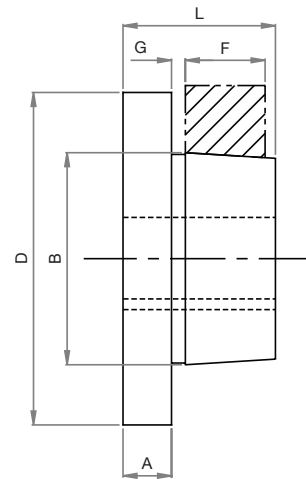
<sup>1)</sup> Alteration field only to be denoted if a deviation from standard is required.



BUSHINGS JA TO J



BUSHINGS M TO P



# SPROCKETS

## QD® BUSHING Dimensional Information

All dimensions in inches unless noted.

QD® Bushing	Bore Range				Torque Capacity (lb-in)	A	B	D	F	G	L	Wt. Lbs
	Min.	Max w/ Standard Keyway	Max w/ Shallow Keyway	Max w/No Keyway								
JA	0.500	1.000	1.188	1.250	1,000	0.375	1.375	2.000	0.563	0.125	1.063	0.80
SH	0.500	1.375	1.625	1.688	3,500	0.438	1.871	2.625	0.813	0.125	1.313	0.70
SDS	0.500	1.625	1.938	2.000	5,000	0.438	2.187	3.188	0.760	0.125	1.313	1.00
SD	0.500	1.625	1.938	2.000	5,000	0.438	2.187	3.188	1.250	0.125	1.813	1.20
SK	0.500	2.125	2.500	2.625	7,000	0.563	2.812	3.875	1.250	0.125	1.938	2.10
SF	0.500	2.313	2.938	2.938	11,000	0.625	3.125	4.625	1.250	0.125	2.063	3.10
E	0.875	2.875	3.500	-	20,000	0.873	3.834	6.000	1.625	0.250	2.750	7.10
F	1.000	3.250	3.938	4.000	30,000	0.938	4.437	6.625	2.500	0.344	3.750	8.70
J	1.500	3.750	4.500	-	45,000	1.125	5.148	7.250	3.188	0.375	4.625	16.80
M	2.000	4.750	5.500	-	85,000	1.250	6.500	9.000	5.188	0.400	6.750	56.00
N	2.438	5.000	6.000	-	150,000	1.500	7.000	10.000	6.250	0.563	8.125	68.00
P	2.938	5.938	7.000	-	250,000	1.750	8.250	11.750	7.250	0.625	9.375	120.00

All dimensions in inches unless noted.

QD® Bushing	Cap Screws			Bolt Torque (FT. LBS.)
	Size	Quantity Req.	Bolt Circle*	
JA	10 - 24 x 1	3	1.656	5
SH	1/4 x 1 3/8	3	2.250	9
SDS	1/4 x 1 3/8	3	2.688	9
SD	1/4 x 1 7/8	3	2.688	9
SK	5/16 x 2	3	3.313	15
SF	3/8 x 2	3	3.875	30
E	1/2 x 2 3/4	3	5.000	60
F	9/16 x 3 5/8	3	5.625	75
J	5/8 x 4 1/2	3	6.250	135
M	3/4 x 6 3/4	4	7.875	225
N	7/8 x 8	4	8.500	300
P	1 x 9 1/2	4	10.000	450

QD® is a registered trademark of, and is used under license agreement from Emerson Electric Co.

# QD® BUSHING SELECTION CHART

QD® Bushing													
Bore Size in Inches	Item Code	JA	SH	SDS	SD	SK	SF	E	F	J	M	N	P
1/2"	H	•	•	•	•	•	•						
9/16"	I	•	•	•	•	•	•						
5/8"	J	•	•	•	•	•	•						
11/16"	K	•	•	•	•	•	•						
3/4"	L	•	•	•	•	•	•						
13/16"	M	•	•	•	•	•	•						
7/8"	P	•	•	•	•	•	•	•					
15/16"	R	•	•	•	•	•	•	•					
1"	1	•	•	•	•	•	•	•	•				
1-1/16"	1A	S	•	•	•	•	•	•	•				
1-1/8"	1B	S	•	•	•	•	•	•	•				
1-3/16"	1C	S	•	•	•	•	•	•	•				
1-1/4"	1D	N	•	•	•	•	•	•	•				
1-5/16"	1E		•	•	•	•	•	•	•				
1-3/8"	1F		•	•	•	•	•	•	•				
1-7/16"	1G		S	•	•	•	•	•	•				
1-1/2"	1H		S	•	•	•	•	•	•	•			
1-9/16"	1I		S	•	•	•	•	•	•	•			
1-5/8"	1J		S	•	•	•	•	•	•	•			
1-11/16"	1K		N	S	S	•	•	•	•	•			
1-3/4"	1L			S	S	•	•	•	•	•			
1-13/16"	1M			S	S	•	•	•	•	•			
1-7/8"	1P			S	S	•	•	•	•	•			
1-15/16"	1R			S	S	•	•	•	•	•			
2"	2			N	N	•	•	•	•	•	•		
2-1/16"	2A					•	•	•	•	•	•		
2-1/8"	2B					•	•	•	•	•	•		
2-3/16"	2C					S	•	•	•	•	•		
2-1/4"	2D					S	•	•	•	•	•		
2-5/16"	2E					S	•	•	•	•	•		
2-3/8"	2F					S	S	•	•	•	•		
2-7/16"	2G					S	S	•	•	•	•	•	
2-1/2"	2H					S	S	•	•	•	•	•	
2-9/16"	2I					N	S	•	•	•	•	•	
2-5/8"	2J					N	S	•	•	•	•	•	
2-11/16"	2K						S	•	•	•	•	•	
2-3/4"	2L						S	•	•	•	•	•	
2-13/16"	2M						S	•	•	•	•	•	
2-7/8"	2P						S	•	•	•	•	•	
2-15/16"	2R						S	S	•	•	•	•	
3"	3							S	•	•	•	•	
3-1/16"	3A							S	•	•	•	•	
3-1/8"	3B							S	•	•	•	•	
3-3/16"	3C							S	•	•	•	•	
3-1/4"	3D							S	•	•	•	•	
3-5/16"	3E							S	•	•	•	•	
3-3/8"	3F							S	S	•	•	•	
3-7/16"	3G							S	S	•	•	•	•
3-1/2"	3H							S	S	•	•	•	•
3-9/16"	3I								S	•	•	•	•
3-5/8"	3J								S	•	•	•	•
3-11/16"	3K								S	•	•	•	•
3-3/4"	3L								S	•	•	•	•

See page 199 for Shallow keyway dimensions.

S = Shallow keyway in hub

N = No keyway in hub

# QD® BUSHING SELECTION CHART

QD® Bushing													
Bore Size in Inches	Item Code	JA	SH	SDS	SD	SK	SF	E	F	J	M	N	P
3-13/16"	3M								S	•	•	•	•
3-7/8"	3P								S	S	•	•	•
3-15/16"	3R								S	S	•	•	•
4"	4								N	S	•	•	•
4-1/16"	4A									S	•	•	•
4-1/8"	4B									S	•	•	•
4-3/16"	4C									S	•	•	•
4-1/4"	4D									S	•	•	•
4-5/16"	4E									S	•	•	•
4-3/8"	4F									S	•	•	•
4-7/16"	4G									S	•	•	•
4-1/2"	4H									S	•	•	•
4-9/16"	4I										•	•	•
4-5/8"	4J										•	•	•
4-11/16"	4K										•	•	•
4-3/4"	4L										•	•	•
4-13/16"	4M										•	•	•
4-7/8"	4P										S	•	•
4-15/16"	4R										S	•	•
5"	5										S	•	•
5-1/16"	5A										S	•	•
5-1/8"	5B										S	S	•
5-3/16"	5C										S	S	•
5-1/4"	5D										S	S	•
5-5/16"	5E										S	S	•
5-3/8"	5F										S	S	•
5-7/16"	5G										S	S	•
5-1/2"	5H										S	S	•
5-9/16"	5I											S	•
5-5/8"	5J											S	•
5-11/16"	5K											S	•
5-3/4"	5L											S	•
5-13/16"	5M											S	•
5-7/8"	5											S	•
5-15/16"	5R											S	•
6"	6											S	S
6-1/16"	6A												S
6-1/8"	6B												S
6-3/16"	6C												S
6-1/4"	6D												S
6-5/16"	6E												S
6-3/8"	6F												S
6-7/16"	6G												S
6-1/2"	6H												S
6-9/16"	6I												S
6-5/8"	6J												S
6-11/16"	6K												S
6-3/4"	6L												S
6-13/16"	6M												S
6-7/8"	6P												S
6-15/16"	6R												S
7"	7												S

See page 199 for Shallow keyway dimensions.

S = Shallow keyway in hub

N = No keyway in hub

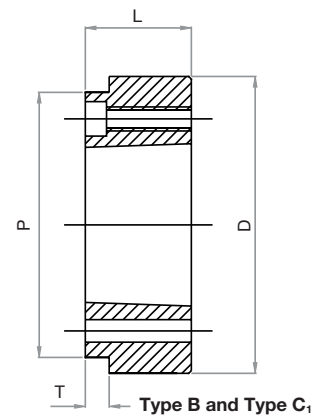
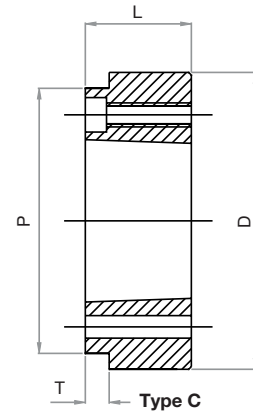
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# QD® WELD-ON HUBS

Tsubaki offers the most complete line of “QD®” Style weld-on hubs for insertion and welding to produce “B” style sprockets, sheaves, and other applications. To provide greater strength for this type of shaft locking mechanism and reduce heat distortion caused by welding, these hubs are dimensionally the same as our sprocket items. Special dimensional hubs are available per your specifications on a made-to-order basis. All Tsubaki hubs are made from steel bar stock (not powdered or sintered metal). The “QD®” Style Weld-On hubs listed below include appropriate tapered bores and mounting holes. QD® Weld-On hubs are manufactured with a step for assistance in locating the attached plate. This is shown as the “T” dimension and depending on the width of the plate, the result is either a B-style or C-style sprocket.

All dimensions in inches unless noted.

Catalog Number	Use with Bushing #	Dim. D	Dim. P	Dim. L	Dim. T	Hub Type	Wt. Lbs.
35SHW	SH	3.00	2.875	0.813	0.141	B	.90
40SDSW	SDS	3.500	3.125	0.750	0.250	B	1.00
40SKW	SK	4.250	3.875	1.250	0.250	B	2.40
50SDSW	SDS	3.625	3.438	0.750	0.313	B	1.00
50SKW	SK	4.250	4.125	1.250	0.313	B	2.40
50SFW	SF	5.000	4.625	1.250	0.313	B	3.70
60SDSW	SDS	3.500	3.125	0.750	0.438	B	1.00
60SKW	SK	4.250	3.875	1.250	0.438	B	2.40
60SFW	SF	5.000	4.625	1.250	0.438	B	3.60
60EW	E	6.250	5.875	1.625	0.438	B	7.80
80SFW	SF	5.000	4.625	1.250	0.563	B	3.50
80EW	E	6.250	5.875	1.625	0.563	C	7.70
80FW	F	7.000	6.625	2.500	0.563	C	14.70
100EWB	E	6.250	5.875	1.625	0.688	B	7.50
100EWC	E	6.250	5.875	1.625	0.688	C	7.50
100FW	F	7.000	6.625	2.500	0.688	C	14.60
120EW	E	6.250	5.875	1.625	0.875	B	7.40
120FW	F	7.000	6.625	2.500	0.875	C	14.30
120JW	J	8.000	7.500	3.188	0.875	C	23.70
160FW	F	7.000	6.625	2.500	1.094	B	14.00
160JW	J	8.000	7.500	3.188	1.125	C	23.30
160MW	M	10.000	9.500	5.188	2.250	C1	59.30





Chain Data	
Chain Size	35
Pitch	.375"
Inside Width	.188"
Roller Diameter	.2"
Nominal Tooth Width:	0.168"

All dimensions in inches unless otherwise stated.

No. 35 Single Split Taper - 3/8" Pitch				Type B										
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Style	Bushing	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
15	1.989	1.804	1.594	35G15	3	G1	0.750	1.000	1.348	1.000	0.168	0.156	2.000	0.3
16	2.110	1.922	1.722	35G16	3	G1	0.750	1.000	1.348	1.000	0.168	0.156	2.000	0.3
17	2.231	2.041	1.832	35G17	3	G1	0.750	1.000	1.348	1.000	0.168	0.156	2.000	0.3
18	2.352	2.160	1.960	35G18	3	G1	0.750	1.000	1.348	1.000	0.168	0.156	2.000	0.3
19	2.472	2.279	2.071	35G19	3	G1	0.625	1.250	1.348	1.000	0.168	0.063	2.500	0.3
19	2.472	2.279	2.071	35H19	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.5
20	2.593	2.397	2.197	35H20	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.5
21	2.713	2.516	2.039	35H21	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.6
22	2.833	2.635	2.435	35H22	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.8
23	2.953	2.754	2.548	35H23	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.7
24	3.073	2.873	2.673	35H24	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.8
25	3.193	2.992	2.786	35H25	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.8
26	3.313	3.111	2.911	35H26	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.8
28	3.553	3.349	3.149	35H28	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.9
30	3.793	3.588	3.388	35H30	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.9
32	4.032	3.826	3.626	35H32	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	0.9
35	4.392	4.184	3.979	35H35	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.0
36	4.511	4.303	4.103	35H36	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.0
40	4.990	4.780	4.580	35H40	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.2
42	5.229	5.018	4.818	35H42	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.2
45	5.588	5.375	5.173	35H45	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.4
48	5.946	5.734	5.534	35H48	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.5
54	6.664	6.449	6.249	35H54	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	1.8
60	7.380	7.165	6.965	35H60	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	2.3
70	8.575	8.358	8.158	35H70	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	2.8
72	8.881	8.597	8.397	35H72	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	3.0
80	9.769	9.552	9.352	35H80	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	3.8
84	10.247	10.029	9.829	35H84	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	4.0
96	11.680	11.461	11.261	35H96	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	5.3
112	13.591	13.371	13.171	35H112	3	H1	0.875	1.250	1.500	1.156	0.168	0.063	2.500	6.8

Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur.

Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering.

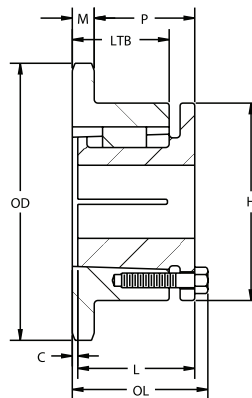
For Split Taper Bushings see page 217.



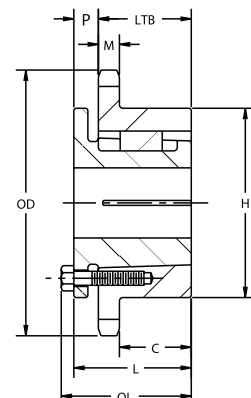
If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.



All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 4  
TYPE B



STYLE 5  
TYPE B

# No. 41 SINGLE SPLIT TAPER

1/2" PITCH

Chain Data	
Chain Size	41
Pitch	.5"
Inside Width	.025"
Roller Diameter	.306"
Nominal Tooth Width:	0.227"

All dimensions in inches unless otherwise stated.

No. 41 Single Split Taper - 1/2" Pitch				Type B										
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Style	Bushing	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
12	2.166	1.932	1.626	41G12	3	G1	0.625	1.000	1.638	1.031	0.227		2.000	0.3
14	2.491	2.247	1.941	41G14	3	G1	0.625	1.000	1.638	1.031	0.227		2.000	0.4
15	2.652	2.405	2.086	41H15	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.5
16	2.814	2.563	2.257	41H16	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.5
17	2.974	2.721	2.403	41H17	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.6
18	3.136	2.879	2.573	41H18	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.7
19	3.292	3.038	2.722	41H19	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.8
20	3.457	3.196	2.890	41H20	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.8
21	3.618	3.355	3.040	41H21	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.9
22	3.778	3.513	3.207	41H22	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	0.9
23	3.938	3.672	3.357	41H23	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.0
24	4.098	3.831	3.525	41H24	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.1
25	4.258	3.989	3.675	41H25	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.1
26	4.418	4.148	3.842	41H26	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.1
27	4.578	4.307	3.994	41H27	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.1
28	4.738	4.465	4.159	41H28	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.2
30	5.057	4.783	4.477	41H30	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.3
32	5.316	5.101	4.794	41H32	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.5
35	5.856	5.578	5.266	41H35	3	H1	0.875	1.250	1.500	1.094	0.227		2.500	1.8
36	6.015	5.737	5.431	41P36	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	2.5
40	6.653	6.373	6.067	41P40	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	3.0
42	6.972	6.691	6.385	41P42	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	3.1
45	7.450	7.168	6.858	41P45	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	3.5
48	7.928	7.645	7.339	41P48	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	4.0
54	8.884	8.599	8.294	41P54	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	4.6
60	9.840	9.554	9.246	41P60	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	5.5
70	11.433	11.145	10.840	41P70	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	7.0
72	11.752	11.463	11.156	41P72	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	7.9
80	13.026	12.736	12.43	41P80	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	9.3
84	13.663	13.372	13.067	41P84	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	9.7
96	15.573	15.282	14.976	41P96	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	13.0
112	18.121	17.827	17.522	41P112	4	P1	1.313	1.938	2.188	1.594	0.227		3.000	18.0

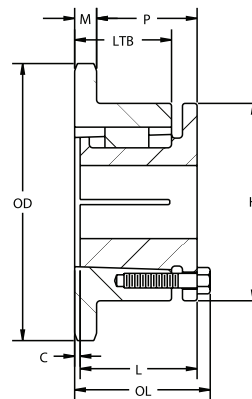
Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.



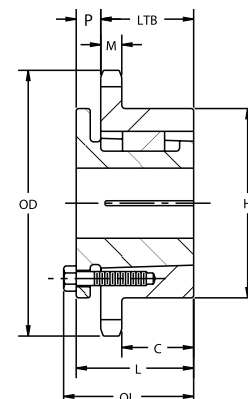
If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.



All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 4  
TYPE B



STYLE 5  
TYPE B

# No. 40 SINGLE SPLIT TAPER

1/2" PITCH

Chain Data	
Chain Size	40
Pitch	.500"
Inside Width	.313"
Roller Diameter	.313"
Nominal Tooth Width:	0.284"

All dimensions in inches unless otherwise stated.

No. 40 Single Split Taper - 1/2" Pitch				Type B										
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Style	Bushing	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
12	2.166	1.932	1.620	40G12	G1	3	0.875	1.000	1.500	1.031	0.284	0.313	2.000	0.3
13	2.329	2.089	1.761	40G13	G1	3	0.875	1.000	1.500	1.031	0.284	0.313	2.000	0.4
14	2.491	2.247	1.934	40G14	G1	3	0.875	1.000	1.500	1.031	0.284	0.313	2.000	0.4
15	2.652	2.405	2.079	40H15	H1	3	1.000	1.250	1.594	1.125	0.284	0.156	2.500	0.5
16	2.814	2.563	2.250	40H16	H1	3	1.000	1.250	1.594	1.125	0.284	0.156	2.500	0.6
17	2.975	2.721	2.397	40H17	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	0.6
18	3.136	2.879	2.567	40H18	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	0.6
18	3.136	2.879	2.567	40P18	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.4
19	3.296	3.038	2.715	40H19	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	0.8
19	3.296	3.038	2.715	40P19	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.3
20	3.457	3.196	2.883	40H20	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	0.9
20	3.457	3.196	2.883	40P20	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.3
21	3.617	3.355	3.033	40H21	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	0.9
21	3.617	3.355	3.033	40P21	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.5
22	3.778	3.513	3.201	40H22	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.0
22	3.778	3.513	3.201	40P22	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.6
23	3.938	3.672	3.351	40H23	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.0
23	3.938	3.672	3.351	40P23	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.7
24	4.098	3.831	3.518	40H24	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.1
24	4.098	3.831	3.518	40P24	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.8
25	4.258	3.989	3.669	40H25	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.3
25	4.258	3.989	3.669	40P25	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.9
26	4.418	4.148	3.835	40H26	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.3
26	4.418	4.148	3.835	40P26	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.9
27	4.578	4.307	3.987	40H27	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.4
27	4.578	4.307	3.987	40P27	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	1.4
28	4.738	4.465	4.153	40H28	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.4
28	4.738	4.465	4.153	40P28	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.1
29	4.897	4.625	4.305	40P29	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.3
30	5.057	4.783	4.471	40H30	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.6
30	5.057	4.783	4.471	40P30	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.3
31	5.217	4.942	4.623	40P31	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.5
32	5.377	5.101	4.788	40H32	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.8
32	5.377	5.101	4.788	40P32	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.6
33	5.538	5.260	4.941	40H33	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	1.9
33	5.538	5.260	4.941	40P33	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.6
34	5.696	5.419	5.107	40P34	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.8
35	5.855	5.578	5.260	40H35	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	2.1
35	5.855	5.578	5.260	40P35	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	2.9
36	6.015	5.737	5.425	40H36	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	2.3
36	6.015	5.737	5.425	40P36	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	3.1
37	6.175	5.896	5.578	40P37	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	3.3
38	6.334	6.055	5.742	40H38	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	2.6
38	6.334	6.055	5.742	40P38	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	3.3
40	6.653	6.373	6.061	40H40	H1	3	0.875	1.250	1.500	1.031	0.284	0.063	2.500	2.8
40	6.653	6.373	6.061	40P40	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	3.5
41	6.813	6.532	6.214	40P41	P1	4	1.313	1.250	2.188	1.656	0.284		3.000	3.6
42	6.972	6.691	6.379	40P42	P1	4	1.131	1.935	2.188	1.656	0.284		3.000	3.9
44	7.291	7.009	6.696	40P44	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	4.0
45	7.450	7.168	6.851	40P45	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	4.2
47	7.769	7.486	7.169	40P47	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	4.6
48	7.929	7.645	7.332	40P48	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	4.8
50	8.247	7.963	7.650	40P50	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	5.0
54	8.885	8.597	8.286	40P54	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	5.5
56	9.203	8.917	8.605	40P56	P1	4	1.313	1.938	2.188	1.656	0.284		3.000	5.9
60	9.841	9.554	9.241	40P60	P1	4	1.313	2.500	2.188	1.656	0.284		3.000	6.6
60	9.841	9.554	9.241	40Q60	Q1	4	1.750	1.938	2.781	2.219	0.284		4.500	8.8
70	11.433	11.145	10.832	40P70	P1	4	1.313	2.500	2.188	1.656	0.284		3.000	8.6
70	11.433	11.145	10.832	40Q70	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	11.0
72	11.752	11.463	11.151	40Q72	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	11.2
80	13.026	12.736	12.423	40Q80	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	13.1
84	13.663	13.372	13.059	40Q84	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	14.1
96	15.573	15.822	14.969	40Q96	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	17.3
112	18.121	17.827	17.515	40Q112	Q1	4	1.750	2.500	2.781	2.219	0.284		4.500	12.8

Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.





# No. 80 SINGLE SPLIT TAPER

1" PITCH

Chain Data	
Chain Size	80
Pitch	1.00"
Inside Width	.625"
Roller Diameter	.625"
Nominal Tooth Width:	0.575"

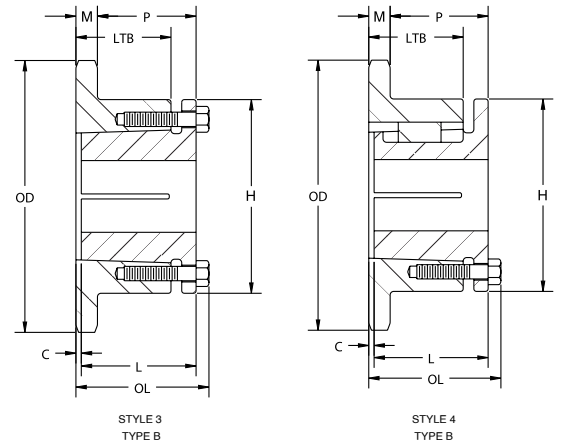
All dimensions in inches unless otherwise stated.

80 Single Split Taper - 1" Pitch				Type B											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Style	Bushing	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS	
10	3.678	3.236	2.611	80H10	H1	3	1.500	1.250	2.094	1.328	0.575	0.656	2.500	1.2	
11	4.006	3.550	2.888	80H11	H1	3	1.500	1.250	1.500	0.750	0.575	0.063	2.500	1.3	
11	4.006	3.550	2.888	80P11	P1	4	1.500	1.938	2.344	1.533	0.575	0.156	3.000	1.6	
12	4.332	3.864	3.239	80P12	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	2.0	
13	4.657	4.179	3.523	80P13	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	2.4	
14	4.981	4.494	3.869	80P14	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	2.6	
14	4.981	4.494	3.869	80Q14	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	2.9	
15	5.305	4.810	4.158	80P15	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	3.0	
15	5.305	4.810	4.158	80Q15	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	3.4	
16	5.627	5.126	4.501	80P16	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	3.5	
16	5.627	5.126	4.501	80Q16	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	4.6	
17	5.950	5.442	4.794	80P17	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	3.8	
17	5.950	5.442	4.794	80Q17	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	5.3	
18	6.271	5.759	5.134	80P18	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	4.4	
18	6.271	5.759	5.134	80Q18	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	6.0	
19	6.593	6.076	5.430	80P19	P1	4	1.313	1.938	2.188	1.375	0.575		3.000	4.9	
19	6.593	6.076	5.430	80Q19	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	6.5	
20	6.914	6.392	5.767	80Q20	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	7.0	
21	7.235	6.710	6.066	80Q21	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	7.3	
22	7.555	7.027	6.402	80Q22	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	8.2	
23	7.876	7.344	6.702	80Q23	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	8.8	
24	8.196	7.661	7.036	80Q24	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	9.1	
25	8.516	7.979	7.338	80Q25	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	9.6	
26	8.836	8.296	7.671	80Q26	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	10.6	
27	9.156	8.614	7.974	80Q27	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	10.9	
28	9.475	8.931	8.306	80Q28	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	12.4	
29	9.795	9.249	8.611	80Q29	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	12.6	
30	10.114	9.567	8.942	80Q30	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	13.4	
31	10.434	9.884	9.247	80Q31	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	13.9	
32	10.753	10.202	9.577	80Q32	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	14.8	
33	11.072	10.520	9.883	80Q33	Q1	4	1.750	2.500	2.781	1.938	0.575		3.875	15.5	
34	11.392	10.838	10.213	80Q34	Q1	4	1.750	2.500	2.781	1.938	0.575	0.656	4.500	16.3	
35	11.711	11.156	10.520	80Q35	Q1	4	1.750	2.500	2.781	1.938	0.575	0.063	4.500	17.8	
36	12.030	11.474	10.849	80Q36	Q1	4	1.750	2.500	2.781	1.938	0.575	0.156	4.500	18.1	
36	12.030	11.474	10.849	80R36	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	19.5	
37	12.349	11.792	11.156	80Q37	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	18.5	
38	12.668	12.110	11.485	80Q38	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	20.0	
39	12.987	12.428	11.792	80Q39	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	22.8	
40	13.306	12.746	12.121	80Q40	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	21.9	
40	13.306	12.746	12.121	80R40	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	23.4	
41	13.625	13.064	12.429	80R41	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	23.9	
42	13.944	13.382	12.757	80Q42	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	23.8	
42	13.944	13.382	12.757	80R42	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	25.4	
44	14.582	14.018	13.393	80R44	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	27.2	
45	14.901	14.336	13.702	80Q45	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	27.8	
45	14.901	14.336	13.702	80R45	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	28.5	
47	15.538	14.972	14.338	80R47	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	31.0	
48	15.857	15.290	14.665	80Q48	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	30.8	
48	15.857	15.290	14.665	80R48	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	32.3	
50	16.495	15.926	15.301	80R50	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	35.1	
54	17.769	17.198	16.573	80Q54	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	38.5	
54	17.769	17.198	16.573	80R54	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	40.8	
56	18.407	17.835	17.210	80R56	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	44.0	
60	19.681	19.107	18.482	80Q60	Q1	4	1.750	2.500	2.781	1.938	0.575		4.500	46.8	
60	19.681	19.107	18.482	80R60	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	47.3	
70	22.867	22.289	21.664	80Q70	Q1	4	1.750	2.500	2.781	2.313	0.575		4.500	60.0	
70	22.867	22.289	21.664	80R70	R1	4	2.000	2.875	3.156	2.313	0.575		5.750	63.5	
72	23.504	22.926	22.301	80Q72	Q1	4	1.750	2.500	2.781	2.313	0.575		4.500	67.5	
72	23.504	22.926	22.301	80R72	R1	5	2.000	2.875	3.156	0.875	0.575	1.438	5.750	69.4	
80	26.052	25.471	24.846	80R80	R1	5	2.000	2.875	3.156	0.875	0.575	1.438	5.750	85.0	
84	27.326	26.744	26.119	80R84	R1	5	2.000	2.875	3.156	0.875	0.575	1.438	5.750	90.0	
96	31.147	30.563	29.938	80R96	R1	5	2.000	2.875	3.156	0.875	0.575	1.438	5.750	110.0	
112	36.241	35.655	35.030	80S112	S1	5	3.313	4.375	4.750	1.125	0.575	2.750	6.750	165.0	

Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217

If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.

All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



# No. 80 DOUBLE SPLIT TAPER

1" PITCH

Chain Data	
Chain Size	80
Pitch	.625"
Inside Width	.625"
Roller Diameter	.625"
Nominal Tooth Width:	0.557"
Plate Thickness	1.710

All dimensions in inches unless otherwise stated.

80 Double Split Taper - 1" Pitch				Types A, B and C											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
13	4.657	4.179	3.523	D80P13	A	P1	13	1.710	1.938	2.594	0.625	1.710	0.406		3.6
14	4.981	4.494	3.869	D80Q14	C	Q2	16	2.750	3.500	4.625	1.750	1.710	0.844	4.500	5.4
15	5.305	4.810	4.158	D80Q15	B	Q2	12	2.750	3.500	3.781	1.750	1.710		3.875	5.4
16	5.627	5.126	4.501	D80Q16	A	Q1	13	1.750	2.500	2.781	0.750	1.710			4.8
17	5.950	5.442	4.794	D80Q17	A	Q1	13	1.750	2.500	2.781	0.750	1.710			6.0
18	6.271	5.759	5.134	D80Q18	A	Q1	13	1.750	2.500	2.781	0.750	1.710			7.3
19	6.593	6.076	5.430	D80Q19	A	Q1	13	1.750	2.500	2.781	0.750	1.710			8.5
20	6.914	6.392	5.767	D80R20	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.250	7.8
21	7.235	6.710	6.066	D80R21	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.250	9.4
22	7.555	7.027	6.402	D80R22	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	10.8
23	7.876	7.344	6.702	D80R23	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	12.3
24	8.196	7.661	7.036	D80R24	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	14.1
25	8.516	7.979	7.338	D80R25	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	15.8
26	8.836	8.296	7.671	D80R26	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	18.1
27	9.156	8.614	7.974	D80R27	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	20.4
28	9.475	8.931	8.306	D80R28	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	22.7
30	10.114	9.567	8.942	D80R30	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	26.8
36	12.030	11.474	10.849	D80R36	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	41.6
42	13.944	13.382	12.757	D80R42	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	58.0
45	14.901	14.366	13.702	D80R45	B	R1	12	2.000	2.875	3.156	1.156	1.710		5.750	68.0
48	15.857	16.562	14.665	R80R48	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	86.0
52	17.135	16.562	15.937	D80R52	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	103.0
54	17.769	17.198	16.573	D80R54	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	111.0
60	19.681	19.107	18.482	D80R60	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	135.0
68	22.230	21.653	21.028	D80R68	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	176.0
72	23.504	22.926	22.301	D80R72	B	R2	15	4.000	4.875	5.156	0.875	1.710	2.281	5.750	198.0

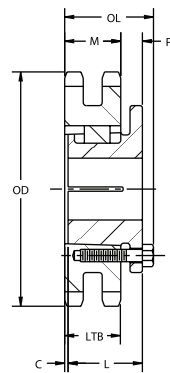
Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.



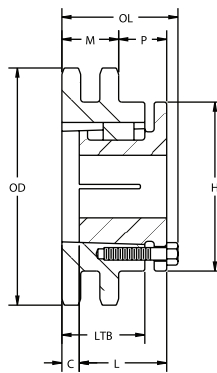
If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.



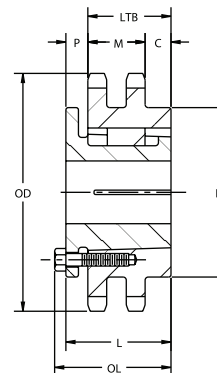
All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



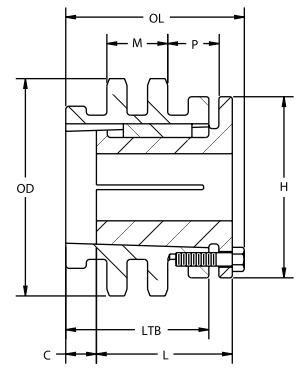
STYLE 13  
TYPE A



STYLE 12  
TYPE B



STYLE 15  
TYPE B



STYLE 16  
TYPE C

# No. 100 SINGLE SPLIT TAPER

1 1/4" PITCH

Chain Data	
Chain Size	100
Pitch	1.250"
Inside Width	.750"
Roller Diameter	.750"
Nominal Tooth Width:	0.692"

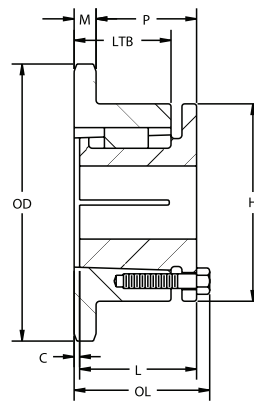
All dimensions in inches unless otherwise stated.

100 Single Split Taper - 1.25" Pitch				Types A, B and C										
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
11	5.007	4.438	3.642	100P11	P1	4	1.156	1.9375	2.188	1.250	0.692		3.388	2.8
12	5.415	4.830	4.080	100Q12	Q1	4	1.750	2.500	2.844	1.875	0.692	0.063	3.875	3.5
13	5.821	5.224	4.435	100Q13	Q1	4	1.750	2.500	2.844	1.875	0.692	0.063	3.875	4.3
14	6.227	5.612	4.868	100Q14	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	5.6
15	6.631	6.013	5.229	100Q15	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	6.6
16	7.034	6.408	5.658	100Q16	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	7.4
17	7.437	6.803	6.024	100Q17	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	8.2
18	7.839	7.199	6.449	100Q18	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	9.0
19	8.241	7.595	6.819	100Q19	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	9.8
20	8.642	7.990	7.240	100Q20	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	10.9
21	9.043	8.368	0.613	100Q21	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	11.8
21	9.043	8.368	7.613	100R21	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	12.1
22	9.444	8.784	8.034	100Q22	Q1	4	1.750	2.500	2.781	1.813	0.692		4.500	12.6
23	9.844	9.180	8.409	100Q23	Q1	4	1.750	2.875	2.781	1.813	0.692		4.500	13.8
24	10.245	9.576	8.826	100Q24	Q1	4	1.750	2.500	3.156	1.813	0.692		4.500	15.4
24	10.245	9.576	8.826	100R24	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	15.6
25	10.645	9.974	9.204	100Q25	Q1	4	1.750	2.500	3.156	1.813	0.692		4.500	16.0
25	10.645	9.974	9.204	100Q25	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	16.5
26	11.045	10.370	9.620	100Q26	Q1	4	1.750	2.500	3.156	1.818	0.692		4.500	17.3
26	11.045	10.370	9.620	100Q26	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	17.9
27	11.444	10.766	9.999	100Q27	Q1	4	1.750	2.500	3.156	1.818	0.692		4.500	18.0
27	11.444	10.766	9.999	100Q27	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	18.5
28	11.844	11.164	10.414	100Q28	Q1	4	1.750	2.800	3.156	1.818	0.692		4.500	19.6
28	11.844	11.164	10.414	100Q28	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	20.1
30	12.643	11.959	11.209	100Q30	Q1	4	1.750	2.500	3.156	1.818	0.692		4.500	22.4
30	12.643	11.959	11.209	100R30	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	22.9
32	13.441	12.753	12.003	100Q32	Q1	4	1.750	2.500	3.156	1.818	0.692		5.750	25.3
32	13.441	12.753	12.003	100Q32	R1	4	2.000	2.875	2.781	2.188	0.692		5.750	26.5
35	14.639	13.945	13.181	100R35	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	30.2
40	16.633	15.933	15.183	100R40	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	40.9
42	17.430	16.728	15.975	100R42	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	44.3
45	18.626	17.920	17.159	100R45	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	50.5
48	19.821	19.113	18.363	100R48	R1	4	2.000	2.875	3.156	2.188	0.692		5.750	57.5
54	22.212	21.498	20.748	100R54	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	69.0
60	24.601	23.884	23.134	100R60	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	84.0
70	28.583	27.861	27.111	100R70	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	104.0
72	29.380	28.657	27.908	100R72	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	106.0
80	32.565	31.839	31.089	100R80	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	135.0
84	34.157	33.430	32.680	100R84	R1	5	2.000	2.875	3.156	0.875	0.692	0.156	5.750	138.0

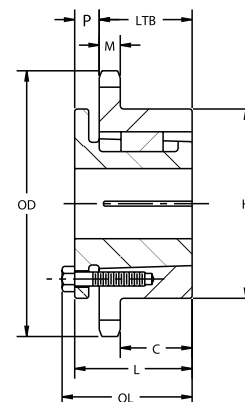
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If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.

All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 4  
TYPE B



STYLE 5  
TYPE B



# No. 100 DOUBLE SPLIT TAPER

1 1/4" PITCH

Chain Data	
Chain Size	100-2
Pitch	1.250"
Inside Width	.750"
Roller Diameter	.750"
Nominal Tooth Width:	0.669"
Plate Thickness	2.077

All dimensions in inches unless otherwise stated.

100 Double Split Taper - 1.25" Pitch				Types B and C											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
11	5.007	4.438	3.642	D100P11	A	P1	4	2.077	1.938	2.938	0.625	0.692		3.388	2.8
12	5.415	4.830	4.080	D100Q12	B	Q2	4	1.750	3.500	4.219	1.859	0.692	0.063	3.875	3.5
13	5.821	5.224	4.435	D100Q13	B	Q2	4	1.750	3.500	4.219	1.859	0.692	0.063	3.875	4.3
14	6.227	5.612	4.868	D100Q14	A	Q1	4	2.077	2.500	3.094	0.750	0.692		4.500	5.6
15	6.631	6.013	5.229	D100Q15	A	Q1	4	2.077	2.500	3.094	0.750	0.692		4.500	6.6
16	7.034	6.408	5.658	D100Q16	A	Q1	4	2.077	2.500	3.094	0.750	0.692		4.500	7.4
17	7.437	6.803	6.024	D100R17	A	R1	4	2.077	2.875	3.094	0.875	0.692		4.500	8.2
18	7.839	7.199	6.449	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	9.0
19	8.241	7.595	6.819	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	9.8
20	8.642	7.990	7.240	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	10.9
21	9.043	8.368	7.613	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	11.8
22	9.444	8.784	8.034	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	12.6
24	10.245	9.576	8.826	D100R17	A	R1	4	2.077	2.875	3.219	0.875	0.692		4.500	15.4
35	14.639	13.945	13.181	D100R35	A	R1	4	2.077	2.875	3.219	0.875	0.692		5.750	30.2
45	18.626	17.920	17.159	D100S48	B	S1	4	2.000	4.375	4.750	1.063	0.692		5.750	57.5
60	24.601	23.884	23.134	D100S60	B	S1	5	2.000	4.375	4.750	1.063	0.692	0.156	5.750	69.0
70	28.583	27.661	27.111	D100S70	C	S2	5	2.000	6.750	7.188	2.475	0.692	0.156	5.750	84.0
80	32.565	31.839	31.089	D100S80	C	S2	5	2.000	6.750	7.188	2.475	0.692	0.156	5.750	104.0

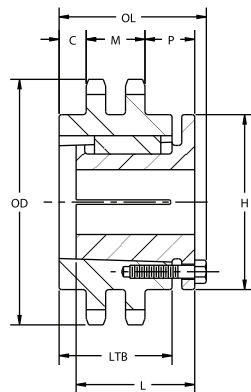
Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.



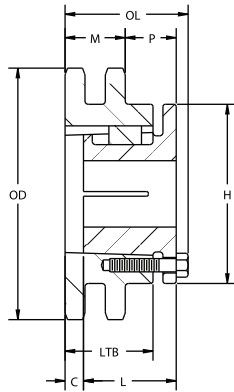
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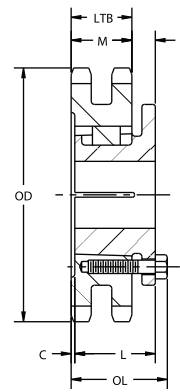
All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



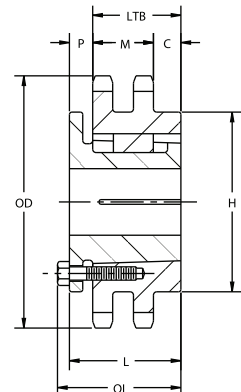
STYLE 18  
TYPE C



STYLE 12  
TYPE B



STYLE 14  
TYPE A



STYLE 15  
TYPE B

# No. 120 SINGLE SPLIT TAPER

1 1/2" PITCH

Chain Data	
Chain Size	120
Pitch	1.500"
Inside Width	1.000"
Roller Diameter	.875"
Nominal Tooth Width:	0.924"

All dimensions in inches unless otherwise stated.

120 Single Split Taper - 1.50" Pitch				Types B and C											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
11	6.009	5.325	4.395	120Q11	B	Q1	4	1.750	2.500	2.781	1.563	0.924		3.875	4.8
12	6.498	5.796	4.921	120Q12	B	Q1	4	1.750	2.500	2.781	1.563	0.924		3.875	6.3
13	6.966	6.269	5.347	120Q13	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	7.9
14	7.472	6.741	5.866	120Q14	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	9.2
15	7.957	7.215	6.300	120Q15	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	10.4
16	8.441	7.689	6.814	120Q16	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	12.0
16	8.441	7.689	6.814	120R16	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	12.2
17	8.924	8.163	7.254	120Q17	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	13.9
17	8.924	8.163	7.254	120R17	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	13.7
18	9.407	8.639	7.764	120Q18	B	Q1	4	1.750	2.500	2.781	1.563	0.924		4.500	15.0
18	9.407	8.639	7.764	120R18	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	15.2
19	9.889	9.114	8.207	120R19	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	16.9
20	10.371	9.588	8.713	120R20	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	18.8
21	10.852	10.065	9.161	120R21	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	20.7
22	11.333	10.541	9.666	120R22	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	22.5
23	11.813	11.016	10.115	120R23	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	24.3
24	12.294	11.492	10.617	120R24	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	27.1
25	12.774	11.969	11.070	120R25	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	29.1
26	13.254	12.444	11.569	120R26	B	R1	5	2.000	2.875	3.156	0.875	0.924		5.750	33.3
28	14.213	13.397	12.522	120R28	B	R1	5	2.000	2.875	3.156	0.875	0.924	1.063	5.750	38.0
30	15.172	14.351	13.476	120R30	B	R1	5	2.000	2.875	3.156	0.875	0.924	1.063	5.750	43.3
32	16.130	15.303	14.428	120R32	B	R1	5	2.000	2.875	3.156	0.875	0.924	1.063	5.750	49.4
35	17.566	16.734	15.842	120R35	C	R2	6	4.000	4.875	5.156	1.938	0.924	1.063	5.750	68.0
36	18.045	17.211	16.336	120R36	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	72.0
40	19.959	19.119	18.244	120R40	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	82.0
40	19.959	19.119	18.244	120S40	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	83.0
42	20.916	20.073	19.198	120S42	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	90.0
45	22.351	21.504	20.615	120R45	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	102.0
45	22.351	21.504	20.615	120S45	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	100.0
48	23.786	22.935	22.060	120S48	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	111.0
54	26.654	25.797	24.922	120S54	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	138.0
60	29.522	28.661	27.786	120R60	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	179.0
60	29.522	28.661	27.786	120S60	B	S1	5	3.156	4.375	4.750	1.063	0.924	2.375	6.750	180.0
70	34.300	33.434	32.559	120R70	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	148.0
70	34.300	33.434	32.559	120S70	B	S2	5	5.688	6.750	7.125	2.938	0.924	2.875	6.750	167.0
80	39.078	38.207	37.332	120R80	C	R2	6	4.000	4.875	5.156	1.938	0.924	2.000	5.750	291.0
80	39.078	38.207	37.332	120S80	C	S2	6	5.688	6.750	7.125	2.938	0.924	2.875	6.750	305.0

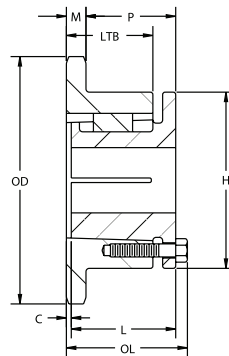
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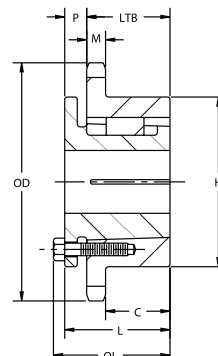
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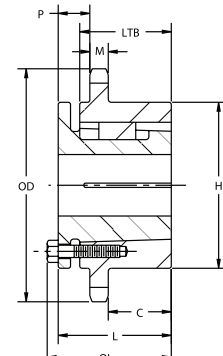
All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 4  
TYPE B



STYLE 5  
TYPE B



STYLE 6  
TYPE C

# No. 120 DOUBLE SPLIT TAPER

1 1/2" PITCH

Chain Data	
Chain Size	120-2
Pitch	1.500"
Inside Width	1.000"
Roller Diameter	.875"
Nominal Tooth Width:	0.894"
Plate Thickness	2.683

All dimensions in inches unless otherwise stated.

120 Double Split Taper - 1.50" Pitch				Types B and C											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
15	7.597	7.215	6.300	D120R15	A	R1	14	2.688	2.875	3.183	0.875	2.683			22.0
17	8.924	8.163	7.254	D120R17	A	R1	14	2.688	2.875	3.183	0.875	2.683			31.0
18	9.407	8.639	7.764	D120R18	A	R1	14	2.688	2.875	3.183	0.875	2.683			35.0
19	9.889	9.114	8.207	D120R19	A	R1	14	2.688	2.875	3.183	0.875	2.683			41.0
22	11.333	10.541	9.666	D120R22	A	R1	14	2.688	2.875	3.183	0.875	2.683			57.0
22	11.333	10.541	9.666	D120S22	B	S1	15	3.156	4.375	4.750	1.063	2.683	0.625	6.750	57.0
23	11.813	11.016	10.115	D120R23	A	R1	14	2.688	2.875	3.813	0.875	2.683			64.0
24	12.294	11.492	10.617	D120R24	A	R1	14	2.688	2.875	3.813	0.875	2.683			70.0
25	12.774	11.969	11.070	D120R25	A	R1	14	2.688	2.875	3.813	0.875	2.683			77.0
26	13.254	12.444	11.569	D120R26	A	R1	14	2.688	2.875	3.813	0.875	2.683			84.0
26	13.254	12.444	11.569	D120S26	B	S1	15	3.156	4.375	4.750	1.063	2.683	0.625	6.750	84.0
28	14.213	13.397	12.522	D120R28	A	R1	14	2.688	2.875	3.813	0.875	2.683			99.0
30	15.172	14.351	13.476	D120S30	B	S1	15	3.156	4.375	4.750	1.063	2.683	0.625	6.750	105.0
35	17.566	16.734	15.842	D120S35	B	S1	15	3.156	4.375	4.750	1.063	2.683	0.625	6.750	148.0
45	22.351	21.504	20.615	D120S45	C	S2	18	5.688	6.750	7.125	2.219	2.683	1.844	6.750	268.0
60	29.522	28.661	27.786	D120U60	B	U0	15	3.750	5.250	5.719	0.594	2.683	1.281	8.500	183.0

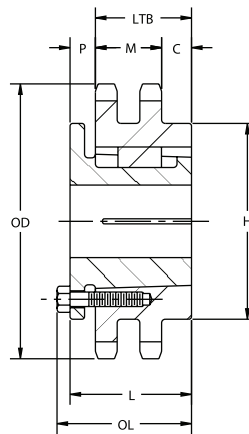
Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.



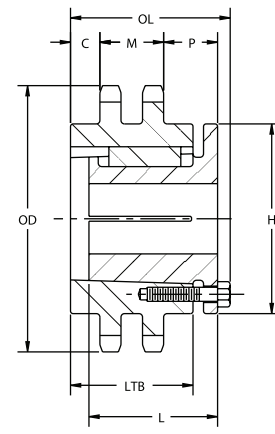
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All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 15  
TYPE B



STYLE 18  
TYPE C

# No. 140 SINGLE SPLIT TAPER

1<sup>3</sup>/<sub>4</sub>" PITCH

Chain Data	
Chain Size	140
Pitch	1.750"
Inside Width	1.000"
Roller Diameter	.1.000"
Nominal Tooth Width:	0.924"

All dimensions in inches unless otherwise stated.

140 Single Split Taper - 1.75" Pitch				Types B and C											
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
11	7.010	6.213	5.148	140Q11	B	Q1	4	1.750	2.500	2.781	1.563	0.924		3.875	6.4
12	7.581	6.762	5.762	140Q12	B	Q1	4	1.750	2.500	2.781	1.563	0.924		3.875	9.0
13	8.150	7.313	6.259	140R13	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	11.1
14	8.717	7.865	6.865	140R14	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	12.6
15	9.283	8.418	7.371	140R15	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	14.7
16	9.848	8.971	7.971	140R16	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	16.5
17	10.412	9.524	8.483	140R17	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	18.5
18	10.975	10.078	9.078	140R18	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	20.5
19	11.537	10.633	9.596	140R19	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	23.0
20	12.099	11.186	10.186	140R20	B	R1	4	1.750	2.875	2.781	1.938	0.924		4.500	25.4
21	12.660	11.743	10.709	140R21	B	R1	4	2.000	2.875	3.156	1.938	0.924		5.750	27.8
22	13.222	12.297	11.297	140R22	B	R1	5	2.000	2.875	3.156	1.938	0.924	1.063	5.750	32.5
23	13.782	12.852	11.822	140R23	B	R1	5	2.000	2.875	3.156	1.938	0.924	1.063	5.750	36.0
24	14.343	13.407	12.407	140R24	B	R1	5	2.000	2.875	3.156	1.938	0.924	1.063	5.750	37.6
25	14.903	13.963	12.935	140R25	B	R1	5	2.000	2.875	3.156	1.938	0.924	1.063	5.750	40.3
26	15.463	14.518	13.518	140R26	B	R1	5	2.000	2.875	3.156	1.938	0.924	1.063	5.750	44.0
30	17.700	16.742	15.742	140R30	C	R2	6	2.000	4.875	3.156	0.875	0.924	2.000	5.750	68.0
35	20.494	19.523	18.503	140R35	C	R2	6	2.000	4.875	3.156	0.875	0.924	2.000	5.750	88.0
36	21.053	20.080	19.080	140R36	C	R2	6	2.000	4.875	3.156	0.875	0.924	2.000	5.750	90.0
36	21.053	20.080	19.080	140S36	B	S1	5	2.000	4.375	3.156	1.062	0.924	2.375	5.750	89.0
40	23.286	22.306	21.306	140R40	C	R2	6	2.000	4.875	3.156	0.875	0.924	2.000	5.750	109.0
40	23.286	22.306	21.306	140S40	B	S1	5	2.000	4.375	3.156	1.062	0.924	2.375	5.750	107.0
45	26.076	25.088	24.072	140S45	B	S1	5	4.000	4.375	5.156	1.062	0.924	2.375	5.750	132.0
48	27.750	26.758	25.758	140S48	C	S2	6	4.000	6.750	5.156	2.938	0.924	2.875	5.750	169.0
54	31.096	30.097	29.097	140S54	C	S2	6	4.000	6.750	5.156	2.938	0.924	2.875	5.750	208.0
60	34.442	33.437	32.437	140S60	C	S2	6	3.156	6.750	4.750	2.938	0.924	2.875	6.750	230.0
70	40.017	39.006	38.006	140S70	C	S2	6	3.156	6.750	4.750	2.938	0.924	2.875	6.750	311.0
80	45.590	44.574	43.574	140S80	C	S2	6	4.000	6.750	5.156	2.938	0.924	2.875	5.750	242.0

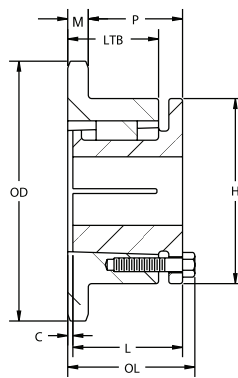
Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.



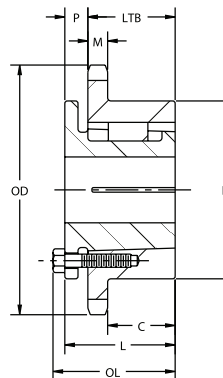
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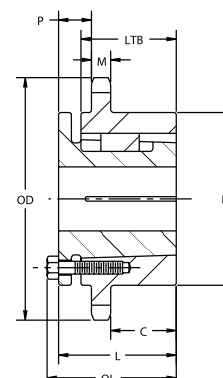
All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



STYLE 4  
TYPE B



STYLE 5  
TYPE B



STYLE 6  
TYPE C

Chain Data	
Chain Size	160
Pitch	2.000"
Inside Width	1.250"
Roller Diameter	1.125"
Nominal Tooth Width:	1.156"

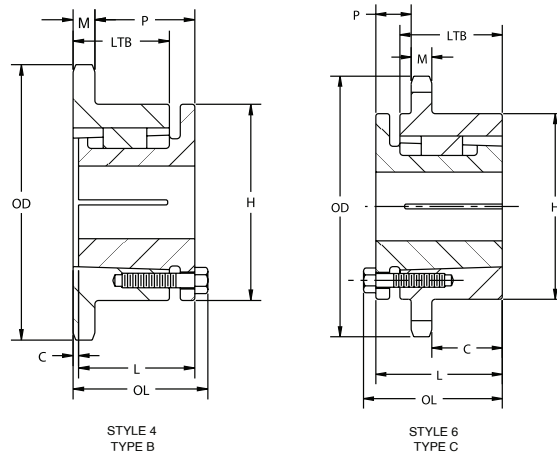
All dimensions in inches unless otherwise stated.

160 Split Taper - 2" Pitch					Types B and C										
No. of Teeth	Outside Diameter	Pitch Diameter	Caliper Diameter	Catalog Number	Type	Bushing	Style	LTB	LTB Bushing (L)	OL	P	M	C	H	Wt. LBS
11	8.011	7.100	5.902	160R11	B	R1	4	2.250	2.875	3.406	1.969	1.156	0.25	5.813	10.8
12	8.664	7.728	6.603	160R12	B	R1	4	2.250	2.875	3.406	1.969	1.156	0.25	5.750	14.2
13	9.314	8.358	7.171	160R13	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	15.5
14	9.963	8.988	7.863	160R14	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	18.5
15	10.609	9.620	8.442	160R15	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	21.6
16	11.255	10.252	9.127	160R16	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	25.0
17	11.899	10.844	9.713	160R17	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	28.0
18	12.543	11.518	10.393	160R18	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	31.9
19	13.185	12.152	10.985	160R19	B	R1	4	2.000	2.875	3.156	1.719	1.156		5.750	35.9
20	13.828	12.784	11.659	160R20	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	51.0
21	14.469	13.420	12.256	160R21	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	56.0
22	15.110	14.054	12.929	160R22	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	60.0
23	15.751	14.688	13.529	160R23	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	65.0
24	16.392	15.322	14.197	160R24	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	71.5
25	17.032	15.958	14.801	160R25	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	74.0
26	17.671	16.592	15.467	160R26	C	R2	6	4.000	4.875	5.156	1.719	1.156	2	5.750	79.0
26	17.671	19.592	15.467	160S26	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	78.0
28	18.950	17.862	16.737	160R28	C	R2	6	4.000	4.875	5.156	1.719	1.156	2.000	5.750	99.8
28	18.950	17.862	16.737	160S28	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	98.7
30	20.229	19.134	18.009	160R30	C	R2	6	4.000	4.875	5.156	1.719	1.156	2.000	5.750	115.0
30	20.229	19.134	18.009	160S30	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	114.0
35	23.422	22.312	21.164	160S35	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	150.0
40	26.612	25.492	24.367	160S40	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	165.0
45	29.801	28.672	27.529	160S45	C	S2	6	5.688	6.750	7.125	2.719	1.156	2.875	6.750	204.0
60	39.362	38.214	37.089	160U60	C	U0	6	3.750	5.250	5.781	1.656	1.156	1.938	8.500	354.0
70	45.733	44.578	43.453	160U70	C	U0	6	3.750	5.250	5.781	1.656	1.156	1.938	8.500	308.0
80	52.103	50.942	49.817	160U80	C	U1	6	5.625	7.125	7.594	2.594	1.156	2.875	8.500	394.0

Construction may not be exactly as shown. Solid or welded construction for sprockets may be substituted. Minor envelope variations may occur. Other bushing sizes and mounting directions are available. Specify bushing size and mounting direction (hub or plate side) when ordering. For Split Taper Bushings see page 217.

If the sprocket needed is not listed above, please contact Tsubaki for made-to-order custom sprockets.

All Tsubaki stock sprockets have hardened teeth (Rockwell C35 minimum).



# SPLIT TAPER BUSHINGS

## ANSI SPLIT TAPER BUSHINGS

All dimensions in inches unless otherwise stated.

Bushing No.	Dimensions											Bore Range				Cap Screws		Approx. Weight (Lbs)	Wrench Torque In. Lbs
	L	U	T	D		H	V	W	X	R	Type 1		Type 2		No.	Size			
				Large End	Small End						Min Bore	Max Bore	Min Bore	Max Bore					
G1	1.000	0.250	0.750	1.172	1.133	2.000	1.563		0.675	0.125	0.375	0.938	1.000	1.000	2	1/4 x 5/8	0.5	95	
H1	1.250	0.250	1.000	1.625	1.570	2.500	2.000		0.875	0.125	0.375	1.375	1.438	1.500	2	1/4 x 3/4	0.8	95	
P1	1.938	0.406	1.531	1.938	1.856	3.000	2.438	0.375	1.313	0.219	0.500	1.438	1.500	1.750	3	5/16 x 1	1.3	192	
P2	2.938	0.406	2.531	1.938	1.793	3.000	2.438	0.375	2.313	0.219	0.750	1.438	1.500	1.750	3	5/16 x 1	1.5	192	
B	1.938	0.500	1.439	2.625	2.557	3.688	3.125	0.500	1.188	0.250	0.500	1.938	2.000	2.438	3	5/16 x 1-1/4	1.8	192	
Q1	2.500	0.531	1.969	2.875	1.796	4.125	3.375	0.500	1.750	0.219	0.750	2.063	2.125	2.688	3	3/8 x 1-1/4	3.5	348	
Q2	3.500	0.531	2.969	2.875	1.704	4.125	3.375	0.500	2.750	0.219	1.000	2.063	2.125	2.625	3	3/8 x 1-1/4	4.5	348	
R1	2.875	0.675	2.250	4.000	3.875	5.375	4.625	0.750	2.000	0.250	1.185	2.813	2.875	3.750	3	3/8 x 1-1/4	7.5	348	
R2	4.875	0.675	4.250	4.000	3.750	5.375	4.625	0.750	4.000	0.313	1.375	2.813	2.875	3.625	3	3/8 x 1-1/4	11	348	
S1	4.375	0.750	3.675	4.625	4.418	6.375	5.375	0.750	3.313	0.313	1.688	3.188	3.250	4.250	3	1/2 x 2-1/4	14	840	
S2	6.750	0.750	6.000	4.625	4.270	6.375	5.375	0.750	5.688	0.438	1.875	3.188	3.250	4.188	3	1/2 x 2-1/4	19	840	
U0	5.250	1.063	4.188	6.000	5.770	8.375	7.000	1.250	3.750	0.438	2.375	3.063			3	5/8 x 2-3/4	30	1680	
U0	4.938	0.750	4.188	6.000	2.766	8.375	7.000	1.250	3.750	0.438	3.250	4.250	4.375	5.500	3	5/8 x 2-3/4	27	1680	
U1	7.125	1.063	6.063	6.000	5.649	8.375	7.000	1.250	5.625	0.438	2.375	4.250	4.375	5.500	3	5/8 x 2-3/4	40	1680	
U2	10.125	1.063	9.063	6.000	5.461	8.375	7.000	1.250	5.625	0.438	2.438	4.250	4.375	5.000	3	5/8 x 2-3/4	50	1680	
W1	8.250	1.438	6.813	8.500	6.102	12.500	10.000	1.250	6.375	0.438	3.375	6.188	6.250	7.438	4	3/4 x 3	104	3000	
W2	11.250	1.438	9.813	8.500	7.914	12.500	10.000	1.250	9.375	0.438	3.375	6.188	6.250	7.438	4	3/4 x 3	133	3000	

## METRIC SPLIT TAPER BUSHINGS

All dimensions in inches unless otherwise stated.

Bore Range	14	15	16	18	19	20	22	24	25	28	30	32	35	36	38
Keyway (mm)	5 x 5	5 x 5	5 x 5	6 x 6	6 x 6	6 x 6	6 x 6	8 x 7	8 x 7	8 x 7	8 x 7	10 x 8	10 x 8	10 x 8	10 x 8
Bushing No.															
G	X		X	X	X	X	X	X	X						
H	X		X	X	X	X	X	X	X	X	X	X	X	X	X
P1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B				X	X	X	X	X	X	X	X	X	X	X	X
Q1				X	X	X	X	X	X	X	X	X	X	X	X
R1										X	X	X	X	X	X
R2													X	X	X

Note:  
 "X" denotes that the Split Taper Bushing is also available in metric bore size and keyway.  
 All metric bores are supplied with imperial threads.  
 All bushings can be supplied in steel, stainless steel and other materials. Consult Tsubaki factory for more details.

## METRIC SPLIT TAPER BUSHINGS

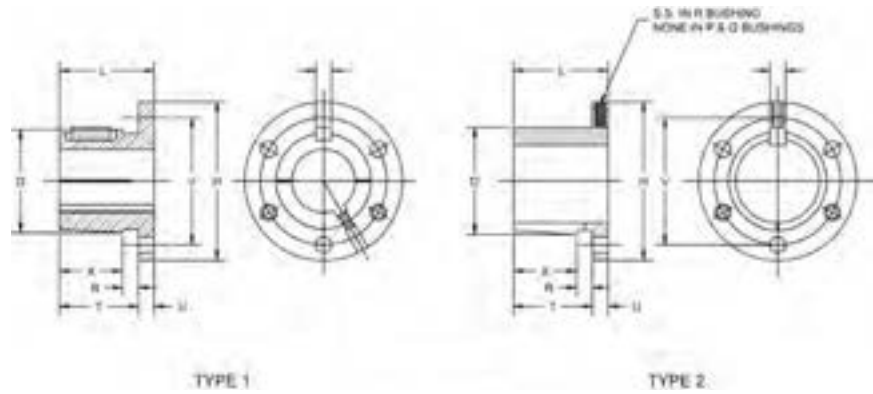
All dimensions in inches unless otherwise stated.

Bore Range	39	40	42	45	48	50	55	60	65	70	75	80	85	90	95
Keyway (mm)	12 x 8	12 x 8	12 x 8	14 x 9	14 x 9	14 x 9	16 x 10	18 x 11	18 x 11	20 x 12	20 x 12	22 x 14	22 x 14	25 x 14	25 x 14
Bushing No.															
G															
H															
P1	X	X	X												
B	X	X	X	X	X	X	X	X	X						
Q1	X	X	X	X	X	X	X	X	X	X					
R1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S1			X	X	X	X	X	X	X	X	X	X	X	X	X

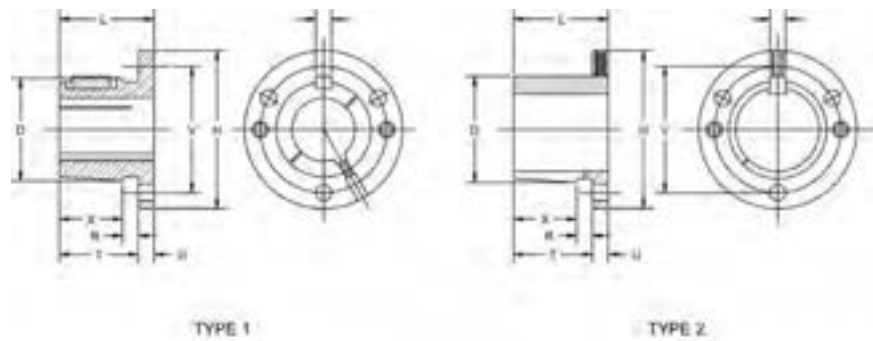
Note:  
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 All metric bores are supplied with imperial threads.  
 All bushings can be supplied in steel, stainless steel and other materials. Consult Tsubaki factory for more details.

# SPLIT TAPER BUSHINGS

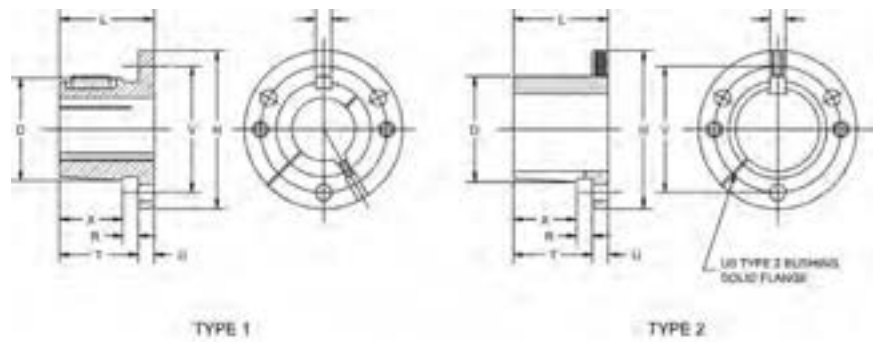
## B, P, Q & R Bushings



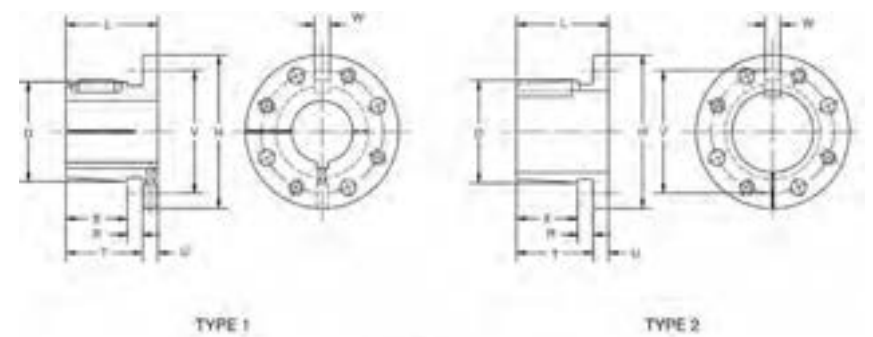
## S Bushings



## U Bushings



## W Bushings

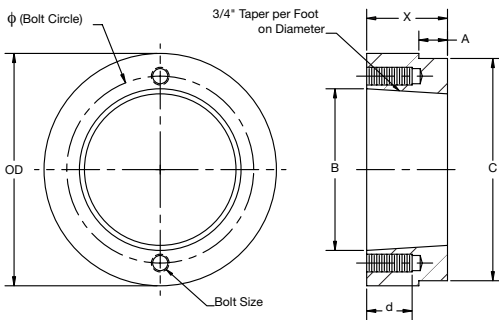


# SPLIT TAPER HUBS

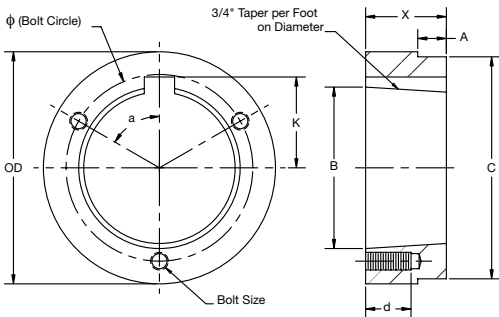
Tsubaki offers a complete line of Split Taper style weld-on hubs for insertion and welding to produce “B:” style sprockets, sheaves and other applications without hub protrusion. To provide greater strength for this type of shaft locking mechanism and reduce heat distortion caused by welding, these hubs are dimensionally the same as our sprocket items. Special dimension hubs are available on a made-to-order basis. All Tsubaki hubs are made from steel bar stock (not powdered or sintered metal). The Split Taper style weld-on hubs listed below include appropriate tapered bores and mounting holes.

All dimensions in inches unless otherwise stated.

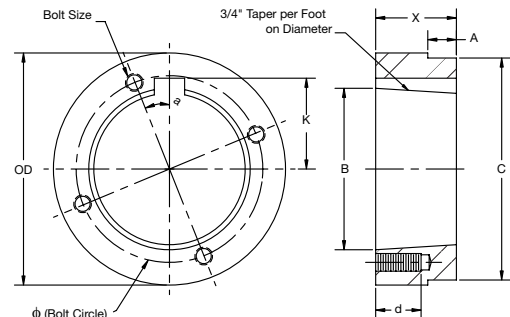
Hub	Bushing	Dimensions									Tapped Holes			Weight (Lbs.)
		OD	A	B	C	K	V	W	X	a(0)	d	No.	Size	
G1W	G	2.00	0.174	1.168	1.875		1.563		0.625		0.625	2	1/4 20	0.4
H1W	H	2.50	0.174	1.621	2.375		2.000		0.875		0.875	2	1/4 20	0.6
P1W	P1	3.00	0.292	1.938	2.875	1.094	2.438	0.375	1.313	60	0.625	3	5/16 18	1.4
P2W	P2	3.00	1.100	1.938	2.875	1.094	2.438	0.375	2.313	60	0.625	3	5/16 18	2.5
B1W	B	3.88	0.292	2.623	3.750	1.438	3.125	0.500	1.313	60	0.813	3	5/16 18	2.3
B2W	B	4.50	0.709	2.623	4.375	1.438	3.125	0.500	1.750	60	0.813	3	5/16 18	4.7
Q1W	Q1	4.50	0.709	2.875	4.375	1.563	3.375	0.500	1.750	60	0.875	3	3/8 16	4.4
Q2W	Q2	4.50	1.606	2.875	4.375	1.563	3.375	0.500	2.750	60	0.875	3	3/8 16	6.9
R1W	R1	5.75	0.709	4.000	5.625	2.188	4.625	0.750	2.000	60	1.125	3	3/8 16	7.3
R2W	R2	5.75	1.606	4.000	5.625	2.188	4.625	0.750	4.000	60	1.125	3	3/8 16	15
S1W	S1	6.75	0.946	4.625	6.500	2.563	5.375	0.750	3.313	60	1.625	3	1/2 13	17
S2W	S2	6.75	2.963	4.625	6.500	2.563	5.375	0.750	5.688	60	1.625	3	1/2 13	30
U0W	U0	8.50	2.000	6.000	8.250	3.250	7.000	1.250	3.750	60	2.000	3	5/8 11	32
U1W	U1	8.50	2.963	6.000	8.250	3.250	7.000	1.250	5.625	60	1.750	3	5/8 11	45
U2W	U2	8.50	6.016	6.000	8.250	3.250	7.000	1.250	8.625	60	1.750	3	5/8 11	69
W1W	W1	12.50	2.963	8.500	12.250	4.563	10.000	1.250	6.375	22.50	1.750	4	3/4 10	130



For Bushings G and H



For Bushings P, B, Q, R, S, and U



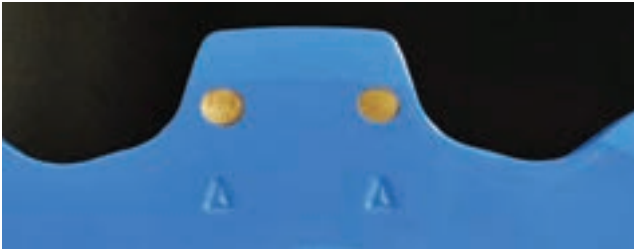
For Bushing W



# SMART TOOTH® SPROCKETS



Tsubaki Smart Tooth® offers users visual indication that a sprocket is still within allowable wear tolerance. The patented wear indicator pins on one or more teeth around the sprocket along with highly-visible blue painted finish, allow the operator to get a clear look at the wear of the sprocket without taking costly downtime to shut down the system. Tsubaki wear indicator technology makes sense in applications wear down time is critical. Sprockets are available with Smart Tooth® technology on a made to order basis.



### New Smart Tooth® Sprocket

- Availability
- ANSI Sizes 80-240 pitch sprockets
- Hardened teeth
- Bored to size and bushed sprockets



### Worn sprocket with Smart Tooth®

- Value
- Extended chain life through predictable maintenance
- Reduction in overall ownership cost
- Life cycle predictability.



# POWER TRANSMISSION UNITS & COMPONENTS

The Tsubaki Power Transmission Units & Components product line utilizes more than 100 years of engineering and manufacturing excellence to offer a wide range of power transmission units and components. Whether it's Tsubaki's full line of overrunning, indexing and backstopping cam clutches, or the new and innovative Zp Chain Actuators®, Tsubaki's engineering creativity and experience shine through to create premium industrial components.



**TSUBAKI**

# INTRODUCTION

Everything you need to get the best results out of your Tsubaki roller chain and sprockets!

## Clutches and Backstops

Full range of overrunning, backstopping and indexing cam clutches. With 50 years of experience, Tsubaki can offer the right cam clutch for any application.



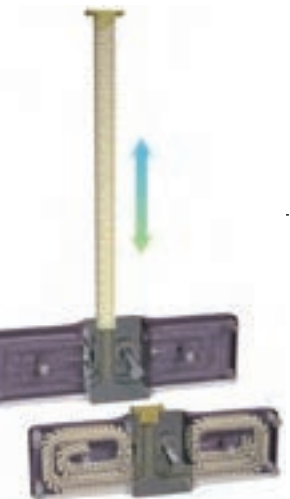
## POWER-LOCK®

Easy-to-install keyless shaft-hub locking device that offers a backlash free method of hub locking that eliminates the costly machining of keyways.



## Shock Relays

Simple to install overload protection device that monitors motor amperage and cuts power should a blockage or equipment malfunction put excessive loads on machinery. Shock relays are a cost effective method of protecting critical machinery.



## Zip Chain Actuators®

An innovative and unique method of linear actuation, the Zip Chain Actuators® utilize modified segmented roller chain and purpose-designed sprockets to create a rigid chain actuator with an extremely small footprint.



## Roller Chain Couplings

Leveraging Tsubaki's extensive roller chain expertise, the Roller Chain Couplings offer a robust and flexible shaft coupling solution.



## Overload Protection Devices

Tsubaki offers a wide range of mechanical overload protection devices that will help protect critical machinery.



For a full listing of all Tsubaki PT Components, visit [www.ustsubaki.com](http://www.ustsubaki.com)

# CLUTCHES & BACKSTOPS

## TSUBAKI BACKSTOP CAM CLUTCH PRODUCTS



### BS & BS-F

BS Series is designed for lower speed conveyor applications. The unique non-rollover cam design provides higher torque capacity, assuring full engagement.

**Bore Range:**  
0.750" to 5.315" (20 to 135 mm)  
**Torque Range:**  
217 to 11,580 lbs. ft.

BS-F Series is designed for simple, drop-in installations to all major competitive backstop products. Uses unique seal design for maximum life, minimal maintenance.

**Bore Range:**  
2.360" to 18.310" (60 to 465 mm)  
**Torque Range:**  
4,980 to 722,000 lbs. ft.



### BR-HT

BR-HT Series is designed for backstop applications where high-speed overrunning is required. Lift off cam design assures minimal heat generation and longest life.

**Bore Range:**  
0.787" to 5.118" (20 to 320 mm)  
**Torque Range:**  
77 to 269,950 lbs. ft.

**COMPETITOR MODELS:**  
Formsprag RSCI; Ringspann FXM



### BSEU

BSEU Cam Clutches are a European variation popular on many bucket elevators in North and South America.

**Bore Range:**  
0.787" to 3.543" (20 to 90 mm)  
**Torque Range:**  
159 to 3,467 lbs. ft.

**COMPETITOR MODELS:**  
Formsprag RSBW  
Morse CR/BW  
Stieber RSBW



### CA

CA line of backstops are an integral part of the reducer. The unique non-rollover cam design is key and prevents damage to the gears, shafts and drive train. This is a drop-in replacement for DodgeTXT® reducers.

**Bore Range:**  
0.738" to 1.750" (18.75 to 44.45 mm)  
**Torque Range:**  
45 to 901 lbs. ft.

**COMPETITOR MODELS:**  
Dodge 24 Series



### BRUS

BRUS series of high-speed external backstops utilize non-rollover and lift-off design cams. This is a drop-in replacement for Falk® BIF backstops.

**Bore Range:**  
1.125" to 3.750" (28.58 to 95.25 mm)  
**Torque Range:**  
700 to 4,420 lbs. ft.

**COMPETITOR MODELS:**  
Falk BIF; Formsprag FHB; Ringspann FRXF



### BREU

BREU Series is designed for backstop applications where bearing support and modular construction is desirable.

**Bore Range:**  
1.181" to 5.906" (30 to 150 mm)  
**Torque Range:**  
447 to 25,009 lbs. ft.

**COMPETITOR MODELS:**  
Formsprag RIZ; Stieber RIZ

## TSUBAKI INDEXING



### MIUS

MIUS Series is for mid-speed indexing applications up to 300 cycles a minute.

**Bore Range:**  
0.500" to 6.250" (12.7 to 160 mm)  
**Torque Range:**  
280 to 27,290 lbs. ft.

**COMPETITOR MODELS:**  
Formsprag HPI  
Morse MI  
Marland RMS



### TSS

TSS Series clutch is designed for press fit installation. Outside dimensions are the same as series 62 ball bearings.

**Bore Range:**  
0.314" to 2.362" (8 mm to 60 mm)  
**Torque Range:**  
4 to 479 lb. ft. (6 to 649 Nm)

**COMPETITOR MODELS:**  
Formsprag AS  
Morse NSS  
Ringspann FCN

# CLUTCHES & BACKSTOPS

## OVERRUNNING AND GENERAL CAM CLUTCH PRODUCTS



### MGUS/MGUS-R

MGUS Series is suitable for applications which require low to high speed inner race. MGUS-R Series contains a built-in oil reservoir and can be used for backstopping applications.

**Bore Range:**  
0.500" to 6.250" (12.7 to 160 mm)  
**Torque Range:**  
280 to 27,290 lb. ft. (380 to 37,000 Nm)

**COMPETITOR MODELS:**  
Formsprag FSO; Morse MG;  
Ringspann FB



### MZEU

MZEU Series is designed for overrunning applications. These units come pre-lubricated, and can be adapted with flanges and torque arms to suit a wide variety of applications.

**Bore Range:**  
0.472" to 5.906" (12 to 150 mm)  
**Torque Range:**  
44 to 24,930 lbs. ft.

**COMPETITOR MODELS:**  
Formsprag GFR/GFRN  
Stieber GFR



### MZ

MZ Series is designed for low speed indexing applications that require inner or outer race overrunning. These units come pre-lubricated for easy installation and long service life.

**Bore Range:**  
0.591" to 2.756" (15 to 70 mm)  
**Torque Range:**  
137 to 2,242 lb. ft.  
(186 Nm-m to 3,040 Nm)

**COMPETITOR MODELS:**  
Stieber SMZ



### BB

BB Series Cam Clutch has the bearing dimensions and characteristics of a 62 Series type ball bearing. This design provides easy installation and is ideal for general overrunning applications

**Bore Range:**  
0.590" to 1.575" (15 to 40 mm)  
**Torque Range:**  
21 to 192 lb. ft. (29 to 260 Nm)

**COMPETITOR MODELS:**  
Formsprag CSK; Morse KK; Ringspann ZZ; Stieber KK

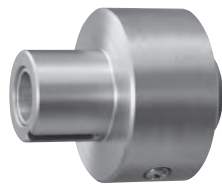


### TFS

TFS Series has two vertical keyways on the outer race to assist with positioning. Outside dimensions are the same as series 63 ball bearings. Ideal for general overrunning applications.

**Bore Range:**  
0.472" to 3.150" (12 to 80 mm)  
**Torque Range:**  
13 to 2,894 lbs. ft. Competitor

**Models:**  
Formsprag ASNU; Morse NFS;  
Ringspann FC/FDN



### PBUS

PBUS Series clutch is packed with a special grease for general applications. The outer race has provision for mounting gears, pulleys, and sprockets.

**Bore Range:**  
0.375" to 1.750" (10 to 45 mm)  
**Torque Range:**  
41 to 1,623 lb. ft. (56 to 2,200 Nm)

**COMPETITOR MODELS:**  
Formsprag FSR; Morse PB-A;  
Renold SB

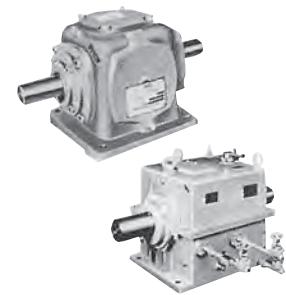


### BUS200

BUS Series is specifically designed for shaft mounting applications that require high speed inner race overrunning or low to mid speed outer race overrunning.

**Bore Range:**  
0.650" to 3.122" (16.5 to 79.3 mm)  
**Torque Range:**  
39 to 1,025 lbs. ft.

**Competitor Models:**  
Formsprag FS50; Morse B200;  
Renold SD



### OB-ON/OF & OB-SF

OB-ON/OF Series is an enclosed unit housing cam clutch units and a common shaft. These units are used for high speed overrunning applications.

**Torque Range:**  
2,318 to 59,270 lbs. ft.

OB-SF Series is an enclosed unit housing cam clutch units that allow for continuous high speed overrunning and engagement and high torque capacities.

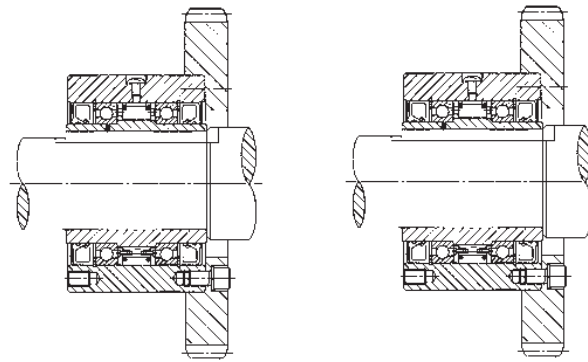
**Torque Range:**  
231 to 4,337 lbs. ft.

For a complete listing of all Tsubaki Cam Clutches, please download the Tsubaki Cam Clutch catalog at: [www.ustsubaki.com](http://www.ustsubaki.com)

# CLUTCHES & BACKSTOPS

## MGUS SERIES

MGUS Series Cam Clutch products are designed to satisfy inner or outer race overrunning/general application requirements. Depending on application requirements, the MGUS Series can be used in overrunning, indexing, or backstopping applications. This series is offered in both metric and inch based inner race configurations. MGUS Series units can easily be mated to pulleys, gears, or sprockets.



MGUS Installation Example

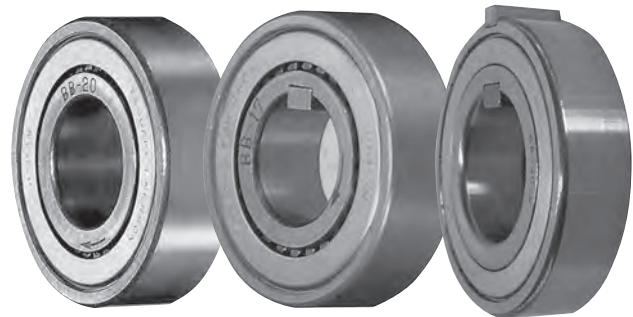
### Available Bore Range

MGUS Series Cam Clutches are stocked in many bore sizes. Requested bore size and keyway combination are possible on a made-to-order basis. Chart below provides the available range of bore sizes per a given model.

Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)
<b>MGUS300</b>	0.500 - 0.750	280
<b>MGUS400</b>	0.437 - 0.866	398
<b>MGUS500</b>	0.750 - 1.312	1195
<b>MGUS600</b>	0.937 - 2.000	2316
<b>MGUS700</b>	1.875 - 2.938	5163
<b>MGUS750</b>	2.250 - 3.437	7007
<b>MGUS800</b>	2.625 - 4.438	13276
<b>MGUS900</b>	3.625 - 5.438	18070
<b>MGUS1000</b>	4.938 - 7.000	27290

## BB SERIES

BB Series Cam Clutches are a combination of a 62 Series ball bearing and a cam style clutch. These units are designed for press fit applications and are available in five variations, combinations of metal shield or dust protective sealed type and with or without keyways on the inner and/or outer race to allow design and application flexibility. BB Series units come grease lubricated but metal shielded style can be adapted for oil bath lubrication.



BB Series

BB-K Series

BB-KK Series

### Specifications

Model	Inner Diameter (mm)	Bearing Series	Torque Capacity (lbs-ft)
<b>BB15</b>	15	6202	21
<b>BB17</b>	17	6203	32
<b>BB20</b>	20	6204	45
<b>BB25</b>	25	6205	58
<b>BB30</b>	30	6206	103
<b>BB35</b>	35	6207	128
<b>BB40</b>	40	6208	192

# CLUTCHES & BACKSTOPS

## TSS SERIES

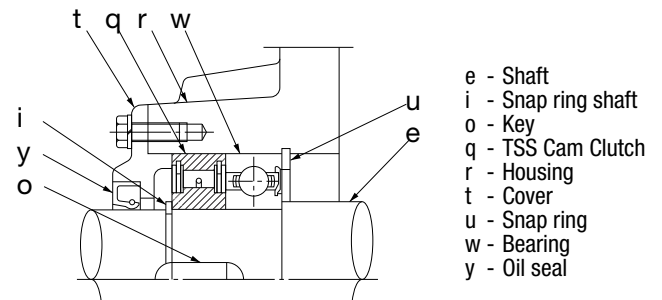
TSS Series Cam Clutch is designed for press fit installation with outside dimensions the same as the 62 Series ball bearing. As a sprag clutch, torque capacities are often higher than a similar ramp & roller design. This design provides easy handling and installation, most often with a Series 62 ball bearing located next to the TSS Cam Clutch. The TSS Series is ideal for applications that require high speed inner race overrunning in a very compact package. This series ships pre-lubricated with oil.



TSS Series Cam Clutch

Specifications			
Model	Inner Diameter (mm)	Bearing Series	Torque Capacity (lbs-ft)
TSS8	8	628	5
TSS10	10	6200	9
TSS12	12	6201	13
TSS15	15	6202	16
TSS20	20	6204	30
TSS25	25	6205	41
TSS30	30	6206	77
TSS35	35	6207	100
TSS40	40	6208	218
TSS45	45	6209	256
TSS50	50	6210	297
TSS60	60	6212	479

TSS installation example



## TFS SERIES

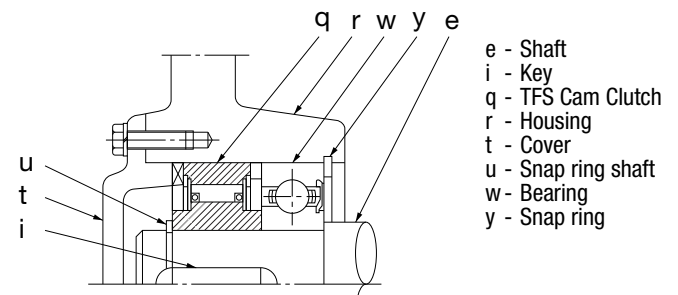
TFS Series Cam Clutch is a sprag type clutch designed for press fit installation. Sprag type designs typically have a higher torque capacity than a similarly sized ramp & roller type clutch. TFS has two vertical keyways on the outer race to assist with locating. Outside dimensions are the same as Series 63 ball bearings. This design is ideal for general inner or outer race overrunning applications. Since the TFS Series does not include an integral bearing, installing the TFS Cam Clutch next to a bearing which handles both the axial and radial loads is the typical application. TFS Series ships pre-lubricated with oil.



TFS Series Cam Clutch

Specifications			
Model	Inner Diameter (mm)	Bearing Series	Torque Capacity (lbs-ft)
TFS12	12	6301	13.3
TFS15	15	6302	20.7
TFS17	17	6303	36.9
TFS20	20	6304	62
TFS25	25	6305	94.4
TFS30	30	6306	148
TFS35	35	6307	350
TFS40	40	6308	448
TFS45	45	6309	558
TFS50	50	6310	829
TFS60	60	6312	1457
TFS70	80	6314	1854
TFS80	80	6316	2894

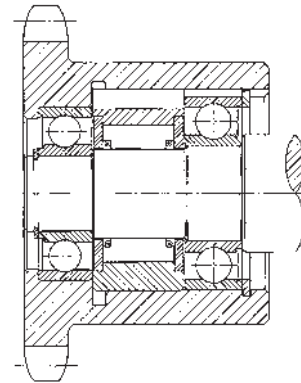
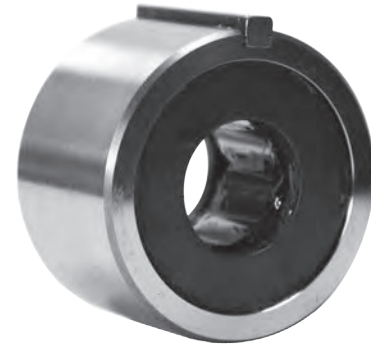
TFS installation example



# CLUTCHES & BACKSTOPS

## BUS200 SERIES

BUS200 Series Cam Clutch is a general purpose Cam Clutch used in backstop, overrunning, and indexing applications. Generally, the customer supplies the inner race as a component of their machinery, but if desired, Tsubaki can also provide an inner race. A second very convenient feature is that the BUS200 Series outside diameter matches with 6200 Series ball bearings. Because of the common popular dimensions, BUS200 Series Cam Clutches are found as integral components in many pieces of machinery; these include backstops within gear boxes and as components within timing gear applications. BUS200 Series ships pre-lubricated with grease. Oil lubrication is generally recommended for indexing applications.

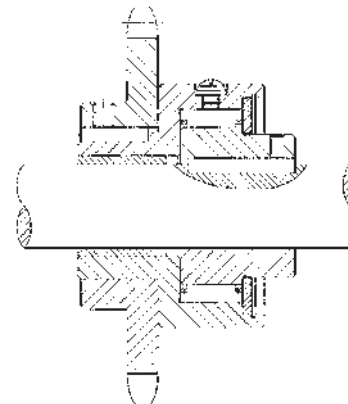
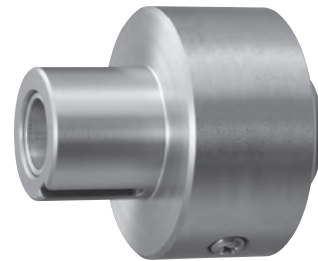


BUS Installation Example

Specifications				
Model	Bearing Series	Torque Capacity (lbs-ft)	Max Overrunning (RPM)	
			Shaft	Outer Race
203	6203	40	2400	500
204	6204	52	2400	500
205	6205	81	1800	400
206	6206	177	1800	350
207	6207	280	1800	300
208	6208	405	1800	200
209	6209	405	1800	200
210	6210	578	1200	200
211	6211	578	1200	200
212	6212	907	1200	180
213	6213	907	1200	180
214	6214	1025	1200	180

## PBUS SERIES

PBUS Series Cam Clutches are intended for use in general overrunning or indexing applications. The PBUS Series comes pre-lubricated with synthetic grease for easy installation and long service life. The outer race has provision for mounting gears, pulleys, and sprockets. Specify direction of rotation when ordering.



PBUS Installation Example

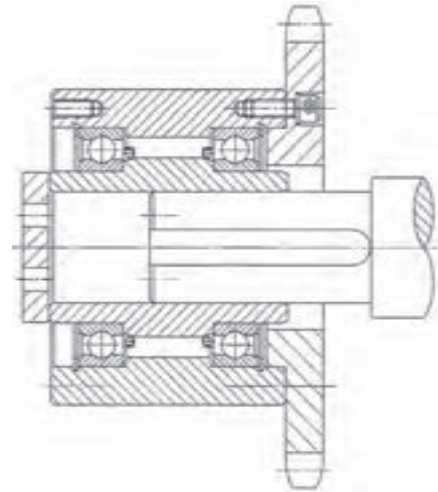
Specifications		
Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)
PBUS3	0.375 - 0.500	41.3
PBUS5	0.500 - 0.630	114
PBUS6	0.750 - 0.787	301
PBUS8	0.875 - 1.000	454
PBUS10	1.125 - 1.250	679
PBUS12	1.375 - 1.575	1365
PBUS14	1.625 - 1.772	1623



# CLUTCHES & BACKSTOPS

## MZ SERIES

MZ Series Cam Clutch products are designed for general overrunning applications. The MZ Series can be used in applications which require the inner or outer race to have overrunning capability. The MZ Series comes pre-lubricated with grease and is ready to install. No lubrication maintenance is required. This series is ideal for gears, pulleys and clutch assemblies.

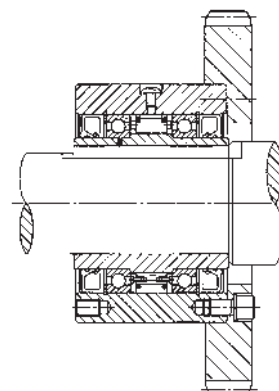


MZ Installation Example

Specifications		
Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)
MZ15	0.500 - 0.591	137
MZ17	0.625 - 0.669	159
MZ20	0.750 - 0.787	238
MZ30	0.866 - 1.181	542
MZ35	1.250 - 1.378	797
MZ45	1.500 - 1.772	1195
MZ60	1.969 - 2.362	1556
MZ70	2.559 - 2.756	2242

## MIUS SERIES

MIUS Series Cam Clutch units are designed for indexing applications. In this mode of operation, reciprocating motion applied to the driving race of the clutch is transformed into uni-directional intermittent motion, at the driven race. The clutch drives in the forward stroke (index) and overruns on the return stroke. In addition to torque capacity, consider the number of indexing cycles per minute. This series ships pre-lubricated with oil.

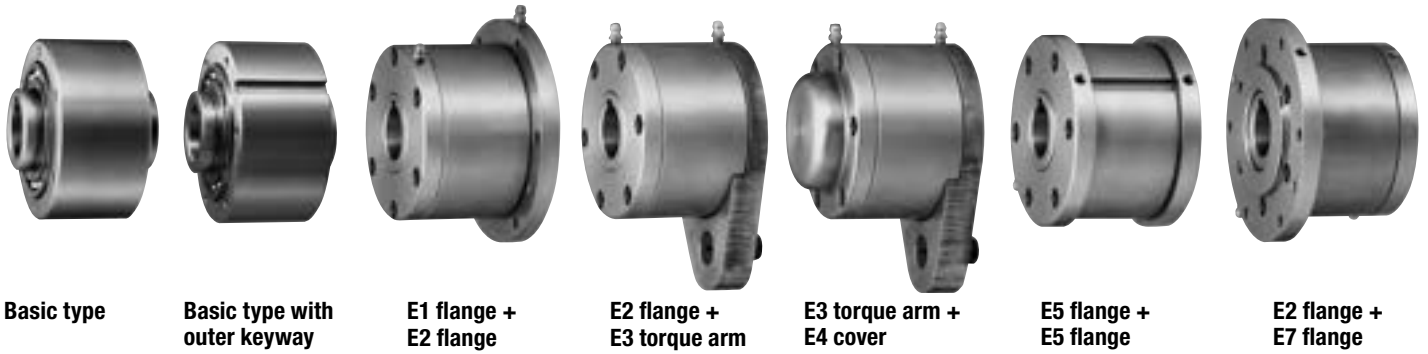


MIUS Installation Example

Specifications		
Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)
MIUS300	0.500 - 0.750	280
MIUS400	0.437 - 0.866	398
MIUS500	0.750 - 1.312	1195
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MIUS700	1.875 - 2.938	5163
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MIUS800	2.625 - 4.438	13276
MIUS900	3.625 - 5.438	18070
MIUS1000	4.938 - 7.000	27290

# CLUTCHES & BACKSTOPS

## MZEU/BREU CAM CLUTCH AVAILABLE MODULAR COMPONENTS



## MZEU SERIES

MZEU Series is a general purpose Cam Clutch suitable for a wide variety of applications. A selection of add-on flanges and torque arms are available enabling this Cam Clutch to easily fit where custom designed products were previously required. MZEU12 to MZEU80 are pre-greased, requiring no Lubrication.

Specifications					
Model	Bore Size (mm)	Torque Capacity (lbs-ft)	Model	Bore Size (mm)	Torque Capacity (lbs-ft)
MZEU12	12	44	MZEU55	55	1770
MZEU15	15	74	MZEU60	60	2176
MZEU20	20	181	MZEU70	70	3105
MZEU25	25	313	MZEU80	80	3813
MZEU30	30	542	MZEU90	90	8851
MZEU35	35	749	MZEU100	100	12981
MZEU40	40	996	MZEU130	130	18070
MZEU45	45	1195	MZEU150	150	24930
MZEU50	50	1527			



## BREU SERIES

The BREU Series Cam Clutch is commonly used in backstopping applications that require higher speed inner race overrunning, and low to medium speed engagement speed capability. The BREU Series Cam Clutch is popular amongst both OEM's and end users, utilizing a broad array of mounting accessories and the ability to select keyway positions on the inner and outer race to offer mounting flexibility. BREU Series incorporates a "lift off" style cam which provides increased Cam Clutch life.

Specifications					
Model	Bore Size (mm)	Torque Capacity (lbs-ft)	Inner Race Overrunning		Engagement
			Min RPM	Max RPM	Max RPM
BREU30	30	448	880	3600	350
BREU35	35	506	780	3600	300
BREU40	40	723	720	3600	300
BREU45	45	795	670	3600	280
BREU50	50	1265	610	3600	240
BREU55	55	1446	580	3600	220
BREU60	60	2566	490	3600	200
BREU70	70	3492	480	3600	200
BREU80	80	4807	450	3600	190
BREU90	90	6288	420	3000	180
BREU100	100	10481	460	2500	180
BREU130	130	15034	420	2200	180
BREU150	150	25009	370	1300	180

# CLUTCHES & BACKSTOPS

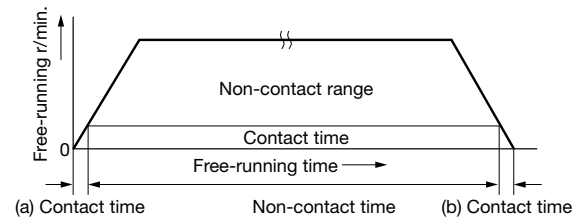
## BR-HT SERIES

BR-HT is mainly used in backstop applications as an integral part of a gear reducer. Prevention of reverse rotation for inclined conveyors and bucket elevators are typical application examples. BR-HT assures not only the immediate backstop function under high torque, but also long service life by the "lift-off" design. In addition, installation on the high speed shaft with low torque enables selection of more compact models with resulting lower cost.

Please refer to Tsubaki's Cam Clutch Catalog for more information on BR-HT part numbering. Available for download at [www.ustsubaki.com/technical-resources.html](http://www.ustsubaki.com/technical-resources.html)

### Service Life of BR-HT Series

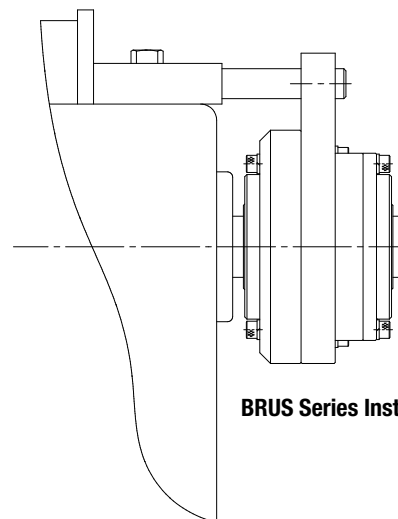
The service life of previous Tsubaki Cam Clutch models was determined as the frictional service life during free-running (when the clutch was disengaged) and the fatigue service life of the engaged clutch. However, with BR-HT Series, frictional service life is not a factor because there is no mechanical contact when the clutch is disengaged. As a result, service life is determined solely by the fatigue life of the engaged clutch.



Friction in the clutch mechanism only occurs during a very short period of time denoted by "a" and "b". "a" is the time during which the cam is engaged until the acceleration of inner race causes it to disengage. "b" is the time during which the cam engages when the inner race decelerates.

## BRUS SERIES BACKSTOPS

The BRUS Series backstops are designed for use in external high-speed backstopping applications. The BRUS is drop-in-ready and has a unique torque arm design that allows for backstop or torque arm replacement only during maintenance. BRUS series backstops ship pre-lubricated with grease.



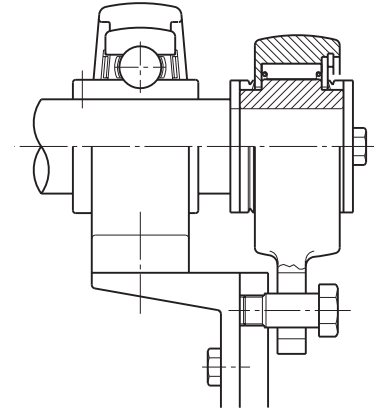
**BRUS Series Installation**

Specifications					
Model	Torque Capacity		Inner Diameter Range (in)	Inner Race Overrunning (r/min)	
	lb. ft.	(Nm)		Min.	Max.
<b>BRUS45</b>	700	(950)	6.5 - 0.98	400	3600
<b>BRUS60</b>	1770	(2400)	8.58 - 1.26	400	2400
<b>BRUS90</b>	4420	(6000)	11.65 - 1.50	400	1800

# CLUTCHES & BACKSTOPS

## BSEU SERIES

BSEU Series Cam Clutch was developed as a user-friendly backstopping Cam Clutch. It has cam and roller construction which is the same as the smaller size BS Series Cam Clutch. The outer race has a special shape which combines the torque arm providing easy installation. These Cam Clutches are shipped pre-lubricated with grease and ready for installation. Most often used as a backstop in applications where limited space is available.



BSEU Installation Example

Specifications			
Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)	Overrunning Max Speed (RPM)
BSEU25	20-25	159	500
BSEU40	20-40	1062	450
BSEU70	45-70	2316	350
BSEU90	75-90	3467	250

## CA SERIES

The CA series backstops are designed to be an integral part of the reducer. The unique non-rollover style cams prevent damage to gears, shafts, and drive train. This extends the life of the reducer and other system components while also ensuring proper performance. The CA series backstops are drop-in replacements for Dodge® reducers. CA series backstops ship pre-lubricated.



Cross-Reference Chart									
Tsubaki CA Series Part Number	DODGE® Part Number	Current TXT Series Housing Redesign 2005		Obsolete TXT Series		TDT Series		TD Series	
211CA-0.738	243106	TXT309B, TXT315B, TXT325B		TXT309A, TXT315A, TXT325A		—		—	
212CA-0.889	244106	TXT409B, TXT415B, TXT425B		TXT409A, TXT415A, TXT425A		—		—	
214CA-1.052	244148	—		TXT405 TXT419	TXT415 TXT425	—		—	
216CA-1.215	245154	TXT509C TXT515C TXT525C		TXT509 TXT509A TXT509B TXT515	TXT515A TXT515B TXT525 TXT525A TXT525B	—		—	
217CA-1.296	246101	—		TXT505 TXT505A		T15		—	
F227CA-1.500A	246092	TXT609A, TXT615A, TXT625A		TXT605 TXT609	TXT615 TXT625	TDT615A, TDT625A, T16		TDT615 TDT625	TDT615A TDT625A
F227CA-1.500B	247260 (247092)	TXT709A, TXT715A, TXT725A		TXT705 TXT709	TXT715 TXT725	TDT715, TDT725, T17		TDT715 TDT725	TDT715A TDT725A
F233CA-1.750A	249260 (248101) (250101)	TXT815A TXT825A	TXT15A TXT926A	TXT815 TXT825	TXT915 TXT926	TXT815 TXT825 TXT915	TXT926 TDT1115 TDT1125	TD815 TD825 TD815A TD825A	TD915 TD1115 TD1125
F233CA-1.750B	250260	TXT1015A TXT1024A		TXT805 TXT1015 TXT1024	TXT1215 TXT1225	TD1015 TDT1024 T18	TDT1215 TDT1225	TD1015 TD1024	TDT1215 TDT1225

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# CLUTCHES & BACKSTOPS

## BS SERIES

BS Series Cam Clutch products are designed to provide inner race overrunning capability in one direction of operation, and engage the outer race when reverse rotation is experienced. BS Series units are often found on incline conveyor systems or pump systems that may experience reverse rotation due to excessive loading on the discharge side of the pump. BS Series Cam Clutches are a cam and roller design incorporating the low friction bearing into the cam cage.

A complete Cam Clutch assembly typically includes the Cam Clutch, torque arm, shaft key, shaft end plate, and safety cover or oil reservoir. The shaft key is included with the Cam Clutch but please select each additional item individually as needed. These Cam Clutches are shipped pre-lubricated with grease and ready for installation.



Specifications				
Model	Inner Diameter Range (in)	Torque Capacity (lbs-ft)	Overrunning Max RPM	Torque Arm Part #
<b>BS30</b>	0.750 - 1.181	217	350	BS30TA
<b>BS50</b>	1.125 - 2.000	578	300	BS50TA
<b>BS65</b>	1.500 - 2.559	1158	340	BS65TA
<b>BS75</b>	1.938 - 2.953	1807	300	BS75TA

## BS/BS-F SERIES SAFETY COVER

This safety cover is specifically designed to fit the BS and BS-F Series Cam Clutch. The safety cover is intended to protect and cover the rotating portion of the Cam Clutch from debris and foreign objects entering the rotating portion of the unit.

### Cover Installed



### Contents Delivered



# CLUTCHES & BACKSTOPS

## BS-F SERIES BACKSTOPS

Tsubaki's new BS-F Series backstops are designed for simple, drop-in installations to all major competitive backstop products. These backstops use a unique seal design for maximum life with minimal maintenance. With Tsubaki's innovative design features, our backstops ensure efficient and dependable operation in the harshest environments.

BS-F series backstop units are all manufactured on a made-to-order basis. When ordering, please specify bore size, keyway dimensions, overrunning rotation, and torque arm orientation. Tsubaki includes a shaft key with your BS-F backstop. If tolerances are not known, Tsubaki will produce per our standards. BS-F Series backstops are pre-lubricated with grease prior to shipping.



### Specifications

Model	Torque Capacity		Inner Diameter Range (in)	Overrunning Max. RPM
	lb. ft.	(Nm)		
<b>BS85F</b>	4980	(6760)	4.21 - 2.52	300
<b>BS95F</b>	6590	(8940)	4.21 - 2.80	300
<b>BS115F</b>	12000	(16300)	5.00 - 2.80	300
<b>BS140F</b>	18000	(24400)	5.00 - 2.99	300
<b>BS165F</b>	32500	(44100)	5.55 - 3.58	300
<b>BS200F</b>	45500	(61700)	5.91 - 4.17	180
<b>BS225F</b>	75200	(102000)	10.12 - 4.65	150
<b>BS250F</b>	108000	(147000)	9.72 - 5.00	135
<b>BS270F</b>	141000	(192000)	10.51 - 5.51	125
<b>BS300F</b>	254000	(345000)	10.94 - 5.63	115
<b>BS360F</b>	360000	(489000)	11.50 - 5.98	100
<b>BS425F</b>	542000	(735000)	14.96 - 6.38	85
<b>BS465F</b>	722000	(980000)	16.14 - 7.24	80

# POWER-LOCKS®

## ENTER THE “KEYLESS” SOCIETY

### Our POWER-LOCK® solves your problems.

Eliminate backlash damage to keyways from heavy loads... the Tsubaki POWER-LOCK® fits tightly around the shaft/hub and is not affected by load reversals.

End your high machining expenses for long shaft keyways, splined shafts, threads, grooves and steps... the Tsubaki POWER-LOCK® offers exacting, slip-free location. Erase the headaches of shrink and press fits. The Tsubaki POWER-LOCK® simplifies installation and removal.

This easy-to-install unit slides into position and offers a keyless shaft-hub lock that will simultaneously handle both high torque and thrust while increasing your shaft strength.

The POWER-LOCK® is easy to assemble... you only need one tool. It is ideal for locking in large or small sprockets, gears, pulleys, timing cams and rollers. Best of all, the POWER-LOCK® is in stock for immediate shipment.

## Features & Applications

### High Durability Against Reversing or Impacting Loads

The POWER-LOCK® connection is not affected by torsional load reversal or impact, which damages the key and keyway connection. Tsubaki POWER-LOCKS® fit tightly around the shaft/hub and is free of backlash.

### Easy and Precise Positioning

The POWER-LOCK® offers 360-degree angular adjustment and is excellent for indexing tables, cam mechanisms, gear drives and double-strand conveyor sprockets.

### Thrust Capability

The Tsubaki POWER-LOCK® can hold axial forces, too. Typical applications with these forces include indexing tables and bevel gears.

### Easy Assembly and Disassembly

The POWER-LOCK® can be assembled and disassembled frequently, so maintenance or replacement of worn parts is simple and easy as compared to other methods (key and keyway, spline, shrink or press fits and welding).

### Increased Shaft Strength

By using the POWER-LOCK®, no metal needs to be removed from the shaft (such as the cutting of a keyway). The strength of the shaft can be kept at its original diameter. This savings can be especially noted on hollow-shaft applications.

### Eliminates Costly Machining

There is no need for time-consuming machining of keyways. The POWER-LOCK® offers substantial savings on long, heavy shafts.



**Tsubaki POWER-LOCKS® offer a Whole New Approach to Replacing Keyways**

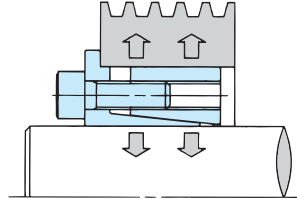
**For a complete listing of all Tsubaki POWER-LOCK® locking devices, please download the Tsubaki POWER-LOCK® catalog at: [www.ustsubaki.com](http://www.ustsubaki.com)**

# POWER-LOCKS®

## KE SERIES



1. Designed to suit a wide range of shaft tolerances.
2. Compact with only a small difference between the inner and outer diameters.
3. Self-centering.
4. Excellent for locking small shafts.



## AD SERIES

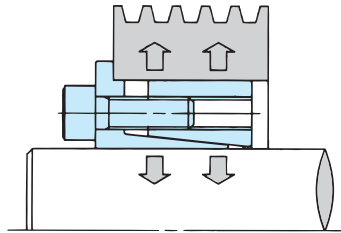


HIGH TORQUE

## AE SERIES



1. Self-centering.
2. Generally the same inner and outer diameters as an AS Series POWER-LOCK®.



WIDE RANGE OF TOLERANCES

## AS SERIES MULTIPURPOSE



MULTIPURPOSE FLANGE

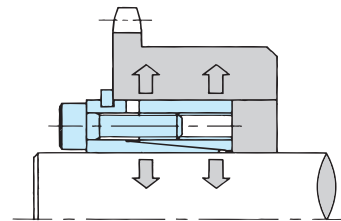
ENVIRONMENTAL RESISTANT

FLUSH MOUNTING

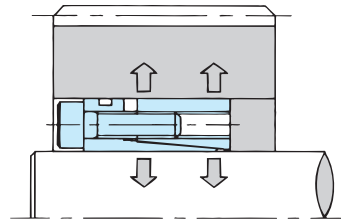
## RE SERIES STAINLESS STEEL



1. RE Series can be installed without snap ring.
2. Offers corrosion protection.



FLANGE TYPE



STRAIGHT TYPE

## FL SERIES

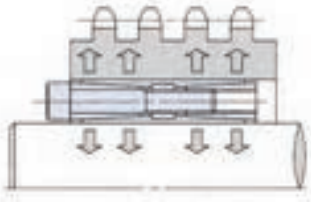


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# POWER-LOCKS®

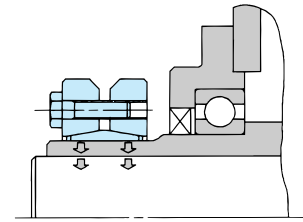
1. Offers 1.5 to 3 times the rated torque capacity of the AS Series.
2. Self-centering.
3. Designed with the same inner and outer diameters as an AS Series POWER-LOCK®.



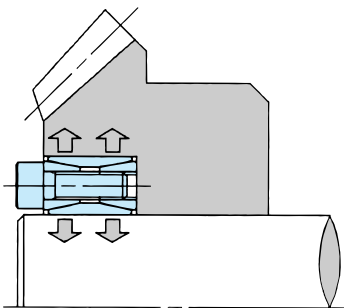
## SL SERIES



1. Installs over outer hub diameters.
2. Excellent for locking hollow shafts.
3. Low profile for applications with space restrictions.



1. Easy-handling and multipurpose.
2. Compatible with large shafts.

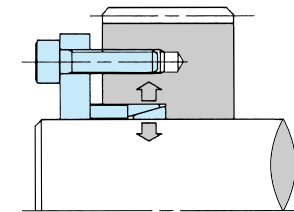


EXTERNAL  
LOCKS

## EL SERIES



1. Offers flexible design configurations.
2. Designed for applications requiring space restrictions.
3. Excellent cost performance.

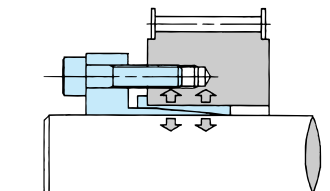


LOCKING  
ELEMENTS

## EF SERIES



1. Pressure flange type locking elements.
2. Offers 2 to 3 times the rated torque capacity of the EL Series.
3. Self-centering.



LOW PROFILE

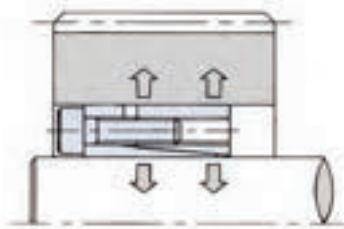
Environment resistant models in stainless steel (AS-SS Series) and electroless nickel-plated finish (AS-KP Series) available.

SMALL HUB  
DIAMETERS

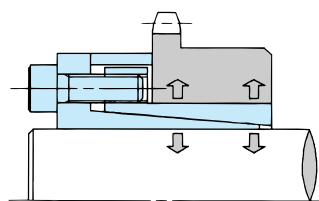
## TF SERIES



1. Self-Centering Function
2. Same size inside diameter and outside diameter as AS Series POWER-LOCK® in most cases.
3. Simple Construction



1. Excellent for locking small hubs.
2. Minimum number of bolts used.
3. Self-centering.



For a complete listing of all Tsubaki POWER-LOCK® locking devices, please download the Tsubaki POWER-LOCK® catalog at: [www.ustsubaki.com](http://www.ustsubaki.com)

# AS INCH & METRIC SERIES

## MOST POPULAR STYLE

### Features & Applications

#### Multipurpose

Ideally structured and highly reliable locking device

#### Easy and Precise Positioning

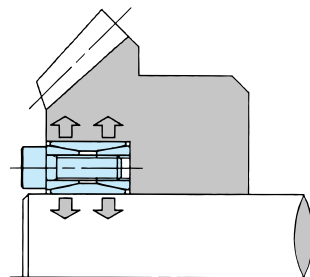
Keyway, splines, presses and thermal fittings are not required. Optimum performance is achieved with low shaft and hub tolerances minimizing the total machining costs.

#### Thrust Capability

Install or removes just by tightening or loosening of bolts. No need to hassle with adjusting keyways and thermal fittings.

#### Easy Assembly and Disassembly

Stainless Steel and electroless nickel plating options are offered for standard models. Both are highly durable in corrosive or clean room environments.



LOCKING BOLTS



TAPER RING (A)



OUTER RING



INNER RING



TAPER RING (B)

#### MODEL NUMBER

**Inch Series:** PL 2 AS  
 POWER-LOCK® Shaft Dia. (inch) AS Series

**Metric Series:** PL 020 X 047 AS  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) Series  
 AS: Standard  
 AS-SS: Stainless Steel  
 AS-KP: Electroless Nickel-Plated

# AD INCH & METRIC SERIES

## DOUBLE TORQUE SERIES

### Features & Applications

Over 2 Times Larger Transmissible Torque than that of AS Series

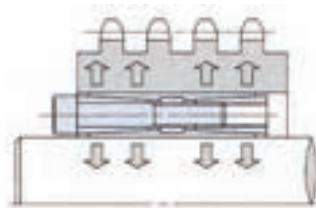
#### Interchangeable with POWER-LOCK® AS Series

Has the same size inside and outside diameter as AS Series POWER-LOCK® in most cases.

#### Self-Centering Function

Straight and narrow hubs can be used with AD Series POWER-LOCK®

#### Easy and Precise Positioning



#### MODEL NUMBER

**Inch Series:** PL 1 AD  
 POWER-LOCK® Shaft Dia. (inch) AD Series

**Metric Series:** PL 045 X 075 AD  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) AD Series

**Note:** AD Series is referred to as AND and AD-N in other parts of the world. All three describe an identical product.

# AE INCH & METRIC SERIES

## SELF CENTERING SERIES

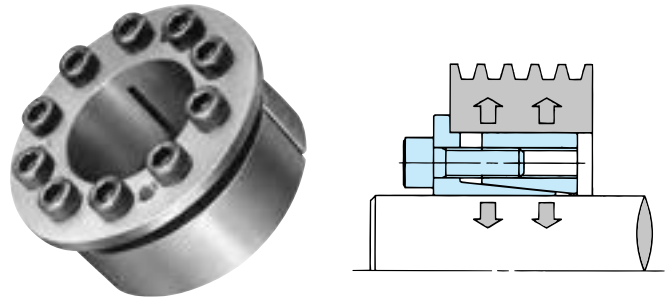
### Features & Applications

#### Multipurpose

Ideally structured and highly reliable locking device

#### Easy and Precise Positioning

Keyway, splines, presses and thermal fittings are not required. Optimum performance is achieved with low shaft and hub tolerances minimizing the total machining costs.



LOCKING BOLTS



INNER RING



OUTER RING

#### MODEL NUMBER

**Inch Series:** PL 2 AE  
 POWER-LOCK® Shaft Dia. (inch) AE Series

**Metric Series:** PL 019 X 047 AE  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) AE Series

# FL INCH & METRIC SERIES

## FLUSH-MOUNT SELF-CENTERING STYLE

### Features & Applications

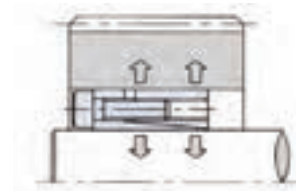
#### Self-Centering Function

Straight and narrow hubs can be used with FL Series POWER-LOCK®

#### Interchangeable POWER-LOCK® AS Series to FL Series

#### Easy and Precise Positioning

#### Simple Construction



LOCKING BOLTS



INNER RING



OUTER RING

#### MODEL NUMBER

**Inch Series:** PL 2 FL  
 POWER-LOCK® Shaft Dia. (inch) FL Series

**Metric Series:** PL 019 X 047 FL  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) FL Series

# RE INCH & METRIC SERIES

## STAINLESS STEEL FLANGED/STRAIGHT OPTION

### Features & Applications

#### Installation Options

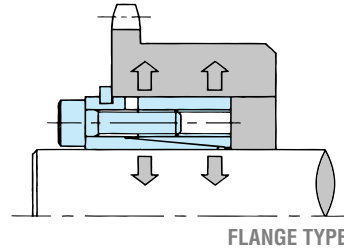
Comes with removable snap ring allowing either flange type or straight-type mounting.

#### Austenite Stainless Steel

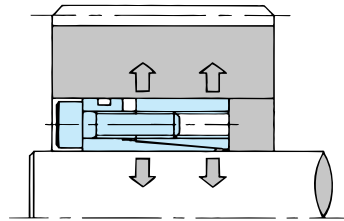
The main unit is made of highly anti-corrosive austenite stainless steel, which makes the entire product excellent for clean-room operation.

#### No Lubrication Required

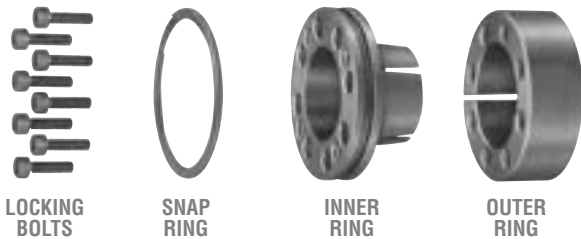
Locking bolts are lubricated so that no additional lubrication is necessary during assembly.



FLANGE TYPE



STRAIGHT TYPE



#### MODEL NUMBER

PL 010 X 026 RE-SS  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) Stainless Steel RE Series

# KE INCH & METRIC SERIES

## SELF-CENTERING KEYLESS LOCKING POWER

### Features & Applications

#### Self-Centering

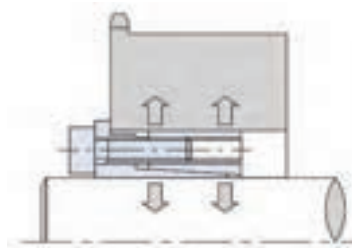
Ideal for A-type sprockets and narrow gears. The POWER-LOCK® KE Series actually strengthens the shaft. Pre-centering is not required.

#### Strong, Long-Lasting Performance

The POWER-LOCK® KE Series has been tested in hundreds of applications. It offers high durability against reversing or impacting loads.

#### Range of Sizes Available

Available in a variety of sizes, including fractional inch sizes for smaller motors or sensors. No costly machining.



LOCKING BOLTS



INNER RING



OUTER RING

#### MODEL NUMBER

Inch Series: PL 1 KE  
 POWER-LOCK® Shaft Dia. (inch) KE Series

Metric Series: PL 005 X 016 KE  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm) Series  
 KE: Standard  
 KE-SS: Stainless Steel  
 KE-KP: Electroless Nickel-Plated

# TF METRIC SERIES

## SELF-CONTAINED THIN PROFILE

### Features & Applications

#### Designed to Fit Small Hub Diameters

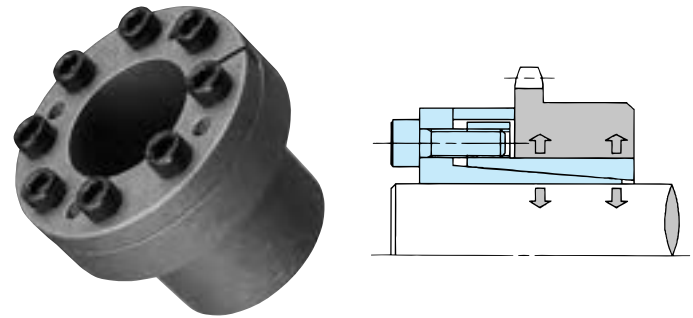
The small difference between inner and outer diameters reduces contact pressure and makes mounting to small hubs possible.

#### Self-Centering

These units provide accurate shaft-hub alignment and concentricity, allowing straight bore mounting.

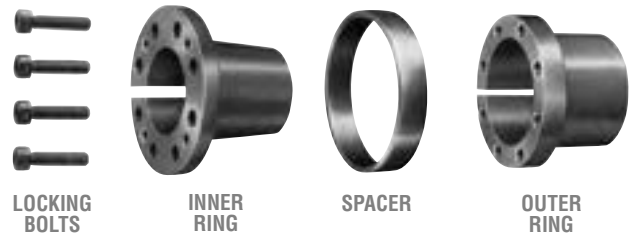
#### Simple Construction

Constructed with only an inner and an outer ring and locking bolts. Simply tighten these bolts to achieve a completely secure connection.



#### MODEL NUMBER

PL 010 X 018 TF  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm)  
 TF Series: Standard  
 TF-KP: Electroless Nickel-Plated



# SL SERIES

## SHRINK DISK STYLE

### Features & Applications

#### External Lock

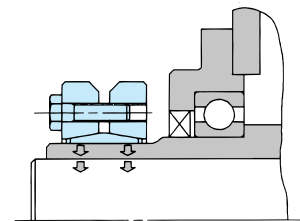
Excellent for hollow shaft or space restricted installation.

#### Easy to Install and Remove

Installs or removes just by the tightening or loosening of bolts. No need to hassle with adjusting keyways and thermal fittings.

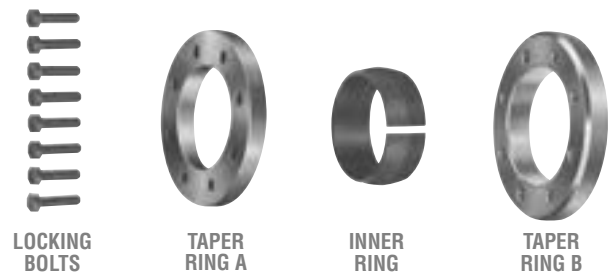
#### Simple Construction

Simply constructed with only an inner ring and taper rings A and B. Simply tighten the locking bolts to achieve a completely secure connection.



#### MODEL NUMBER

PL 024 X 050 SL  
 POWER-LOCK® Shaft Dia. (mm) Outer Dia. (mm)  
 SL Series



# EL SERIES

## LOCKING ELEMENT STYLE

### Features & Applications

#### External Lock

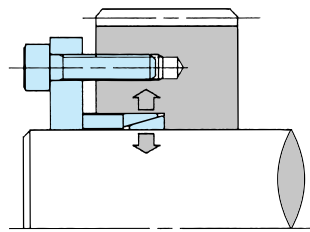
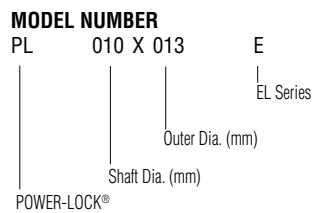
Excellent for hollow shaft or space restricted installation.

#### Easy to Install and Remove

Installs or removes just by the tightening or loosening of bolts. No need to hassle with adjusting keyways and thermal fittings.



OUTER RING  
INNER RING



# EF METRIC SERIES

## THIN PROFILE SERIES

### Features & Applications

#### Same Inner and Outer Diameters as the EL Series

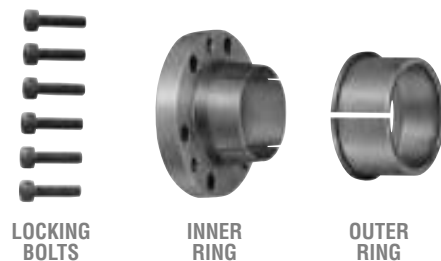
Designed with the same inner and outer diameters as an EL Series POWER-LOCK®

#### Self-Centering

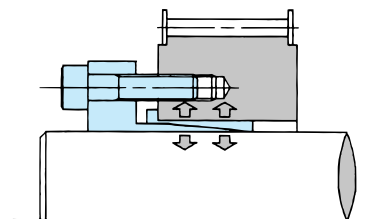
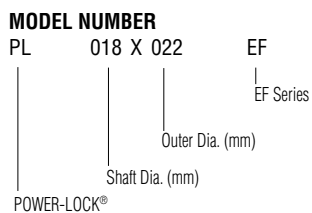
These units provide accurate shaft-hub alignment and concentricity, allowing straight bore mounting.

#### Simple Construction

Constructed with only an inner and an outer ring and locking bolts. Simply tighten the bolts to achieve a completely secure connection.



LOCKING BOLTS  
INNER RING  
OUTER RING



# SHOCK RELAYS

## THE ELECTRONIC SHEAR PIN

Pioneered by Tsubaki, the Shock Relay protects your equipment against unexpected shock loads, overloads, and underloads before damage occurs. The Shock Relay protects the mechanical parts of your equipment by monitoring the current draw on your electric drive motor, and shutting it down when the motor works too hard for too long.

### Advantages:

- Back to work with the press of a button
- No moving parts, CPU design ensures repeatability
- Precise set-points retain accuracy day-after-day
- Permits problem notification by alarm or warning lights
- Protect equipment that is up to 1000 feet away

The Shock Relay adapts to virtually any kind of equipment that's driven by an electric motor and is used in applications in a broad variety of industries. Some of the common industries and applications are listed below:

Industry	Application
Material handling	Conveyors, turntables, elevators
Water treatment plants	Pumps, scrapers, water screens
Food machinery	Screw and belt conveyors, bucket elevators
Machine tool	Tapping machines, drill presses
Chemical	Pumps, agitators, filters



### Reacts only when there is a problem

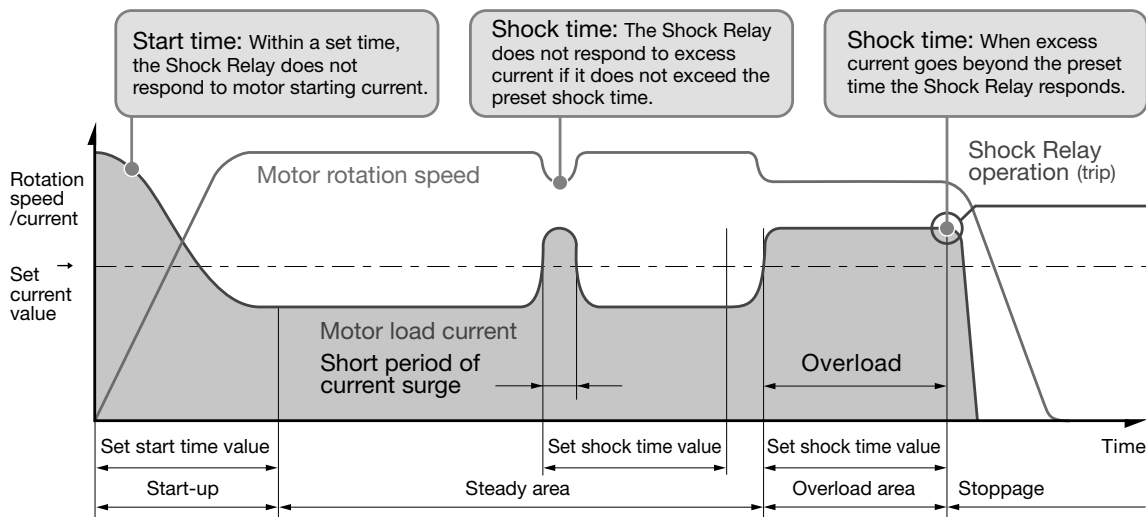
At installation, two set-points are made to the Shock Relay:

- How hard is the equipment allowed to work as measured by motor amperage
- Once the motor starts to work too hard, how soon in seconds must we stop production

Balancing these two settings allows for protection when the unexpected happens, limiting damage and downtime.

## THEORY OF OPERATION

### HOW DOES IT WORK?



# SHOCK RELAYS

## PRODUCT OVERVIEW

### TSBSB SERIES

Dimensional Envelope  
2.6"H X 2.2"W X 3"D

Provides overload protection. Select manual or automatic reset output. Monitor AC motors up to 600 volts and 300 Amps. Shock Relay power supply can be AC or 24VDC. 35 mm DIN rail or panel mount. Economically priced, OEM style. UL Listed.



### TSBED SERIES

Dimensional Envelope  
2.8"H X 2.2"W X 3.1"D

Designed to work with inverters. Product features include: digital display, built-in tamper-proof cover, and built-in test button. Choose between self-holding output relay and automatic reset. UL listed.



### TSBSC SERIES

Dimensional Envelope  
2.9"H X 2.8"W X 3.3"D

Product features include: overload or underload, pre-alarm notification, thermal energy protection, communication function (4 to 20 mA) to allow central monitoring, and works with 20Hz to 200Hz inverters. Panel mount option available.



For a complete listing of all Tsubaki Shock Relay devices, please download the Tsubaki Shock Relay catalog at: [www.ustsubaki.com](http://www.ustsubaki.com)



# TSBSB SERIES

## Features:

- User adjustable for manual or automatic reset
- Contacts open when an overload is detected and remain until the reset button is pushed
- Fail-safe relay de-energizes when over current detected
- Economically priced
- Wide current setting range
- High degree of repeatability with low hysteresis
- Includes TEST and RESET buttons
- All-in-one unit with built-in current transformer
- 35 mm DIN rail mount or panel mount
- Can be used with single-phased motors
- UL listed
- Permits trip notification by alarm or warning lights



Model	Amperage Range
TSBSB5	0.5 - 6 A
TSBSB10	1 - 12 A
TSBSB30	3 - 30 A
TSBSB60	5 - 60 A
TSBSB100	10 - 100 A
TSBSB200	20 - 200 A
TSBSB300	30 - 300 A

# TSBED SERIES

## Features:

- Works with inverter 20 to 200 Hz
- User adjustable for manual or automatic reset
- Digital display
- Adjustable Start Time, Shock Time, and Current setting
- Built-in tamper-resistant cover over controls
- Built-in Test Function
- Includes motor locked rotor protection
- DIN rail or panel mount
- UL listed
- Permits trip notification by alarm or warning lights



Model	Amperage Range
TSBED020	0.2 - 2.4 A
TSBED075	1.2 - 5.8 A
TSBED220	3 - 14 A
TSBED550	6 - 34 A

For a complete listing of all Tsubaki Shock Relay devices, please download the Tsubaki Shock Relay catalog at: [www.ustsubaki.com](http://www.ustsubaki.com)

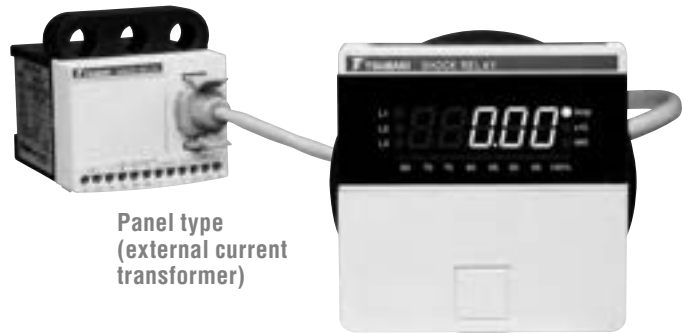
# TSBSC SERIES

## Features:

- The 4 to 20 mA output allows communication to a central control, or as input to controls that operators monitor and adjust to maintain production
- Panel mounting with remote display option
- Both Under current and Over current monitoring
- Inverter compatible from 20 to 200 Hz
- Locked rotor protection
- Phase imbalance protection
- Phase loss protection
- Thermal overload protection
- Can be used with single-phased motors
- Multiple operations can be linked together and monitored from one location.



All-in-one type  
(built-in current transformer)



Panel type  
(external current transformer)

Model	Amperage Range
<b>TSBSC06</b>	0.15 - 6.40 A
<b>TSBSC34</b>	3 - 34 A
<b>TSBSC60</b>	10 - 60 A
<b>TSBSC100</b>	12 - 100 A
<b>TSBSC200</b>	24 - 200 A
<b>TSBSC300</b>	36 - 300 A

# OVERLOAD PROTECTION DEVICES



## Torque Guard TGB Series

An economical choice for general use. The TGB series can be used with about any machine. Offers automatic resetting, easy-to-read torque indicator and no backlash.



## Torque Guard TGM Series

The gasket and O-ring sealed construction in the TGM series is unique. Excels in wet, dusty, and oily applications. Designed for long life, tough environments.



## Torque Guard TGX Series

A high-precision option, the TGX series features no backlash and unsurpassed operation rigidity. Ideal for machines that require accurate positioning.

For a complete listing of all Tsubaki Overload Protection Devices, please download the Tsubaki Overload Protection Devices brochure at: [www.ustsubaki.com](http://www.ustsubaki.com)

# OVERLOAD PROTECTION DEVICES



## Torque Limiter TL Series

A friction system, mechanical device that limits damage to equipment when an unexpected increase in torque occurs because of a jam or overload by slipping and absorbing the brunt of the force, preventing the increased power from damaging your equipment.



## Torque Limiter Coupling

A flexible coupling that uses a Torque Limiter and special type sprocket and is connected by two rows of roller chains. It acts as an automatic safety device, protecting machinery from damage due to overload.



## Torque Keeper TFK Series

A mechanical device for industrial equipment brake mechanisms has been designed with abrasion resistance, the use of a torque indicator, weight savings and other aspects that make it easy to use.



## Mini-Keeper MK Series

A super-compact slipping clutch and brake, constructed from fine chemicals and engineering plastic. The MINI-KEEPER has a supreme level of lightness, compactness and accuracy and is ideal for braking, accumulating and dragging applications.

For a complete listing of all Tsubaki Overload Protection Devices,  
please download the Tsubaki Overload Protection Devices brochure at: [www.ustsubaki.com](http://www.ustsubaki.com)



# CHAIN TOOLS & TECHNICAL RESOURCES

Tsubaki has the path to the right roller chain in the Technical Resource section. In this section you will find details on how to size a roller chain, select a chain for even the most difficult applications, and sizing up the right roller chain. All the details for designing and selecting the right Double Plus® and Top Chain for your accumulating applications is right here. Need the right chain tool for breaking or measuring your chain? Get it all here.



 **TSUBAKI®**

# CHAIN MANAGEMENT SYSTEM™

With Storeroom and Warehouse space at a premium, and no room to stack boxes of chain, Tsubaki has the solution. The Tsubaki Chain Management System™ (CMS) is a combination cutting table and reel storage carousel.

## Features and benefits of the CMS include:

- Reel storage capacity for up to 12 reels of chain
- Cutting table can cut sizes 40-120 and Multi-Wide chains to size 80.
- British standard chains can also be cut from 06B-20B.
- Cutting table comes with electric or hydraulic pump options.



Reel Storage Carousel



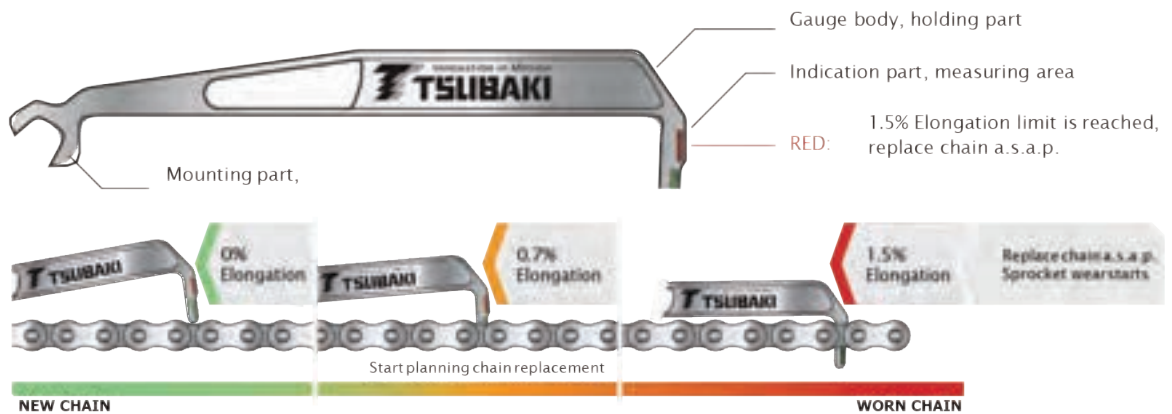
Hydraulic Cutting Table

# CHAIN WEAR INDICATOR KIT

## Chain Wear Indicator Kit

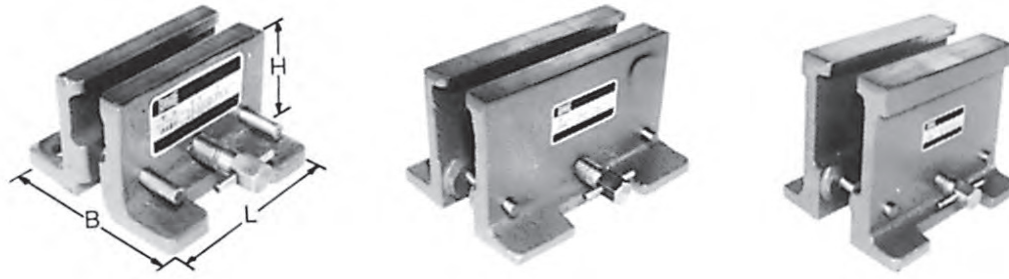
- ANSI Chain Wear Kit - Measuring tools sizes 35-80  
Part #ANSICHAINWERINDIC
- British Standard Chain Wear Kit - Measuring tools sizes 06B-16B  
Part #BSCHAINWEARINDICA

Additional sizes available please consult factory.



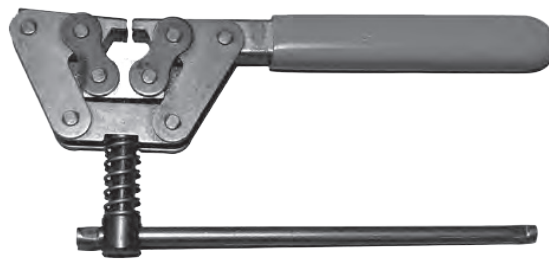
## Punches

Chain No.	Primary Punch	Secondary Punch	Chain No.	Riveting Punch
40-60	S-1	D-1	40	RV-1
80-120	S-2	D-2	50	RV-2
140-240	S-3	D-3	60	RV-3
			80	RV-4



### Chain Vices

No. of Strands	40	50	60	80	100	120	140	160	180	200	240
1	CV1	CV1	CV1	CV1	CV2	CV2	CV2	CV2	CV3	CV3	CV3
2	CV1	CV2	CV2	CV2	CV2	CV3	CV3	CV3	CV3	CV3	CV3
3	CV2	CV2	CV2	CV2	CV2	CV3	CV3	Made To Order			



### Chain Breakers

Model No.	D-35	D-60	D-120	CS - C3
Chain No.	25-60	60-100	120-160	160-240



### Chain Pullers

Model No.	P-35	P-60	P-80
Chain No.	35-60	40-80	80-240

## Tsubaki Roller Chain Drive Selection Process

### Horsepower Rating

The horsepower rating in Table 4 on page 253 is based on the following conditions:

1. The chains are operated under ordinary conditions. The ambient temperature range must be between 15°F and 140°F. They should not be used in an atmosphere in which abrasive dust or corrosive gas is present or where high humidity is present.
2. The two transmission shafts are in a horizontal position, and the chains are properly installed.
3. The suggested lubrication system and oil are used.
4. The load does not change significantly during transmission. The service factor given in Table 1 should be taken into account when the chains are used under various operating conditions. The load conditions will affect the life of the chain.
5. The increase in horsepower rating of multiple strand roller chain cannot be calculated simply by multiplying the horsepower rating of one strand by the number of strands, since the load on each strand is not exactly the same. In order to estimate the service life of the multiple strand chain, the multiple strand service factor given in Table 2 must be used. When the chain length is 100 pitches and the above conditions are met, a service life of approximately 15,000 hours can be expected.

### Procedures for Selecting Roller Chain

1. The following must be considered when selecting roller chain:
  - a. Source of Power
  - b. Driven machine
  - c. HP to be transmitted
  - d. RPM of drive and driven shafts
  - e. Diameter of shafts
  - f. Center distance of shafts
2. Use Table 1 to obtain the service factor.
3. Multiply the horsepower value by the service factor to obtain the design horsepower value.
4. Use Table 4 on page 253 and the HP ratings tables on pages 8-21 to obtain the chain number and the number of teeth for small sprockets. Refer to the number of revolutions of the high speed shaft (the driving shaft when the speed is reduced; the driven shaft when the speed is increased) and the design horsepower value. For smoother chain drive, a smaller pitch chain is suggested. If a single strand chain does not satisfy the requirements, use a multi-strand chain. If space is limited, a smaller pitch, multi-strand roller chain can be used.
5. After determining the number of teeth for the small sprocket, refer to the sprocket dimension table on page .....to check if the sprocket diameter satisfies the space limitations.
6. The number of teeth for the large sprocket is determined by multiplying the number of teeth for the small sprocket by the speed ratio. More than 15 teeth on the small sprocket is suggested. The number of teeth for the small sprocket should be less than 120. By reducing the number of teeth for the small sprocket, the number of teeth for the large sprocket can be reduced.
7. For temperatures below 15°F, see the environmental temperatures and points of concern table on page 262.

**Table 1 – Service Factor**

Type of Impact	Machines	Source of Power		
		Electric Motor or Turbine	Internal Combustion Engine	
			With Hydraulic Drive	Without Hydraulic Drive
Smooth	Belt conveyors with small load fluctuation, chain conveyors, centrifugal blowers, general textile machines, machines with small load fluctuation.	1.0	1.0	1.2
Some Impact	Centrifugal compressors, marine engines, conveyors with some load fluctuation, automatic furnaces, dryers, pulverizers, general machine tools, compressors, general work machines, general paper mills.	1.3	1.2	1.4
Large Impact	Press, construction or mining machines, vibration machines, oil well rigs, rubber mixers, rolls, general machines with reverse or large impact loads.	1.5	1.4	1.7

### Basic Formula for Chain Drives

1. Chain Speed: S

$$S = \frac{P \times N \times n}{12} = (\text{Ft/min})$$

P = Chain Pitch

N = Sprocket tooth count

n = RPM

2. Chain tension: T

$$T = \frac{33,000 \times \text{HP}}{S} = (\text{lbs})$$

S = Chain Speed (ft/min)

HP = Horsepower transmitted

3. Number of chain pitches: L

$$*L = \frac{N_1 + N_2}{2} + 2C + \frac{(N_2 - N_1)^2}{4C}$$

N<sub>1</sub> = Small sprocket teeth

N<sub>2</sub> = Large sprocket teeth

C = Center distance in pitches

\*Any fraction of L is counted as one pitch

4. Center distance in Pitches: C

$$C = \frac{1}{8} \left\{ 2L - N_1 - N_2 + \sqrt{(2L - N_1 - N_2)^2 - \frac{8}{9.86} (N_2 - N_1)^2} \right\}$$

**Table 2 – Multi-Strand Factor**

Number of Chain Strands	Multi-Strand Factor
2	1.7
3	2.5
4	3.3
5	3.9
6	4.6



### Example

#### STEP – 1 Data Required:

1. Type of Application: Centrifugal Blower
2. Shock Load: Small load fluctuation
3. Source of Power: Motor
4. HP to be transmitted: 40HP
5. Drive shaft: Diameter – 2", 750 RPM  
Driven Shaft: Diameter – 3", 250 RPM
6. Center distance: Less than 9 inches
7. Space limitation: Less than 20 inches

#### STEP 2 – Use Table 1 to determine the service factor

Service Factor SF = 1.0

#### STEP 3 – Obtain Design HP

Design HP = (HP to be transmitted) x SF  
= 40hp x 1  
= 40hp

#### STEP 4 – Obtain the chain number and the number of teeth on the small sprocket from the roller chain selection table page 240 referring to the above 40 hp and 750 rpm.

#### Then check it by referring to the Horsepower Rating Tables (Pages 8-21)

1. According to the horsepower rating, the best choice would be a single strand 80 – 17 teeth. Since the speed ratio is 1/3 (250/750 rpm), the necessary number of sprocket teeth would be 17 for the small sprocket and 51 for the large sprocket. But, as outside diameters are 5.94 inches for 17T and 16.81 inches for 51T. This exceeds the limitation of 20 inches (5.67 + 16.81 > 20 inches).
2. As a single strand chain is not suitable, a multi-strand chain of 60-2 with sprockets of 22 and 66 teeth also would not fit this working envelope.
3. A triple strand, 60-3 with 15 and 45 teeth would fit the working envelope. The sprocket diameters are 3.90 and 11.18 inches respectively and the sum is less than 20 inches. The HP rating of the 15T is 15.1 at 700 rpm and 17 hp at 800 rpm. A single strand chain rates at 16 hp and thus must be multiplied by a strand factor of 2.5 for a triple strand. Therefore, the horsepower rating of 60-3 15-teeth at 750 rpm is 40 hp.

#### STEP 5 – Refer to the sprocket section to check the diameter of the bore.

A 45-tooth sprocket meets the necessary requirement, but since the maximum bore diameter is 1.87 inches of a 15-tooth sprocket is smaller than the drive shaft, diameter of 2 inches, it cannot be used.

A 16-tooth sprocket with a maximum bore of 2 inches must be used. Check again that the O.D. of 4.21 inches for 16 teeth and 11.89 inches for 48 teeth is less than the space limitation. A combination of 60-3, 16 and 48 teeth must be used to fulfill the necessary application requirements.

#### Selection for slow speed

When the chain speed (S) is less than 160 ft/min, select the roller chain that is one size smaller than the chain chose from the horsepower rating method mentioned above.

1. Tentatively select the chain and sprocket from Table 4 and proceed by using the on-size-smaller chain and its sprocket with the number of teeth close to the sprocket selected above. Be sure to confirm the sprocket meets the application requirements such as bore diameter and space limitations.

2. Calculate the chain speed from the number of teeth on the drive sprocket using the equation (A). Also, check that the speed is less than 160 ft/min.
3. Calculate the tension for the above from equation (B).
4. Select the service factor and the chain speed coefficient from Table 1 and Table 3.
5. Verify that the chain has maximum allowable load which satisfies equation (C).

$$S = \frac{P \times N \times n}{12} \text{ ft/min... (A)}$$

$$T = \frac{33,000 \times HP}{S} (\text{lbs}) \dots\dots (B)$$

$$T \bullet \text{Service factor} \bullet \text{chain speed coefficient} \leq \text{Maximum allowable load} \dots\dots (C)$$

- S: Chain speed (ft/min)
- P: chain pitch
- N: No. of sprocket teeth
- n: RPM
- T: chain tension (lbs.)
- HP: Transmitted horsepower

There are two different ways to do the next step: to increase the number of teeth, or to use the same procedure for Super Chains of the same size.

**NOTE:** Please use press-fit connecting links for slow speed chain selection.

**Table 3**

Chain Speed	Speed Coefficient
Less than 50ft/min	1.0
50 to 100 ft/min	1.2
100 to 160 ft./min	1.4

#### Selection for High Temperatures

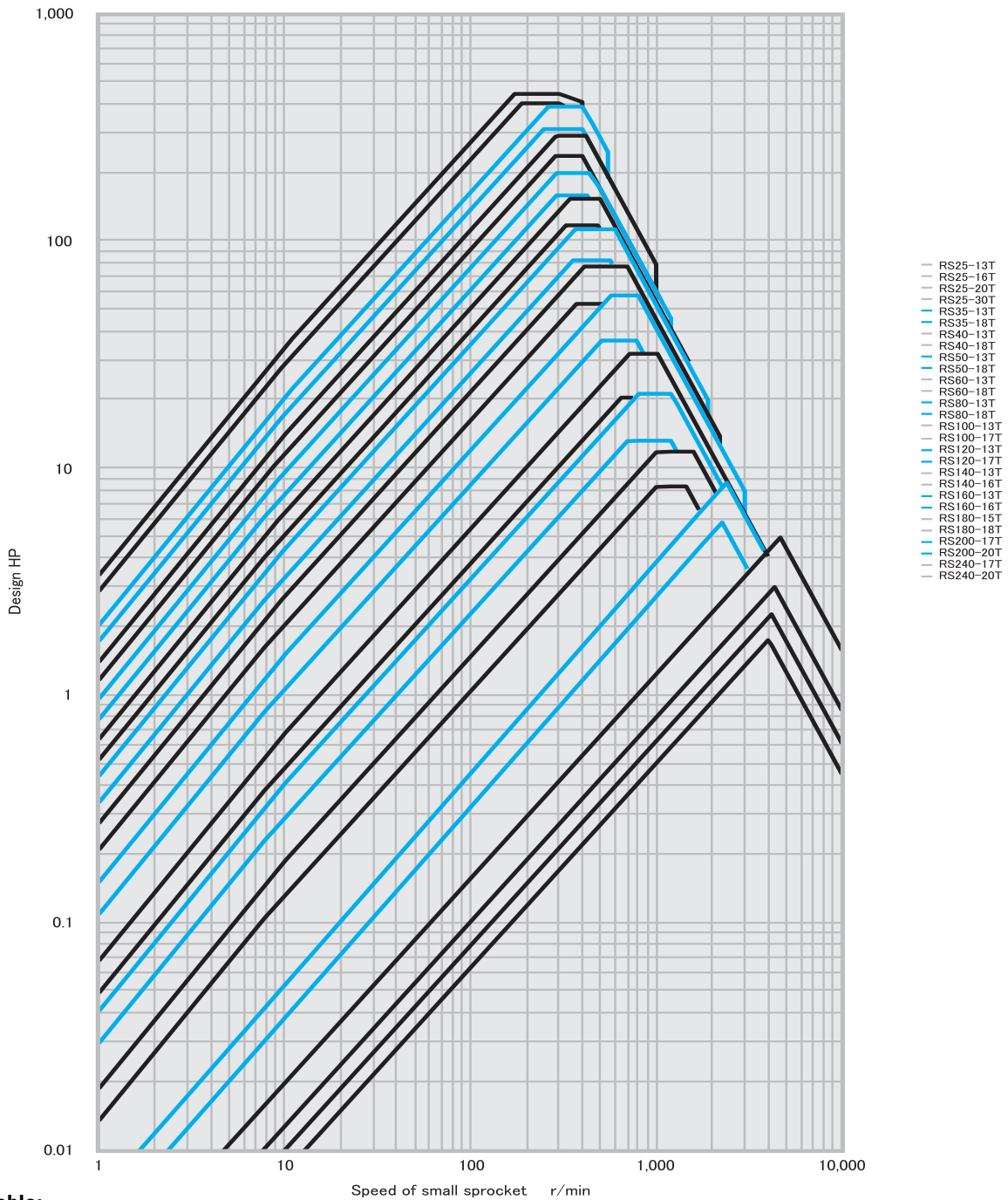
**Tsubaki drive chains are made of heat treated carbon steel. When exposed to high temperatures, the mechanical properties of the heat treated chain components are lost.**

1. The hardness, and therefore the wear resistance of the pins and bushings is reduced.
2. At temperatures of 390°F, the rollers and plates lose their hardness and strength.

Standard roller chains can be used in temperatures up to 500°F with the following adjustments.

Temperature	% of Catalog Capacity Rating
Up to 340° F	100%
390° F	75%
500° F	50%

**Table 4: ANSI Roller Chain Selection Table**



**How to use this table:**

**1 – Example – Design horsepower 7hp**

a) Assume that the RPM of the small sprocket is 100. Judging from the intersection point of the design horsepower's value of 7 hp and the RPM value of 100, size 80 roller chain and a subsequent sprocket with 17 or 18 teeth can be selected. Sprockets with 17 teeth are more economical than those with 18 teeth.

b) Assume that the RPM of the small sprocket is 300. A size 60, 15-tooth sprocket is appropriate from the intersection point in the same manner as above. The line for a size 50 chain, 24-tooth sprocket can also be seen as near the intersection of 7 hp and 300 RPM. Therefore, either a size 60 chain, 15-tooth or a size 50 chain, 24-tooth sprocket can be selected. This table is used to make a tentative selection. The Horsepower Rating Tables should be used to determine the most appropriate chain and sprocket.

2 – Horsepower lines of 20, 24, and 30-tooth sprockets are shown only in the high speed range on the right hand side of the above chart. When checking with the horsepower line of these sprockets, make a line parallel to the other lines on the left hand side of the dotted line for a size 50, 24-tooth sprocket.

3 – When the chain speed is less than 160 ft./min, it is more economical to select the right roller chain by the selection method for slow speed drives (page 252).

## CHAIN DRIVE SELECTION

### Heavy Series Chains

Generally Super Series chains are suggested when the chain speed is less than 160 ft./min and where the roller chain or the ASME/ANSI Heavy Series chains are not strong enough to meet application requirements.

- 1) Tentatively select the chain and sprocket with the same size and number of teeth as used in the "Selection for Slow Speed."
- 2) Calculate the chain speed from the number of teeth of the driving sprocket using equation (A) and check whether the speed is less than 160 ft./min.
- 3) Calculate the chain tension necessary for the above drive from equation (B).
- 4) Select the same service factor and the chain speed coefficient from Tables 1 and 2.
- 5) Select the suitable chain and verify that the chain satisfies equation (C).

$$S = \frac{P \times N \times n}{12} \text{ (Ft/min)}$$

$$T = \frac{33,000 \times HP}{S} = \text{(LBS)}$$

T x Service Factor x Chain Speed Coefficient ≤ or = to MAL .....(C)

- S:** Chain speed (ft/min)  
**P:** Chain pitch (inches)  
**N:** Drive sprocket teeth No.  
**n:** RPM of drive sprocket  
**T:** Chain tensions (lbs)

**Table 1: Service Factor**

Type of Impact	Service Factor
Smooth	1.0
Some Impact	1.3
Large Impact	1.5

**Table 2: Service Factor**

Chain Speed	Speed Coefficient
Less than 50 ft/min	1.0
50-100 ft/min	1.2
100-160 ft/min	1.4

## BRITISH STANDARD CHAIN DRIVE SELECTION

1. The following must be considered when selecting roller chain:
  - a. Source of Power
  - b. Driven machine
  - c. HP to be transmitted
  - d. RPM of drive and driven shafts
  - e. Diameter of shafts
  - f. Center distance of shafts
2. Use Table 1 to obtain the service factor.
3. Multiply the horsepower value by the service factor to obtain the design horsepower value.
4. Use Table 4 on page 255 to obtain the chain number and the number of teeth for small sprockets. Refer to the number of revolutions of the high speed shaft (the driving shaft when the speed is reduced; the driven shaft when the speed is increased) and the design horsepower value. For smoother chain drive, a smaller pitch chain is suggested. If a single strand chain does not satisfy the requirements, use a multi-strand chain. If space is limited, a smaller pitch, multi-strand roller chain can be used.
5. After determining the number of teeth for the small sprocket, refer to the sprocket section to check if the sprocket diameter satisfies the space limitations.
6. The number of teeth for the large sprocket is determined by multiplying the number of teeth for the small sprocket by the speed ratio. More than 15 teeth on the small sprocket is suggested. The number of teeth for the small sprocket should be less than 120. By reducing the number of teeth for the small sprocket, the number of teeth for the large sprocket can be reduced.
7. For temperatures below 15°F, see the environmental temperatures and points of concern table on page 262.

**Table 1: Service Factor**

Type of Impact	Machines	Source of Power		
		Electric Motor or Turbine	Internal Combustion Engine	
			With Hydraulic Drive	Without Hydraulic Drive
Smooth	Belt conveyors with small load fluctuation, chain conveyors, centrifugal blowers, general textile machines, machines with small load fluctuation.	1.0	1.0	1.2
Some Impact	Centrifugal compressors, marine engines, conveyors with some load fluctuation, automatic furnaces, dryers, pulverizers, general machine tools, compressors, general work machines, general paper mills.	1.3	1.2	1.4
Large Impact	Press, construction or mining machines, vibration machines, oil well rigs, rubber mixers, rolls, general machines with reverse or large impact loads.	1.5	1.4	1.7

**Table 2 – Multi-Strand Factor**

Number of Chain Strands	Multi-Strand Factor
Double Strand	1.7
Triple Strand	2.5

**Number of Pitches of Chain**

$$L = \frac{N_1 + N_2}{2} + 2C + \frac{\left(\frac{N_2 - N_1}{6.28}\right)^2}{C}$$

Any fraction of L is counted as one pitch.

**Center Distance in Pitches**

$$C = \frac{1}{8} \left\{ 2L - N_1 - N_2 + \sqrt{(2L - N_1 - N_2)^2 - \frac{8}{9.86}(N_2 - N_1)^2} \right\}$$

- L: Number of pitches
- N<sub>1</sub>: Number of teeth (small Sprocket)
- N<sub>2</sub>: Number of teeth (large sprocket)
- C: Center distance in pitches

**Chain Speed**

$$S = \frac{P \times N \times n}{12} = (\text{ft./min})$$

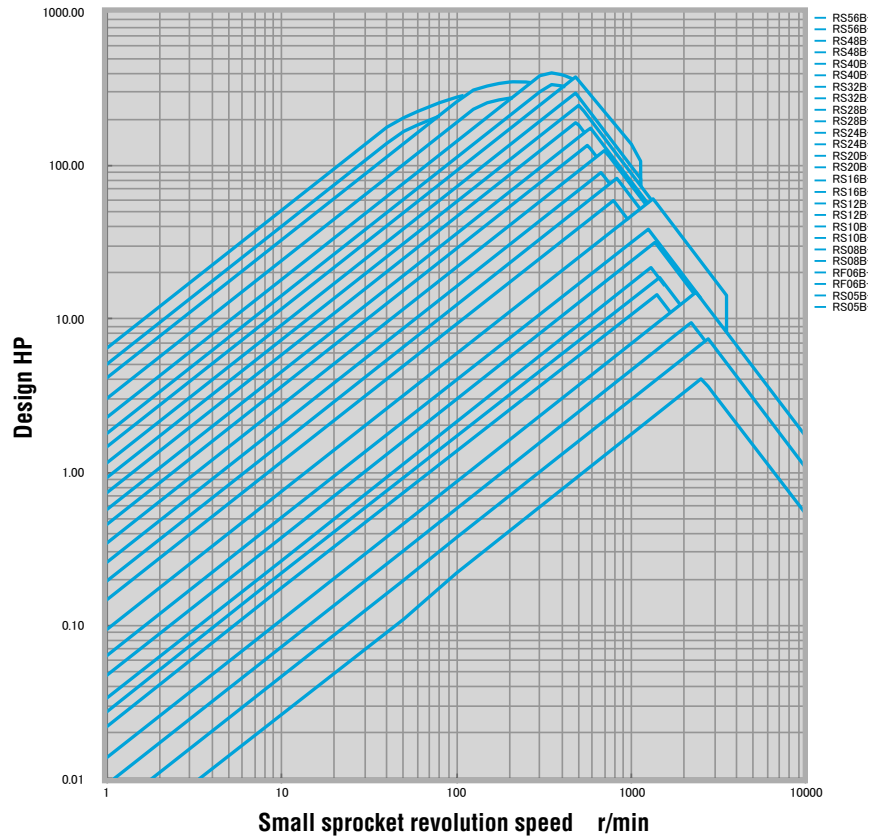
- S: Chain Speed (ft./min.)
- P: Chain Pitch (Inch)
- N: Number of sprocket teeth
- n: RPM of sprocket

**Chain Tension from HP**

$$T = \frac{30,000 \times \text{HP}}{S} = (\text{lbs.})$$

T: Chain Tension (lbs.)

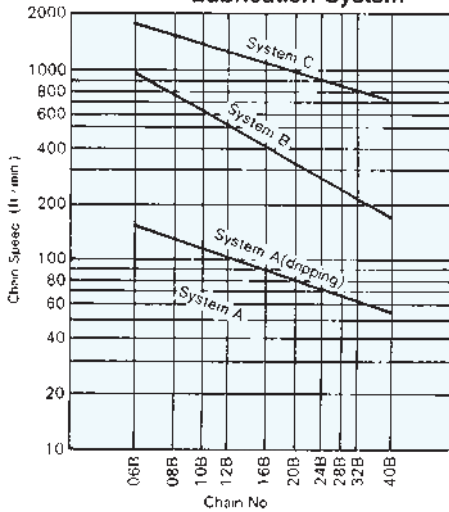
**Table 3: British Standard Roller Chain Selection Table**



**The selection table is based on the following conditions:**

1. The chains are operated under ordinary conditions. The ambient temperature range is between 15°F and 140°F. They are not to be in an environment where abrasive dust or corrosive gas is present or when the humidity is high.
2. The two transmission shafts are in a horizontal position and the chains are properly installed.
3. The load does not change significantly during transmission. The "Service Factors" given in Table 1 are used under various operating conditions. The load conditions will affect the chain life. The increase in horsepower rating of the multi-strand chains cannot be calculated by multiplying the horsepower rating of one strand by the total number of strands since the load on each strand is not the same. In order to estimate the service life of a multi-strand chain, the "Multiple-Strand Factor" given in Table 2 must be used.
4. Refer to chain lubrication styles and details in Technical Data sections.

**Table IV: Chain Speed and Lubrication System**



**Example:**

- Data:
1. Type of application: Centrifugal Blowers
  2. Source of Power: Electric Motor
  3. HP to be transmitted: 40 hp
  4. Drive shaft: 600 rpm
  5. Driven shaft: 200 rpm
  6. Center distance: 19 inches
  7. Space Limit: Maximum 24 inches

**STEP 1** – Service Factor per Table 1 – 1.0

**STEP 2** – Calculate HP  
 Design HP = HP transmitted SF  
 = 40 HP 1.0  
 = 40 HP

**STEP 3** – Obtain chain size and the small sprocket teeth count from the selection table for 40 hp and 600 rpm.

- According to the selection table, the selected chain and sprocket RPM's are:
- (a) RS12B-3 chain and 25 tooth sprocket
  - (b) RS16B-2 chain and 17-tooth sprocket
  - (c) RS16B chain and 25-tooth sprocket

\* For (a), the necessary number of teeth for both small and large sprockets are 25 teeth and 75 teeth respectively, since the speed ratio is 1/3 (200/600 rpm). But the outside diameter of the sprockets  
 \* For (c), the necessary number of teeth for small and large sprockets is 25 (O.D. 8.4 inches) and 75 teeth (O.D. 24.4 inches) respectively. It exceeds the space limitation again (8.4 inches + 24.4 inches > 24 inches).  
 \* For (b), the necessary number of teeth for the small and large sprockets is 17 (O.D. 5.9 inches) and 51 (O.D. 16.8 inches). It satisfies the space limitation (5.9 inches + 16.8 inches < 24 inches). A combination of RS16B-2, and 17 teeth and 51 teeth must be used to fulfill all the necessary requirements.

**STEP 4** – Use Table IV to determine the lubrication method

$$\text{Chain Speed (S): } \frac{P \times N \times n}{12}$$

$$= \frac{1 \times 600 \times 17}{12} = 850 \text{ ft/min}$$

System B is suggested

**STEP 5** – Obtain the number of pitches of chain (L).

$$= \frac{N_1 + N_2}{2} + 2C + \frac{(N_2 - N_1)^2}{4C}$$

$$= \frac{17 + 51}{2} + 2 \cdot \frac{19}{1} + \frac{(51 - 17)^2}{4 \cdot 1}$$

$$= 73.35 = 74 \text{ Links of chain}$$

**Installation and Arrangement**

**Speed Ratio and Chain Wrap**

The speed ratio of the roller chain can range up to 7:1 under normal operating conditions. However, a speed ratio of 10:1 is possible if the speed is very low. Chain wrap on a small sprocket must be at least 120 degrees.

**Distance Between Shafts**

Sprockets can be separated by any distance as long as their teeth do not touch. Optimum distance is 30 to 50 times the pitch of the chain used except when there is a pulsating load. In such cases, the distance should be up to 20 times the pitch of the chain used.

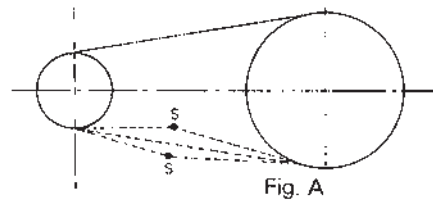
**Position**

Roller chains are ideally installed horizontally. When chains are installed at angles approaching the vertical, they stretch quickly and may slip off the sprockets. In such cases, the sprockets should be adjusted properly.

**Slack**

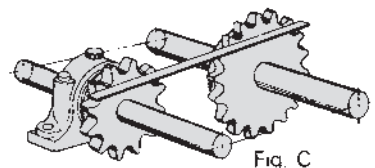
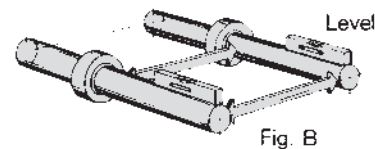
Generally, the slack of a roller chain should be on the lower side (Figure A). Adequate slack is 4% of the span for normal drives. In the following cases, the slack should be about 2% of the span:

- a) Vertical Drive or close to vertical drive.
- b) Center distance between two shafts is greater than 3ft.
- c) Chain is operated under heavy load and high frequency of an on and off drive.
- d) Direction of the drive is often changed.



**Position of Sprocket**

The two shafts should be parallel and preferably in a horizontal position. Sprockets should be firmly installed (Figs B & C). Use a straight edge to check that the two sprockets are installed along the same horizontal plane.



## Arrangement

When designing roller chain drives, the centerline of both sprockets should be close to the horizontal (Figs D & E). The angle of the incline can be up to 60 degrees (Figs F & G). If installation is close to vertical, it is desirable to install an idler or a guide stopper to maintain smooth engagement of the chain and sprocket.

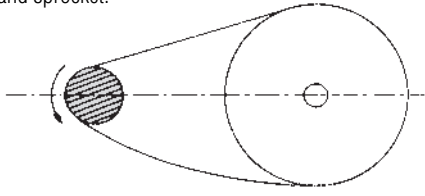


Fig D

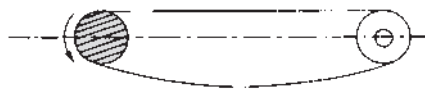


Fig E

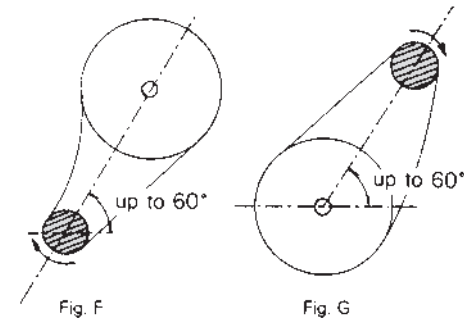


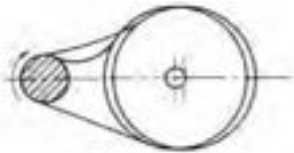
Fig. F

Fig. G

### Attention should be paid to the following arrangements:

If the slack side is on the top, it is necessary to eliminate excessive chain slack.

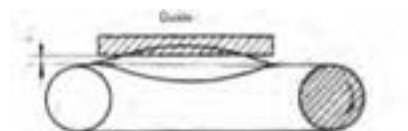
**A-1** When the center distance is short, chain slack should be adjusted by increasing the center distance.



**A-2** When the center distance is long, the chain slack should be adjusted by installing an idler.

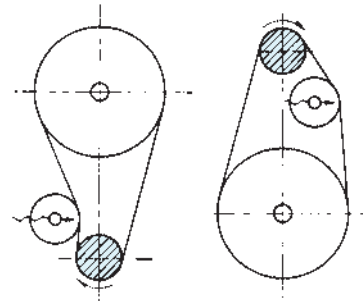


**B** If vibration occurs due to high chain speed, install a guide.



\* Distance between chain and guide should be 1/64" to 1/32"

**C** If the centerline is vertical, install an idler which functions automatically to eliminate extr5a chain slack. If the driving shaft is on the lower side, an idler must be installed.



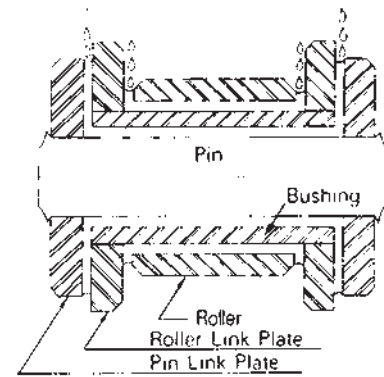
## Lubrication

### Lubrication increases the Service Life

One of the most important factors in getting the best possible performance out of your roller chain is proper lubrication. No matter how well a transmission system is designed, if it is not properly lubricated, it will not meet its full service life potential.

### Lubrication

Wear between the pin and bushing causes the roller chain to elongate. These parts should, therefore, be well lubricated. The gap between the pin link plate and the roller link plate on the slack side of the chain should be filled with oil as much as possible. This oil forms a film which minimizes wear on the pin and bushing thus increases the chains service life. It also reduces noise and acts as a coolant when the chain runs at high speeds.



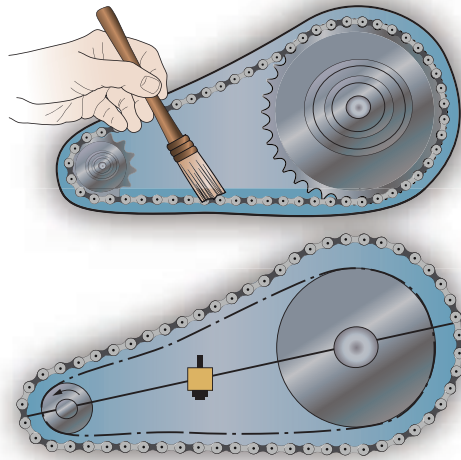
### Suggested Lubricants

Only high quality oil should be used to lube roller chain. Neither heavy oil nor grease is suitable. The viscosity of the oil used will depend on the chain size, speed and temperature. See table below for more information.

Lubricating System	A, B Ambient Temperature Range				C Ambient Temperature Range			
	14°-32°F	32°-104°F	104°-122°F	122°-140°F	14°-32°F	32°-104°F	104°-122°F	122°-140°F
Chain No. 50 or less	SAE 10	SAE 20	SAE 30	SAE 40	SAE10	SAE20	SAE30	SAE40
60 and 80	SAE20	SAE 30	SAE 40	SAE 50				
100								
120 or more	SAE 30	SAE 40	SAE 50		SAE 20	SAE 30	SAE 40	SAE 50

The following lubrication systems are suggested:

### SYSTEM A

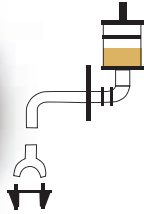


#### Manual Lubrication

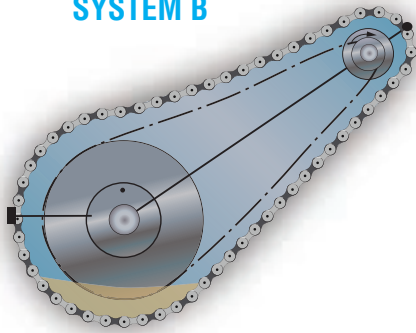
Oil is applied with an oil filler or brush in the gap between the pin link and roller link on the slack side of the chain. It should be applied about every eight hours or so as often as necessary to prevent the bearing area of the chain from becoming dry. Always turn off and lockout the power switch before lubricating or servicing a chain system.

#### Drip Lubrication

A simple casing can be used. The oil is supplied by a drip feed. Each strand of chain should ordinarily receive 50 to 20 drops of oil per minute depending on chain speed.



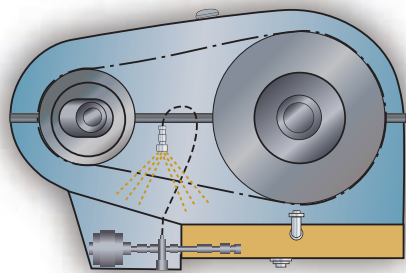
### SYSTEM B



#### Oil Bath Lubrication

The chain is installed in a leak-free casing. The oil depth should be  $\frac{1}{4}$  to  $\frac{1}{2}$  inch deep. In the oil is too deep, the oil will be adversely affected by the heat generated.

### SYSTEM C



#### Lubrication Using a Pump

Use a leak-free casing. A pump is used to circulate the oil which is cooled. The number of supply holes should equal the number of strands plus 1. The amount of oil supplied to each hole should be constant.



Chain Speed (ft/min)	Chain Number			
	60 and under	80-100	120-140	160 and over
1600-2600	.26gal/min	.40gal/min	.53gal/min	.66gal/min
2600-3600	.53gal/min	.66gal/min	.79gal/min	.92gal/min
3600-4600	.79gal/min	.92gal/min	1.06gal/min	1.19gal/min

Regardless of lubricating system, the roller chain must be washed periodically with solvent. Examine the pin and bushing after removing the chain. Any damage or reddish-brown color on the surfaces may indicate that the system is not being lubed correctly.

## Troubleshooting Guide

Problem	Possible Cause	What to Do
<b>Excessive Noise</b>	Misalignment of sprockets	Realign sprockets and shafts
	Loose casings or bearings	Tighten set-bolts
	Too little or too much slack	Adjust centers or idler take-up
	Chain and/or sprocket wear	Replace chain and/or sprocket
	Inadequate lubrication or no lubrication	Proper lubrication
	Chain pitch is too large	
<b>Chain Vibration</b>	Resonance to the vibration cycle of machine to be installed	Chain vibration cycle of chain or machine
	High load fluctuation	Use torque converter or fluid coupling
<b>Wear on inside of link plate and one side of sprocket teeth</b>	Misalignment	Realign sprockets and shafts
<b>Chain climbs sprockets</b>	Excessive chain wear	Replace chain and/or sprocket
	Excessive chain slack	Adjust centers or idler take-up
	Heavy overload	Reduce load or install stronger chain
<b>Broken pins, bushings or rollers</b>	Chain speed too high for pitch and sprocket size	Shorter pitch chain or larger dia. Sprockets
	Heavy shock or suddenly applied loads	Reduce shock load or install larger chain.
	Material build-up in sprocket tooth pockets	Remove material build up or install mud-relief sprockets
	Inadequate lubrication or no lubrication	Proper lubrication
	Chain or sprocket corrosion	Install corrosion resistant chain and sprockets
<b>Chain clings to sprocket</b>	Center distance too big or high load fluctuation	Adjust the center distance or idler take-up
	Excessive chain slack	Same as above
	Excessive chain wear	Replace chain
<b>Chain gets stiff</b>	Misalignment	Realign sprockets and shafts
	Inadequate lubrication or no lubrication	Proper lubrication
	Corrosion	Replace with corrosion resistant chains
	Excessive load	Reduce load or replace with larger chain
	Material build-up in chain joints	Shield drive from foreign matter
	Peening or deformed sideplates	Check for chain interference/impact
<b>Breaking of link plate</b>	Subjected to shock load	Reduce shock (install shock damper)
	Vibration	Install a device to absorb vibration (tensioner)
	Moment of load inertia is too big	Increase chain pitch or no. of strands
	Load/speed too high	Check for proper chain selection
	Corrosion	Corrosion resistant chains



# ATTACHMENT CHAIN SELECTION GUIDE

Tsubaki ANSI single and double pitch roller chain is widely used for conveyor service. The following procedure is useful for economical and quick chain selection.

- Step 1 – Confirm operating conditions**
- Step 2 – Tentatively select chain size**
- Step 3 – Calculate the design tension (Actual chain tension)**
- Step 4 – Verify the chain selection**
- Step 5 – Verify the allowable roller load**

## STEP 1 - Confirm the operating conditions of the conveyor

The following information is needed to design the chain conveyor

1. Type of conveyor
2. Method of chain travel
3. Type, weight, and size of materials to be conveyed
4. Weight of materials being transported.
5. Conveyor speed
6. Conveyor length
7. Lubrication
8. Environment

## STEP 2 – Tentatively select chain size

To tentatively select the chain size, estimate the tension (T) by the following formula. A chain with an allowable load equal to or over the above calculated chain tension may be tentatively selected.

$$T (\text{lbs.}) = M_T \cdot f \cdot k_1 \text{-----}(1)$$

$M_T$ : Total weight of material conveyed (lbs)

$f$ : Coefficient of friction, sliding and/or rolling  
( $f_1$  and or  $f_2$  of Table 1 and Table 2)

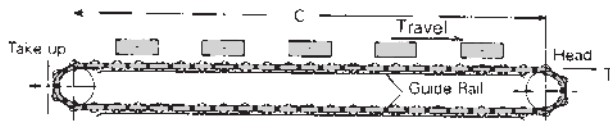
$k_1$ : Chain speed coefficient (Table 3)

## STEP 3 – Calculate chain tension

Next, the chain tension should be calculated using the actual weight of the conveyor chain and material conveyed, as shown below.

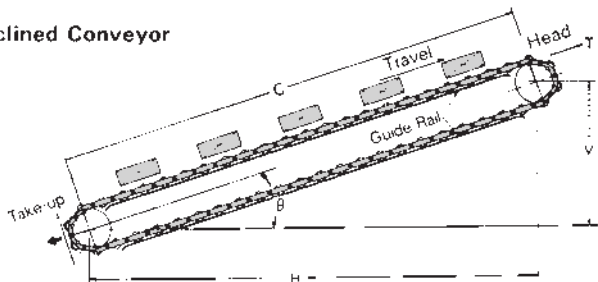
### 1. Chain rolling

#### Horizontal Conveyor



$$T = (M + 2.1w) f_1 C \text{-----}(2)$$

#### Inclined Conveyor



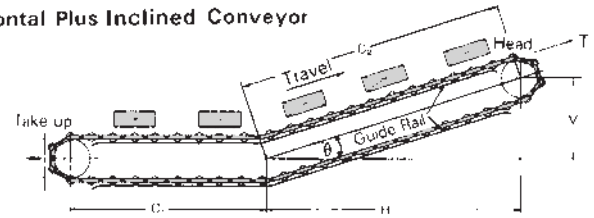
$$T = (M + w)(f_1 C \cos \theta + C \sin \theta) + 1.1w(f_1 C \cos \theta - C \sin \theta) \text{-----}(3)$$

When  $(f_1 C \cos \theta - C \sin \theta) < 0$ ,  $1.1w(f_1 C \cos \theta - C \sin \theta) = 0$

$$\text{or } T = (M + w)(V + f_1 H) + 1.1w(f_1 H - V) \text{-----}(4)$$

When  $(f_1 H - V) < 0$ ,  $1.1w(f_1 H - V) = 0$

#### Horizontal Plus Inclined Conveyor



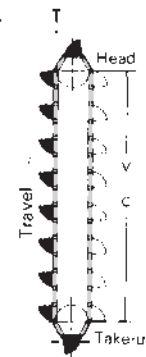
$$T = (M + 2.1w) f_1 C_1 + (M + w)(f_1 C_2 \cos \theta + C_2 \sin \theta) + 1.1w(f_1 C_2 \cos \theta - C_2 \sin \theta) \text{-----}(5)$$

When  $(f_1 C_2 \cos \theta - C_2 \sin \theta) < 0$ ,  $1.1w(f_1 C_2 \cos \theta - C_2 \sin \theta) = 0$

$$\text{or } T = (M + 2.1w) f_1 C_1 + (M + w)(V + f_1 H) + 1.1w(f_1 H - V)$$

When  $(f_1 H - V) < 0$ ,  $1.1w(f_1 H - V) = 0$  -----(6)

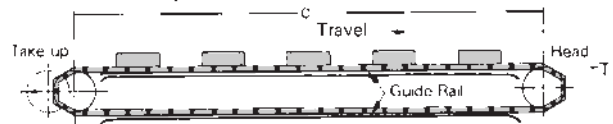
#### Vertical Conveyor



$$T = (M + w)V \text{-----}(7)$$

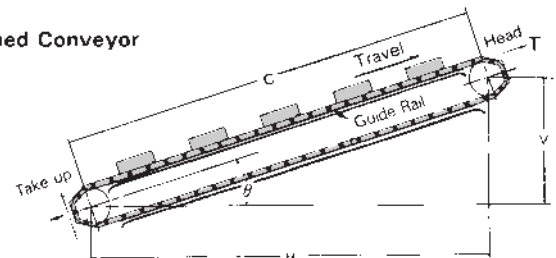
## 2. Chain sliding

#### Horizontal Conveyor



$$T = (M + 2.1w) f_2 C \text{-----}(8)$$

#### Inclined Conveyor



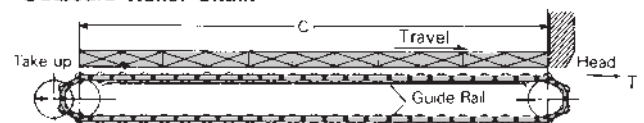
$$T = (M + w)(f_2 C \cos \theta + C \sin \theta) + 1.1w(f_2 C \cos \theta - C \sin \theta) \text{-----}(9)$$

When  $(f_2 C \cos \theta - C \sin \theta) < 0$ ,  $1.1w(f_2 C \cos \theta - C \sin \theta) = 0$

$$\text{or } T = (M + w)(V + f_2 H) + 1.1w(f_2 H - V) \text{-----}(10)$$

When  $(f_2 H - V) < 0$ ,  $1.1w(f_2 H - V) = 0$

#### Horizontal Conveyor for Top Roller Chain and Outboard Roller Chain



$$T = \frac{1}{2} M(f_1 + f_2) + 2.1w \frac{f_1 + f_2}{2} C \text{-----}(11)$$

### 3. Calculate the required power

Calculate the required power to drive the conveyor from the following formula.

#### ■Horizontal and/or Inclined Conveyor

$$HP = \frac{T \cdot S}{33,000 \times \eta} \dots\dots\dots(12)$$

#### ■Vertical Conveyor

$$HP = \frac{M \cdot V \cdot S}{33,000 \times \eta} \dots\dots\dots(13)$$

Where:

T = Chain Tension (lbs)

w = Weight of chain and attachments per foot (lbs/ft)

M = Weight of material conveyed per foot (lbs/ft)

V = Vertical center distance of conveyor (ft.)

H = Horizontal center distance of conveyor (ft.)

C = Center distance between sprockets (ft.)

f<sub>1</sub> = Coefficient of rolling friction between chain and guide rail (Table 1)

f<sub>2</sub> = Coefficient of sliding friction between chain and guide rail (Table 2)

η = Transmission efficiency

$$S = \text{Speed} = P \times N \times \frac{\pi}{12} = (\text{ft}/\text{min})$$

P = Chain pitch

N = Number of teeth

n = Sprocket speed (rpm)

### 4. Verify chain selection

Multiply the chain tension (T) by the chain coefficient (K<sub>1</sub>) listed in Table 3 and verify the following formula.

$$T \cdot K_1 \leq \text{Max. Allowable load of the chain} \dots\dots\dots(14)$$

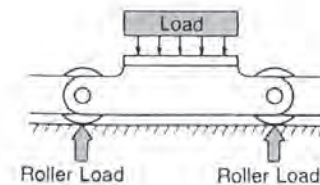
**Table 3: Chain Speed Coefficient (K<sub>1</sub>)**

Chain Speed (Ft/Min)	Speed Factor (K <sub>1</sub> )
0 - 50	1.0
50 - 100	1.2
100 - 160	1.4
160 - 230	1.6
230 - 300	2.2
300 - 360	2.8
360 - 400	3.2

When the design chain tension (T • K<sub>1</sub>) is over the allowable load or much less than it, try the same steps again for the next bigger or smaller chain size to select a more suitable chain.

### 5. Verify the allowable roller load

When the load is carried on the rollers, the total weight of the chain and load per roller should not exceed the allowable roller load shown in Table 4.



**Table 1: Coefficient of Rolling Friction (f<sub>1</sub>)**

Type of Roller	Dry	Lubricated
Oversized "R" roller type	0.12	0.08
Standard "S" roller type	0.21	0.14
Top roller type	0.09	0.06

**Table 2: Coefficient of Sliding Friction (f<sub>2</sub>)**

Dry	Lubricated
0.3	0.2

**Table 4: Allowable Roller Load**

Chain No.	Allowable Roller Load lbs/roller			
	Oversized Roller	Plastic Oversized Roller	Standard Roller	
<b>C2040</b>	40	143	44	33
<b>C2050</b>	50	220	66	44
<b>C2060H</b>	60	350	110	66
<b>C2080H</b>	80	590	198	120
<b>C2100H</b>	100	880	286	180
<b>C2120H</b>	120	1,320		260
<b>C2140H</b>	140			300
<b>C2160H</b>	160	2,160		430

Note - Oversized rollers available only for double pitch chains.

## GENERAL ENGINEERING INFORMATION - ATTACHMENT CHAIN SELECTION GUIDE

### Environmental Temperatures and Points of Concern

Temperatures	Chain Selection	Caution
(-60°F) to (-20°F)	Under (-20°F) or lower, ANSI 304 stainless, super stainless and 600 stainless chains are suggested	1 - Low-temperature embrittlement may occur on link plates of carbon chain. 2 - Freezing of lubricant 3 - Rust due to condensation. 4 - Seizure due to freezing.
	Carbon chains are not suggested	
(-20°F) to 15°F	The chain should be selected on the basis of the corrected working load below.	
140°F to 300°F	Special lube required	
300°F to 480°F	The chain should be selected on the basis of the corrected working load below. Selection of the next larger pitch chain over the originally selected chain is suggested.	1 - Excessive wear due to decrease of hardness of pin and bushing. 2 - Poor Lubrication due to deterioration of lube.
480° F and Greater	ANSI 304, 316 and 600 stainless steel chains are suggested.	

**Table 5: Corrected Working Load**

Temperature	Corrected Working Load
(-20° F - -4° F)	(Max. allowable load in catalog) x 0.25
(-4° F - 15° F)	(Max. allowable load in catalog) x 0.30
(15° F - 300° F)	(Max. allowable load in catalog) x 1.00
(300° F - 390° F)	(Max. allowable load in catalog) x 0.75
(390° F - 480° F)	(Max. allowable load in catalog) x 0.50

#### 2 - Wet Conditions:

When the chain is exposed to water in a sterilizer or in a water screen, excessive wear due to insufficient lubrication and rust may shorten life. In these cases, a larger chain size provides less bearing pressure and stainless steel or coated chains will provide rust prevention.

#### 3 - Corrosive Environments:

When the chain is exposed to acidic or alkaline solution or operates in a corrosive atmosphere, excessive wear may occur due to chemical corrosion on the chain parts in addition to mechanical wear. Hydrogen embrittlement may also occur in an acidic atmosphere. Roller chain is more easily affected by acid than alkali. In special cases, electro-chemical corrosion may occur on the chain due to sea or mine water. Refer to the "Corrosion Resistance" guide on page 270 for the proper chain selection.

#### 4 - Dusty conditions:

When conveyor chain operates in dusty conditions, (in coke, foundry's, sand, metal powder) the chain wears very quickly because foreign material penetrates the pin and bushing area. In such cases, consult Tsubaki engineering for the best roller chain option. Options include, Titan®, Lambda® and, potentially, larger pitch chains for higher wear resistance.

## I - Selection Procedure for Double Plus<sup>®</sup>, Outboard Roller and Top Roller Chain

### 1 - Confirmation of operating conditions for free flow conveyors

The Following information is needed in order to select an appropriate chain for free flow conveyors:

- 1 - Material weight, dimension and quantity of the conveyed object (including pallet).
- 2 - Conveyor speed
- 3 - Conveyor length (the length for accumulating and transferring portion respectively).
- 4 - Lubrication requirements and environment.

### 2 - Tentative selection of chain size

$$T = W_T \cdot f \cdot K$$

$W_T$  = Total weight of conveyed object except chain (lbs)

$f$  = Coefficient of friction  $f = f_1 + f_3$  (See page 264, Tables 4 and 5 or Table 8)

$K$  = Chain speed coefficient (See page 264, Table 6)

**Note:** In the case where two matched strands are to be operated, the chain's maximum allowable tension (shown in Table 7, page 264) should be compared with  $T \cdot 0.6$  to decide the chain type and size.

### 3 - Confirmation of the maximum allowable roller load

The maximum allowable roller load for conveyed objects should not exceed the figures shown in Table 1 below. However, maximum allowable roller load for the base chain should be checked using Table 2.

**Table 1 - Maximum Allowable Roller Load For Conveyed Objects**

Chain Type	Type of Guide Rail	C2030VRP	C2040VRP	C2050VRP	C2060VRP	C2080VRP
Double Plus Chain	Aluminum	26	40	53	67	
	Aluminum with Steel Rail	53	80	107	134	201

**This is the load for two strands of Double-Plus chain**

**Note** - When using aluminum frame with steel rail, the maximum allowable for VR series is twice that of VRP series

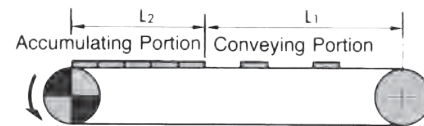
Chain	Type of Roller for transfer	Lbs/Roller				
		40 C2040	50 C2050	60 C2060	80 C2080	100 C2100
Outboard Roller Chain	Plastic Outboard Roller	11	15	30	55	66
	Steel Outboard Roller	33	44	66	121	176
Top Roller Chain (Single Strand)	Plastic Top Roller	11	15	30	55	66
	Steel Top Roller	33	44	66	121	176

**Table 2 - Maximum Allowable Roller Load of Base Chain**

Chain	Type of Roller for transfer	40 C2040	50 C2050	60 C2060	80 C2080	100 C2100
Steel Roller	Standard Roller "S"	33	44	66	121	176
	Oversized Roller "R"	143	220	352	594	880
Top Roller Chain (Single Strand)	Standard Roller "S"	4	7	11		
	Oversized Roller "R"	44	66	110	198	286
Poly Steel		4	9	13		

**Note** - The above figures for Poly-Steel show the maximum allowable load per plastic inner link.

### 4 - Calculation of maximum chain tension (T)



$$T = (W_1 + M) L_1 \cdot f_1 + W_2 \cdot L_2 \cdot f_2 + (W_2 + M) L_2 \cdot f_3 + 1.1 M (L_1 + L_2) f_1$$

### 5 - Calculation of required power (HP)

- P: Maximum number of pallets on conveyor
- T: Maximum chain tension (lbs)
- $L_2$ : Length of accumulating portion (ft)
- $W_2$ : Weight of conveyed objects in accumulating portion (Lbs/ft)
- $L_1$ : Length of conveying portion (ft)
- $W_1$ : Weight of conveyed objects in conveying portion
- $f_1$ : Coefficient of friction between chain and rail when conveying
- $f_2$ : Coefficient of friction between chain and conveyed object when accumulating
- $f_3$ : Coefficient of friction between chain and rail when accumulating
- M: Weight of chain and slat, etc. (lbs/ft)
- Hp: Required power (Hp)
- V: Chain speed (ft/min)
- $\eta$ : Transmission efficiency of drive unit
- L: Length of pallet

Calculate the maximum chain tension (T) with the following formula referring to Table 3 and Tables 4 and 5 (or Table 8) on page XXX

$$T = \{ (W_1 + M) L_1 \cdot f_1 + W_2 \cdot L_2 \cdot f_2 + (W_2 + M) L_2 \cdot f_3 + 1.1 M (L_1 + L_2) \} f_1$$

In general, free flow conveyors should have two matched strands of chain and in this case, the chain weight should be for two strands of chain. T, calculated above is the maximum chain tension for two strands of chain.

**Table 3 f<sub>1</sub> - Coefficient of Friction between chain and rail when conveying**

Chain Type	Type of Roller on Base Chain	Dry	Lubricated	
Double Plus Chain	Regular and high friction type	0.08		
Outboard Roller Chain	Steel Roller	"S" Roller	0.21	0.14
		"R" Roller	0.12	0.08
	Plastic roller	"S" Roller	0.12	
		"R" Roller	0.08	
Top Roller Chain	Poly-Steel		0.25	
	Steel Roller	"S" Roller	0.21	0.14
		"R" Roller	0.12	0.08

**Table 4 f<sub>2</sub> - Coefficient of Friction between chain and Conveyed Object when Accumulating**

Chain Type	Type of Roller on Base Chain	Dry	Lubricated
Double Plus Chain	Regular Type	0.10	
	High Friction Type	0.15	
Outboard Roller Chain	Plastic Outboard Roller	0.06	
	Plastic brake outboard roller	0.10	
	Steel outboard roller	0.09	0.06
Top Roller Chain	Plastic top roller	0.06	
	Steel top roller	0.09	0.06

**Note:** These factors are for reference only.

**Table 5 f<sub>3</sub> - Coefficient of Friction between Chain and Rail when Accumulating**

Chain Type	Type of Roller on Base Chain	Dry	Lubricated
Double Plus® Chain	Regular Type	0.20	
	High friction type	0.25	

**Note:** For all chains except Double Plus® chain, f<sub>3</sub> equals f<sub>1</sub>. These factors are for reference only.

**Table 6 - Chain Speed Coefficient**

Chain Speed ft/min	Chain Speed Coefficient (K)
0 - 50	1.0
50 - 100	1.2
100 - 160	1.4
160 - 230	1.6
230 - 300	2.2
300 - 360	2.8
360 - 400	3.2

**Note:** These factors are for reference only.

Suggested chain speed is as follows:

Double Plus® - 50ft/min or less

Plastic Roller Chain - 230ft/min or less

Poly-Steel Chain - 230ft/min or less

When chain speed exceeds the above, consult Tsubaki engineering

**6 - Determination of Chain Size**

Multiply the maximum chain tension (T) by the speed coefficient (K) listed in Table 6 and verify with the following formula

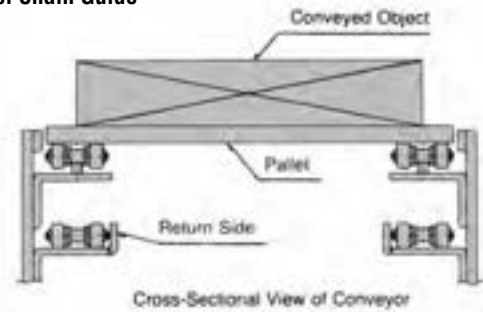
$$T \cdot K \leq \text{Maximum allowable chain tension}$$

Note - When there are two strands, the maximum chain tension should be  $T \cdot 0.6 \leq \text{Maximum allowable chain tension}$

**Ambient Temperature Range**

Suggested ambient temperature range is between 14°F and 140°F, for which standard lubrication is suggested. Special lubrication is required for temperatures between 140°F and 300°F. For temperatures above 300°F please consult Tsubaki engineering.

**Use of Chain Guide**



**Note:**

- 1 - When using plastic brake outboard roller chain, the rollers of the base chain on the return side should be supported by the rail in the same way as the conveying side.
- 2 - When using Poly-Steel chain with the outboard rollers, the guide should support the bottom surface of the links.

**Table 7 - Maximum Allowable Chain Tension (Lbs)**

Chain Type	Type of Roller on Base Chain	C2030	40 C2040	50 C2050	60 C2060	80 C2080	100 C2100
Double Plus® Chain	Regular	120	200	310	460	1190	
	High Friction	60	100	155	230	595	
	Stainless Steel	60	100	155	230	595	
	Steel Roller	220	350	550	840		
Outboard Roller Chain	Steel Roller		595	970	1410	2400	3835
	Plastic Roller		100	155	230	400	575
	Poly-Steel		100	155	200		
Top Roller Chain	Steel Roller		595	970	1410	2400	3835
	Plastic Roller		100	155	230	400	575

**Table 8 - Coefficient of Friction Double Plus® "VR" Steel Roller**

Coefficient of Friction		Double Pitch Double Plus® Steel Roller		Large Size Double Plus®	
f <sub>1</sub>	Coefficient of friction between chain and rail when conveying	0.05	0.05	0.05	0.05
f <sub>2</sub>	Coefficient of friction between chain and conveyed object when accumulating	0.10	0.15	0.10	0.15
f <sub>3</sub>	Coefficient of friction between chain and rail when accumulating	0.10	0.25	0.05	0.15

**Note -** Tsubaki suggests lubricating steel roller and "VR" type chains

## 7 - Selection Procedure Example for Double Plus® Chain

### I – Confirm operating conditions for conveyor

Conveyor Length 30 Feet  
 Dimensions of conveyed object: 53lbs/piece  
 $53\text{lbs/piece} \div 1.5\text{ ft.} = 35.3\text{ lbs./ft.}$   
 Conveyed product speed 30ft/min  
 Chain speed: 12 ft./min

### Full conveyor accumulating

Quantity of conveyed object: 20 pieces  
 Dry, in-plant use, normal operating temperatures (up to 77°F)

### II – Select initial chain size

Use the calculation method in Step 2 on page 263.

$$T_i = W_i \times (f_2 + f_3) \times K$$

$$T_i = (35.3\text{ (lbs.ft.)} \times 30\text{ ft.}) \times (0.1 + 0.2) \times 1.0 = 318\text{ lbs}$$

$$T_s = 318 \times 0.6 = 190.8\text{ lbs}$$

### Note – Presume two strands of chain, each loaded by 0.6 of the total.

Based on these calculations, C2040VRP-A chain is the preliminary choice but this selection must be confirmed.

**Note: C2040VRP-A weight/ft. = .67 lbs./ft. per strand  
 (1.34 lbs./ft. for two strands)**

### III – Confirm the maximum allowable roller load

By consulting Table 1 on page 263, you find that for C2040VRP-A, the maximum allowable load is 40 lbs./ft. for the aluminum rail.

In this example, the weight of the conveyed object is 35.3 lbs./ft.  
 Therefore, C2040VRP-A can cover the load.

### IV – Confirm total chain tension

Using the calculation method of total chain tension ( $T_t$ ):

$$T_t = (0 \times 1.34) \times 0 \times .08 + 35.3 \times 30 \times .10 + (35.5 + 1.34) \times 30 \times .20 + 1.1 \times 1.34 \times (0+30) \times .08$$

$$T_t = 329\text{ lbs.}$$

$$T_s = T_t \times .6 = 1967\text{ pounds per strand.}$$

### Now determine chain size:

Multiply the chain tension ( $T_s$ ) by the chain speed coefficient (K) in Table 6 on page 264, confirm with the following formula:

$$T_s \times K \leq \text{Maximum allowable chain tension (Table 7).}$$

$$197 \times 1.0 \leq 200\text{ (C2040VRP regular plastic)}$$

### V – Calculate required power

\*Presume gear motor efficiency ( $\eta$ ) = 0.8

$$\text{HP} = 329\text{ lbs.} \times 12\text{ ft./min} \times 1.1 \div 33,000 \times 0.8 = .17\text{ or } \frac{1}{4}\text{ HP}$$

## II Design guidelines for Double Plus® Chain

### I – Dimensions for both ends of the conveyor

A typical arrangement of Double Plus® components is illustrated in Figure 1. The bracket is used to mount the plastic return guide to the aluminum guide rail, allowing the chain to flow smoothly between the sprocket and guide rail. See Table 9a for dimensions.

Figure 1 – Typical arrangement of Double Plus® components

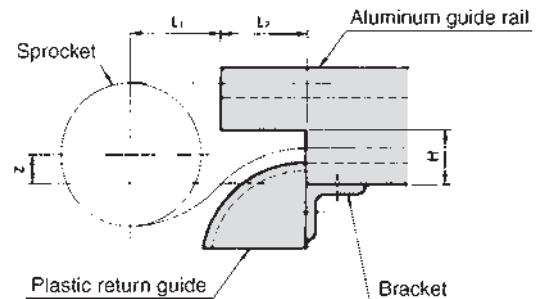


Table 9a - Conveyor End Dimensions

Chain Number	Z	L <sub>1</sub>	L <sub>2</sub>	L <sub>2</sub>	H
			Driver Side	Driven Side	
C2030CRP-R3L & R3LS	0.839	1.57	8.27	3.15	0.98
C2040VRP-R4L & R4LS	0.579	1.97	11.81	3.94	0.98
C2050VRP-R4L & R4LS	0.634	2.36	13.39	4.72	1.18
C2050VRP-R3H & R3HS	3.000	2.36	13.39	4.72	1.18
C2060VRP-R4K & R4KS	0.587	2.76	16.93	5.12	1.57
C2080VRP-R3LS	0.945	3.94	21.65	7.87	2.36

### ii – Screws, bolts, height of conveyor

The values for L shown in in Table 9b and Fig 2 vary because of the plastic bumper wall thickness tolerance.

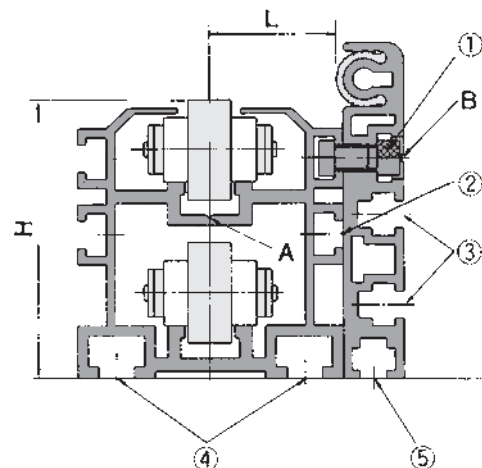
### Connecting the aluminum guide rail

Connect the aluminum guide rails by aligning the V groove shown by arrow A in Fig 2.

### Installing the pallet guide rail

Drill holes using the V groove as a guide, shown by arrow B in Fig 2, and install the pallet guide rail using socket head cap screws from Table 9b.

Figure 2 – Location of screws and bolts



**Table 9b - Screws, Bolts, Height of Conveyor**

Rail Number	1	2	3	4	5	H	L
C2030CRP-R3L & R3LS	M6 X 10	M6	M5	M6	M5	2.42	0.57
C2040VRP-R4L & R4LS	M6 X 12	M6	M6	M8	M6	2.68	1.12
C2050VRP-R4L & R4LS	M8 X 20	M8	M8	M10	M8	3.25	1.42
C2050VRP-R3H & R3HS	M8 X 20	M8	M8	M10	M8	5.61	1.46
C2060VRP-R4K & R4LS	M8 X 20	M8	M8	M10	M8	3.74	1.75
C2080VRP-R3LS	M8 X 25	M8	M8	M10	M8	5.12	1.85

**iii – Nominal Spacing of Conveyor Supports**

Proper operation of Double Plus® chain is maintained by controlling the amount of deflection of the aluminum guide rail. This deflection is determined from the weight of the conveyed goods and the second moment of area, shown in Table 9c. To control deflection, supports should be spaced as shown in Figure 3, in accordance with the following equation:

$$l = (\text{in}) [384 \times E \times L \times d \div 5 \times 0.6 \times W]^{1/4}$$

$l$  = Spacing support (inches)

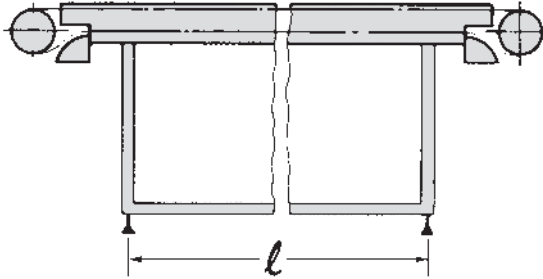
$E$  = Young's Modulus = 9.956 x 106 lbs./in

$L$  = Second movement area = in<sup>4</sup> (See table 9c)

$d$  = Deflection = 0.079 in.

$W$  = Total conveyed weight = lbs./ft.

**Figure 3 – Nominal spacing of conveyor supports (l)**



**Table 9c - Second Moment of Area**

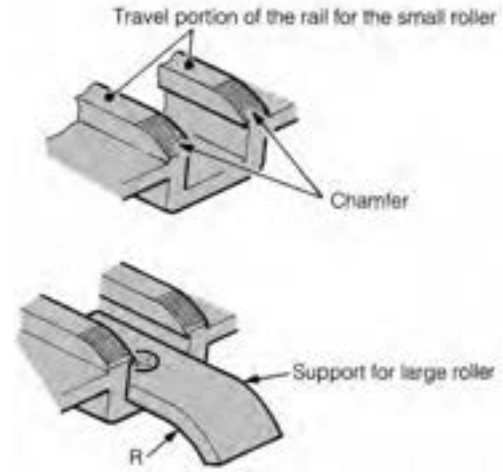
	Rail No.	Second moment of area (L) in <sup>4</sup>
Aluminum Guide Rail	C2030VRP-R3L	0.411
	C2040VRP-R4L	0.965
	C2050VRP-R4L	2.019
	C2050VRP-R3H	9.809
	C2060VRP-R4L	3.247
	C2060VRP-R4K	2.607
Aluminum Frame with Steel Rail	C2030VRP-R3LS	0.428
	C2040VRP-R4LS	1.065
	C2050VRP-R4LS	2.297
	C2050VRP-R3HS	10.621
	C2060VRP-R4LS	4.127
	C2080VRP-R3LS	8.666

**iv - Finishing the ends of the conveying side.**

Put a chamfer on the ends of the upper rail that the chain's small rollers travel on Fig. 4.

**Figure 4 – Location of Chamfer**

Travel portion of the rail for the smaller roller.

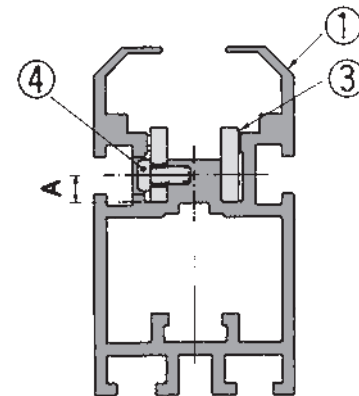


It is possible to prevent the chain's large roller from dipping at the chamfered portion by installing a support for the large roller on the ends of the rail on the driven side.

**v – Aluminum frame with steel rail.**

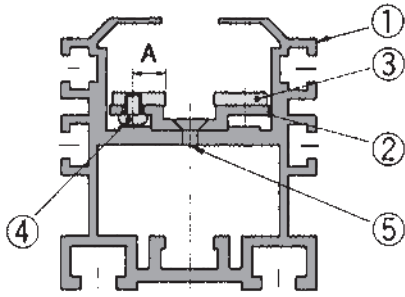
Two basic constructions are used when building guide rail with aluminum frame and steel rail.

For C2030VRP-R3LS, a steel rail (No. 3) is arranged in the vertical position and lock screws (No. 4) are secured into the frame (no. 1) from both sides (See Fig 5a). See Table 9d for dimensions and hardware.



For C2040 – C2080 Double Plus® Guide Rails with steel inserts – Lock screws (no. 4) are secured through the inner rail (no. 2), which anchors the steel rail (no. 3) to the frame (no. 1) (see Fig 5b). See table 9d for dimensions and hardware.

**Fig 5b – Cross Section of C2040VRP-C2080VRP frame with steel rail**



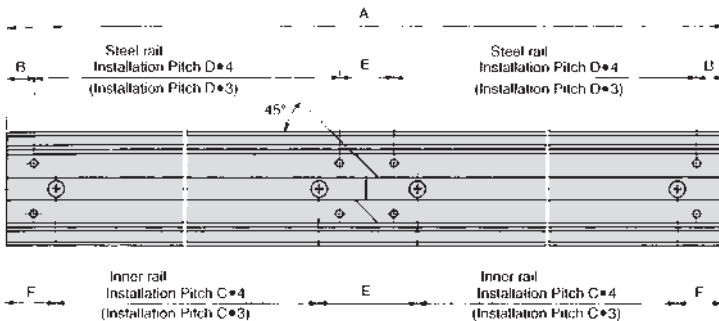
**Table 9d - Aluminum Frame with Steel Rail**

Rail No.	Steel Rail (Part No. 3)		Installation screws for steel rail (Part No. 4) phillips pan head machine screws	Installation screws for steel rail (Part No. 5) phillips flat head machine screws
	Dim. (Plate Thickness x width) Inches	"A" Dim. Inches		
C2030VRP-R3LS	.12 X .51	0.187	M3 X 7	
C2040VRP-R4LS	.12 X .51	0.315	M4 X 5	M4 X 6
C2050VRP-R4LS	.12 X .51	0.315	M4 X 6	M4 X 6
C2050VRP-R3HS	.12 X .51	0.315	M4 X 6	M4 X 6
C2060VRP-R4LS	.12 X .51	0.315	M4 X 6	M4 X 6
C2080VRP-R3LS	.24 X .63	0.413	M5 X 8	M6 X 10

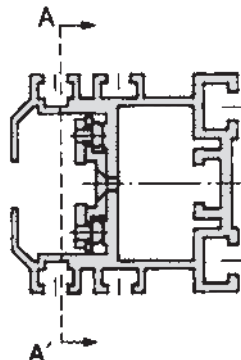
**(2) – Assembly Drawing**

When joining rail sections to form a longer conveyor, please refer to Fig 6.

**Figure 6 – Assembly Drawing**



- 1 – The steel rail is cut at an angle of 45° at the center portion of the main rail.
- 2 – The installation spacing for C2030VRP-R3LS steel rail is the same as that for C2050VRP-R3HS and C2080VRP-R3LS.
- 3 – Dimensions in parenthesis refer to C2050 – C2080-R3LS



**Table 9e - Steel Rail Assembly Dimensions**

Rail No.	A	B	C	D	E	F
C2040VRP-R4LS	157.5	1.18	19.09	19.09	2.36	1.18
C2050VRP-R4LS	157.5	1.18	19.09	19.09	2.36	1.18
C2060VRP-R4LS	157.5	1.18	19.09	19.09	2.36	1.18
C2050VRP-R3LS	118.1	0.59	18.9	19.09	2.36	1.18
C2080VRP-R3LS	118.1	0.59	18.9	19.09	2.36	1.18

**(3) – Important points when handling steel guide rails –  
When cutting the guide rail with steel rail**

- 1 – Cut anywhere other than the central portion or screwed portions of the conveyor.
- 2 – Insert lock screws into the steel rail and inner rail along with the inner rail and main rail at 0.6 - 1.2 inches from the cut end.
- 3 – Machine all parts individually.
- 4 – Completely remove all burrs before reassembly.

Note - Use screws according to Table 9d when reassembling the conveyor.

**When connecting the rail**

After connecting the rail, put small chamfers on the mating faces of the steel rail in both directions where steps occur. These prevent the chain rollers from getting caught.

**vi – Transferring objects between conveyors.**

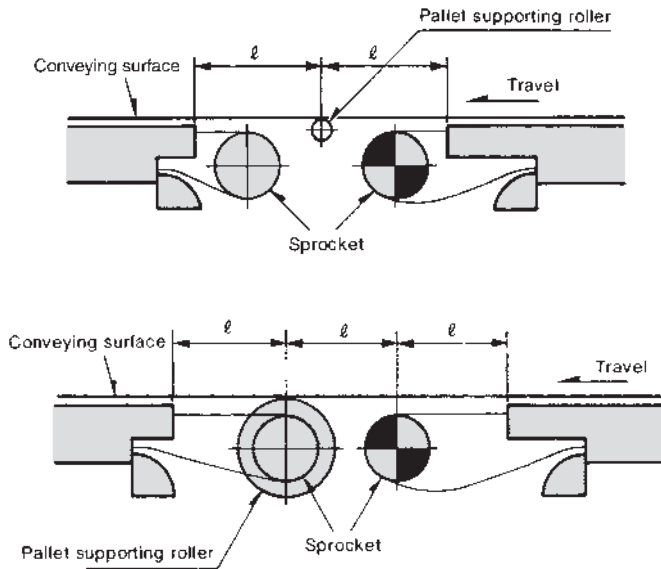
To convey pallets in a stable condition at the transfer portion of the conveyor, install a roller between the two conveyors or the shafts of the sprockets (fig. 7). Be sure that the distance (l) from the ends of the rail to the roller that supports the pallets is less than  $\frac{1}{25}$  times the pallet length in the conveying direction.

**Table 9f - Chain Slack for Double Plus®**

Chain Size	Normal Slack Inches	Maximum Slack Inches
C2030	0.1	2.95
C2040	1.38	4.13
C2050	1.57	4.72
C2060	1.97	5.9
C2080	2.56	7.48



**Figure 7 – Install a roller as shown for a straight line transfer**

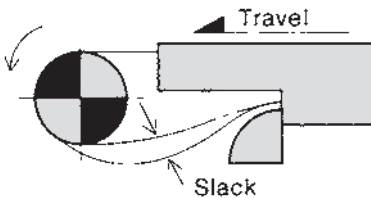


**vii – Take-up**

The amount of take-up  $l = (L \cdot 0.02) + \text{marginal length}$   
 (0.02 = allowable chain wear elongation 2%).

Allow for some sagging (up to 10% of the span) in the chain on the bottom of the driver sprocket. Adjust the take-up so that the slack does not exceed the values in Table 9f (see Fig. 8). The total arc of contact between the chain and the sprocket should be more than 130°. If the take-up cannot be set up as shown in Fig. 9 due to space limitations, refer to Fig. 10.

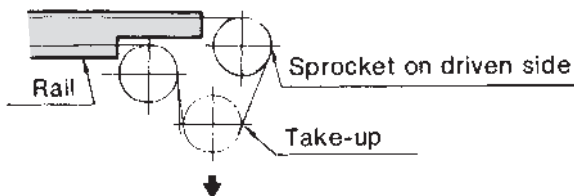
**Figure 8 – Slack Tolerance**



**Figure 9 – Take-up Arrangement**



**Figure 10 – Take-up Arrangement for limited space.**



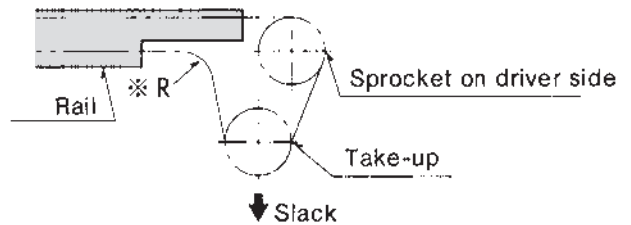
**viii – Maximum conveyor length**

Double Plus® chain operates well on conveyors with lengths not exceeding 50 feet, make several shorter conveyors in line. If you require one continuous system longer than 50 feet, consult Tsubaki Engineering.

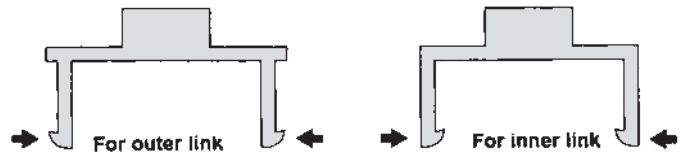
**ix – For Double Plus® Chain with Snap Covers**

When using this arrangement, as shown in Fig. 11, be aware that the sprocket cannot engage the chain from the top surface of the snap covers. When bending the chain toward the snap cover side, do not bend beyond the R dimension of the plastic return guide. Snap covers and installation are shown in Figs 12 and 13.

**Figure 11 – Take-up arrangement for limited space for Double Plus® with snap covers.**



**Figure 12 – Snap covers for outer and inner links**



**Figure 13 – Proper installation of snap covers.**



# TOP CHAIN

## Selection and Engineering Information

Chain Type	Materials		Specifications				Feature	Applications
	Chain/Pin	Top Plate	Suggested Max. Speed (ft./Min)					
			Max. Allowable Load (Lbs.)	Lubricated	Dry	Ambient Temp.		
<b>Linear Movement</b>								
TS-P	Carbon Steel	430 Stainless Steel	660	390	200	15 30	Type P: Suitable for single strand	Assembly line for bottling or canning, and conveying tons or parts
TS-SS	304 Stainless Steel	304 Stainless Steel	231	23	150	4 750	Type SS: Suitable for multi-strand operation and corrosive environment	
TS-CS	Hardened Carbon Steel	430 Stainless Steel	1,100	390	200	15 350	Type CS: Suitable for heavy load operation	
TT-N	304 Stainless Steel	430 Stainless Steel	330	330	200	15 500	Simple construction, washable, clean-handling, and anti-corrosive	Conveying steel, cans, finished parts, paper packages, etc.
TT-SS	304 Stainless Steel		484			4 750		
TP	304 Stainless Steel	Polyacetal Resin	264	330	160	4 170	Self-lubrication, quiet operation. Anti-corrosive, suitable for transportation of small size goods due to small clearance between top plates.	
TTP			187					
TN	Carbon Steel		1,410	390	200	15 170	Damage-free, quiet operation. Smooth transportation, easy removal of top plate. Easy repair.	
TN-NP	Nickel-Plated		231	230	150	4 170		
TN-S	304 Stainless Steel		40P, 2040P: 100 60P: 200	200	200	4 170	Quiet and trouble-free operation with anti-corrosive protection. Also available in "E", "K", "Y", and "SY" Series.	Conveying electronic parts and small items.
P	304 Stainless Steel							
<b>Curved Movement</b>								
TRU	Carbon Steel	430 Stainless Steel	902	330	200	15 350	Float-prevention tab allows high speed, complex, and curved transportation	Curved operation for type TS and TT.
TRU-SS	304 Stainless Steel		231	230	150	4 750		
TKU	Carbon Steel	430 Stainless Steel	638	150		15 350	Easy removal of chain. Used for low speed and simple curved operation.	
TTU	304 Stainless Steel		484	260	160	4 750	Same features as TT - used for curved operation.	Curved operation for TT
TPU	304 Stainless Steel	Polyacetal Resin	220			4 170	Same features as TP and TRU.	Curved operation for TP
TNU	Carbon Steel		902	330	200	15 170	Used for simple curved operation. TN type side bow feature.	Curved operation for TN
TNU-NP	Nickel-Plated							
TO	Carbon Steel	430 Stainless Steel	660	200	200	15 350	Any horizontal curved operation is possible. Min radius: 4". Complex curved operation is available.	Suitable for horizontal curved operations.
TU			220				Any return such as straight/curved line on horizontal or vertical route is available. Complex curved operation available.	

### Top Plate Selection Process

Follow the procedure below to select top chain and liner that are most economical and suitable for the application

- Step 1** Establish general conveyor conditions.
- Step 2** Select top plate material
- Step 3** Select liner material
- Step 4** Determine factors and coefficients
- Step 5** Select top plate width
- Step 6** Calculate tension
- Step 7** Determine chain size.

### Step 1

### Establish general conveyor conditions

- A** Materials conveyed
  - 1 - Container material
  - 2 - Weight
  - 3 - Dimensions
- B** Conveyor Arrangement
  - 1 - Straight or curved movement
  - 2 - Conveyor length
  - 3 - Layout
  - 4 - Space limitations
- C** Other conditions
  - 1 - Conveyor capacity
  - 2 - Interval
  - 3 - Conveyor Speed
  - 4 - Lubrication requirements
  - 5 - Material conveyance regularity
- D** Environment
  - 1 - Temperature
  - 2 - Presence of chemical substances
  - 3 - Existence of wear-causing agents such as class, paint, metal, powder or sand.

Table 1 must be referred to when selecting chain and the liner materials to be used with top chain.  
The table shows the results of lab tests at 68 F. It is to be used for reference only and does

**Table 1 - Corrosion Resistance to Various Fluids**

Fluid	Steel	Polyacetal	Stainless Steel		Ultra-High Polymer Polyethylene
			304	430	
Acetone	3	1	1	1	1
Oils (Vegetable and Mineral)	1	1	1	1	1
Alcohol	1	1	1	1	1
Aqueous ammonia	2	1	1	1	1
Sodium Chloride	3	1	2	2	1
Hydrochloric Acid (2%)	3	3	3	3	3
Sea Water	3	2	2	3	1
Hydrogen Peroxide	3	3	1	1	1
Caustic Soda (25%)	3	3	1	1	1
Gasoline	1	1	1	1	2
Formic Acid	3	3	3	3	1
Formic Acid Aldehyde	1	1	1	1	1
Milk	1	1	1	1	1
Lactic Acid	3	1	1	3	1
Citric Acid	3	2	1	2	1
Acetic Acid (5%)	3	3	1	1	1
Carbon Tetrachloride	2	1	2	2	2
Nitric Acid (5%)	3	3	1	1	2
Rice vinegar (5%)	3	1	2	2	1
Hypochlorite Soda	3	3	3	3	1
Soapy Water	2	1	1	1	1
Paraffin	1	1	1	1	1
Beer	1	1	1	1	1
Fruit Juice	3	1	1	2	1
Wine	1	1	1	1	1
Whiskey	1	1	1	1	1
Benzene	1	1	1	1	2
Water	3	1	1	1	1
Vegetable Juice	2	1	1	1	1
Iodine	3	3	3	3	3
Sulfuric Acid	3	3	3	3	3
Phosphoric Acid	3	3	2	3	1
Soft Drinks	1	1	1	1	1

1 = Totally Resistant 2 = Partially resistant 3 = Not suggested

**Step 2 - Select Top Plate Material**

Top plate must be selected according to the type of goods to be moved.

**Table II: Plate Material Selection Guide**

Material Conveyed	Top Plate Material	Dry		Lubricated	
		Abrasive Atmosphere			
		No	Yes	No	Yes
Tin cans, aluminum cans, metal containers,	Polyacetal	0	X	0	
Industrial parts, machine parts, dies, castings, forgings, bolts, nuts, etc.	Stainless Steel		0		0
Plastics and plastic covered containers and paper products. Milk products, paper containers, paper boards.	Polyacetal		X		
	Stainless Steel	0	0	0	0
Glass jars, glass products, ceramics	Polyacetal		X		X
	Stainless Steel	0	0	0	0

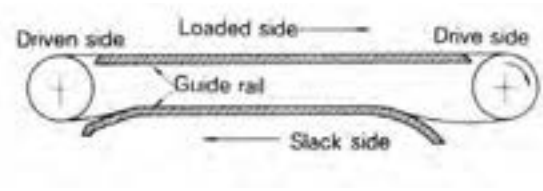
**0 = Suggested X = Suggested**

**Good**

**Limited Use**

## 2 - 1 Guide Rail

The guide rail consists of the conveyor frame and liner. The liner sider with the top chain to minimize frictional resistance and wear so the chains are protected and driving power can be minimized.

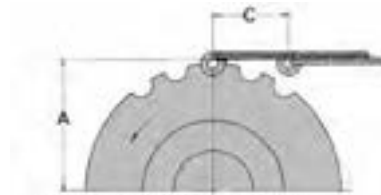


## 2 - 2 Location of guide rails and sprocket

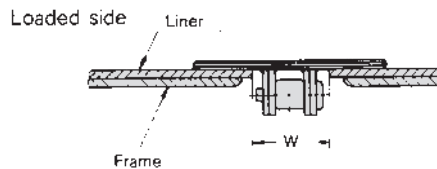
When the chain engages the sprocket, the chain itself moves up and down slightly due to the polygonal of the sprocket. Therefore, the guide rail on the loaded side must be positioned so that the chain is horizontal when at the highest level. Guide rail installation dimension "A" is determined from the following equation.

$$A = (\text{Pitch diameter of sprocket}/2) + B \text{ (inch)}$$

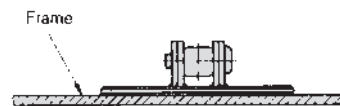
Chain Type	B	C
TS, TRU, TKU, TN, TNU	0.433	1.496
TT, TTU	0.157	
TP-I	0.197	
TP-11, TPU, TTP, TTPF	0.157	



Note: Please refer to page B-69 for the RS Plastic chain.



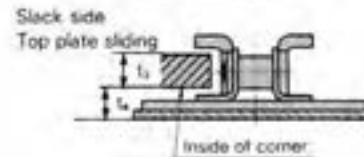
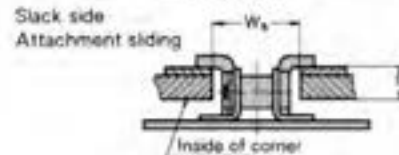
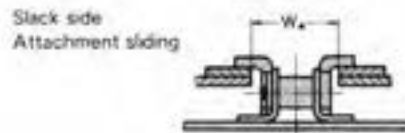
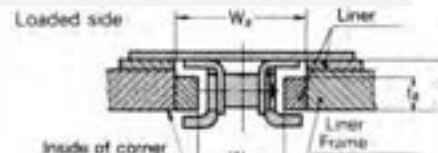
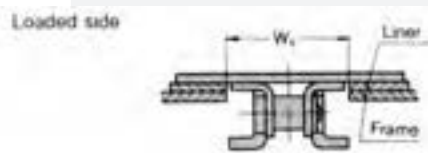
Slack-side (top plate sliding)



### Guide Rail Inside Width

Chain Type	W
TS-P	1.300
TS-SS, TS-CS	1.594
TT	1.772

Chain Type	W
TP	1.772
TTP	1.772
TN	1.496

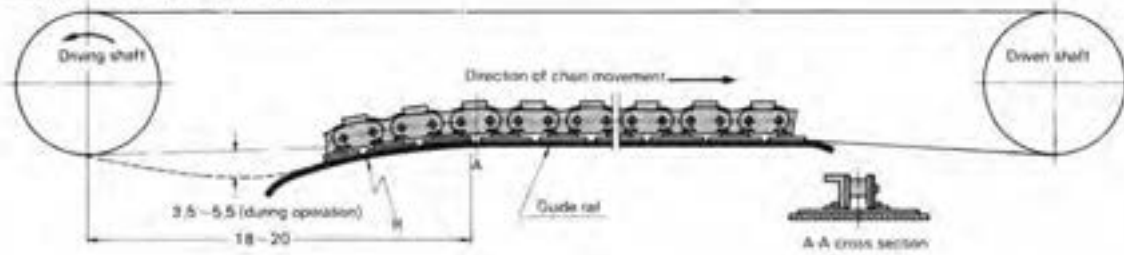


## Curved Movement Chain

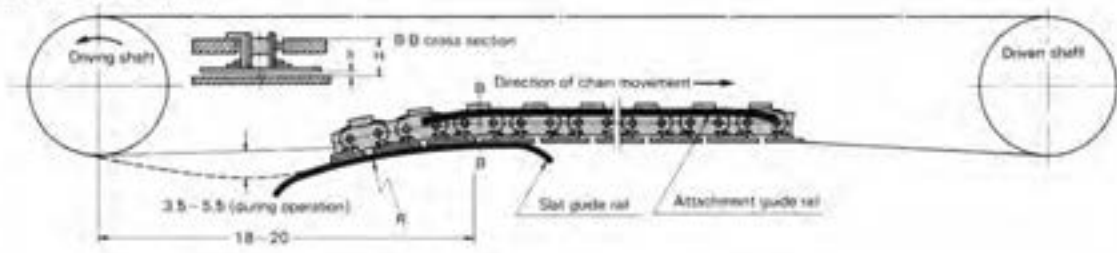
Chain Type	W1	W2	W3	t1	t2	W4	W5	t3
TRU	1.752	1.890	1.220	0.689	0.472	1.220	1.220	0.472
TPU	1.772	1.772	1.772	0.472	0.472	1.890	1.890	0.472
TNU	1.496	1.496	1.496	0.709	0.709			
TO	1.752							
TU	1.752							
TKU	1.772	1.890	1.417	0.748	0.531			
TTU	1.654					1.654		

## 2 - 3 Slack side guide rail arrangement

Top plate sliding (applicable for all top chains)



Attachment sliding (TRU type)



Chain Type	h	H
TRU	0.260	1.181
TPU	0.236	1.024

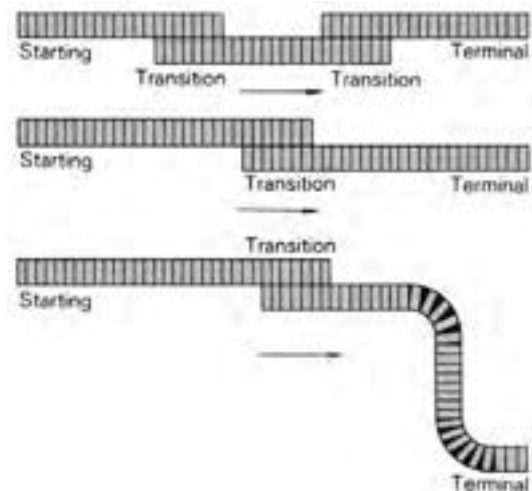
- 1 - Slack of 3.5 - 5.5 inches during operation is needed under the drive sprocket.
- 2 - Engagement angle must be more than  $150^\circ$  between the drive sprocket and chain.
- 3 - The radius R (inches) of the guide rail must be larger than the radius of chain back-bend given in the table below.

Type	Back-bend radius	Type	Back-bend radius
TS	13	2040P	18
TRU, TKU	12	TP, TTP, TPU	2
TT	7	TN, TNU	4
40P	5	TTU	2
60P	18		

- 4 - Guide rails must have sloped ends to prevent interference with the chain.

## 2 - 4 Connection of additional conveyors

If a conveyor is too long, the chain tension will increase and chain strength will not be sufficient. In such cases, additional conveyors should be used.



Locations of the chain and the guide rail are very important for a smooth transition between conveyors. Two parallel chains must be positioned at the same height, or the output chain must be positioned slightly higher than the receiving chain. The guide rail must be shaped such that transition of goods can be accomplished smoothly.



### Step 3 - Select Liner material

The appropriate liner material must be selected from the top plate materials listed in Step 2.

Top Plate Material (Chain Type)	Liner Material	Dry		Lubricated	
		Abrasive Atmosphere			
		No	Yes	No	Yes
Stainless Steel TS and TT for straight running TRU, TKU, TO and TU, for curved.	Stainless Steel				
	Steel		0		0
	Super-High Polymer Polyethylene	0	X	0	0
Palyacetal (TP, TTP, TN and P for linear movement, TPU and TNU for curved).	Stainless Steel			0	0
	Steel	0	0		
	Super-High Polymer Polyethylene		X		

0 = Suggested X = Suggested

■ Good

■ Limited Use

### Step 4 - Determine factors of coefficients (f2, f3, k2, k3)

Table IV: Coefficient of Friction (f2) between Top Plate and liner.

Top Plate Material	Lubrication	Coefficient of Dynamic Friction of Liner Material		
		Stainless Steel	Steel	Ultra High Polymer Polyethylene
Stainless Steel	Dry	0.35	0.35	0.25
	Lubrication by soapy water	0.20	0.20	0.15
	Oil Lubrication	0.20	0.20	0.15
Palyacetal	Stainless Steel	0.25	0.25	0.25
	Steel	0.15	0.15	0.15

Table V: Coefficient of Friction (f2) between Material Conveyed and Top Plate

Top Plate Material	Lubrication	Coefficient of Dynamic Friction of Top Plate Material	
		Stainless Steel	Polyacetal
Plastic and paper containers and film packages	Dry	0.30	0.25
	Lubrication by soapy water	0.20	0.10
Cans (with metal tops and bottoms)	Dry	0.35	0.25
	Lubrication by soapy water	0.20	0.15
Bottles and Ceramics	Dry	0.30	0.40
	Lubrication by soapy water	0.20	0.20
Industrial parts (metal)	Dry	0.35	0.25
	Lubrication by soapy water	0.20	0.15

Table VI: Angle Factor (k2) and Length Factor (k3)

Turning Angle	Length Factor (k2)	Angle Factor (k2)			
		TPU and TNU Chains		TRU and TKU Chains	
		Dry	Lubricated	Dry	Lubricated
30°	0.50	1.15	1.10	1.20	1.10
60°	1.00	1.30	1.15	1.45	1.25
90°	1.60	1.50	1.25	1.75	1.35
120°	2.10	1.70	1.35	2.10	1.50
150°	2.60	1.90	1.50	2.50	1.70
180°	3.10	2.20	1.60	3.00	1.85

k2 and k3 factors are to be used for curved movement except for TO and TU types.

$$k3 = \frac{\pi}{180} \times \text{Turning Angle} / 180^\circ$$

### Step 5 - Top Plate width

Generally, the top plate must be wider than the material conveyed. When materials are very wide, and none of the top plate widths are satisfactory, top plates of the same width may be used in multi-strand arrangement. Top plates of different widths can be used together, but this is not desirable since the tension on the chains will be uneven.

### Step 6 - Calculate Chain tension (T)

#### 1 - Linear movement.

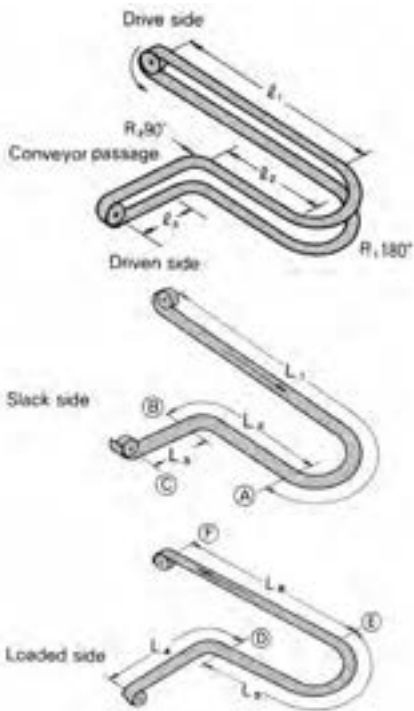
(TS, TT,TP,TN,TTP and P chains)

$$T = (M+2.1w) Lf2 + ML'f3 \dots \dots \dots \text{Formula 1}$$

#### 2 - Curved Movement

(TRU,TKU,TPU,TNU and TTU Chains)

The chain tension for curved movement is calculated similarly to that for linear movement. The tension at corners, however, is compensated for by the angle factor (K2) and length factor (K3).



#### Slack Side

Chain tension at A: Ta

$$Ta = L1wf2k2, L1 = I1 + R1k3 \text{ (k2 and k3 at } 180^\circ)$$

Chain tension at B: Tb

$$Tb = (Ta + L2wf2) k2, L2 = I2 + R2k3 \text{ (k2 and k3 at } 90^\circ)$$

Chain tension at C: Tc

$$Tc = Tb + L3wf2, L3 = I3$$

#### Loaded Side

Chain tension at d: Td

$$Td = (Tc + (M+w) L5f2 + ML'4f3) K2, L4 = I3 + R2k3$$

Chain tension at e: Te

$$Te = (Td + (M + w) L4f2 + ML'4f3) K2, L5 = I2 + R1k3$$

Chain tension at f: Tf

$$Tf = Te + (M+w) L5f2 + ML'6f3$$

### 3 - TO and TU Chains

Calculations for chain selection vary according to their usage and arrangement. A sample calculation is given for the arrangement shown to the right.

$$T = (M + w) Lf2 + wf2 + ML'f3 \dots \dots \dots \text{Formula 3}$$

#### 4 - Calculation of power required.

$$HP = (TS/33,000 \text{ } \eta) \dots \dots \dots \text{Formula 4}$$

### Step 7 - Determine Chain Size

Multiply maximum chain tension (T) by the speed coefficient (k1) taken from the Table VII and verify that the following equation is satisfied.

$$T \times k1 \leq \text{Chain maximum allowable load} \dots \dots \dots \text{Formula 5}$$

When the maximum allowable load is insufficient, it can be corrected by using top plates with narrower width and increasing the number of chain strands, or splitting into many short conveyors.

**Table VII - Speed Coefficient (k1)**

Chain Speed (ft./min)	Speed Factor (k1)
0 - 50	1.0
50 - 100	1.2
100 - 160	1.4
160 - 230	1.6
230 - 300	2.2
300 - 360	2.8
360 - 400	3.2

T = Chain tension (lbs.)

M = Weight of material conveyed per foot (lbs./ft.)

w = Chain weight (lbs./ft.)

L = Center distance between sprockets (ft.)

I = Distance not loaded (ft.)

L' = Distance of material sliding on the chain for storage

(L' = 0 when items and chain are not slipping)

f2 = Coefficient of friction between the top plate and liner

f3 = Coefficient of friction between goods moved and top plate

k1 = Speed coefficient

k2 = Angle factor

k3 = Length factor

R = Radius at corner (ft.)

S = Chain speed (ft./min)

$\eta$  = Mechanical transmission efficiency for drive unit

HP = Power required

### Conveyor Design

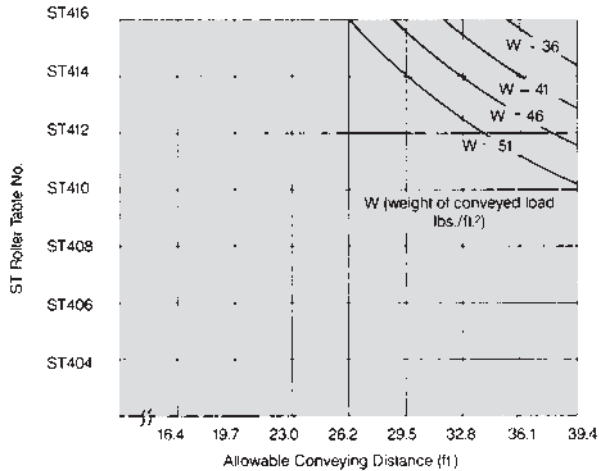
The layout of a conveyor varies with the type of chain used. A typical layout is shown below. Goods should be conveyed on the tension side of the chain, and the slack (return) side should be supported by guide rails with sloped ends to prevent chain vibration and conveyor pulsation.

### III – Selection Procedure for Roller Table

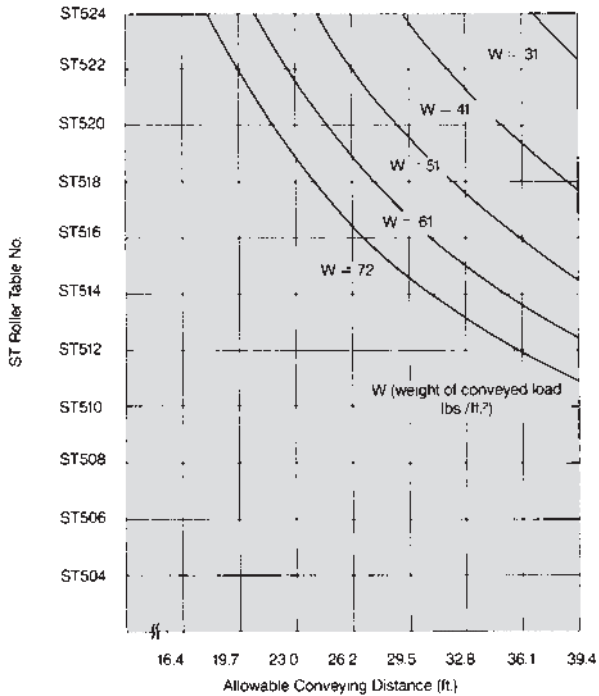
Determine the Roller Table Size with the following capability graphs:

#### ST – Roller Table Capability Graph

##### ST400



##### ST500

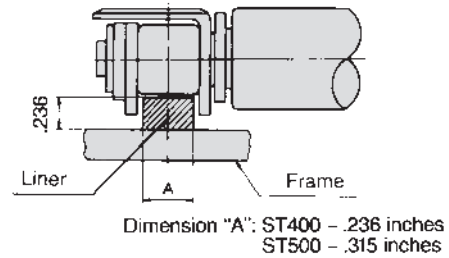


How to use the graph:  
 If W equals 61 lbs./ft.² and the conveyor length equals 32.8 ft., Roller Table numbers ST514 to ST504 can be used.

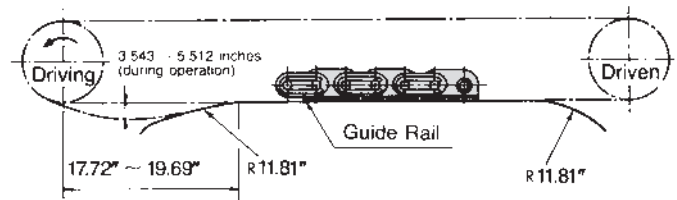
$$W \left[ \frac{\text{Weight of conveyed object (lbs.)}}{\text{Base area of conveyed object (ft.}^2\text{)}} \right]$$

#### Guide for ST Roller Table

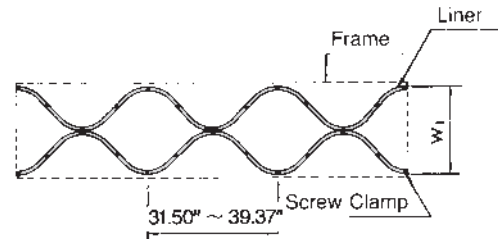
Conveying Side (reference only)



Return Side



1) Top View of Return Side



2) Cross-Sectional View



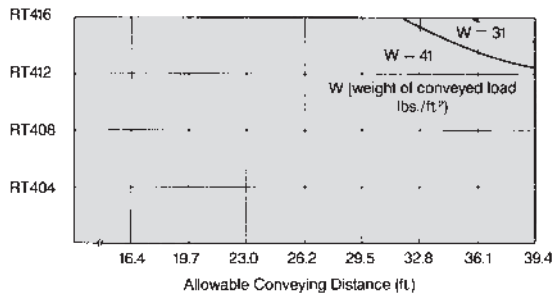
- Liner should be shaped to avoid plastic roller wear.
- Liner width (W<sub>1</sub>) should be C<sub>1</sub> (effective width) minus (0.394 inches).
- Material of liner should be high polymer polyethylene.

**Roller Table Speed should not exceed 160 ft./min.**

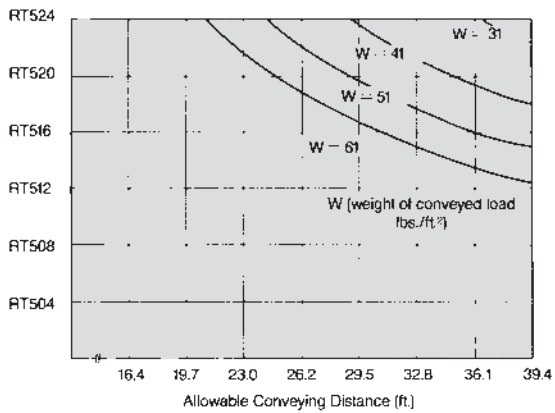


## Roller Table Conveyor Capability Graph

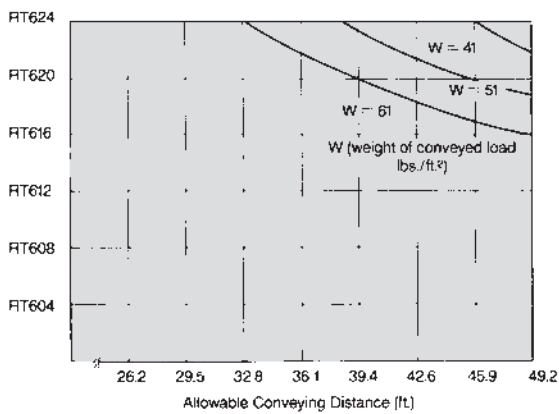
### RT400



### RT500



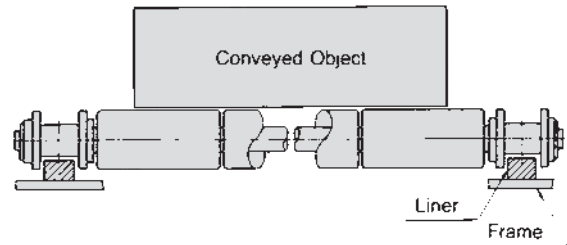
### RT600



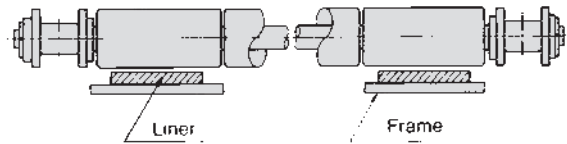
Use these graphs in the same way as for ST Roller Table.

## Guide for RT Roller Table

### Conveying Side



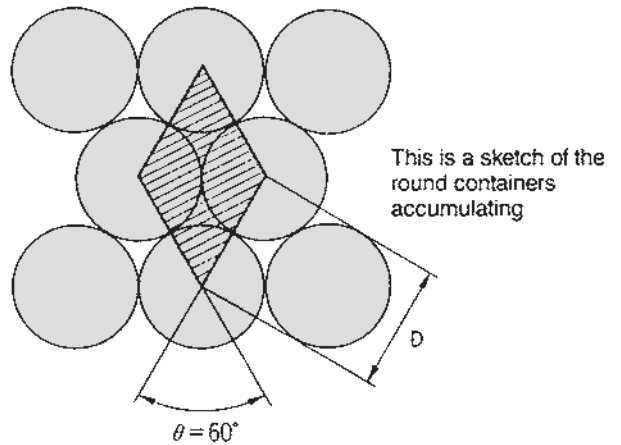
### Return Side



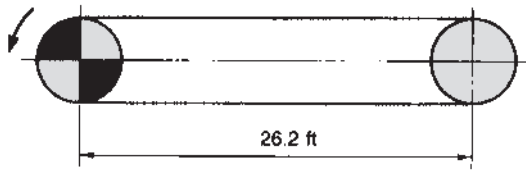
Note: Material of liner should be high polymer polyethylene.

Roller Table speed should not exceed 160 ft./min

How to calculate the carrying capacity (For round containers)



### Selection Procedure Example



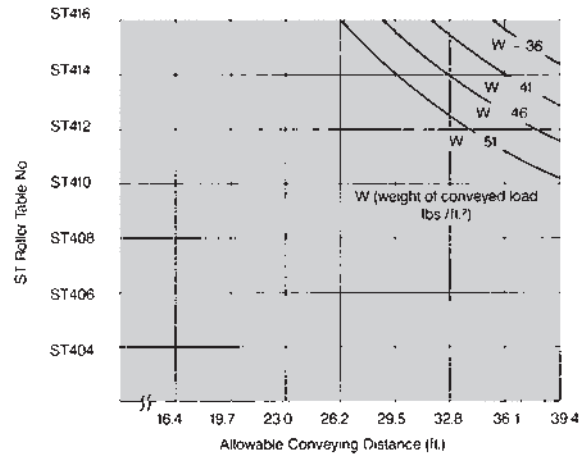
Conveyor Length – 26.2 feet  
 Weight of conveyed object – 44 pounds  
 Dimensions of conveyed object – 0.98 ft. x 0.66 ft. x 0.33 ft.

From the ST Roller Table conveyor capability graph:

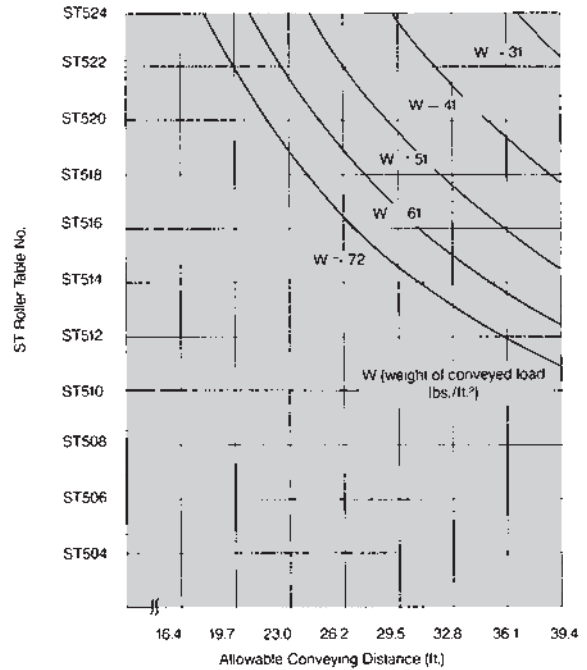
$$W = 44 \div (.98 \times .66) = 68 \text{ lbs./ft}^2$$

If  $W = 68 \text{ lbs./ft}^2$  and the conveyor length is 26.2 ft., ST504 – ST516 Roller Table is the appropriate choice according to the following table:

#### ST400



#### ST500



How to use the graph:

If  $W$  equals 61 lbs./ft.² and the conveyor length equals 32.8 ft., Roller Table numbers ST514 to ST504 can be used.

$$W \text{ [Weight of conveyed load (lbs./ft.}^2\text{)]} = \frac{\text{Weight of conveyed object (lbs.)}}{\text{Base area of conveyed object (ft.}^2\text{)}}$$

Determine the chain width (C1) using the dimension diagram.  
 In this example, ST510SS (NP) Roller table chain with chain-width.



# Horsepower Ratings

## 40 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	10	25	50	100	200	300	400	500	700	900	1000	1200
9	0.06	0.15	0.28	0.52	0.97	1.39	1.81	2.21	2.99	3.74	4.12	4.85
10	0.06	0.16	0.31	0.58	1.09	1.55	2.02	2.47	3.35	4.20	4.61	
11	0.08	0.19	0.35	0.64	1.21	1.73	2.24	2.73	3.71	4.65	5.11	
12	0.09	0.20	0.38	0.71	1.31	1.90	2.47	3.00	4.08	5.11		
13	0.09	0.23	0.42	0.76	1.43	2.08	2.68	3.28	4.44	5.56		
14	0.11	0.24	0.44	0.83	1.55	2.24	2.91	3.55	4.81			
15	0.11	0.25	0.48	0.90	1.68	2.41	3.14	3.83	5.19			
16	0.12	0.28	0.52	0.97	1.80	2.59	3.37	4.10	5.56			
17	0.13	0.29	0.55	1.03	1.92	2.76	3.58	4.38				
18	0.13	0.31	0.59	1.10	2.04	2.95	3.81	4.67				
19	0.15	0.34	0.62	1.17	2.17	3.12	4.05	4.95				
20	0.16	0.35	0.66	1.23	2.29	3.30	4.28	5.23				
21	0.16	0.38	0.70	1.30	2.41	3.47	4.51	5.51				
22	0.17	0.39	0.72	1.35	2.53	3.66	4.73	5.79				
23	0.17	0.42	0.76	1.42	2.67	3.83	4.97	6.07				
24	0.19	0.43	0.80	1.49	2.79	4.02	5.20					
25	0.20	0.44	0.83	1.55	2.91	4.20	5.44					
26	0.20	0.47	0.87	1.64	3.04	4.38	5.67					
28	0.23	0.51	0.95	1.77	3.30	4.75	6.14					
30	0.24	0.55	1.02	1.90	3.55	5.11						
32	0.25	0.59	1.10	2.04	3.81	5.48						
35	0.28	0.64	1.21	2.25	4.20	6.03						
40	0.32	0.75	1.39	2.60	4.84							
45	0.38	0.84	1.58	2.95	5.50							

## 50 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	10	25	50	100	200	300	400	500	600	700	800	900
9	0.13	0.31	0.58	1.07	2.00	2.88	3.73	4.56	5.38	6.18	6.96	7.74
10	0.15	0.35	0.64	1.21	2.24	3.23	4.18	5.11	6.02	6.92	7.80	
11	0.16	0.39	0.71	1.33	2.48	3.58	4.64	5.67	6.68	7.67		
12	0.19	0.42	0.78	1.46	2.72	3.93	5.10	6.22	7.34	8.42		
13	0.20	0.46	0.86	1.59	2.98	4.29	5.55	6.79	7.99			
14	0.21	0.50	0.92	1.73	3.22	4.64	6.02	7.35	8.66			
15	0.23	0.54	0.99	1.86	3.47	5.00	6.48	7.93				
16	0.25	0.58	1.07	2.00	3.73	5.36	6.95	8.49				
17	0.27	0.62	1.14	2.13	3.97	5.73	7.42	9.07				
18	0.28	0.66	1.22	2.27	4.22	6.09	7.89					
19	0.31	0.68	1.29	2.40	4.48	6.45	8.37					
20	0.32	0.72	1.35	2.53	4.73	6.83	8.84					
21	0.34	0.76	1.43	2.68	4.99	7.19	9.32					
22	0.35	0.80	1.50	2.82	5.26	7.56						
23	0.38	0.84	1.58	2.95	5.51	7.94						
24	0.39	0.88	1.66	3.10	5.77	8.31						
25	0.40	0.92	1.73	3.23	6.03	8.69						
26	0.43	0.97	1.81	3.37	6.29	9.07						
28	0.46	1.05	1.96	3.65	6.81	9.82						
30	0.50	1.13	2.10	3.93	7.34							
32	0.54	1.21	2.27	4.22	7.87							
35	0.59	1.34	2.49	4.64	8.68							
40	0.67	1.54	2.87	5.36	10.0							
45	0.76	1.76	3.27	6.10								

# Horsepower Ratings

## 60 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	10	25	50	100	150	200	250	300	400	500	600	700
9	0.24	0.55	1.02	1.89	2.72	3.54	4.32	5.10	6.60	8.06	9.5	10.9
10	0.27	0.60	1.14	2.12	3.06	3.96	4.84	5.70	7.39	9.04	10.6	
11	0.29	0.67	1.26	2.35	3.39	4.38	5.36	6.32	8.19	10.0		
12	0.32	0.74	1.38	2.59	3.73	4.83	5.90	6.95	8.99	11.0		
13	0.35	0.80	1.52	2.82	4.06	5.26	6.42	7.58	9.82			
14	0.39	0.87	1.64	3.06	4.40	5.70	6.96	8.21	10.6			
15	0.42	0.94	1.76	3.29	4.73	6.14	7.50	8.84	11.4			
16	0.44	1.01	1.89	3.53	5.08	6.58	8.05	9.48				
17	0.47	1.09	2.01	3.77	5.42	7.03	8.58	10.1				
18	0.51	1.15	2.15	4.01	5.77	7.47	9.13	10.7				
19	0.54	1.22	2.28	4.24	6.11	7.93	9.68	11.4				
20	0.56	1.29	2.40	4.49	6.46	8.37	10.2	12.5				
21	0.59	1.35	2.53	4.73	6.81	8.82	10.8	12.7				
22	0.63	1.42	2.67	4.97	7.16	9.28	10.3					
23	0.66	1.50	2.79	5.22	7.51	9.74	11.9					
24	0.68	1.57	2.92	5.46	7.87	10.2	12.5					
25	0.72	1.64	3.06	5.71	8.22	10.6	13.0					
26	0.75	1.72	3.19	5.95	8.58	11.1						
28	0.82	1.85	3.46	6.45	9.29	12.0						
30	0.87	2.00	3.73	6.95	10.0	13.0						
32	0.94	2.15	3.99	7.46	10.7							
35	1.03	2.36	4.40	8.21	11.8							
40	1.19	2.72	5.08	9.48	13.7							
45	1.35	3.10	5.77	10.8								

## 80 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm										
	10	25	50	75	100	125	150	200	250	300	350
9	0.54	1.22	2.27	3.27	4.24	5.18	6.10	7.91	9.67	11.4	13.1
10	0.60	1.37	2.55	3.66	4.75	5.81	6.84	8.86	10.84	12.8	14.6
11	0.66	1.51	2.82	4.06	5.27	6.44	7.59	9.83	12.0	14.2	
12	0.72	1.66	3.10	4.46	5.78	7.07	8.33	10.8	13.2		
13	0.79	1.81	3.38	4.87	6.30	7.71	9.08	11.8	14.3		
14	0.86	1.96	3.66	5.27	6.84	8.35	9.84	12.7	15.5		
15	0.92	2.12	3.94	5.69	7.36	8.99	10.6	13.7			
16	0.99	2.27	4.22	6.09	7.89	9.64	11.4	14.7			
17	1.06	2.41	4.52	6.50	8.42	10.3	12.1	15.7			
18	1.13	2.57	4.80	6.92	8.96	11.0	12.9				
19	1.19	2.72	5.10	7.34	9.51	11.6	13.7				
20	1.26	2.88	5.38	7.75	10.0	12.3	14.5				
21	1.33	3.04	5.67	8.17	10.6	12.9	15.3				
22	1.41	3.19	5.97	8.60	11.1	13.5	16.1				
23	1.47	3.35	6.26	9.01	11.7	14.2	16.8				
24	1.54	3.51	6.56	9.44	12.2	14.9					
25	1.61	3.67	6.85	9.87	12.8	15.7					
26	1.68	3.83	7.15	10.3	13.3	16.4					
28	1.82	4.14	7.74	11.1	14.5	17.7					
30	1.96	4.47	8.34	12.0	15.5						
32	2.10	4.79	8.94	12.9	16.6						
35	2.32	5.28	9.86	14.2	18.4						
40	2.67	6.10	11.4	16.4							
45	3.03	6.92	12.9	18.6							

# Horsepower Ratings

## 100 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	10	25	50	75	100	125	150	175	200	225	250	275
9	0.88	2.02	3.78	5.46	7.07	8.64	10.2	11.7	13.2	14.6	16.1	17.6
10	0.99	2.28	4.24	6.11	7.91	9.68	11.4	13.1	14.7	16.5	18.1	
11	1.10	2.52	4.70	6.77	8.77	10.7	12.6	14.5	16.4	18.0		
12	1.22	2.76	5.16	7.44	9.64	11.8	13.9	15.9	18.0			
13	1.33	3.02	5.63	8.11	10.5	12.8	15.1	17.4				
14	1.43	3.27	6.10	8.79	11.4	13.9	16.4	18.9				
15	1.54	3.53	6.57	9.47	12.3	15.0	17.7					
16	1.65	3.78	7.05	10.1	13.1	16.1	18.9					
17	1.77	4.04	7.52	10.8	14.1	17.2						
18	1.88	4.29	8.00	11.5	14.9	18.2						
19	2.00	4.55	8.49	12.2	15.8	19.3						
20	2.10	4.80	8.97	12.9	16.8	20.5						
21	2.23	5.07	9.45	13.7	17.7							
22	2.33	5.32	9.94	14.3	18.5							
23	2.45	5.59	10.4	15.0	19.4							
24	2.56	5.85	10.9	15.7	20.4							
25	2.68	6.11	11.4	16.5	21.3							
26	2.80	6.38	11.9	17.2								
28	3.03	6.92	12.9	18.6								
30	3.26	7.44	13.9	20.0								
32	3.50	7.99	14.9	21.4								
35	3.86	8.79	16.4									
40	4.45	10.2	18.9									
45	5.05	11.5	21.6									

## 120 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	5	10	15	20	25	30	40	50	60	80	100	125
9	0.87	1.64	2.35	3.04	3.72	4.39	5.67	6.93	8.18	10.6	12.9	15.8
10	0.98	1.82	2.63	3.41	4.17	4.91	6.36	7.78	9.16	11.9	14.5	17.7
11	1.09	2.03	2.91	3.78	4.61	5.45	7.04	8.62	10.1	13.1	16.1	
12	1.19	2.23	3.21	4.14	5.07	5.98	7.74	9.47	11.1	14.5	17.7	
13	1.30	2.43	3.49	4.52	5.53	6.52	8.44	10.3	12.2	15.7	19.3	
14	1.41	2.63	3.78	4.90	5.99	7.05	9.15	11.2	13.2	17.0		
15	1.52	2.83	4.08	5.28	6.45	7.60	9.86	12.0	14.2	18.4		
16	1.62	3.03	4.37	5.66	6.92	8.15	10.6	12.9	15.1	19.7		
17	1.73	3.25	4.67	6.05	7.39	8.70	11.3	13.8	16.2			
18	1.85	3.45	4.96	6.42	7.86	9.27	12.0	14.6	17.3			
19	1.96	3.65	5.26	6.81	8.33	9.82	12.7	15.5	18.4			
20	2.07	3.86	5.57	7.20	8.81	10.4	13.4	16.5	19.3			
21	2.19	4.06	5.86	7.59	9.28	10.9	14.2	17.3	20.4			
22	2.29	4.28	6.17	7.98	9.76	11.5	14.9	18.2				
23	2.40	4.49	6.46	8.38	10.2	12.1	15.7	19.2				
24	2.52	4.71	6.77	8.77	10.7	12.6	16.4	20.0				
25	2.63	4.91	7.08	9.17	11.2	13.2	17.2	20.9				
26	2.75	5.12	7.39	9.56	11.7	13.8	17.8	21.8				
28	2.98	5.55	7.99	10.3	12.7	14.9	19.3					
30	3.21	5.98	8.62	11.2	13.7	16.1	20.8					
32	3.43	6.41	9.24	12.0	14.6	17.3	22.4					
35	3.78	7.07	10.2	13.2	16.1	19.0						
40	4.37	8.17	11.7	15.3	18.6	22.0						
45	4.96	9.27	13.3	17.3	21.2							

# Horsepower Ratings

## 140 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	5	10	15	20	25	30	40	50	60	80	100	125
9	1.37	2.55	3.67	4.76	5.82	6.87	8.89	10.8	12.8	16.6	20.3	24.8
10	1.53	2.86	4.12	5.34	6.53	7.68	9.96	12.2	14.3	18.6	22.7	
11	1.70	3.17	4.57	5.91	7.23	8.53	11.0	13.5	15.9	20.6	25.2	
12	1.86	3.49	5.02	6.50	7.95	9.36	12.1	14.9	17.4	22.7		
13	2.04	3.80	5.47	7.09	8.66	10.2	13.2	16.2	19.0	24.7		
14	2.20	4.12	5.93	7.68	9.39	11.1	14.3	17.6	20.6	26.7		
15	2.37	4.44	6.38	8.27	10.1	11.9	15.4	18.9	22.2			
16	2.55	4.75	6.85	8.87	10.8	12.8	16.5	20.2	23.9			
17	2.72	5.07	7.31	9.47	11.6	13.7	17.7	21.6	25.5			
18	2.90	5.40	7.78	10.1	12.3	14.5	18.8	22.9	27.1			
19	3.07	5.73	8.25	10.7	13.0	15.4	20.0	24.4				
20	3.25	6.05	8.72	11.3	13.8	16.2	21.0	25.7				
21	3.42	6.37	9.19	11.9	14.5	17.2	22.2	27.1				
22	3.59	6.71	9.66	12.5	15.3	18.0	23.3	28.5				
23	3.77	7.04	10.1	13.1	16.1	18.9	24.5					
24	3.94	7.36	10.6	13.7	16.8	19.8	25.6					
25	4.13	7.70	11.1	14.3	17.6	20.6	26.8					
26	4.31	8.03	11.6	15.0	18.4	21.6	27.9					
28	4.67	8.70	12.5	16.2	19.8	23.3	30.3					
30	5.02	9.37	13.5	17.4	21.3	25.2						
32	5.39	10.0	14.5	18.8	22.9	26.9						
35	5.93	11.1	15.9	20.6	25.2	29.8						
40	6.85	12.8	18.4	23.9	29.1							

## 160 Lambda® Horsepower Ratings (Single Strand Chain)

Small Sprocket Teeth No.	Small Sprocket Max. rpm											
	5	10	15	20	25	30	40	50	60	80	100	
9	2.07	3.85	5.54	7.18	8.77	10.3	13.4	16.4	19.3	24.9	30.6	
10	2.31	4.31	6.21	8.03	9.83	11.6	15.0	18.4	21.6	28.0		
11	2.56	4.77	6.88	8.91	10.9	12.8	16.6	20.4	24.0	31.0		
12	2.82	5.24	7.55	9.79	11.9	14.1	18.2	22.3	26.3	34.1		
13	3.06	5.71	8.23	10.7	13.0	15.4	19.8	24.3	28.7			
14	3.33	6.20	8.92	11.5	14.1	16.6	21.6	26.4	31.1			
15	3.58	6.68	9.62	12.4	15.3	18.0	23.2	28.4	33.5			
16	3.84	7.16	10.3	13.3	16.4	19.2	24.9	30.4	35.9			
17	4.09	7.64	11.0	14.2	17.4	20.5	26.6	32.5				
18	4.36	8.13	11.7	15.2	18.5	21.9	28.3	34.6				
19	4.61	8.61	12.4	16.1	19.7	23.2	30.0	36.6				
20	4.88	9.11	13.1	17.0	20.8	24.4	31.7					
21	5.14	9.6	13.8	18.0	21.9	25.8	33.4					
22	5.40	10.1	14.5	18.8	23.1	27.1	35.1					
23	5.67	10.6	15.3	19.7	24.1	28.4	36.9					
24	5.94	11.1	16.0	20.7	25.3	29.8	38.6					
25	6.21	11.6	16.6	21.6	26.4	31.1						
26	6.48	12.1	17.4	22.5	27.6	32.5						
28	7.01	13.1	18.9	24.4	29.9	35.1						
30	7.56	14.1	20.4	26.3	32.2	38.0						
32	8.10	15.2	21.7	28.2	34.5	40.6						
35	8.93	16.6	24.0	31.1	38.0							
40	10.3	19.3	27.8	35.9								

# Horsepower Ratings

## 40 Drive Xceeder®

No. of Teeth Small Sprocket	Horsepower Ratings - Maximum Speed - Small Sprocket (RPM)											
	10	25	50	100	200	300	400	500	700	900	1000	1200
9	0.07	0.15	0.28	0.52	0.97	1.39	1.81	2.20	2.99	3.74	4.11	4.85
10	0.07	0.16	0.31	0.58	1.09	1.55	2.02	2.47	3.34	4.20	4.61	
11	0.08	0.19	0.35	0.64	1.21	1.73	2.24	2.73	3.70	4.65	5.11	
12	0.09	0.20	0.38	0.71	1.31	1.90	2.47	3.00	4.07	5.11		
13	0.09	0.23	0.42	0.76	1.43	2.06	2.68	3.28	4.44	5.56		
14	0.11	0.24	0.44	0.83	1.55	2.24	2.91	3.55	4.81			
15	0.11	0.25	0.48	0.90	1.68	2.41	3.14	3.83	5.19			
16	0.12	0.28	0.52	0.97	1.80	2.59	3.35	4.10	5.55			
17	0.13	0.29	0.55	1.03	1.92	2.76	3.58	4.38				
18	0.13	0.31	0.59	1.10	2.04	2.95	3.81	4.66				
19	0.15	0.34	0.62	1.17	2.17	3.12	4.05	4.95				
20	0.16	0.35	0.66	1.23	2.29	3.30	4.28	5.23				
21	0.16	0.38	0.70	1.29	2.41	3.47	4.50	5.51				
22	0.17	0.39	0.72	1.35	2.53	3.66	4.73	5.79				
23	0.17	0.42	0.76	1.42	2.67	3.83	4.97	6.07				
24	0.19	0.43	0.80	1.49	2.79	4.02	5.20					
25	0.20	0.44	0.83	1.55	2.91	4.20	5.44					
26	0.20	0.47	0.87	1.62	3.04	4.38	5.67					
28	0.23	0.51	0.95	1.77	3.30	4.74	6.14					
30	0.24	0.55	1.02	1.90	3.55	5.11						
32	0.25	0.59	1.09	2.04	3.81	5.48						
35	0.28	0.64	1.21	2.24	4.20	6.03						
40	0.32	0.75	1.39	2.59	4.84							
45	0.38	0.84	1.58	2.95	5.50							

## 50 Drive Xceeder®

No. of Teeth Small Sprocket	Horsepower Ratings - Maximum Speed - Small Sprocket (RPM)											
	10	25	50	100	200	300	400	500	600	700	8000	900
9	0.13	0.31	0.58	0.52	0.97	1.39	1.81	2.20	5.37	6.17	6.96	7.73
10	0.15	0.31	0.64	0.58	1.09	1.55	2.02	2.47	3.34	4.20	7.80	
11	1.50	0.38	0.71	0.64	1.21	1.73	2.24	2.73	3.70	4.65		
12	0.19	0.42	0.78	0.71	1.31	1.90	2.47	3.00	4.07	5.11		
13	0.02	0.46	0.86	0.76	1.43	2.06	2.68	3.28	4.44	5.56		
14	0.21	0.50	0.92	0.83	1.55	2.24	2.91	3.55	4.81			
15	0.23	0.54	0.99	0.90	1.68	2.41	3.14	3.83	5.19			
16	0.25	0.58	1.07	0.97	1.80	2.59	3.35	4.10	5.55			
17	0.27	0.62	1.14	1.03	1.92	2.76	3.58	4.38				
18	0.28	0.66	1.22	1.10	2.04	2.95	3.81	4.66				
19	0.31	0.68	1.29	1.17	2.17	3.12	4.05	4.95				
20	0.32	0.72	1.35	1.23	2.29	3.30	4.28	5.23				
21	0.34	0.76	1.43	1.29	2.41	3.47	4.50	5.51				
22	0.35	0.80	1.50	1.35	2.53	3.66	4.73	5.79				
23	0.38	0.84	1.58	1.42	2.67	3.83	4.97	6.07				
24	0.39	0.88	1.66	1.49	2.79	4.02	5.20					
25	0.40	0.92	1.73	1.55	2.91	4.20	5.44					
26	0.43	0.97	1.81	1.62	3.04	4.38	5.67					
28	0.46	1.05	1.96	1.77	3.30	4.74	6.14					
30	0.50	1.13	2.10	1.90	3.55	5.11						
32	0.54	1.21	2.27	2.04	3.81	5.48						
35	0.59	1.33	2.49	2.24	4.20	6.03						
40	0.67	1.54	2.87	2.59	4.84							
45	0.76	1.74	3.27	2.95	5.50							



# Horsepower Ratings

## 60 Drive Xceeder®

No. of Teeth Small Sprocket	Horsepower Ratings - Maximum Speed - Small Sprocket (RPM)											
	10	25	50	100	150	200	250	300	400	500	600	700
9	0.24	0.55	1.02	1.89	2.72	3.52	4.32	5.08	6.59	8.06	9.49	10.91
10	0.27	0.60	1.14	2.12	3.06	3.95	4.84	5.70	7.39	9.02	10.64	
11	0.29	0.67	1.26	2.35	3.39	4.38	5.36	6.31	8.19	10.00		
12	0.32	0.74	1.38	2.59	3.71	4.81	5.88	6.94	8.99	10.99		
13	0.35	0.80	1.51	2.81	4.06	5.25	6.42	7.57	9.80			
14	0.39	0.87	1.64	3.06	4.40	5.70	6.96	8.20	10.62			
15	0.42	0.94	1.76	3.28	4.73	6.13	7.49	8.83	11.45			
16	0.44	1.01	1.89	3.52	5.08	6.57	8.04	9.46				
17	0.47	1.09	2.01	3.77	5.41	7.02	8.58	10.11				
18	0.51	1.15	2.14	3.99	5.76	7.47	9.13	10.75				
19	0.54	1.22	2.28	4.24	6.11	7.91	9.68	11.41				
20	0.56	1.29	2.40	4.48	6.46	8.36	10.23	12.05				
21	0.59	1.35	2.53	4.73	6.81	8.82	10.78					
22	0.63	1.42	2.67	4.97	7.16	9.27	11.34					
23	0.66	1.50	2.79	5.21	7.51	9.73	11.89					
24	0.68	1.57	2.92	5.46	7.87	10.19	12.45					
25	0.72	1.64	3.06	5.71	8.22	10.64	13.01					
26	0.75	1.72	3.19	5.95	8.58	11.11						
28	0.82	1.85	3.46	6.45	9.29	12.04						
30	0.87	2.00	3.73	6.94	10.00	12.96						
32	0.94	2.14	3.99	7.45	10.72							
35	1.03	2.36	4.40	8.20	11.82							
40	1.19	2.72	5.08	9.48	13.67							
45	1.35	3.10	5.76	10.76								

## 80 Drive Xceeder®

No. of Teeth Small Sprocket	Horsepower Ratings - Maximum Speed - Small Sprocket (RPM)											
	10	25	50	75	100	125	150	200	250	300	350	
9	0.54	1.22	2.27	3.27	4.24	5.17	6.10	7.91	9.66	11.39	13.08	
10	0.60	1.37	2.55	3.66	4.74	5.80	6.84	8.86	10.83	12.76	14.61	
11	0.66	1.51	2.81	4.06	5.27	6.43	7.57	9.82	12.01	14.21		
12	0.72	1.66	3.10	4.46	5.78	7.06	8.32	10.79	13.19			
13	0.79	1.81	3.38	4.87	6.30	7.71	9.07	11.75	14.34			
14	0.86	1.96	3.66	5.27	6.82	8.35	9.84	12.75	15.55			
15	0.92	2.12	3.94	5.68	7.36	8.99	10.59	13.67				
16	0.99	2.27	4.22	6.08	7.88	9.64	11.37	14.74				
17	1.06	2.41	4.52	6.50	8.42	10.26	12.13	15.68				
18	1.13	2.57	4.80	6.92	8.95	10.95	12.91					
19	1.19	2.72	5.09	7.33	9.49	11.61	13.67					
20	1.26	2.88	5.37	7.75	10.04	12.26	14.48					
21	1.33	3.04	5.67	8.16	10.57	12.93	15.28					
22	1.39	3.19	5.96	8.59	11.12	13.54	16.08					
23	1.47	3.35	6.26	9.01	11.67	14.21	16.75					
24	1.54	3.51	6.55	9.44	12.22	14.88						
25	1.61	3.67	6.85	9.85	12.77	15.55						
26	1.68	3.82	7.14	10.28	13.32	16.35						
28	1.82	4.14	7.73	11.14	14.48	17.69						
30	1.96	4.46	8.34	12.01	15.55							
32	2.10	4.78	8.94	12.87	16.62							
35	2.31	5.28	9.84	14.21	18.36							
40	2.67	6.10	11.37	16.35								
45	3.03	6.92	12.94	18.63								

# Horsepower Ratings

## 100 Drive Xceeder®

No. of Teeth Small Sprocket	Horsepower Ratings - Maximum Speed - Small Sprocket (RPM)											
	10	25	50	75	100	125	150	175	200	225	250	275
9	0.88	2.02	3.78	5.46	7.06	8.63	10.17	11.69	13.18	14.61	16.08	17.56
10	0.99	2.28	4.24	6.11	7.91	9.68	11.39	13.09	14.74	16.35	18.09	
11	1.10	2.52	4.70	6.77	8.77	10.72	12.63	14.48	16.35	18.23		
12	1.21	2.76	5.16	7.44	9.64	11.78	13.94	15.95	17.96			
13	1.33	3.02	5.63	8.11	10.51	12.84	15.15	17.42				
14	1.43	3.27	6.10	8.79	11.38	13.94	16.35	18.76				
15	1.54	3.52	6.57	9.46	12.26	15.01	17.69					
16	1.65	3.78	7.05	10.15	13.15	16.08	18.90					
17	1.77	4.03	7.52	10.83	14.07	17.16						
18	1.88	4.29	8.00	11.53	14.88	18.23						
19	2.00	5.21	8.48	12.21	15.82	19.30						
20	2.10	4.80	8.97	12.91	16.75	20.51						
21	2.22	5.07	9.45	13.67	17.69							
22	2.33	5.32	9.93	14.34	18.50							
23	2.45	5.59	10.43	15.01	19.43							
24	2.56	5.84	10.91	15.68	20.37							
25	2.68	6.11	11.41	16.49	21.31							
26	2.80	6.38	11.90	17.16								
28	3.03	6.90	12.89	18.63								
30	3.26	7.44	13.94	19.97								
32	3.50	7.97	14.88	21.44								
35	3.86	8.79	16.38									
40	4.45	10.16	18.90									
45	5.05	11.53	21.58									

# TERMS AND CONDITIONS OF SALE

## PRICE-PAYMENT

The prices stated are those in effect on the date hereof and are subject to change based on prices in effect on the date of shipment. Interest at the rate of 18% per annum shall be charged on overdue payments. Prices are for Seller's standard packaging only, and F.O.B. Seller's plant or warehouse. All orders are subject to credit approval. Terms of payment are net, 30 days. In the event of non-payment by Buyer, Buyer shall pay all of Seller's costs of collection, including reasonable attorneys' fees. Up to 5% over or under the specified quantity for made-to-order products may be shipped at Seller's option.

## PERFORMANCE-CHANGES-DELAYS

- (a) Any time for delivery stated herein is approximate. Delivery shall be deemed complete by tender of the products to a common carrier. Partial shipments are permitted.
- (b) Orders are not subject to cancellation or revision, in whole or in part, without written approval of Seller.
- (c) Should Buyer cause changes to be made in the design or construction of said products, or otherwise delay or interrupt the progress of the work hereunder, Buyer will reimburse Seller for any additional expenses arising therefrom.
- (d) Seller shall not be liable for any delay caused by acts of God, riot or civil commotion, government orders, rules, regulations, suspensions or requisitions of any kind, strikes or other stoppages of labor or shortage in the supply of labor or material, fire casualties or accidents, or any cause, whether of the same or a different character, beyond Seller's control. Any such delay shall extend the time for delivery of the products. Delay in delivery of any installment shall not relieve Buyer of its obligation to accept remaining deliveries.
- (e) If delays due to Buyer's fault exceed 60 days in the aggregate, the entire purchase price shall be due and payable to Seller on demand.

## RISK OF LOSS

After delivery to the carrier, Buyer assumes the risk of all loss or damage to the products resulting from any cause whatever.

## LIMITED WARRANTY

Products manufactured by Seller: (a) conform to the design and specifications, if any, expressly agreed to in writing by Seller; and (b) are free of defects in workmanship and materials at the time of shipment. The warranties set forth in the preceding sentence are exclusive of all other warranties, express or implied, and extend only to Buyer and to no other person. ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED.

## NON-RELIANCE

Buyer is not relying upon any advice, representations or warranties (except the warranties expressly set forth above) of Seller, or upon Seller's skill or judgment regarding the Seller's products. Buyer is solely responsible for the design and specifications of the products, including without limitation, the determination of suitability for Buyer's application of the products.

## CLAIMS

- (a) Any claim relating to quantity or type shall be made to Seller in writing within 7 days after receipt of the products; any such claim made thereafter shall be barred.
- (b) Any claim under the above-stated Limited Warranty shall be made to Seller in writing within three (3) months after receipt of the products; any such claim made thereafter shall be barred.
- (c) Seller's liability for breach of warranty or otherwise is limited to repair or replacement, at Seller's option, of non-conforming or defective products. Buyer waives all other remedies, including, but not limited to, all rights to consequential, special or incidental damages, including, but not limited to, damages resulting from personal injury, death or damage to or loss of use of property.
- (d) Repair, alteration, neglect or misuse of the products shall void all applicable warranties.

## INDEMNIFICATION

Buyer will indemnify, defend and hold Seller harmless from all loss, liability, damage and expense, including attorneys' fees, arising out of any claim (a) for infringement of any patent, trademark, copyright, misappropriation of trade secrets, unfair competition or similar charge by any products supplied by Seller in accordance with the design or specifications furnished by Buyer, or (b) arising out of or connected with the products or any items into which the products are incorporated, including, but not limited to, any claim for product liability (whether or not based on negligence or strict liability of Seller), breach of warranty, breach of contract or otherwise.

## DUTIES AND TAXES

In addition to the specified purchase price, Buyer will pay any and all federal, state or local taxes, duties, excises, license fees and other charges levied, assessed or imposed upon Seller due to the manufacture, sale, purchase or delivery of the products. Buyer shall also pay the cost by which such manufacture is increased by reason of any law, ordinance or regulation adopted or promulgated by any government or governmental subdivision, department or agency, or other source, after the date hereof, but prior to the completion and delivery hereunder.

## SPECIFICATIONS, DRAWINGS, PATTERNS AND TOOLS

Seller's specifications, drawings, patterns and tooling shall be the sole and exclusive property of Seller unless otherwise agreed in writing.

## ENTIRE AGREEMENT

These terms and conditions constitute the entire agreement between Buyer and Seller and supersede any inconsistent terms and conditions, whether contained in Buyer's purchase order or otherwise, and whether made heretofore or hereafter. No statement or writing subsequent to the date hereof which purports to modify or add to the terms and conditions hereof shall be binding unless consented to in writing, which makes specific reference hereto, and which has been signed by the party against which enforcement thereof is sought. Seller reserves the right to change these terms and conditions without prior notice.

## RETURNED GOODS

No goods will be accepted for return without prior written authorization by Seller. Freight must be prepaid on all such returns, and each return is subject to inspection and acceptance by Seller to assure the goods are in a "resalable" condition. A minimum 10% handling and restocking charge will be applied to all authorized returns. Special or made-to-order goods are NOT returnable. Attachment chains returned are at the manufacturer's discretion.



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