

HITACHI
Inspire the Next

**INDUSTRIAL
CHAIN PRODUCTS
GENERAL CATALOG**



Industrial Roller Chain Products General Catalog

Inspire Series™ SBR® Roller Chain Products
HI-MAX® Roller Chain Products

Look for these unique product solutions inside:



“The highest rated standard roller chain in the world”

See pages 10-11 for more details



“Increased wear life and excellent corrosion resistance”

See page 59 for more details



“Thirty times more corrosion resistance compared with nickel plate”

See page 56 for more details



“An incredibly high strength stainless steel product”

See page 62 for more details



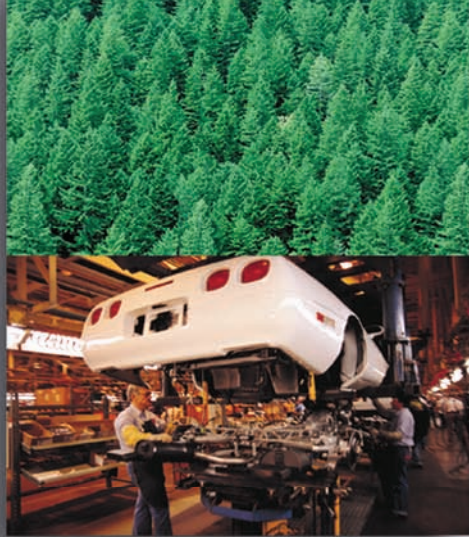
“A high strength maintenance free roller chain product”

See pages 69 - 73 for more details



“An economical standard performance roller chain”

See page 118 for more details



The Highest Rated Standard Roller Chains In The World

Development History-SBR®

In 1987 Hitachi introduced the first premium line of solid bushing/solid roller (SBR®) industrial chain products to the North American marketplace. Cold forged solid steel parts replaced traditional curled components to increase strength and extend chain life.

This new idea gained in popularity during the 1990s. Some producers began copying the technology for use in their standard products, while others offered solid bushing - solid roller chains as a high cost premium option.

Neo-SBR®

In 1997 Hitachi added a unique coating to pins and bushings and re-designed the connecting link. A good product was made better as our design focus shifted to improving chain wear life and improving the endurance of the connecting link.

The new coating assisted lubrication and protected against corrosion. A 5% - 10% increase in wear life was achieved and Hitachi roller chains were now challenging the best products in the world.



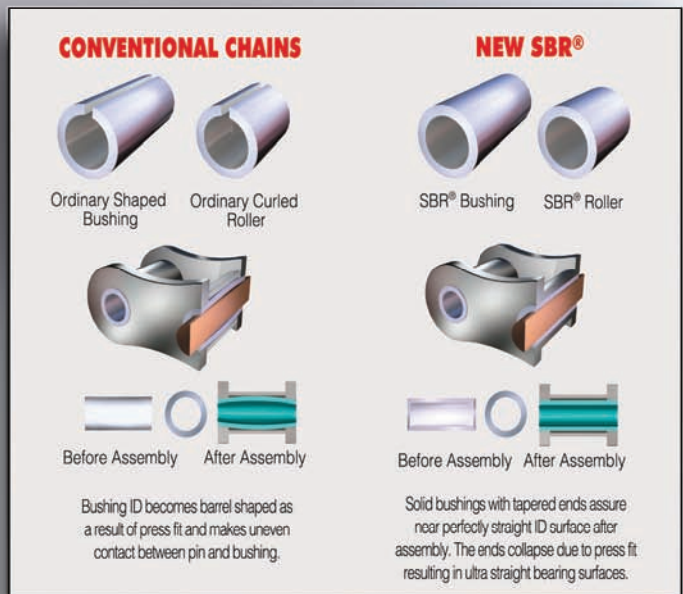
ATLANTA

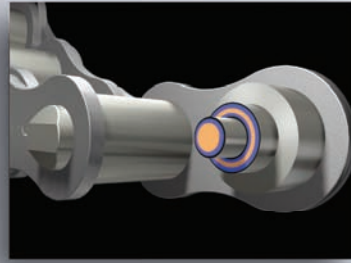
Hitachi Maxco, Ltd.
1630 Cobb International Blvd.
Kennesaw, GA 30152
800-241-8209
Tel: (770) 424-9350
Fax: (770) 424-9145



PORTLAND

Hitachi Maxco, Ltd.
3529 N.W. Yeon Avenue
Portland, OR 97210
800-544-7943
Tel: (503) 228-6828
Fax: (503) 228-6703





The INSPIRE SERIES™ SBR®

Today Hitachi stands poised to offer a quantum leap in the performance of standard roller chain. New innovations in manufacturing technologies and parts processing have led to the development of our new INSPIRE SERIES™ SBR® line of standard roller chain products.

A unique patent pending, "**Hi-Energy Mechanical Process**" is performed on all of the chain's components and has yielded surprising benefits in both the fatigue strength and wear performance of this remarkable new series. INSPIRE SERIES™ SBR® chains possess the highest working load and horsepower capacity ratings in the world.

Serving North American Industry

Whether for power transmission or conveying; in the food and beverage, packaging, forest products, mining, pharmaceutical, automotive, or the high speed printing industries, count on Hitachi to provide the ultimate in performance and value for industrial roller chain products . . . and the next . . .



HITACHI

Inspire the Next

Table of Contents

Hitachi Industrial Chain Product

Page

INSPIRE SERIES™ SBR® ASME/ANSI Roller Chains

Roller Chain Construction and Ordering Cut-To-Length Strands	8 - 9
Product Features	10 - 11
Product Specifications, Horsepower Ratings, and Sprocket Data	12 - 39
Drive Chain Selection	40 - 42
Rated Working Loads and Ultimate Strength Guide	43

INSPIRE SERIES™ SBR® Extra Capacity Roller Chains

“H” Heavy Series	44
“HE” High Strength Through Hardened Pin Heavy Series	45
“E” High Strength Through Hardened Pin Series	46
Double Capacity Series	47
Super Series	48
Super Heavy Series	49

INSPIRE SERIES™ Double Pitch Roller Chains

Transmission Series	50
Conveyor Series	51

INSPIRE SERIES™ British Standard Roller Chains

Product Specification	52
-----------------------	----

Corrosion Resistant Roller Chains

General Information	53
Nickel Plated	54 - 55
Perfect Coat Plus™	56 - 58
Stainless Steel	59 - 61
Mega Chain	62 - 63
Corrosion Resistance Guide and Stainless Steel Selection Information	64 - 66

Maintenance Free Roller Chains

“SL” Series Sintered Bushed Self Lubricating Chains	67 - 68
Freedom Series® PT-Type Self Lubricating Roller Chains	69 - 71
Freedom Series® C-Type Self Lubricating Roller Chains	72 - 73

Specialty Roller Chains

Hollow Pin Chains	74 - 77
Straight Side Bar Roller Chains	78
Rollerless Chains	78
Side Bow (Curved) Roller Chains	79
Plastic Roller Double Pitch Chains	80

Table of Contents

Hitachi Industrial Chain Product	Page
Leaf Chains	
Engineering Information _____	81
AL Series Leaf Chains _____	82
BL Series Leaf Chains _____	83
LL Series European Standard Leaf Chains _____	84
SBR® Series Attachment Chains	
General Information _____	85
ASME/ANSI Standard Carbon and Stainless Steel Attachments _____	86 - 89
Double Pitch Carbon and Stainless Steel Attachments _____	90 - 93
British Standard Carbon and Stainless Steel Attachments _____	94 - 97
Mega Chain Strainless Steel Attachments _____	98 - 99
Freedom Series C-Type Attachment Chains _____	100 - 107
#50 Thermoformer Spike Chain _____	108
#40 Stainless Steel Sticker Chain _____	108
#40 Book Binding Chain _____	109
C2060H Citrus Chain _____	109
SBR® Free Flow Chains	
Top Roller Chains _____	110 - 111
Side Roller Chains _____	112
Triple Speed Chains _____	113
81X Chains and Attachments	
81X, 81XH and 81XHS _____	114
3939 (8" Pitch 81X) _____	115
Conveyor Chain Selection	
Selection Method and Engineering Information _____	116 - 117
HI-MAX® Standard Performance Roller Chains	
General Information _____	118
ASME/ANSI Standard Chains _____	119 - 129
Heavy Series Roller Chains _____	130
British Standard Roller Chains _____	131
Double Pitch Chains _____	132 - 133
Technical Information	
Installation and Maintenance _____	134 - 137
Drive Configurations _____	138
Troubleshooting _____	139
Conversions Pitches to Feet _____	140 - 149
Product Index _____	150 - 156
Attachment Spacing Line Drawing _____	158

General Information

Chain Construction

Riveted Chain



Riveted chains possess pins which are dual staked on both sides of the chain.

Cottered Chain



Cottered chains possess pins which are dual staked on one side of the chain. On the other, the chains have cottered pins assembled through drilled holes. Cottered chains are slightly easier to assemble and disassemble in the field and are more common on larger pitch chains. Cottered chains are available from stock beginning with 3/4" pitch (#60) chain.

Multiple Strand Chain



Multiple strand chains are available when space is limited on roller chain drives. These chains allow the horsepower capacity to be increased, without increasing the diameter of the sprockets. Middle link plates are slip fit as standard however, press fit center plates are available for severe applications.

Roller Chain Parts



Connecting Link



Offset Link



Two Pitch Offset Link



Roller Link



Pin Link

General Information

Ordering Cut-To-Length Roller Chains

Cut-To-Length roller chains may be ordered in a variety of configurations with an odd or even number of pitches. When ordering it is important to specify both the length in pitches and the configuration including whether a strand contains connecting links, offset links etc. Conversion tables which convert pitches to feet can be found on pages 140-149.

The following are the most common configurations for roller chains:

Even Number of Pitches



8 Pitches Connecting link at one end



16 Pitches Endless (no connecting link)



7 Pitches one connecting link and one offset link



7 Pitches roller link at each end



7 Pitches one connecting link at each end

The correct way to order the examples above is as follows:

Even Number of Pitches

For the first chain shown above:

“8 pitches including a connecting link”

For the endless chain:

“16 pitches endless”

The correct way to order the examples above is as follows:

Odd Number of Pitches

For the first chain shown above:

“7 pitches including a connecting link and offset link”

For the 2nd chain shown above:

“7 pitches with a roller link each end”

For the 3rd chain shown above:

“7 pitches with a connecting link each end”



Hitachi Inspire Series™ SBR® chains are the highest rated standard roller chains in the world.

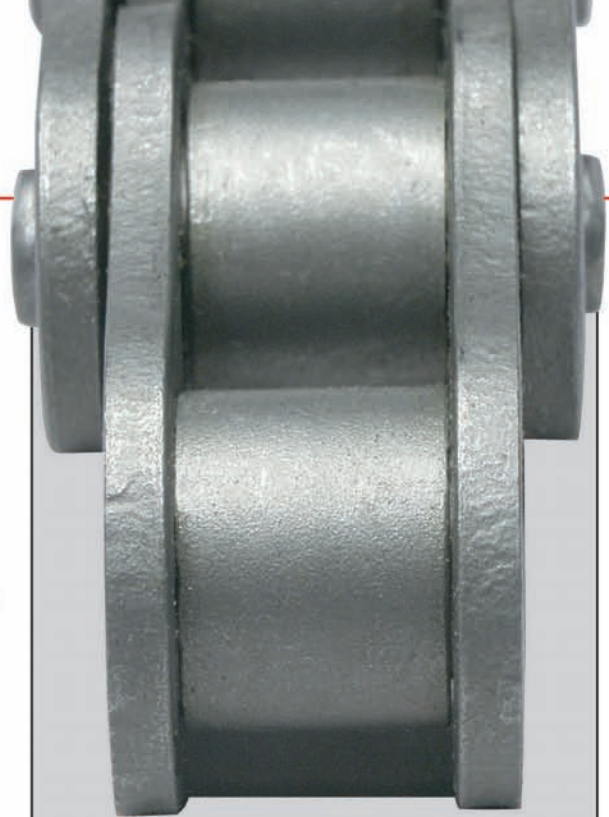
Stainless Steel Blast Treatment

Components of our new INSPIRE SERIES™ SBR® roller chains are coated with a film of stainless steel achieved through a proprietary blast treatment.

The film works with the high quality pre-lubricant to protect the chain from corrosive attack and extend life. The blast also gives the chain an enhanced silver color appearance.

Features Summary:

- 45%-50% Higher Fatigue Strength
- Highest Rated Roller Chains in the World
- Higher Horsepower Capacities
- New Ultra-high Hardness Shell On Bearing Parts
- Unique Stainless Steel Blast Treatment
- Solid Bushings and Solid Rollers

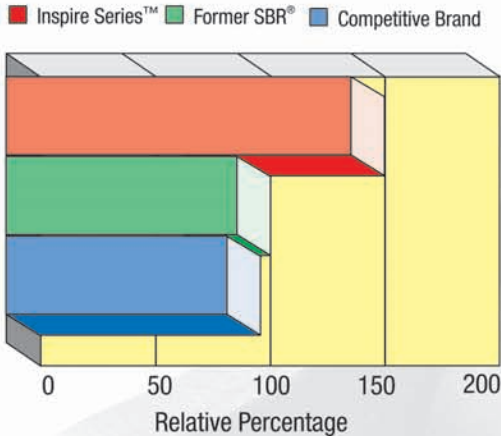


The Difference is New Patent Pending Production Technology...

- The Production Process
- Raw Material - High Quality Alloy Steel.
- Parts Fabrication.
- Heat Treatment.
- Hi-Energy Mechanical Process (Pat. Pend.).
- Stainless Steel Blast (Pat. Pend.).
- Assembly.
- Pre-Lubrication.
- Packaging.
- Shipping.

Chain Size	Maximum Allowable Working Loads (lbs)			Chain Size	Maximum Allowable Working Loads (lbs)		
	Inspire Series™	Competitive	% Difference		Inspire Series™	Competitive	% Difference
35	560	480	16.7%	120	8,540	6,830	25.0%
40	940	810	16.0%	140	11,310	9,040	25.1%
50	1,620	1,430	13.3%	160	14,900	11,900	25.2%
60	2,470	1,980	24.7%	180	16,600	13,670	21.4%
80	4,140	3,300	25.5%	200	18,600	16,090	15.6%
100	6,400	5,070	25.1%	240	25,400	22,700	12.0%

Fatigue Strength



Compressive Residual Stress Zones

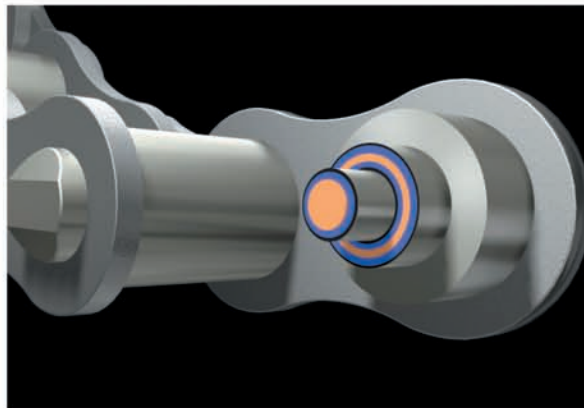
Compressive stress has long been known to improve fatigue strength. Sources of compression in existing chain products include shot peening, high interference fits between pins, bushings and side plates, and the carburized zone found on pins and bushings.

Our unique patent pending "Hi-Energy Mechanical Process" imparts substantial compressive stresses to the chain components (see chart right) resulting in a 45%-50% increase in fatigue strength. Horsepower ratings as well as the rated working loads are the highest in the world.

Triple Zone Hardness Wear Protection

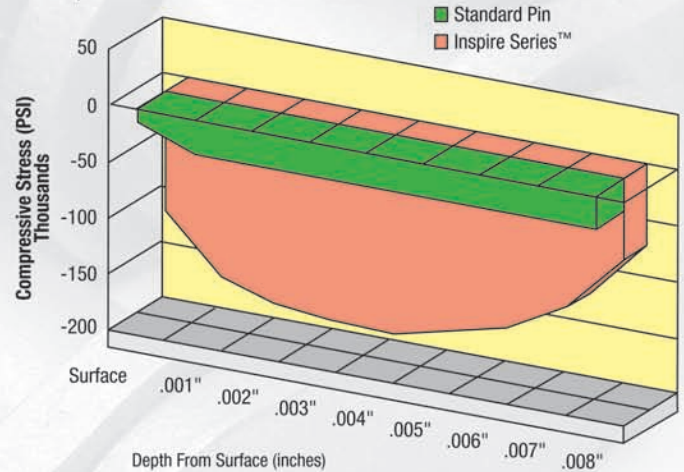
A residual, but important benefit of Hitachi's new "Hi-Energy Mechanical Process" is that an ultra-high hardness shell is developed on the surface of carburized pins and bushings. This effectively gives these wearing components three layers of hardness protection:

1. Ultra-high hardness shell (Black Zone - See Below)
2. High hardness carburized case (Blue Zone - See Below)
3. Core Hardness (Orange Zone - See Below).



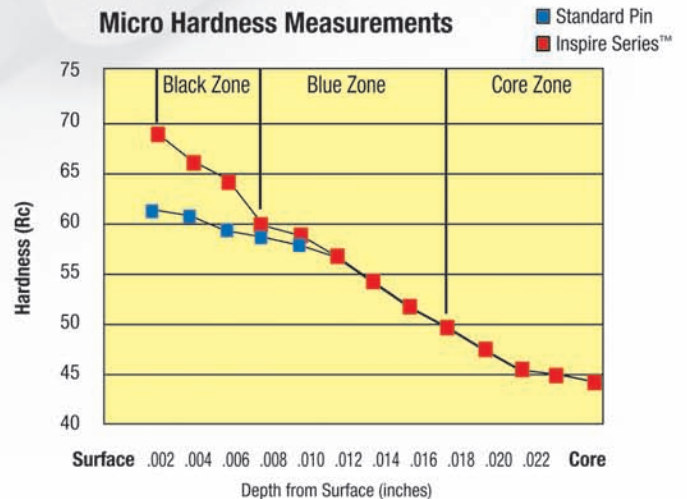
Compressive Residual Stress Measurements

Inspire Series Pin vs Standard Carburized Pin



Compressive stress measurements. The deeper trough of the INSPIRE SERIES™ SBR® pin means that the part has more compressive residual stress and is therefore more resistant to fatigue failure. Link plates, rollers and bushings undergo the same treatment with similar results.

Micro Hardness Measurements

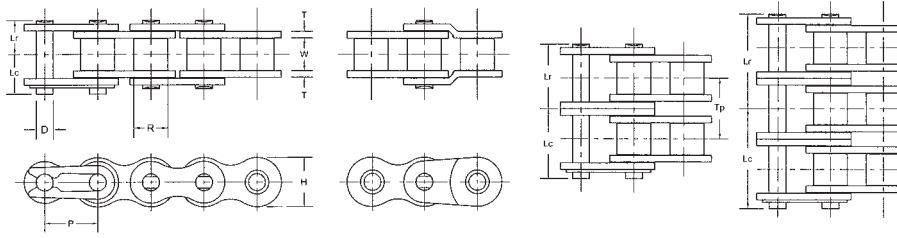


Micro hardness measurements of the pins and bushings reveal an ultra-hard shell which fights chain elongation far better than can be achieved with conventional carburized parts

Benefits Summary:

- Greater resistance to fatigue failure.
- Longer wear life due to high hardness shell.
- Smaller chain sizes required (Higher HP ratings).
- Corrosion protection from proprietary stainless blast.

25 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch	Inside Width	Bushing* Diameter	Pin Diameter	Link Plate Thickness	Roller Link Plate Height	Number of Links in 10ft	Available Construction	
	P	W	R	D	T	H		Cottered	Riveted
25	1/4	0.125	0.130	0.091	0.030	0.230	480	No	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain	Cot. Pin End to C/L of Chain	Overall Length Riveted Pin	Overall Length Conn. Pin	Transverse Pitch for Multi-strand	Rated Working Load	Average Ultimate Strength	Average Chain Weight
		Lr	Lc	Lr + Lr	Lr + Lc	TP	(lbs)	(lbs)	(lbs/ft)
25	1	0.150	0.190	0.300	0.340	-	140	1,050	0.10
25-2	2	0.280	0.310	0.560	0.590	0.252	240	2,100	0.19
25-3	3	0.405	0.445	0.810	0.850	0.252	320	3,150	0.27

Note: #25 Chain is Rollerless

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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
11	0.03	0.05	0.14	0.23	0.31	0.39	0.50	0.62	0.73	0.83	0.98	1.15	1.32	1.38	1.16	0.99	0.86	0.75	0.67	0.60	0.54	0.49	0.45	0.41	0.35
12	0.03	0.06	0.16	0.25	0.34	0.43	0.55	0.68	0.80	0.92	1.07	1.26	1.45	1.57	1.32	1.12	0.97	0.86	0.76	0.68	0.61	0.56	0.51	0.47	0.40
13	0.04	0.06	0.17	0.27	0.37	0.47	0.60	0.74	0.87	1.00	1.17	1.38	1.58	1.77	1.49	1.27	1.10	0.96	0.86	0.77	0.69	0.63	0.57	0.53	0.45
14	0.04	0.07	0.19	0.30	0.40	0.50	0.65	0.80	0.94	1.08	1.27	1.49	1.71	1.93	1.66	1.42	1.23	1.08	0.96	0.86	0.77	0.70	0.64	0.59	0.50
15	0.04	0.08	0.20	0.32	0.43	0.54	0.70	0.86	1.01	1.17	1.36	1.61	1.85	2.08	1.84	1.57	1.36	1.20	1.06	0.95	0.86	0.78	0.71	0.65	0.56
16	0.04	0.08	0.22	0.34	0.47	0.58	0.76	0.92	1.09	1.25	1.46	1.72	1.98	2.23	2.03	1.73	1.50	1.32	1.17	1.05	0.94	0.86	0.78	0.72	0.61
17	0.05	0.09	0.23	0.37	0.50	0.62	0.81	0.99	1.16	1.33	1.56	1.84	2.11	2.38	2.22	1.90	1.64	1.44	1.28	1.14	1.03	0.94	0.86	0.79	0.67
18	0.05	0.09	0.25	0.39	0.53	0.66	0.86	1.05	1.24	1.42	1.66	1.96	2.25	2.53	2.42	2.07	1.79	1.57	1.39	1.25	1.12	1.02	0.93	0.86	0.73
19	0.05	0.10	0.26	0.41	0.56	0.70	0.91	1.11	1.31	1.50	1.76	2.07	2.38	2.69	2.62	2.24	1.94	1.70	1.51	1.35	1.22	1.11	1.01	0.93	0.79
20	0.06	0.10	0.28	0.44	0.59	0.74	0.96	1.17	1.38	1.59	1.86	2.19	2.52	2.84	2.83	2.42	2.10	1.84	1.63	1.46	1.32	1.20	1.09	1.00	0.86
21	0.06	0.11	0.29	0.46	0.62	0.78	1.01	1.24	1.46	1.68	1.96	2.31	2.66	2.99	3.05	2.60	2.26	1.98	1.76	1.57	1.42	1.29	1.17	1.08	0.92
22	0.06	0.11	0.31	0.48	0.66	0.82	1.07	1.30	1.53	1.76	2.06	2.43	2.79	3.15	3.27	2.79	2.42	2.12	1.88	1.69	1.52	1.38	1.26	1.16	0.99
23	0.06	0.12	0.32	0.51	0.69	0.86	1.12	1.37	1.61	1.85	2.16	2.55	2.93	3.30	3.50	2.98	2.59	2.27	2.01	1.80	1.62	1.47	1.35	1.24	1.06
24	0.07	0.13	0.34	0.53	0.72	0.90	1.17	1.43	1.69	1.94	2.27	2.67	3.07	3.46	3.73	3.18	2.76	2.42	2.15	1.92	1.73	1.57	1.44	1.32	1.12
25	0.07	0.13	0.35	0.56	0.75	0.94	1.22	1.50	1.76	2.02	2.37	2.79	3.21	3.61	3.96	3.38	2.93	2.57	2.28	2.04	1.84	1.67	1.53	1.40	1.20
26	0.07	0.14	0.37	0.58	0.79	0.98	1.28	1.56	1.84	2.11	2.47	2.91	3.34	3.77	4.19	3.59	3.11	2.73	2.42	2.17	1.95	1.77	1.62	1.49	1.27
28	0.08	0.15	0.40	0.63	0.85	1.07	1.38	1.69	1.99	2.29	2.68	3.15	3.62	4.09	4.54	4.01	3.47	3.05	2.70	2.42	2.18	1.98	1.81	1.66	1.42
30	0.08	0.16	0.43	0.68	0.92	1.15	1.49	1.82	2.15	2.46	2.88	3.40	3.90	4.40	4.89	4.45	3.85	3.38	3.00	2.68	2.42	2.20	2.01	1.84	1.57
32	0.09	0.17	0.46	0.73	0.98	1.23	1.60	1.95	2.30	2.64	3.09	3.64	4.18	4.72	5.25	4.90	4.25	3.73	3.30	2.96	2.67	2.42	2.21	2.03	1.73
35	0.10	0.19	0.51	0.80	1.08	1.36	1.76	2.15	2.53	2.91	3.41	4.01	4.61	5.20	5.78	5.60	4.86	4.26	3.78	3.38	3.05	2.77	2.53	2.32	1.98
40	0.12	0.22	0.58	0.92	1.25	1.57	2.03	2.48	2.93	3.36	3.93	4.64	5.32	6.00	6.68	6.85	5.93	5.21	4.62	4.13	3.73	3.38	3.09	2.83	2.42
45	0.13	0.25	0.66	1.05	1.42	1.78	2.31	2.82	3.32	3.82	4.47	5.26	6.05	6.82	7.58	8.17	7.08	6.21	5.51	4.93	4.45	4.04	3.69	3.38	2.89
Lube	Type A					Type B										Type C									

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6

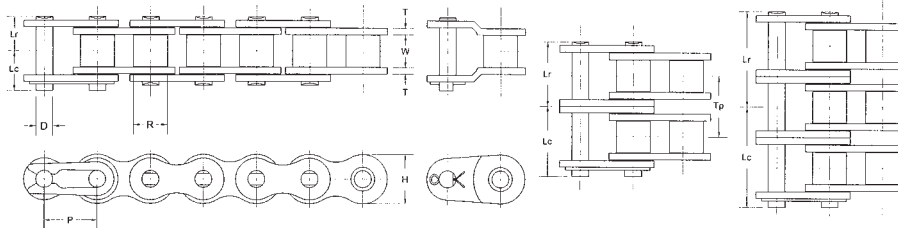
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

25 ASME/ANSI Roller Chain

#25 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	0.731	0.837	0.601	51	4.061	4.203	3.931	93	7.402	7.548	7.272
10	0.809	0.919	0.679	52	4.141	4.283	4.011	94	7.482	7.627	7.352
11	0.887	1.001	0.757	53	4.220	4.363	4.090	95	7.561	7.707	7.431
12	0.966	1.083	0.836	54	4.300	4.442	4.170	96	7.641	7.787	7.511
13	1.045	1.164	0.915	55	4.379	4.522	4.249	97	7.720	7.866	7.590
14	1.123	1.245	0.993	56	4.459	4.602	4.329	98	7.800	7.946	7.670
15	1.202	1.326	1.072	57	4.538	4.681	4.408	99	7.879	8.026	7.749
16	1.281	1.407	1.151	58	4.618	4.761	4.488	100	7.959	8.105	7.829
17	1.361	1.487	1.231	59	4.697	4.841	4.567	101	8.039	8.185	7.909
18	1.440	1.568	1.310	60	4.777	4.920	4.647	102	8.118	8.264	7.988
19	1.519	1.648	1.389	61	4.856	5.000	4.726	103	8.198	8.344	8.068
20	1.598	1.728	1.468	62	4.936	5.080	4.806	104	8.277	8.424	8.147
21	1.677	1.809	1.547	63	5.015	5.159	4.885	105	8.357	8.503	8.227
22	1.757	1.889	1.627	64	5.095	5.239	4.965	106	8.436	8.583	8.306
23	1.836	1.969	1.706	65	5.175	5.319	5.045	107	8.516	8.662	8.386
24	1.915	2.049	1.785	66	5.254	5.398	5.124	108	8.596	8.742	8.466
25	1.995	2.129	1.865	67	5.334	5.478	5.204	109	8.675	8.822	8.545
26	2.074	2.209	1.944	68	5.413	5.557	5.283	110	8.755	8.901	8.625
27	2.153	2.289	2.023	69	5.493	5.637	5.363	111	8.834	8.981	8.704
28	2.233	2.369	2.103	70	5.572	5.717	5.442	112	8.914	9.060	8.784
29	2.312	2.449	2.182	71	5.652	5.796	5.522	113	8.993	9.140	8.863
30	2.392	2.529	2.262	72	5.731	5.876	5.601	114	9.073	9.220	8.943
31	2.471	2.608	2.341	73	5.811	5.956	5.681	115	9.153	9.299	9.023
32	2.551	2.688	2.421	74	5.891	6.035	5.761	116	9.232	9.379	9.102
33	2.630	2.768	2.500	75	5.970	6.115	5.840	117	9.312	9.458	9.182
34	2.709	2.848	2.579	76	6.050	6.194	5.920	118	9.391	9.538	9.261
35	2.789	2.928	2.659	77	6.129	6.274	5.999	119	9.471	9.618	9.341
36	2.868	3.008	2.738	78	6.209	6.354	6.079	120	9.550	9.697	9.420
37	2.948	3.087	2.818	79	6.288	6.433	6.158	121	9.630	9.777	9.500
38	3.027	3.167	2.897	80	6.368	6.513	6.238	122	9.710	9.856	9.580
39	3.107	3.247	2.977	81	6.447	6.593	6.317	123	9.789	9.936	9.659
40	3.186	3.327	3.056	82	6.527	6.672	6.397	124	9.869	10.015	9.739
41	3.266	3.406	3.136	83	6.607	6.752	6.477	125	9.948	10.095	9.818
42	3.345	3.486	3.215	84	6.686	6.831	6.556	126	10.028	10.175	9.898
43	3.425	3.566	3.295	85	6.766	6.911	6.636	127	10.107	10.254	9.977
44	3.504	3.645	3.374	86	6.845	6.991	6.715	128	10.187	10.334	10.057
45	3.584	3.725	3.454	87	6.925	7.070	6.795	129	10.267	10.413	10.137
46	3.663	3.805	3.533	88	7.004	7.150	6.874	130	10.346	10.493	10.216
47	3.743	3.885	3.613	89	7.084	7.229	6.954	131	10.426	10.573	10.296
48	3.822	3.964	3.692	90	7.163	7.309	7.033	132	10.505	10.652	10.375
49	3.902	4.044	3.772	91	7.243	7.389	7.113	133	10.585	10.732	10.455
50	3.981	4.124	3.851	92	7.323	7.468	7.193	134	10.664	10.811	10.534

35 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
35	3/8	0.188	0.200	0.141	0.050	0.354	320	No	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
35	1	0.236	0.272	0.472	0.508	-	560	2,400	0.23
35-2	2	0.437	0.469	0.874	0.906	0.398	840	4,800	0.42
35-3	3	0.634	0.669	1.268	1.303	0.398	1,230	7,200	0.62
35-4	4	0.835	0.866	1.669	1.701	0.398	1,620	9,600	0.82
35-5	5	1.031	1.063	2.063	2.094	0.398	1,910	12,000	1.05
35-6	6	1.232	1.268	2.465	2.500	0.398	2,250	14,400	1.27

Note: #35 Chain is Rollerless

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	7000	7500	8000	8500	9000	10000	
9	0.11	0.21	0.57	0.90	1.21	1.52	1.97	2.41	2.84	3.26	2.86	2.17	1.73	1.41	1.18	1.01	0.88	0.77	0.68	0.61					
10	0.13	0.24	0.63	1.00	1.36	1.71	2.21	2.70	3.18	3.66	3.35	2.55	2.02	1.65	1.39	1.18	1.03	0.90	0.80	0.71					
11	0.14	0.26	0.70	1.11	1.51	1.89	2.45	2.99	3.53	4.05	3.86	2.94	2.33	1.91	1.60	1.37	1.18	1.04	0.92	0.82	0.74	0.67	0.62	0.57	0.48
12	0.15	0.29	0.77	1.22	1.66	2.08	2.69	3.29	3.87	4.45	4.40	3.35	2.66	2.17	1.82	1.56	1.35	1.18	1.05	0.94	0.85	0.77	0.70	0.64	0.55
13	0.17	0.31	0.84	1.33	1.81	2.26	2.93	3.58	4.22	4.85	4.96	3.77	3.00	2.45	2.05	1.75	1.52	1.33	1.18	1.06	0.95	0.87	0.79	0.73	0.62
14	0.18	0.34	0.91	1.44	1.96	2.45	3.18	3.88	4.58	5.26	5.55	4.22	3.35	2.74	2.30	1.96	1.70	1.49	1.32	1.18	1.07	0.97	0.88	0.81	0.69
15	0.20	0.37	0.98	1.56	2.11	2.64	3.42	4.18	4.93	5.66	6.15	4.68	3.71	3.04	2.55	2.17	1.88	1.65	1.47	1.31	1.18	1.07	0.98	0.90	0.77
16	0.21	0.39	1.05	1.67	2.26	2.83	3.67	4.49	5.29	6.07	6.77	5.15	4.09	3.35	2.81	2.40	2.08	1.82	1.62	1.45	1.30	1.18	1.08	0.99	0.85
17	0.22	0.42	1.13	1.78	2.41	3.02	3.92	4.79	5.64	6.48	7.42	5.64	4.48	3.67	3.07	2.62	2.27	2.00	1.77	1.58	1.43	1.30	1.18	1.09	0.93
18	0.24	0.45	1.20	1.90	2.57	3.22	4.17	5.09	6.00	6.90	8.07	6.15	4.88	3.99	3.35	2.86	2.48	2.17	1.93	1.73	1.56	1.41	1.29	1.18	1.01
19	0.25	0.47	1.27	2.01	2.72	3.41	4.42	5.40	6.36	7.31	8.55	6.67	5.29	4.33	3.63	3.10	2.69	2.36	2.09	1.87	1.69	1.53	1.40	1.28	1.10
20	0.27	0.50	1.34	2.12	2.88	3.60	4.67	5.71	6.73	7.73	9.04	7.20	5.72	4.68	3.92	3.35	2.90	2.55	2.26	2.02	1.82	1.65	1.51	1.39	1.18
21	0.28	0.53	1.41	2.24	3.03	3.80	4.92	6.02	7.09	8.15	9.53	7.75	6.15	5.03	4.22	3.60	3.12	2.74	2.43	2.17	1.96	1.78	1.62	1.49	1.27
22	0.30	0.55	1.49	2.35	3.19	4.00	5.18	6.33	7.46	8.57	10.02	8.31	6.59	5.40	4.52	3.86	3.35	2.94	2.61	2.33	2.10	1.91	1.74	1.60	1.37
23	0.31	0.58	1.56	2.47	3.34	4.19	5.43	6.64	7.82	8.99	10.51	8.88	7.05	5.77	4.83	4.13	3.58	3.14	2.79	2.49	2.25	2.04	1.86	1.71	1.46
24	0.33	0.61	1.63	2.59	3.50	4.39	5.69	6.95	8.19	9.41	11.01	9.47	7.51	6.15	5.15	4.40	3.81	3.35	2.97	2.66	2.40	2.17	1.99	1.82	1.56
25	0.34	0.63	1.71	2.70	3.66	4.59	5.94	7.26	8.56	9.83	11.50	10.07	7.99	6.54	5.48	4.68	4.05	3.56	3.16	2.82	2.55	2.31	2.11	1.94	1.65
26	0.35	0.66	1.78	2.82	3.82	4.79	6.20	7.58	8.93	10.26	12.00	10.68	8.47	6.93	5.81	4.96	4.30	3.77	3.35	3.00	2.70	2.45	2.24	2.05	1.75
28	0.38	0.72	1.93	3.05	4.13	5.18	6.72	8.21	9.67	11.11	13.00	11.93	9.47	7.75	6.49	5.55	4.81	4.22	3.74	3.35	3.02	2.74	2.50	2.30	1.96
30	0.41	0.77	2.08	3.29	4.45	5.59	7.24	8.85	10.42	11.97	14.01	13.23	10.50	8.59	7.20	6.15	5.33	4.68	4.15	3.71	3.35	3.04	2.77	2.55	2.17
32	0.44	0.83	2.23	3.53	4.78	5.99	7.76	9.48	11.18	12.84	15.02	14.58	11.57	9.47	7.93	6.77	5.87	5.15	4.57	4.09	3.69	3.35	3.06	2.81	
35	0.49	0.91	2.45	3.89	5.26	6.60	8.55	10.45	12.31	14.14	16.55	16.67	13.23	10.83	9.08	7.75	6.72	5.90	5.23	4.68	4.22	3.83	3.50	3.21	
40	0.57	1.05	2.84	4.49	6.08	7.62	9.87	12.07	14.22	16.34	19.11	20.37	16.17	13.23	11.09	9.47	8.21	7.20	6.39	5.72	5.15	4.68			
45	0.64	1.20	3.22	5.10	6.90	8.65	11.21	13.71	16.15	18.55	21.70	24.31	19.29	15.79	13.23	11.30	9.79	8.59	7.62	6.82					
Lube	Type A				Type B								Type C												

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.48	1.70	2.18	2.50	2.88	3.30	3.40	3.90	4.01	4.60

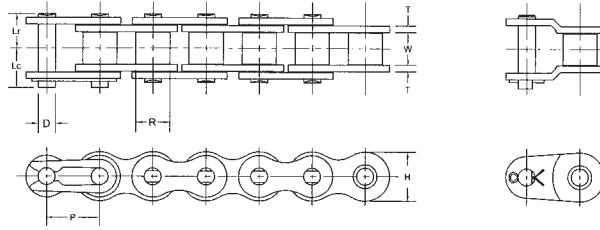
Note:
For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

35 ASME/ANSI Roller Chain

#35 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	1.096	1.255	0.896	51	6.092	6.305	5.892	93	11.103	11.322	10.903
10	1.214	1.379	1.014	52	6.211	6.424	6.011	94	11.223	11.441	11.023
11	1.331	1.502	1.131	53	6.330	6.544	6.130	95	11.342	11.561	11.142
12	1.449	1.625	1.249	54	6.449	6.664	6.249	96	11.461	11.680	11.261
13	1.567	1.746	1.367	55	6.569	6.783	6.369	97	11.581	11.799	11.381
14	1.685	1.868	1.485	56	6.688	6.902	6.488	98	11.700	11.919	11.500
15	1.804	1.989	1.604	57	6.807	7.022	6.607	99	11.819	12.038	11.619
16	1.922	2.110	1.722	58	6.927	7.141	6.727	100	11.939	12.158	11.739
17	2.041	2.231	1.841	59	7.046	7.261	6.846	101	12.058	12.277	11.858
18	2.160	2.352	1.960	60	7.165	7.380	6.965	102	12.177	12.397	11.977
19	2.278	2.472	2.078	61	7.285	7.500	7.085	103	12.297	12.516	12.097
20	2.397	2.593	2.197	62	7.404	7.619	7.204	104	12.416	12.635	12.216
21	2.516	2.713	2.316	63	7.523	7.739	7.323	105	12.535	12.755	12.335
22	2.635	2.833	2.435	64	7.643	7.858	7.443	106	12.655	12.874	12.455
23	2.754	2.953	2.554	65	7.762	7.978	7.562	107	12.774	12.994	12.574
24	2.873	3.073	2.673	66	7.881	8.097	7.681	108	12.893	13.113	12.693
25	2.992	3.193	2.792	67	8.000	8.217	7.800	109	13.013	13.232	12.813
26	3.111	3.313	2.911	68	8.120	8.336	7.920	110	13.132	13.352	12.932
27	3.230	3.433	3.030	69	8.239	8.456	8.039	111	13.251	13.471	13.051
28	3.349	3.553	3.149	70	8.358	8.575	8.158	112	13.371	13.591	13.171
29	3.468	3.673	3.268	71	8.478	8.694	8.278	113	13.490	13.710	13.290
30	3.588	3.793	3.388	72	8.597	8.814	8.397	114	13.609	13.829	13.409
31	3.707	3.913	3.507	73	8.716	8.933	8.516	115	13.729	13.949	13.529
32	3.826	4.032	3.626	74	8.836	9.053	8.636	116	13.848	14.068	13.648
33	3.945	4.152	3.745	75	8.955	9.172	8.755	117	13.968	14.187	13.768
34	4.064	4.272	3.864	76	9.074	9.292	8.874	118	14.087	14.307	13.887
35	4.183	4.392	3.983	77	9.194	9.411	8.994	119	14.206	14.426	14.006
36	4.303	4.511	4.103	78	9.313	9.531	9.113	120	14.326	14.546	14.126
37	4.422	4.631	4.222	79	9.432	9.650	9.232	121	14.445	14.665	14.245
38	4.541	4.751	4.341	80	9.552	9.769	9.352	122	14.564	14.784	14.364
39	4.660	4.870	4.460	81	9.671	9.889	9.471	123	14.684	14.904	14.484
40	4.780	4.990	4.580	82	9.790	10.008	9.590	124	14.803	15.023	14.603
41	4.899	5.109	4.699	83	9.910	10.128	9.710	125	14.922	15.143	14.722
42	5.018	5.229	4.818	84	10.029	10.247	9.829	126	15.042	15.262	14.842
43	5.137	5.349	4.937	85	10.148	10.367	9.948	127	15.161	15.381	14.961
44	5.257	5.468	5.057	86	10.268	10.486	10.068	128	15.280	15.501	15.080
45	5.376	5.588	5.176	87	10.387	10.605	10.187	129	15.400	15.620	15.200
46	5.495	5.707	5.295	88	10.506	10.725	10.306	130	15.519	15.740	15.319
47	5.614	5.827	5.414	89	10.626	10.844	10.426	131	15.638	15.859	15.438
48	5.734	5.946	5.534	90	10.745	10.964	10.545	132	15.758	15.978	15.558
49	5.853	6.066	5.653	91	10.864	11.083	10.664	133	15.877	16.098	15.677
50	5.972	6.185	5.772	92	10.984	11.202	10.784	134	15.997	16.217	15.797

41 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
41	1/2	0.250	0.306	0.141	0.050	0.382	240	No	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Comm. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
41	1	0.260	0.313	0.520	0.573	-	500	2,600	0.30

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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
11	0.04	0.09	0.16	0.31	0.58	0.82	1.06	1.30	1.76	2.20	2.27	1.71	1.36	1.11	0.93	0.74	0.61	0.51	0.43	0.34	0.28	0.20	0.15	0.12	0.10
12	0.04	0.09	0.19	0.34	0.63	0.90	1.17	1.42	1.93	2.41	2.59	1.95	1.55	1.27	1.06	0.84	0.69	0.58	0.49	0.39	0.32	0.23	0.17	0.14	0.11
13	0.04	0.11	0.20	0.36	0.68	0.98	1.27	1.55	2.10	2.63	2.90	2.30	1.75	1.43	1.20	0.95	0.78	0.65	0.56	0.44	0.36	0.26	0.20	0.16	0.13
14	0.05	0.11	0.21	0.39	0.74	1.06	1.37	1.68	2.28	2.85	3.14	2.46	1.95	1.60	1.34	1.06	0.87	0.73	0.62	0.49	0.40	0.29	0.22	0.17	0.14
15	0.05	0.12	0.23	0.43	0.79	1.14	1.47	1.81	2.45	3.07	3.38	2.73	2.17	1.77	1.49	1.18	0.96	0.81	0.69	0.55	0.45	0.32	0.24	0.19	0.16
16	0.05	0.13	0.24	0.46	0.84	1.22	1.58	1.94	2.63	3.30	3.62	3.01	2.39	1.95	1.64	1.30	1.06	0.89	0.76	0.60	0.49	0.35	0.27	0.21	0.17
17	0.07	0.13	0.25	0.48	0.91	1.31	1.69	2.08	2.80	3.51	3.86	3.29	2.61	2.14	1.79	1.42	1.16	0.98	0.83	0.66	0.54	0.39	0.29	0.23	0.19
18	0.07	0.15	0.28	0.52	0.97	1.39	1.80	2.20	2.98	3.74	4.11	3.59	2.55	2.33	1.95	1.55	1.27	1.06	0.91	0.72	0.59	0.42	0.32	0.25	
19	0.07	0.16	0.29	0.55	1.02	1.47	1.90	2.33	3.16	3.97	4.36	3.89	3.99	2.53	2.12	1.68	1.38	1.15	0.98	0.78	0.64	0.46	0.35	0.28	
20	0.07	0.16	0.31	0.58	1.09	1.55	2.02	2.47	3.34	4.20	4.61	4.24	3.33	2.73	2.29	1.81	1.49	1.24	1.06	0.84	0.69	0.49	0.38	0.30	
21	0.08	0.17	0.32	0.62	1.14	1.65	2.13	2.60	3.52	4.41	4.85	4.56	3.59	2.94	2.46	1.95	1.60	1.34	1.14	0.91	0.74	0.53	0.40	0.32	
22	0.08	0.19	0.35	0.64	1.19	1.73	2.22	2.73	3.70	4.64	5.11	4.88	3.85	3.15	2.64	2.09	1.71	1.44	1.23	0.97	0.80	0.57	0.43	0.34	
23	0.08	0.19	0.36	0.67	1.26	1.81	2.35	2.87	3.89	4.87	5.36	5.21	4.11	3.37	2.82	2.24	1.83	1.54	1.31	1.04	0.85	0.61	0.46	0.37	
24	0.09	0.20	0.38	0.71	1.31	1.90	2.45	3.00	4.07	5.11	5.60	5.56	4.38	3.59	3.01	2.39	1.95	1.64	1.40	1.11	0.91	0.65	0.49	0.39	
25	0.09	0.21	0.40	0.74	1.38	1.98	2.57	3.14	4.25	5.33	5.86	5.91	4.66	3.81	3.20	2.54	2.08	1.74	1.49	1.18	0.96	0.69	0.53		
26	0.09	0.23	0.42	0.76	1.43	2.06	2.68	3.28	4.44	5.56	6.11	6.27	4.94	4.05	3.39	2.69	2.20	1.85	1.58	1.25	1.02	0.73	0.56		
28	0.11	0.24	0.44	0.83	1.55	2.24	2.91	3.55	4.81	6.03	6.62	7.01	5.52	4.52	3.79	3.01	2.46	2.06	1.76	1.40	1.14	0.82	0.62		
30	0.11	0.25	0.48	0.90	1.68	2.41	3.12	3.82	5.17	6.49	7.13	7.77	6.13	5.01	4.20	3.33	2.73	2.29	1.95	1.55	1.27	0.91	0.69		
32	0.12	0.28	0.51	0.97	1.80	2.59	3.36	4.10	5.55	6.96	7.65	8.56	6.75	5.52	4.63	3.67	3.01	2.52	2.15	1.71	1.40	1.00			
35	0.13	0.31	0.58	1.06	1.98	2.85	3.70	4.52	6.11	7.67	8.43	9.80	7.72	6.32	5.29	4.20	3.44	2.88	2.46	1.95	1.60	1.14			
40	0.16	0.35	0.66	1.23	2.29	3.30	4.26	5.21	7.06	8.86	9.73	11.50	9.43	7.72	6.47	5.13	4.20	3.52	3.01	2.39	1.95	1.40			
45	0.17	0.40	0.75	1.39	2.60	3.74	4.85	5.92	8.03	10.10	11.10	13.00	11.30	9.21	7.72	6.13	5.01	4.20	3.59	2.85	2.33				
Lube	Type A					Type B					Type C														

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6

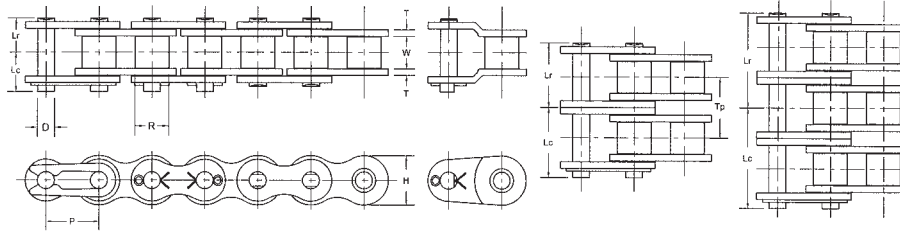
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

41 ASME/ANSI Roller Chain

#41 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	1.462	1.674	1.156	51	8.122	8.407	7.816	93	14.804	15.096	14.498
10	1.618	1.839	1.312	52	8.281	8.566	7.975	94	14.963	15.255	14.657
11	1.775	2.003	1.469	53	8.440	8.725	8.134	95	15.122	15.414	14.816
12	1.932	2.166	1.626	54	8.599	8.885	8.293	96	15.282	15.573	14.976
13	2.089	2.329	1.783	55	8.758	9.044	8.452	97	15.441	15.733	15.135
14	2.247	2.491	1.941	56	8.917	9.203	8.611	98	15.600	15.892	15.294
15	2.405	2.652	2.099	57	9.076	9.363	8.770	99	15.759	16.051	15.453
16	2.563	2.814	2.257	58	9.236	9.522	8.930	100	15.918	16.210	15.612
17	2.721	2.975	2.415	59	9.395	9.681	9.089	101	16.077	16.369	15.771
18	2.879	3.136	2.573	60	9.554	9.841	9.248	102	16.236	16.529	15.930
19	3.038	3.296	2.732	61	9.713	10.000	9.407	103	16.396	16.688	16.090
20	3.196	3.457	2.890	62	9.872	10.159	9.566	104	16.555	16.847	16.249
21	3.355	3.617	3.049	63	10.031	10.318	9.725	105	16.714	17.006	16.408
22	3.513	3.778	3.207	64	10.190	10.478	9.884	106	16.873	17.165	16.567
23	3.672	3.938	3.366	65	10.349	10.637	10.043	107	17.032	17.325	16.726
24	3.831	4.098	3.525	66	10.508	10.796	10.202	108	17.191	17.484	16.885
25	3.989	4.258	3.683	67	10.667	10.956	10.361	109	17.350	17.643	17.044
26	4.148	4.418	3.842	68	10.826	11.115	10.520	110	17.509	17.802	17.203
27	4.307	4.578	4.001	69	10.985	11.274	10.679	111	17.669	17.961	17.363
28	4.466	4.738	4.160	70	11.145	11.433	10.839	112	17.828	18.121	17.522
29	4.625	4.897	4.319	71	11.304	11.593	10.998	113	17.987	18.280	17.681
30	4.783	5.057	4.477	72	11.463	11.752	11.157	114	18.146	18.439	17.840
31	4.942	5.217	4.636	73	11.622	11.911	11.316	115	18.305	18.598	17.999
32	5.101	5.377	4.795	74	11.781	12.070	11.475	116	18.464	18.757	18.158
33	5.260	5.536	4.954	75	11.940	12.230	11.634	117	18.623	18.917	18.317
34	5.419	5.696	5.113	76	12.099	12.389	11.793	118	18.783	19.076	18.477
35	5.578	5.855	5.272	77	12.258	12.548	11.952	119	18.942	19.235	18.636
36	5.737	6.015	5.431	78	12.417	12.707	12.111	120	19.101	19.394	18.795
37	5.896	6.175	5.590	79	12.577	12.867	12.271	121	19.260	19.553	18.954
38	6.055	6.334	5.749	80	12.736	13.026	12.430	122	19.419	19.713	19.113
39	6.214	6.494	5.908	81	12.895	13.185	12.589	123	19.578	19.872	19.272
40	6.373	6.653	6.067	82	13.054	13.344	12.748	124	19.737	20.031	19.431
41	6.532	6.813	6.226	83	13.213	13.504	12.907	125	19.896	20.190	19.590
42	6.691	6.972	6.385	84	13.372	13.663	13.066	126	20.056	20.349	19.750
43	6.850	7.131	6.544	85	13.531	13.822	13.225	127	20.215	20.509	19.909
44	7.009	7.291	6.703	86	13.690	13.981	13.384	128	20.374	20.668	20.068
45	7.168	7.450	6.862	87	13.849	14.140	13.543	129	20.533	20.827	20.227
46	7.327	7.610	7.021	88	14.009	14.300	13.703	130	20.692	20.986	20.386
47	7.486	7.769	7.180	89	14.168	14.459	13.862	131	20.851	21.145	20.545
48	7.645	7.929	7.339	90	14.327	14.618	14.021	132	21.010	21.304	20.704
49	7.804	8.088	7.498	91	14.486	14.777	14.180	133	21.170	21.464	20.864
50	7.963	8.247	7.657	92	14.645	14.937	14.339	134	21.329	21.623	21.023

40 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
40	1/2	0.312	0.312	0.156	0.060	0.463	240	No	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Comm. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
40	1	0.327	0.378	0.654	0.705	-	940	4,300	0.40
40-2	2	0.606	0.661	1.213	1.268	0.567	1,400	8,600	0.82
40-3	3	0.886	0.949	1.772	1.835	0.567	2,050	12,900	1.24
40-4	4	1.181	1.213	2.362	2.394	0.567	2,710	17,200	1.65
40-5	5	1.469	1.508	2.937	2.976	0.567	3,200	21,500	2.11
40-6	6	1.752	1.787	3.504	3.539	0.567	3,770	25,800	2.54

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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
9	0.06	0.14	0.27	0.50	0.93	1.34	1.74	2.12	2.87	3.60	3.96	4.67	5.03	4.12	3.45	2.74	2.24	1.88	1.60	1.27					
10	0.07	0.16	0.30	0.56	1.04	1.50	1.95	2.38	3.22	4.04	4.44	5.23	5.89	4.82	4.04	3.21	2.63	2.20	1.88	1.49					
11	0.08	0.18	0.33	0.62	1.16	1.66	2.16	2.64	3.57	4.47	4.92	5.80	6.66	5.57	4.66	3.70	3.03	2.54	2.17	1.72	1.41	1.01	0.77	0.61	0.50
12	0.09	0.20	0.36	0.68	1.27	1.83	2.37	2.90	3.92	4.91	5.40	6.37	7.31	6.34	5.31	4.22	3.45	2.89	2.47	1.96	1.60	1.15	0.87	0.69	0.57
13	0.09	0.21	0.40	0.74	1.38	1.99	2.58	3.16	4.27	5.36	5.89	6.94	7.97	7.15	5.99	4.76	3.89	3.26	2.79	2.21	1.81	1.29	0.98	0.78	0.64
14	0.10	0.23	0.43	0.80	1.50	2.16	2.80	3.42	4.63	5.80	6.38	7.52	8.64	7.99	6.70	5.31	4.35	3.65	3.11	2.47	2.02	1.45	1.10	0.87	0.71
15	0.11	0.25	0.46	0.87	1.62	2.33	3.01	3.68	4.99	6.25	6.88	8.10	9.31	8.86	7.43	5.89	4.82	4.04	3.45	2.74	2.24	1.60	1.22	0.97	0.79
16	0.12	0.27	0.50	0.93	1.73	2.49	3.23	3.95	5.35	6.70	7.37	8.69	9.98	9.76	8.18	6.49	5.31	4.45	3.80	3.02	2.47	1.77	1.34	1.07	0.87
17	0.12	0.28	0.53	0.99	1.85	2.66	3.45	4.22	5.71	7.16	7.87	9.27	10.65	10.69	8.96	7.11	5.82	4.88	4.17	3.31	2.71	1.94	1.47	1.17	0.96
18	0.13	0.30	0.56	1.05	1.97	2.83	3.67	4.49	6.07	7.61	8.37	9.86	11.33	11.65	9.76	7.75	6.34	5.31	4.54	3.60	2.95	2.11	1.60	1.27	
19	0.14	0.32	0.60	1.12	2.08	3.00	3.89	4.76	6.44	8.07	8.87	10.46	12.01	12.64	10.59	8.40	6.88	5.76	4.92	3.91	3.20	2.29	1.74	1.38	
20	0.15	0.34	0.63	1.18	2.20	3.17	4.11	5.03	6.80	8.53	9.38	11.05	12.70	13.65	11.44	9.07	7.43	6.22	5.31	4.22	3.45	2.47	1.88	1.49	
21	0.16	0.36	0.67	1.24	2.32	3.35	4.33	5.30	7.17	8.99	9.89	11.65	13.39	14.68	12.30	9.76	7.99	6.70	5.72	4.54	3.71	2.66	2.02	1.60	
22	0.16	0.38	0.70	1.31	2.44	3.52	4.56	5.57	7.54	9.46	10.40	12.25	14.07	15.74	13.19	10.47	8.57	7.18	6.13	4.87	3.98	2.85	2.17	1.72	
23	0.17	0.39	0.74	1.37	2.56	3.69	4.78	5.85	7.91	9.92	10.91	12.85	14.77	16.65	14.10	11.19	9.16	7.68	6.55	5.20	4.26	3.05	2.32	1.84	
24	0.18	0.41	0.77	1.44	2.68	3.87	5.01	6.12	8.29	10.39	11.42	13.46	15.46	17.44	15.03	11.93	9.76	8.18	6.99	5.54	4.54	3.25	2.47	1.96	
25	0.19	0.43	0.81	1.50	2.80	4.04	5.23	6.40	8.66	10.86	11.94	14.07	16.16	18.22	15.98	12.68	10.38	8.70	7.43	5.89	4.82	3.45	2.63		
26	0.20	0.45	0.84	1.57	2.93	4.21	5.46	6.67	9.03	11.33	12.45	14.67	16.86	19.01	16.95	13.45	11.01	9.23	7.88	6.25	5.12	3.66	2.79		
28	0.21	0.49	0.91	1.70	3.17	4.57	5.91	7.23	9.79	12.27	13.49	15.90	18.26	20.59	18.94	15.03	12.30	10.31	8.80	6.99	5.72	4.09	3.11		
30	0.23	0.53	0.98	1.83	3.41	4.92	6.37	7.79	10.54	13.22	14.53	17.13	19.68	22.19	21.01	16.67	13.65	11.44	9.76	7.75	6.34	4.54	3.45		
32	0.25	0.56	1.05	1.96	3.66	5.27	6.83	8.35	11.30	14.17	15.58	18.36	21.10	23.79	23.14	18.37	15.03	12.60	10.76	8.54	6.99	5.00			
35	0.27	0.62	1.16	2.16	4.03	5.81	7.53	9.20	12.45	15.61	17.17	20.23	23.24	26.21	26.47	21.01	17.20	14.41	12.30	9.76	7.99	5.72			
40	0.31	0.72	1.34	2.50	4.66	6.71	8.69	10.63	14.39	18.04	19.83	23.37	26.84	30.27	32.34	25.67	21.01	17.61	15.03	11.93	9.76	6.99			
45	0.36	0.81	1.52	2.84	5.29	7.62	9.87	12.07	16.34	20.48	22.52	26.54	30.49	34.38	38.22	30.63	25.07	21.01	17.94	14.23	11.70				
Lube	Type A					Type B					Type C														

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.48	1.70	2.18	2.50	2.88	3.30	3.40	3.90	4.01	4.60

Note:
For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

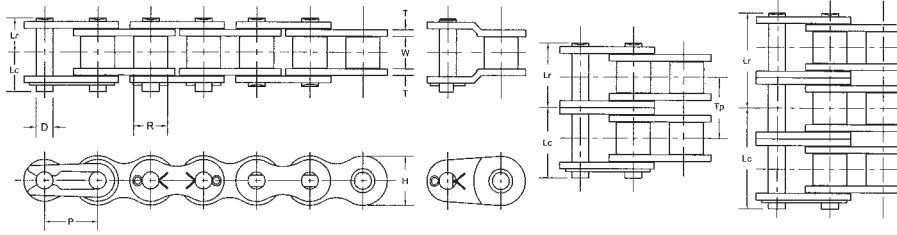
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

40 ASME/ANSI Roller Chain

#40 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	1.462	1.674	1.150	51	8.122	8.407	7.810	93	14.804	15.096	14.492
10	1.618	1.839	1.306	52	8.281	8.566	7.969	94	14.963	15.255	14.651
11	1.775	2.003	1.463	53	8.440	8.725	8.128	95	15.122	15.414	14.810
12	1.932	2.166	1.620	54	8.599	8.885	8.287	96	15.282	15.573	14.970
13	2.089	2.329	1.777	55	8.758	9.044	8.446	97	15.441	15.733	15.129
14	2.247	2.491	1.935	56	8.917	9.203	8.605	98	15.600	15.892	15.288
15	2.405	2.652	2.093	57	9.076	9.363	8.764	99	15.759	16.051	15.447
16	2.563	2.814	2.251	58	9.236	9.522	8.924	100	15.918	16.210	15.606
17	2.721	2.975	2.409	59	9.395	9.681	9.083	101	16.077	16.369	15.765
18	2.879	3.136	2.567	60	9.554	9.841	9.242	102	16.236	16.529	15.924
19	3.038	3.296	2.726	61	9.713	10.000	9.401	103	16.396	16.688	16.084
20	3.196	3.457	2.884	62	9.872	10.159	9.560	104	16.555	16.847	16.243
21	3.355	3.617	3.043	63	10.031	10.318	9.719	105	16.714	17.006	16.402
22	3.513	3.778	3.201	64	10.190	10.478	9.878	106	16.873	17.165	16.561
23	3.672	3.938	3.360	65	10.349	10.637	10.037	107	17.032	17.325	16.720
24	3.831	4.098	3.519	66	10.508	10.796	10.196	108	17.191	17.484	16.879
25	3.989	4.258	3.677	67	10.667	10.956	10.355	109	17.350	17.643	17.038
26	4.148	4.418	3.836	68	10.826	11.115	10.514	110	17.509	17.802	17.197
27	4.307	4.578	3.995	69	10.985	11.274	10.673	111	17.669	17.961	17.357
28	4.466	4.738	4.154	70	11.145	11.433	10.833	112	17.828	18.121	17.516
29	4.625	4.897	4.313	71	11.304	11.593	10.992	113	17.987	18.280	17.675
30	4.783	5.057	4.471	72	11.463	11.752	11.151	114	18.146	18.439	17.834
31	4.942	5.217	4.630	73	11.622	11.911	11.310	115	18.305	18.598	17.993
32	5.101	5.377	4.789	74	11.781	12.070	11.469	116	18.464	18.757	18.152
33	5.260	5.536	4.948	75	11.940	12.230	11.628	117	18.623	18.917	18.311
34	5.419	5.696	5.107	76	12.099	12.389	11.787	118	18.783	19.076	18.471
35	5.578	5.855	5.266	77	12.258	12.548	11.946	119	18.942	19.235	18.630
36	5.737	6.015	5.425	78	12.417	12.707	12.105	120	19.101	19.394	18.789
37	5.896	6.175	5.584	79	12.577	12.867	12.265	121	19.260	19.553	18.948
38	6.055	6.334	5.743	80	12.736	13.026	12.424	122	19.419	19.713	19.107
39	6.214	6.494	5.902	81	12.895	13.185	12.583	123	19.578	19.872	19.266
40	6.373	6.653	6.061	82	13.054	13.344	12.742	124	19.737	20.031	19.425
41	6.532	6.813	6.220	83	13.213	13.504	12.901	125	19.896	20.190	19.584
42	6.691	6.972	6.379	84	13.372	13.663	13.060	126	20.056	20.349	19.744
43	6.850	7.131	6.538	85	13.531	13.822	13.219	127	20.215	20.509	19.903
44	7.009	7.291	6.697	86	13.690	13.981	13.378	128	20.374	20.668	20.062
45	7.168	7.450	6.856	87	13.849	14.140	13.537	129	20.533	20.827	20.221
46	7.327	7.610	7.015	88	14.009	14.300	13.697	130	20.692	20.986	20.380
47	7.486	7.769	7.174	89	14.168	14.459	13.856	131	20.851	21.145	20.539
48	7.645	7.929	7.333	90	14.327	14.618	14.015	132	21.010	21.304	20.698
49	7.804	8.088	7.492	91	14.486	14.777	14.174	133	21.170	21.464	20.858
50	7.963	8.247	7.651	92	14.645	14.937	14.333	134	21.329	21.623	21.017

50 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
50	5/8	0.375	0.400	0.200	0.080	0.577	192	No	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
50	1	0.400	0.463	0.800	0.863	-	1,620	7,200	0.66
50-2	2	0.752	0.831	1.504	1.583	0.712	2,430	14,400	1.34
50-3	3	1.116	1.172	2.232	2.288	0.712	3,580	21,600	2.06
50-4	4	1.476	1.507	2.952	2.983	0.712	4,720	28,800	2.67
50-5	5	1.834	1.873	3.668	3.707	0.712	5,580	36,000	3.37
50-6	6	2.193	2.239	4.386	4.432	0.712	6,580	43,200	4.04

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	4500	5000	5500	6000
9	0.12	0.28	0.52	0.97	1.81	2.61	3.38	4.13	5.59	7.01	7.71	7.58	6.02	4.92	4.13	3.27	2.68	2.25	1.92	1.52					
10	0.14	0.31	0.58	1.09	2.03	2.92	3.79	4.63	6.26	7.85	8.63	8.88	7.05	5.77	4.83	3.84	3.14	2.63	2.25	1.78					
11	0.15	0.35	0.65	1.20	2.25	3.24	4.20	5.13	6.94	8.70	9.57	10.24	8.13	6.65	5.58	4.42	3.62	3.04	2.59	2.06	1.68	1.41	1.20	1.04	0.92
12	0.17	0.38	0.71	1.32	2.47	3.56	4.61	5.63	7.63	9.56	10.51	11.67	9.26	7.58	6.35	5.04	4.13	3.46	2.95	2.34	1.92	1.61	1.37	1.19	1.04
13	0.18	0.41	0.77	1.44	2.69	3.88	5.03	6.14	8.32	10.43	11.46	13.16	10.44	8.55	7.16	5.69	4.65	3.90	3.33	2.64	2.16	1.81	1.55	1.34	
14	0.20	0.45	0.84	1.56	2.92	4.20	5.44	6.65	9.01	11.29	12.42	14.63	11.67	9.55	8.01	6.35	5.20	4.36	3.72	2.95	2.42	2.03	1.73	1.50	
15	0.21	0.48	0.90	1.68	3.14	4.53	5.87	7.17	9.71	12.17	13.38	15.76	12.94	10.60	8.88	7.05	5.77	4.83	4.13	3.27	2.68	2.25	1.92	1.66	
16	0.23	0.52	0.97	1.81	3.37	4.85	6.29	7.69	10.41	13.05	14.34	16.90	14.26	11.67	9.78	7.76	6.35	5.32	4.55	3.61	2.95	2.47	2.11	1.83	
17	0.24	0.55	1.03	1.93	3.60	5.18	6.71	8.21	11.11	13.93	15.32	18.05	15.62	12.78	10.71	8.50	6.96	5.83	4.98	3.95	3.23	2.71	2.31	2.01	
18	0.26	0.59	1.10	2.05	3.83	5.51	7.14	8.73	11.82	14.82	16.29	19.20	17.02	13.93	11.67	9.26	7.58	6.35	5.42	4.30	3.52	2.95	2.52		
19	0.27	0.62	1.17	2.17	4.06	5.84	7.57	9.25	12.53	15.71	17.27	20.35	18.45	15.10	12.66	10.05	8.22	6.89	5.88	4.67	3.82	3.20	2.73		
20	0.29	0.66	1.23	2.30	4.29	6.18	8.00	9.78	13.24	16.60	18.25	21.51	19.93	16.31	13.67	10.85	8.88	7.44	6.35	5.04	4.13	3.46	2.95		
21	0.30	0.70	1.30	2.42	4.52	6.51	8.44	10.31	13.96	17.50	19.24	22.67	21.44	17.55	14.71	11.67	9.55	8.01	6.84	5.42	4.44	3.72	3.18		
22	0.32	0.73	1.36	2.55	4.75	6.85	8.87	10.84	14.68	18.40	20.23	23.84	22.99	18.82	15.77	12.52	10.24	8.59	7.33	5.82	4.76	3.99	3.41		
23	0.34	0.77	1.43	2.67	4.99	7.18	9.31	11.38	15.40	19.31	21.23	25.01	24.58	20.12	16.86	13.38	10.95	9.18	7.84	6.22	5.09	4.27			
24	0.35	0.80	1.50	2.80	5.22	7.52	9.74	11.91	16.12	20.22	22.23	26.19	26.20	21.44	17.97	14.26	11.67	9.78	8.35	6.63	5.42	4.55			
25	0.37	0.84	1.57	2.92	5.46	7.86	10.18	12.45	16.85	21.13	23.23	27.37	27.85	22.80	19.11	15.16	12.41	10.40	8.88	7.05	5.77	4.83			
26	0.38	0.88	1.63	3.05	5.69	8.20	10.62	12.99	17.58	22.04	24.23	28.55	29.54	24.18	20.26	16.08	13.16	11.03	9.42	7.47	6.12	5.13			
28	0.42	0.95	1.77	3.30	6.17	8.88	11.51	14.07	19.04	23.88	26.25	30.93	33.01	27.02	22.65	17.97	14.71	12.33	10.52	8.35	6.84	5.73			
30	0.45	1.02	1.91	3.56	6.64	9.57	12.40	15.16	20.52	25.72	28.28	33.33	36.61	29.97	25.11	19.93	16.31	13.67	11.67	9.26	7.58				
32	0.48	1.10	2.05	3.82	7.12	10.26	13.29	16.25	22.00	27.58	30.32	35.73	40.34	33.01	27.67	21.96	17.97	15.06	12.86	10.20	8.35				
35	0.53	1.21	2.25	4.21	7.85	11.30	14.64	17.90	24.23	30.38	33.41	39.36	45.22	37.76	31.65	25.11	20.56	17.23	14.71	11.67	9.55				
40	0.61	1.40	2.60	4.86	9.07	13.06	16.92	20.68	27.99	35.10	38.59	45.47	52.24	46.14	38.67	30.68	25.11	21.05	17.97	14.26					
45	0.69	1.58	2.96	5.52	10.30	14.83	19.21	23.48	31.79	39.86	43.82	51.64	59.32	55.05	46.14	36.61	29.97	25.11	21.44	17.02					
Lube	Type A				Type B								Type C												

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note:
For values to the left of solid black line in HP Table use Factor "A" . . . for values to the right use factor "B".

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.48	1.70	2.18	2.50	2.88	3.30	3.40	3.90	4.01	4.60

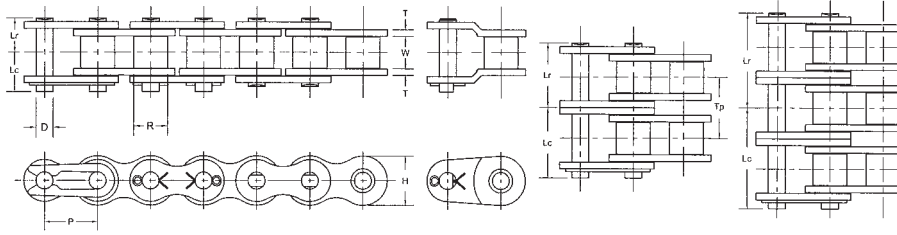
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

50 ASME/ANSI Roller Chain

#50 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	1.827	2.092	1.427	51	10.153	10.508	9.753	93	18.505	18.870	18.105
10	2.023	2.299	1.623	52	10.351	10.707	9.951	94	18.704	19.069	18.304
11	2.218	2.504	1.818	53	10.550	10.907	10.150	95	18.903	19.268	18.503
12	2.415	2.708	2.015	54	10.749	11.106	10.349	96	19.102	19.467	18.702
13	2.612	2.911	2.212	55	10.948	11.305	10.548	97	19.301	19.666	18.901
14	2.809	3.113	2.409	56	11.147	11.504	10.747	98	19.500	19.865	19.100
15	3.006	3.315	2.606	57	11.346	11.703	10.946	99	19.699	20.064	19.299
16	3.204	3.517	2.804	58	11.544	11.902	11.144	100	19.898	20.263	19.498
17	3.401	3.718	3.001	59	11.743	12.102	11.343	101	20.097	20.462	19.697
18	3.599	3.920	3.199	60	11.942	12.301	11.542	102	20.295	20.661	19.895
19	3.797	4.120	3.397	61	12.141	12.500	11.741	103	20.494	20.860	20.094
20	3.995	4.321	3.595	62	12.340	12.699	11.940	104	20.693	21.059	20.293
21	4.193	4.522	3.793	63	12.539	12.898	12.139	105	20.892	21.258	20.492
22	4.392	4.722	3.992	64	12.738	13.097	12.338	106	21.091	21.457	20.691
23	4.590	4.922	4.190	65	12.936	13.296	12.536	107	21.290	21.656	20.890
24	4.788	5.122	4.388	66	13.135	13.495	12.735	108	21.489	21.855	21.089
25	4.987	5.322	4.587	67	13.334	13.694	12.934	109	21.688	22.054	21.288
26	5.185	5.522	4.785	68	13.533	13.894	13.133	110	21.887	22.253	21.487
27	5.384	5.722	4.984	69	13.732	14.093	13.332	111	22.086	22.452	21.686
28	5.582	5.922	5.182	70	13.931	14.292	13.531	112	22.285	22.651	21.885
29	5.781	6.122	5.381	71	14.130	14.491	13.730	113	22.484	22.850	22.084
30	5.979	6.321	5.579	72	14.328	14.690	13.928	114	22.682	23.049	22.282
31	6.178	6.521	5.778	73	14.527	14.889	14.127	115	22.881	23.248	22.481
32	6.376	6.721	5.976	74	14.726	15.088	14.326	116	23.080	23.447	22.680
33	6.575	6.920	6.175	75	14.925	15.287	14.525	117	23.279	23.646	22.879
34	6.774	7.120	6.374	76	15.124	15.486	14.724	118	23.478	23.845	23.078
35	6.972	7.319	6.572	77	15.323	15.685	14.923	119	23.677	24.044	23.277
36	7.171	7.519	6.771	78	15.522	15.884	15.122	120	23.876	24.243	23.476
37	7.370	7.718	6.970	79	15.721	16.083	15.321	121	24.075	24.442	23.675
38	7.568	7.918	7.168	80	15.920	16.282	15.520	122	24.274	24.641	23.874
39	7.767	8.117	7.367	81	16.118	16.481	15.718	123	24.473	24.840	24.073
40	7.966	8.316	7.566	82	16.317	16.680	15.917	124	24.672	25.039	24.272
41	8.165	8.516	7.765	83	16.516	16.879	16.116	125	24.871	25.238	24.471
42	8.363	8.715	7.963	84	16.715	17.078	16.315	126	25.070	25.437	24.670
43	8.562	8.914	8.162	85	16.914	17.278	16.514	127	25.268	25.636	24.868
44	8.761	9.114	8.361	86	17.113	17.477	16.713	128	25.467	25.835	25.067
45	8.960	9.313	8.560	87	17.312	17.676	16.912	129	25.666	26.034	25.266
46	9.159	9.512	8.759	88	17.511	17.875	17.111	130	25.865	26.233	25.465
47	9.357	9.711	8.957	89	17.710	18.074	17.310	131	26.064	26.432	25.664
48	9.556	9.911	9.156	90	17.909	18.273	17.509	132	26.263	26.631	25.863
49	9.755	10.110	9.355	91	18.107	18.472	17.707	133	26.462	26.830	26.062
50	9.954	10.309	9.554	92	18.306	18.671	17.906	134	26.661	27.029	26.261

60 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
60	3/4	0.500	0.469	0.234	0.094	0.691	160	Cottered	Riveted
Yes	Yes								

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
60	1	0.500	0.548	1.000	1.048	-	2,470	9,900	0.98
60-2	2	0.945	1.000	1.890	1.945	0.898	3,370	19,800	1.98
60-3	3	1.386	1.457	2.772	2.843	0.898	4,950	29,700	2.98
60-4	4	1.858	1.869	3.716	3.727	0.898	6,530	39,600	3.98
60-5	5	2.304	2.340	4.608	4.644	0.898	7,720	49,500	4.98
60-6	6	2.760	2.778	5.520	5.538	0.898	9,110	59,400	5.98

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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
9	0.23	0.52	0.97	1.81	2.61	3.38	4.87	6.31	7.71	9.09	10.44	11.78	13.09	11.53	9.99	8.77	6.96	5.70	4.77	4.08					
10	0.26	0.58	1.09	2.03	2.92	3.79	5.46	7.07	8.64	10.18	11.70	13.19	14.67	13.51	11.71	10.27	8.15	6.67	5.59	4.77					
11	0.28	0.65	1.21	2.25	3.24	4.20	6.05	7.84	9.58	11.29	12.97	14.63	16.26	15.58	13.51	11.85	9.41	7.70	6.45	5.51	3.94	3.00	2.38	1.95	1.63
12	0.31	0.71	1.32	2.47	3.56	4.61	6.65	8.61	10.52	12.40	14.25	16.07	17.86	17.75	15.39	13.51	10.72	8.77	7.35	6.28	4.49	3.42	2.71	2.22	1.86
13	0.34	0.77	1.44	2.70	3.88	5.03	7.25	9.39	11.48	13.52	15.53	17.52	19.48	20.02	17.35	15.23	12.08	9.89	8.29	7.08	5.06	3.85	3.06	2.50	
14	0.37	0.84	1.57	2.92	4.21	5.45	7.85	10.17	12.43	14.65	16.83	18.98	21.10	22.37	19.39	17.02	13.51	11.05	9.26	7.91	5.66	4.31	3.42	2.80	
15	0.40	0.90	1.69	3.15	4.53	5.87	8.46	10.96	13.39	15.78	18.13	20.44	22.73	24.81	21.51	18.87	14.98	12.26	10.27	8.77	6.28	4.77	3.79	3.10	
16	0.42	0.97	1.81	3.37	4.86	6.30	9.07	11.75	14.36	16.92	19.44	21.92	24.37	26.80	23.69	20.79	16.50	13.51	11.32	9.66	6.91	5.26	4.17	3.42	
17	0.45	1.03	1.93	3.60	5.19	6.72	9.68	12.54	15.33	18.07	20.75	23.40	26.02	28.61	25.95	22.77	18.07	14.79	12.40	10.58	7.57	5.76	4.57	3.74	
18	0.48	1.10	2.05	3.83	5.52	7.15	10.30	13.34	16.31	19.22	22.08	24.89	27.68	30.43	28.27	24.81	19.69	16.11	13.51	11.53	8.25	6.28	4.98	4.08	
19	0.51	1.17	2.18	4.06	5.85	7.58	10.92	14.14	17.29	20.37	23.40	26.39	29.34	32.26	30.66	26.91	21.35	17.48	14.65	12.50	8.95	6.81	5.40	4.42	
20	0.54	1.23	2.30	4.29	6.18	8.01	11.54	14.95	18.27	21.53	24.74	27.89	31.01	34.10	33.11	29.06	23.06	18.87	15.82	13.51	9.66	7.35	5.83		
21	0.57	1.30	2.42	4.53	6.52	8.44	12.16	15.76	19.26	22.70	26.07	29.40	32.69	35.94	35.62	31.26	24.81	20.31	17.02	14.53	10.40	7.91	6.28		
22	0.60	1.37	2.55	4.76	6.85	8.88	12.79	16.57	20.25	23.87	27.42	30.92	34.38	37.80	38.20	33.52	26.60	21.77	18.25	15.58	11.10	8.48	6.73		
23	0.63	1.43	2.68	4.99	7.19	9.32	13.42	17.38	21.25	25.04	28.77	32.44	36.07	39.65	40.83	35.84	28.44	23.28	19.51	16.66	11.90	9.07	7.19		
24	0.66	1.50	2.80	5.23	7.53	9.75	14.05	18.20	22.25	26.22	30.12	33.97	37.76	41.52	43.52	38.20	30.31	24.81	20.79	17.75	12.70	9.66	7.67		
25	0.69	1.57	2.93	5.46	7.87	10.19	14.68	19.02	23.25	27.40	31.48	35.50	39.47	43.39	46.27	40.61	32.23	26.38	22.11	18.87	13.50	10.30	8.15		
26	0.72	1.64	3.05	5.70	8.21	10.63	15.32	19.84	24.26	28.58	32.84	37.03	41.17	45.27	49.08	43.07	34.18	27.98	23.44	20.02	14.30	10.90	8.65		
28	0.78	1.77	3.31	6.17	8.89	11.52	16.59	21.50	26.28	30.97	35.57	40.12	44.60	49.04	53.43	48.14	38.20	31.26	26.20	22.37	16.00	12.20			
30	0.84	1.91	3.56	6.65	9.58	12.41	17.88	23.16	28.31	33.36	38.33	43.22	48.05	52.83	57.57	53.38	42.36	34.67	29.06	24.81	17.80	13.50			
32	0.90	2.05	3.82	7.13	10.27	13.31	19.17	24.83	30.36	35.77	41.09	46.34	51.52	56.65	61.72	58.81	46.67	38.20	32.01	27.33	19.60	14.90			
35	0.99	2.26	4.21	7.86	11.32	14.66	21.12	27.36	33.44	39.41	45.27	51.05	56.76	62.40	67.99	67.27	53.38	43.69	36.62	31.26	22.40	17.00			
40	1.14	2.61	4.86	9.08	13.07	16.93	24.39	31.60	38.63	45.52	52.29	58.97	65.56	72.09	78.54	82.19	65.22	53.38	44.74	38.20	27.30				
45	1.30	2.96	5.52	10.31	14.84	19.23	27.70	35.89	43.87	51.69	59.39	66.97	74.46	81.86	89.20	96.46	77.8	63.7	53.38	45.58	32.60				
Lube	Type A	Type B																		Type C					

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note: For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

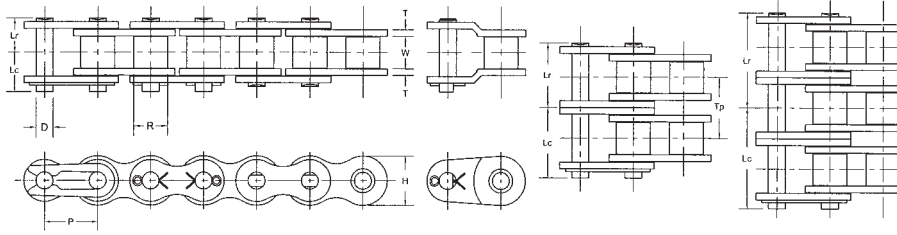
Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

60 ASME/ANSI Roller Chain

#60 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	2.193	2.511	1.724	51	12.183	12.610	11.714	93	22.206	22.644	22.206
10	2.427	2.758	1.958	52	12.422	12.849	11.953	94	22.445	22.882	22.445
11	2.662	3.004	2.193	53	12.660	13.088	12.191	95	22.684	23.121	22.684
12	2.898	3.249	2.429	54	12.899	13.327	12.430	96	22.922	23.360	22.922
13	3.134	3.493	2.665	55	13.137	13.566	12.668	97	23.161	23.599	23.161
14	3.370	3.736	2.901	56	13.376	13.805	12.907	98	23.400	23.838	23.400
15	3.607	3.978	3.138	57	13.615	14.044	13.146	99	23.638	24.077	23.638
16	3.844	4.221	3.375	58	13.853	14.283	13.384	100	23.877	24.315	23.877
17	4.082	4.462	3.613	59	14.092	14.522	13.623	101	24.116	24.554	24.116
18	4.319	4.703	3.850	60	14.330	14.761	13.861	102	24.355	24.793	24.355
19	4.557	4.945	4.088	61	14.569	15.000	14.100	103	24.593	25.032	24.593
20	4.794	5.185	4.325	62	14.808	15.239	14.339	104	24.832	25.271	24.832
21	5.032	5.426	4.563	63	15.046	15.478	14.577	105	25.071	25.509	25.071
22	5.270	5.666	4.801	64	15.285	15.717	14.816	106	25.309	25.748	25.309
23	5.508	5.907	5.039	65	15.524	15.956	15.055	107	25.548	25.987	25.548
24	5.746	6.147	5.277	66	15.762	16.194	15.293	108	25.787	26.226	25.787
25	5.984	6.387	5.515	67	16.001	16.433	15.532	109	26.025	26.465	26.025
26	6.222	6.627	5.753	68	16.240	16.672	15.771	110	26.264	26.703	26.264
27	6.460	6.867	5.991	69	16.478	16.911	16.009	111	26.503	26.942	26.503
28	6.699	7.106	6.230	70	16.717	17.150	16.248	112	26.742	27.181	26.742
29	6.937	7.346	6.468	71	16.956	17.389	16.487	113	26.980	27.420	26.980
30	7.175	7.586	6.706	72	17.194	17.628	16.725	114	27.219	27.659	27.219
31	7.413	7.825	6.944	73	17.433	17.867	16.964	115	27.458	27.897	27.458
32	7.652	8.065	7.183	74	17.672	18.106	17.203	116	27.696	28.136	27.696
33	7.890	8.304	7.421	75	17.910	18.344	17.441	117	27.935	28.375	27.935
34	8.128	8.544	7.659	76	18.149	18.583	17.680	118	28.174	28.614	28.174
35	8.367	8.783	7.898	77	18.387	18.822	17.918	119	28.412	28.853	28.412
36	8.605	9.023	8.136	78	18.626	19.061	18.157	120	28.651	29.091	28.651
37	8.844	9.262	8.375	79	18.865	19.300	18.396	121	28.890	29.330	28.890
38	9.082	9.501	8.613	80	19.104	19.539	18.635	122	29.129	29.569	29.129
39	9.321	9.740	8.852	81	19.342	19.778	18.873	123	29.367	29.808	29.367
40	9.559	9.980	9.090	82	19.581	20.016	19.112	124	29.606	30.046	29.606
41	9.798	10.219	9.329	83	19.820	20.255	19.351	125	29.845	30.285	29.845
42	10.036	10.458	9.567	84	20.058	20.494	19.589	126	30.083	30.524	30.083
43	10.275	10.697	9.806	85	20.297	20.733	19.828	127	30.322	30.763	30.322
44	10.513	10.936	10.044	86	20.536	20.972	20.067	128	30.561	31.002	30.561
45	10.752	11.175	10.283	87	20.774	21.211	20.305	129	30.800	31.240	30.800
46	10.990	11.415	10.521	88	21.013	21.450	20.544	130	31.038	31.479	31.038
47	11.229	11.654	10.760	89	21.252	21.688	20.783	131	31.277	31.718	31.277
48	11.467	11.893	10.998	90	21.490	21.927	21.021	132	31.516	31.957	31.516
49	11.706	12.132	11.237	91	21.729	22.166	21.260	133	31.754	32.196	31.754
50	11.944	12.371	11.475	92	21.968	22.405	21.499	134	31.993	32.434	31.993

80 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch	Inside Width	Roller Diameter	Pin Diameter	Link Plate Thickness	Roller Link Plate Height	Number of Links in 10ft	Available Construction	
80	P	W	R	D	T	H		Cottered	Riveted
80	1	0.625	0.625	0.312	0.125	0.921	120	Yes	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain	Cot. Pin End to C/L of Chain	Overall Length Riveted Pin	Overall Length Conn. Pin	Transverse Pitch for Multi-strand	Rated Working Load	Average Ultimate Strength	Average Chain Weight
		Lr	Lc	Lr + Lr	Lr + Lc	TP	(lbs)	(lbs)	(lbs/ft)
80	1	0.638	0.750	1.276	1.388	-	4,140	17,600	1.69
80-2	2	1.213	1.327	2.426	2.540	1.153	5,630	35,200	3.43
80-3	3	1.790	1.955	3.580	3.745	1.153	8,280	52,800	5.16
80-4	4	2.371	2.492	4.742	4.863	1.153	10,920	70,400	6.89
80-5	5	2.949	3.067	5.898	6.016	1.153	12,910	88,000	8.63
80-6	6	3.526	3.644	7.052	7.170	1.153	15,230	105,600	10.36

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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
9	0.53	1.22	2.27	4.23	6.09	7.90	11.37	14.73	18.01	21.22	24.38	20.29	17.00	14.51	12.58	11.04	8.76	7.17	6.01	5.13					
10	0.60	1.36	2.54	4.74	6.83	8.85	12.74	16.51	20.18	23.78	27.32	23.76	19.91	17.00	14.74	12.93	10.26	8.40	7.04	6.01					
11	0.66	1.51	2.82	5.26	7.57	9.81	14.13	18.30	22.37	26.36	30.28	27.41	22.97	19.61	17.00	14.92	11.84	9.69	8.12	6.93	6.01	5.27	4.42	3.77	3.70
12	0.73	1.66	3.09	5.77	8.32	10.77	15.52	20.10	24.57	28.96	33.26	31.23	26.17	22.35	19.37	17.00	13.49	11.04	9.25	7.90	6.85	6.01	5.04	4.30	
13	0.79	1.81	3.37	6.29	9.07	11.75	16.92	21.92	26.79	31.57	36.27	35.22	29.51	25.20	21.84	19.17	15.21	12.45	10.43	8.91	7.72	6.78	5.68	4.85	
14	0.86	1.96	3.65	6.82	9.82	12.72	18.33	23.74	29.02	34.20	39.29	39.36	32.98	28.16	24.41	21.42	17.00	13.91	11.66	9.96	8.63	7.57	6.35	5.42	
15	0.92	2.11	3.94	7.35	10.58	13.71	19.75	25.58	31.27	36.85	42.33	43.65	36.58	31.23	27.07	23.76	18.85	15.43	12.93	11.04	9.57	8.40	7.04	6.02	
16	0.99	2.26	4.22	7.88	11.35	14.70	21.17	27.43	33.53	39.51	45.39	48.08	40.30	34.41	29.82	26.17	20.77	17.00	14.25	12.16	10.50	9.25	7.76	6.62	
17	1.06	2.41	4.51	8.41	12.11	15.69	22.60	29.28	35.80	42.18	48.46	52.66	44.13	37.68	32.66	28.66	22.75	18.62	15.60	13.32	11.50	10.10	8.49	7.25	
18	1.13	2.57	4.79	8.94	12.88	16.69	24.04	31.15	38.08	44.87	51.54	57.38	48.08	41.05	35.59	31.23	24.78	20.29	17.00	14.51	12.60	11.00	9.25	7.90	
19	1.19	2.72	5.08	9.48	13.66	17.70	25.49	33.02	40.37	47.56	54.64	61.62	52.15	44.52	38.59	33.87	26.88	22.00	18.44	15.74	13.60	12.00	10.00	8.57	
20	1.26	2.88	5.37	10.02	14.44	18.70	26.94	34.90	42.66	50.27	57.75	65.13	56.32	48.08	41.68	36.58	29.03	23.76	19.91	17.00	14.70	12.90	10.80		
21	1.33	3.03	5.66	10.57	15.22	19.72	28.40	36.79	44.97	52.99	60.88	68.65	60.59	51.73	44.84	39.36	31.23	25.56	21.42	18.29	15.90	13.90	11.70		
22	1.40	3.19	5.95	11.11	16.00	20.73	29.86	38.69	47.29	55.72	64.02	72.19	64.97	55.47	48.08	42.20	33.49	27.41	22.97	19.61	17.00	14.90	12.50		
23	1.47	3.35	6.25	11.66	16.79	21.75	31.33	40.59	49.62	58.46	67.16	75.74	69.45	59.30	51.40	45.11	35.80	29.30	24.55	20.97	18.20	15.90	13.40		
24	1.54	3.50	6.54	12.20	17.58	22.77	32.80	42.50	51.95	61.21	70.32	79.30	74.03	63.21	54.79	48.08	38.16	31.23	26.17	22.35	19.40	17.90	14.20		
25	1.61	3.66	6.83	12.75	18.37	23.80	34.28	44.41	54.29	63.97	73.49	82.88	78.70	67.2	58.25	51.12	40.57	33.20	27.83	23.76	20.60	18.10	15.10		
26	1.68	3.82	7.13	13.31	19.17	24.83	35.77	46.33	56.64	66.74	76.67	86.46	83.47	71.3	61.8	54.22	43.02	35.22	29.51	25.20	21.80	19.20	16.10		
28	1.81	4.14	7.72	14.41	20.76	26.90	38.75	50.20	61.36	72.30	83.06	93.67	93.3	79.7	69.0	60.6	48.08	39.36	32.98	28.16	24.40	21.40			
30	1.96	4.46	8.32	15.53	22.37	28.98	41.74	54.08	66.11	77.89	89.49	100.9	103.5	88.3	76.6	67.2	53.33	43.65	36.58	31.23	27.10	23.80			
32	2.10	4.78	8.92	16.65	23.98	31.07	44.76	57.98	70.88	83.52	95.95	108.2	114.0	97.3	84.3	74.0	58.7	48.08	40.30	34.41	29.80	26.20			
35	2.31	5.27	9.83	18.34	26.42	34.23	49.30	63.87	78.08	92.00	105.7	119.2	130.4	111.3	96.5	84.7	67.2	55.00	46.09	39.36	34.10				
40	2.67	6.08	11.35	21.19	30.52	39.54	56.95	73.78	90.19	106.3	122.1	137.7	153.1	136.0	117.9	103.5	82.1	67.2	56.32	48.08	20.00				
45	3.03	6.91	12.90	24.06	34.66	44.90	64.68	83.79	102.4	120.7	138.7	156.4	173.8	162.3	140.7	123.5	98.0	80.2	67.2	57.38					
Lube	Type A				Type B								Type C												

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

Note:

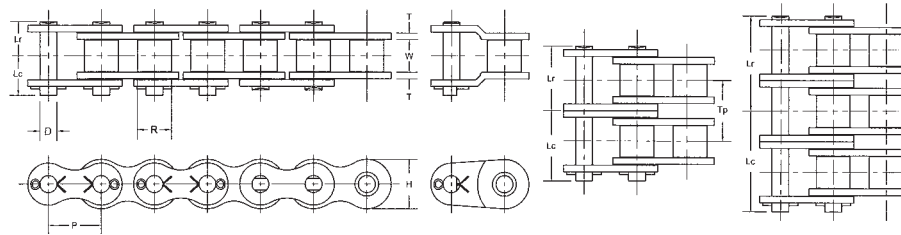
For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

80 ASME/ANSI Roller Chain

#80 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	2.924	3.347	2.299	51	16.244	16.813	15.619	93	29.608	30.192	28.983
10	3.236	3.678	2.611	52	16.562	17.132	15.937	94	29.927	30.510	29.302
11	3.549	4.006	2.924	53	16.880	17.451	16.255	95	30.245	30.828	29.620
12	3.864	4.332	3.239	54	17.198	17.769	16.573	96	30.563	31.147	29.938
13	4.179	4.657	3.554	55	17.517	18.088	16.892	97	30.881	31.465	30.256
14	4.494	4.981	3.869	56	17.835	18.407	17.210	98	31.200	31.784	30.575
15	4.810	5.305	4.185	57	18.153	18.725	17.528	99	31.518	32.102	30.893
16	5.126	5.627	4.501	58	18.471	19.044	17.846	100	31.836	32.421	31.211
17	5.442	5.950	4.817	59	18.789	19.363	18.164	101	32.154	32.739	31.529
18	5.759	6.271	5.134	60	19.107	19.681	18.482	102	32.473	33.057	31.848
19	6.076	6.593	5.451	61	19.425	20.000	18.800	103	32.791	33.376	32.166
20	6.392	6.914	5.767	62	19.744	20.318	19.119	104	33.109	33.694	32.484
21	6.710	7.235	6.085	63	20.062	20.637	19.437	105	33.428	34.013	32.803
22	7.027	7.555	6.402	64	20.380	20.955	19.755	106	33.746	34.331	33.121
23	7.344	7.876	6.719	65	20.698	21.274	20.073	107	34.064	34.649	33.439
24	7.661	8.196	7.036	66	21.016	21.593	20.391	108	34.382	34.968	33.757
25	7.979	8.516	7.354	67	21.335	21.911	20.710	109	34.701	35.286	34.076
26	8.296	8.836	7.671	68	21.653	22.230	21.028	110	35.019	35.605	34.394
27	8.614	9.156	7.989	69	21.971	22.548	21.346	111	35.337	35.923	34.712
28	8.931	9.475	8.306	70	22.289	22.867	21.664	112	35.655	36.241	35.030
29	9.249	9.795	8.624	71	22.607	23.185	21.982	113	35.974	36.560	35.349
30	9.567	10.114	8.942	72	22.926	23.504	22.301	114	36.292	36.878	35.667
31	9.885	10.434	9.260	73	23.244	23.822	22.619	115	36.610	37.197	35.985
32	10.202	10.753	9.577	74	23.562	24.141	22.937	116	36.928	37.515	36.303
33	10.520	11.072	9.895	75	23.880	24.459	23.255	117	37.247	37.833	36.622
34	10.838	11.392	10.213	76	24.198	24.778	23.573	118	37.565	38.152	36.940
35	11.156	11.711	10.531	77	24.517	25.096	23.892	119	37.883	38.470	37.258
36	11.474	12.030	10.849	78	24.835	25.415	24.210	120	38.202	38.788	37.577
37	11.792	12.349	11.167	79	25.153	25.733	24.528	121	38.520	39.107	37.895
38	12.110	12.668	11.485	80	25.471	26.052	24.846	122	38.838	39.425	38.213
39	12.428	12.987	11.803	81	25.790	26.370	25.165	123	39.156	39.744	38.531
40	12.745	13.306	12.120	82	26.108	26.689	25.483	124	39.475	40.062	38.850
41	13.063	13.625	12.438	83	26.426	27.007	25.801	125	39.793	40.380	39.168
42	13.381	13.944	12.756	84	26.744	27.326	26.119	126	40.111	40.699	39.486
43	13.700	14.263	13.075	85	27.063	27.644	26.438	127	40.429	41.017	39.804
44	14.018	14.582	13.393	86	27.381	27.962	26.756	128	40.748	41.335	40.123
45	14.336	14.901	13.711	87	27.699	28.281	27.074	129	41.066	41.654	40.441
46	14.654	15.219	14.029	88	28.017	28.599	27.392	130	41.384	41.972	40.759
47	14.972	15.538	14.347	89	28.335	28.918	27.710	131	41.703	42.291	41.078
48	15.290	15.857	14.665	90	28.654	29.236	28.029	132	42.021	42.609	41.396
49	15.608	16.176	14.983	91	28.972	29.555	28.347	133	42.339	42.927	41.714
50	15.926	16.495	15.301	92	29.290	29.873	28.665	134	42.657	43.246	42.032

100 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
100	1 1/4	0.750	0.750	0.375	0.156	1.154	96	Yes	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
100	1	0.772	0.913	1.544	1.685	-	6,360	26,400	2.62
100-2	2	1.475	1.627	2.950	3.102	1.153	8,650	52,800	5.19
100-3	3	2.180	2.332	4.360	4.512	1.153	12,730	79,200	7.77
100-4	4	2.902	3.036	5.804	5.938	1.153	16,800	105,600	10.33
100-5	5	3.603	3.744	7.206	7.347	1.153	19,850	132,000	12.92
100-6	6	4.308	4.448	8.616	8.756	1.153	23,410	158,400	15.49

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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	2700
9	1.02	2.33	4.34	8.10	11.67	15.12	21.78	28.22	34.50	37.33	29.63	24.25	20.32	17.35	15.04	13.20	11.71	10.47	9.45	7.19					
10	1.14	2.61	4.87	9.08	13.08	16.95	24.41	31.62	38.65	43.73	34.70	28.40	23.80	20.32	17.62	15.46	13.71	12.27	11.06	8.42					
11	1.27	2.89	5.39	10.07	14.50	18.78	27.05	35.05	42.85	50.45	40.03	32.77	27.46	23.45	20.32	17.84	15.82	14.15	12.76	9.71	8.29	7.19	6.31	1.29	
12	1.39	3.18	5.93	11.06	15.93	20.63	29.72	38.50	47.07	55.46	45.61	37.33	31.29	26.71	23.16	20.32	18.02	16.13	14.54	11.06	9.45	8.19	7.19		
13	1.52	3.46	6.46	12.06	17.36	22.50	32.40	41.98	51.32	60.47	51.43	42.10	35.28	30.12	26.11	22.92	20.32	18.18	16.40	12.47	10.60	9.23	8.10		
14	1.64	3.75	7.00	13.06	18.81	24.37	35.10	45.48	55.59	65.51	57.48	47.05	39.43	33.66	29.18	25.61	22.71	20.32	18.32	13.94	11.90	10.30	9.05		
15	1.77	4.04	7.54	14.07	20.27	26.26	37.82	49.00	59.89	70.57	63.75	52.18	43.73	37.33	32.36	28.40	25.19	22.54	20.32	15.46	13.20	11.40	10.00		
16	1.90	4.33	8.08	15.09	21.73	28.15	40.55	52.53	64.22	75.67	70.23	57.48	48.17	41.13	35.65	31.29	27.75	24.83	22.39	17.03	14.50	12.60	11.10		
17	2.03	4.63	8.63	16.11	23.20	30.06	43.29	56.09	68.56	80.79	76.91	63.0	52.76	45.05	39.04	34.27	30.39	27.19	24.52	18.65	15.90	13.80	0.79		
18	2.16	4.92	9.18	17.13	24.68	31.97	46.05	59.66	72.93	85.93	83.80	68.6	57.48	49.08	42.54	37.33	33.11	29.63	26.71	20.32	17.40	15.00			
19	2.29	5.22	9.73	18.16	26.16	33.89	48.82	63.25	77.31	91.10	90.9	74.4	62.3	53.22	46.13	40.49	35.91	32.13	28.97	22.04	18.80	16.30			
20	2.42	5.51	10.29	19.20	27.65	35.82	51.60	66.85	81.72	96.29	98.1	80.3	67.3	57.48	49.82	43.73	38.78	34.70	31.29	23.80	20.30	17.60			
21	2.55	5.81	10.84	20.24	29.15	37.76	54.39	70.47	86.14	101.5	105.6	86.4	72.4	61.8	53.61	47.05	41.72	37.33	33.66	25.61	21.90	19.00			
22	2.68	6.11	11.40	21.28	30.65	39.71	57.19	74.10	90.58	106.7	113.2	92.7	77.7	66.3	57.48	50.45	44.74	40.03	36.10	27.46	23.40	20.30			
23	2.81	6.41	11.96	22.33	32.16	41.66	60.01	77.74	95.03	112.0	121.0	99.1	83.0	70.9	61.4	53.93	47.82	42.79	38.59	29.35	25.10				
24	2.94	6.71	12.53	23.38	33.67	43.62	62.83	81.40	99.50	117.2	129.0	105.6	88.5	75.6	65.5	57.48	50.98	45.61	41.13	31.29	26.70				
25	3.08	7.02	13.09	24.43	35.19	45.59	65.66	85.07	104.0	122.5	137.2	112.3	94.1	80.3	69.6	61.1	54.20	48.49	43.73	33.26	28.40				
26	3.21	7.32	13.66	25.49	36.71	47.56	68.50	88.75	108.5	127.8	145.5	119.1	99.8	85.2	73.8	64.8	57.48	51.43	46.38	35.28	30.10				
28	3.48	7.93	14.80	27.61	39.77	51.52	74.21	96.14	117.5	138.5	159.1	133.1	111.5	95.2	82.5	72.4	64.2	57.48	51.83	39.43	33.70				
30	3.74	8.54	15.94	29.75	42.85	55.51	79.95	103.6	126.6	149.2	171.4	147.6	123.7	105.6	91.5	80.3	71.2	63.7	57.48	43.73					
32	4.02	9.16	17.09	31.89	45.94	59.51	85.72	111.1	135.8	160.0	183.8	162.6	136.3	116.3	100.8	88.5	78.5	70.2	63.3	48.17					
35	4.42	10.09	18.83	35.13	50.61	65.56	94.44	122.3	149.6	176.2	202.4	186.0	155.9	133.1	115.3	101.2	89.8	80.3	72.4	55.10					
40	5.11	11.65	21.75	40.58	58.46	75.73	109.1	141.3	172.8	203.6	233.9	227.2	190.4	162.6	140.9	123.7	109.7	98.1	88.5	67.3					
45	5.80	13.24	24.70	46.09	66.39	86.01	123.9	160.5	196.2	231.2	265.6	271.1	227.2	194.0	168.2	147.6	130.9	117.1	105.6	80.3					
Lube	Type A	Type B																		Type C					

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

Note:

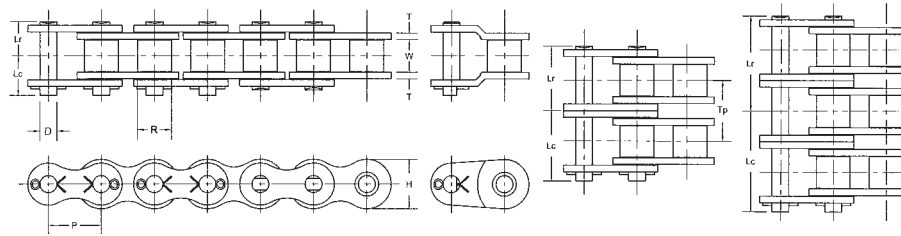
For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

100 ASME/ANSI Roller Chain

#100 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	3.655	4.184	2.905	51	20.305	21.017	19.555	93	37.011	37.739	36.261
10	4.045	4.597	3.295	52	20.703	21.415	19.953	94	37.408	38.137	36.658
11	4.437	5.007	3.687	53	21.100	21.813	20.350	95	37.806	38.536	37.056
12	4.830	5.415	4.080	54	21.498	22.212	20.748	96	38.204	38.934	37.454
13	5.223	5.821	4.473	55	21.896	22.610	21.146	97	38.602	39.332	37.852
14	5.617	6.227	4.867	56	22.293	23.008	21.543	98	39.000	39.730	38.250
15	6.012	6.631	5.262	57	22.691	23.407	21.941	99	39.397	40.128	38.647
16	6.407	7.034	5.657	58	23.089	23.805	22.339	100	39.795	40.526	39.045
17	6.803	7.437	6.053	59	23.486	24.203	22.736	101	40.193	40.924	39.443
18	7.198	7.839	6.448	60	23.884	24.601	23.134	102	40.591	41.322	39.841
19	7.594	8.241	6.844	61	24.282	25.000	23.532	103	40.989	41.720	40.239
20	7.991	8.642	7.241	62	24.680	25.398	23.930	104	41.387	42.118	40.637
21	8.387	9.043	7.637	63	25.077	25.796	24.327	105	41.784	42.516	41.034
22	8.783	9.444	8.033	64	25.475	26.194	24.725	106	42.182	42.914	41.432
23	9.180	9.844	8.430	65	25.873	26.593	25.123	107	42.580	43.312	41.830
24	9.577	10.245	8.827	66	26.270	26.991	25.520	108	42.978	43.710	42.228
25	9.973	10.645	9.223	67	26.668	27.389	25.918	109	43.376	44.108	42.626
26	10.370	11.045	9.620	68	27.066	27.787	26.316	110	43.774	44.506	43.024
27	10.767	11.444	10.017	69	27.464	28.185	26.714	111	44.171	44.904	43.421
28	11.164	11.844	10.414	70	27.861	28.583	27.111	112	44.569	45.302	43.819
29	11.561	12.244	10.811	71	28.259	28.982	27.509	113	44.967	45.700	44.217
30	11.958	12.643	11.208	72	28.657	29.380	27.907	114	45.365	46.098	44.615
31	12.356	13.042	11.606	73	29.055	29.778	28.305	115	45.763	46.496	45.013
32	12.753	13.441	12.003	74	29.453	30.176	28.703	116	46.161	46.894	45.411
33	13.150	13.841	12.400	75	29.850	30.574	29.100	117	46.558	47.292	45.808
34	13.547	14.240	12.797	76	30.248	30.972	29.498	118	46.956	47.690	46.206
35	13.945	14.639	13.195	77	30.646	31.370	29.896	119	47.354	48.088	46.604
36	14.342	15.038	13.592	78	31.044	31.768	30.294	120	47.752	48.486	47.002
37	14.740	15.436	13.990	79	31.441	32.167	30.691	121	48.150	48.884	47.400
38	15.137	15.835	14.387	80	31.839	32.565	31.089	122	48.548	49.282	47.798
39	15.534	16.234	14.784	81	32.237	32.963	31.487	123	48.945	49.680	48.195
40	15.932	16.633	15.182	82	32.635	33.361	31.885	124	49.343	50.077	48.593
41	16.329	17.031	15.579	83	33.033	33.759	32.283	125	49.741	50.475	48.991
42	16.727	17.430	15.977	84	33.430	34.157	32.680	126	50.139	50.873	49.389
43	17.124	17.829	16.374	85	33.828	34.555	33.078	127	50.537	51.271	49.787
44	17.522	18.227	16.772	86	34.226	34.953	33.476	128	50.935	51.669	50.185
45	17.919	18.626	17.169	87	34.624	35.351	33.874	129	51.333	52.067	50.583
46	18.317	19.024	17.567	88	35.022	35.749	34.272	130	51.730	52.465	50.980
47	18.715	19.423	17.965	89	35.419	36.147	34.669	131	52.128	52.863	51.378
48	19.112	19.821	18.362	90	35.817	36.545	35.067	132	52.526	53.261	51.776
49	19.510	20.220	18.760	91	36.215	36.943	35.465	133	52.924	53.659	52.174
50	19.907	20.618	19.157	92	36.613	37.341	35.863	134	53.322	54.057	52.572

120 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
120	1 1/2	1.000	0.875	0.437	0.187	1.382	80	Cottered	Riveted
Yes	Yes								

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
120	1	0.971	1.124	1.942	2.095	-	8,540	39,000	3.87
120-2	2	1.870	1.020	3.740	2.890	1.787	11,610	78,000	7.77
120-3	3	2.766	2.920	5.532	5.686	1.787	17,080	117,000	11.56
120-4	4	3.664	3.817	7.328	7.481	1.787	22,540	156,000	15.40
120-5	5	4.558	4.710	9.116	9.268	1.787	26,640	195,000	19.25
120-6	6	5.451	5.606	10.902	11.057	1.787	31,420	234,000	23.09

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	20	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
9	1.72	3.93	7.33	13.69	19.71	25.54	36.78	47.65	56.78	43.20	34.28	28.06	23.51	20.08	17.40	15.27	13.54	12.12							
10	1.93	4.40	8.22	15.33	22.09	28.61	41.22	53.40	65.27	50.59	40.15	32.86	27.54	23.51	20.38	17.89	15.86	14.19							
11	2.14	4.88	9.11	17.00	24.48	31.72	45.69	59.19	72.35	58.37	46.32	37.91	31.77	27.13	23.51	20.64	18.30	16.38	14.80	13.40	12.20	11.20	10.40	9.59	
12	2.35	5.36	10.01	18.67	26.89	34.84	50.19	65.02	79.48	66.51	52.78	43.20	36.20	30.91	26.79	23.51	20.85	18.66	16.80	15.30	14.90	12.80	11.80	10.90	
13	2.56	5.85	10.91	20.36	29.32	37.99	54.72	70.89	86.66	74.99	59.51	48.71	40.82	34.85	30.21	26.51	23.51	21.04	19.00	17.20	15.70	14.40	13.30	12.30	
14	2.78	6.33	11.82	22.05	31.77	41.15	59.28	76.80	93.88	83.81	66.51	54.44	45.62	38.95	33.76	29.63	26.28	23.51	21.20	19.20	17.60	16.10	14.90		
15	2.99	6.82	12.73	23.76	34.22	44.34	63.86	82.74	101.14	92.95	73.76	60.37	50.59	43.20	37.44	32.86	29.14	26.08	23.50	21.30	19.50	17.90	16.50		
16	3.21	7.32	13.65	25.47	36.69	47.54	68.47	88.71	108.44	102.39	81.26	66.51	55.74	47.59	41.25	36.20	32.11	28.73	25.90	23.50	21.30	19.70	18.20		
17	3.42	7.81	14.58	27.20	39.18	50.75	73.11	94.71	115.78	112.14	88.99	72.84	61.04	52.12	45.18	39.65	35.16	31.46	28.40	25.80	23.50	21.60	19.90		
18	3.64	8.31	15.50	28.93	41.67	53.99	77.76	100.74	123.15	122.18	96.96	79.36	66.51	56.78	49.22	43.20	38.31	34.28	30.90	28.10	25.60	23.50			
19	3.86	8.81	16.44	30.67	44.18	57.23	82.44	106.80	130.55	132.50	105.15	86.06	72.13	61.58	53.38	46.85	41.55	37.18	33.50	30.40	27.80	25.50			
20	4.08	9.31	17.37	32.42	46.69	60.49	87.13	112.88	137.99	143.10	113.56	92.95	77.89	66.51	57.65	50.59	44.87	40.15	36.20	32.90	30.00	27.50			
21	4.30	9.81	18.31	34.17	49.22	63.77	91.85	118.99	145.46	153.97	122.18	100.00	83.81	71.56	62.02	54.44	48.28	43.20	39.00	35.40	32.30	29.60			
22	4.52	10.32	19.26	35.93	51.76	67.05	96.58	125.12	152.95	165.09	131.01	107.23	89.87	76.73	66.51	58.37	51.77	46.32	41.80	37.90	34.60				
23	4.75	10.83	20.20	37.70	54.30	70.35	101.33	131.28	160.47	176.48	140.04	114.62	96.06	82.02	71.09	62.39	55.33	49.51	44.60	40.50	37.00				
24	4.97	11.34	21.15	39.47	56.86	73.66	106.10	137.45	168.02	188.11	149.28	122.18	102.39	87.43	75.78	66.51	58.98	52.78	47.60	43.20	39.40				
25	5.19	11.85	22.11	41.25	59.42	76.98	110.88	143.65	175.60	199.99	158.70	129.90	108.86	92.95	80.56	70.71	62.71	56.11	50.60	45.90	41.30				
26	5.42	12.36	23.06	43.04	61.99	80.31	115.68	149.86	183.19	212.11	168.32	137.77	115.46	98.58	85.45	74.99	66.51	59.51	53.70	48.70					
28	5.87	13.39	24.98	46.62	67.15	87.00	125.32	162.35	198.46	233.85	188.11	153.97	129.03	110.17	95.49	83.81	74.33	66.51	60.00	54.40					
30	6.32	14.42	26.92	50.23	72.35	93.73	135.01	174.91	213.81	251.94	208.62	170.75	143.10	122.18	105.90	92.95	82.43	73.76	66.50						
32	6.78	15.47	28.86	53.86	77.57	100.50	144.76	187.53	229.24	270.12	229.83	188.11	157.65	134.60	116.67	102.39	90.81	81.26	73.30						
35	7.47	17.04	31.79	59.33	85.46	110.71	159.47	206.59	252.54	297.57	262.89	215.17	180.33	153.97	133.46	117.13	103.87	92.95							
40	8.63	19.68	36.73	68.53	98.71	127.88	184.20	238.64	291.72	343.74	321.19	262.89	220.32	188.11	163.05	143.10	126.91	113.56							
45	9.80	22.35	41.71	77.83	112.10	145.23	209.19	271.01	331.29	390.36	383.26	313.69	262.89	224.46	194.56	170.75	151.43	135.50							
Lube	Type A	Type B																			Type C				

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note:

For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

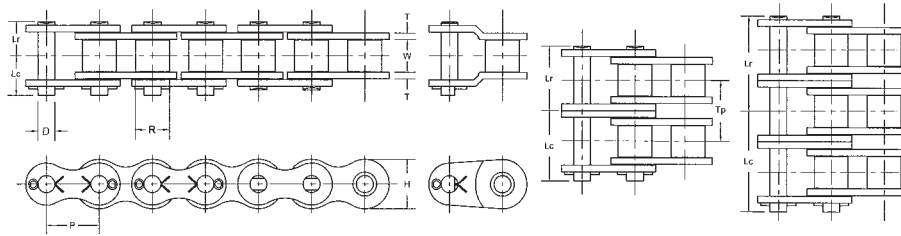
Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

120 ASME/ANSI Roller Chain

#120 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	4.386	5.021	3.511	51	24.366	25.220	23.491	93	44.413	45.287	43.538
10	4.854	5.517	3.979	52	24.843	25.698	23.968	94	44.890	45.765	44.015
11	5.324	6.009	4.449	53	25.320	26.176	24.445	95	45.367	46.243	44.492
12	5.796	6.498	4.921	54	25.798	26.654	24.923	96	45.845	46.720	44.970
13	6.268	6.986	5.393	55	26.275	27.132	25.400	97	46.322	47.198	45.447
14	6.741	7.472	5.866	56	26.752	27.610	25.877	98	46.800	47.676	45.925
15	7.215	7.957	6.340	57	27.229	28.088	26.354	99	47.277	48.153	46.402
16	7.689	8.441	6.814	58	27.707	28.566	26.832	100	47.754	48.631	46.879
17	8.163	8.924	7.288	59	28.184	29.044	27.309	101	48.232	49.108	47.357
18	8.638	9.407	7.763	60	28.661	29.522	27.786	102	48.709	49.586	47.834
19	9.113	9.889	8.238	61	29.138	30.000	28.263	103	49.187	50.064	48.312
20	9.589	10.371	8.714	62	29.615	30.477	28.740	104	49.664	50.541	48.789
21	10.064	10.852	9.189	63	30.093	30.955	29.218	105	50.141	51.019	49.266
22	10.540	11.333	9.665	64	30.570	31.433	29.695	106	50.619	51.496	49.744
23	11.016	11.813	10.141	65	31.047	31.911	30.172	107	51.096	51.974	50.221
24	11.492	12.294	10.617	66	31.525	32.389	30.650	108	51.573	52.452	50.698
25	11.968	12.774	11.093	67	32.002	32.867	31.127	109	52.051	52.929	51.176
26	12.444	13.254	11.569	68	32.479	33.345	31.604	110	52.528	53.407	51.653
27	12.921	13.733	12.046	69	32.956	33.822	32.081	111	53.006	53.884	52.131
28	13.397	14.213	12.522	70	33.434	34.300	32.559	112	53.483	54.362	52.608
29	13.874	14.692	12.999	71	33.911	34.778	33.036	113	53.960	54.840	53.085
30	14.350	15.172	13.475	72	34.388	35.256	33.513	114	54.438	55.317	53.563
31	14.827	15.651	13.952	73	34.866	35.733	33.991	115	54.915	55.795	54.040
32	15.303	16.130	14.428	74	35.343	36.211	34.468	116	55.393	56.272	54.518
33	15.780	16.609	14.905	75	35.820	36.689	34.945	117	55.870	56.750	54.995
34	16.257	17.088	15.382	76	36.298	37.167	35.423	118	56.348	57.228	55.473
35	16.734	17.566	15.859	77	36.775	37.644	35.900	119	56.825	57.705	55.950
36	17.211	18.045	16.336	78	37.252	38.122	36.377	120	57.302	58.183	56.427
37	17.687	18.524	16.812	79	37.730	38.600	36.855	121	57.780	58.660	56.905
38	18.164	19.002	17.289	80	38.207	39.078	37.332	122	58.257	59.138	57.382
39	18.641	19.481	17.766	81	38.684	39.555	37.809	123	58.735	59.615	57.860
40	19.118	19.959	18.243	82	39.162	40.033	38.287	124	59.212	60.093	58.337
41	19.595	20.438	18.720	83	39.639	40.511	38.764	125	59.689	60.571	58.814
42	20.072	20.916	19.197	84	40.116	40.988	39.241	126	60.167	61.048	59.292
43	20.549	21.394	19.674	85	40.594	41.466	39.719	127	60.644	61.526	59.769
44	21.026	21.873	20.151	86	41.071	41.944	40.196	128	61.122	62.003	60.247
45	21.503	22.351	20.628	87	41.548	42.421	40.673	129	61.599	62.481	60.724
46	21.980	22.829	21.105	88	42.026	42.899	41.151	130	62.076	62.958	61.201
47	22.458	23.307	21.583	89	42.503	43.377	41.628	131	62.554	63.436	61.679
48	22.935	23.786	22.060	90	42.981	43.854	42.106	132	63.031	63.913	62.156
49	23.412	24.264	22.537	91	43.458	44.332	42.583	133	63.509	64.391	62.634
50	23.889	24.742	23.014	92	43.935	44.810	43.060	134	63.986	64.869	63.111

140 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
140	1 3/4	1.000	1.000	0.500	0.219	1.610	68	Cottered	Riveted
Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
140	1	1.060	1.228	2.120	2.288	-	11,310	50,900	4.98
140-2	2	2.028	2.197	4.056	4.225	1.925	15,370	101,800	9.83
140-3	3	2.983	3.163	5.966	6.146	1.925	22,600	152,700	14.72
140-4	4	3.961	4.130	7.922	8.091	1.925	29,830	203,600	19.60
140-5	5	4.924	5.092	9.848	10.016	1.925	35,410	254,500	24.49
140-6	6	5.886	6.055	11.772	11.941	1.925	41,580	305,400	29.38

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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	1700	
9	2.67	6.08	11.35	21.17	30.50	39.51	48.30	56.91	65.38	73.73	75.24	64.24	55.68	48.87	38.78	31.74	26.60	22.71								
10	2.99	6.81	12.71	23.73	34.17	44.27	54.12	63.77	73.26	82.62	88.12	75.24	65.21	57.23	45.42	37.17	31.15	26.60								
11	3.31	7.55	14.09	26.30	37.88	49.07	59.99	70.69	81.21	91.58	101.66	86.80	75.24	66.03	52.40	42.89	35.94	30.69	26.60	23.30	20.70	18.50	16.70	15.20		
12	3.64	8.30	15.48	28.89	41.61	53.91	65.90	77.65	89.21	100.60	111.85	98.90	85.72	75.24	59.70	48.87	40.95	34.97	30.30	26.60	23.60	21.10	19.00	17.30		
13	3.97	9.05	16.88	31.50	45.37	58.78	71.85	84.66	97.26	109.68	121.95	111.52	96.66	84.83	67.32	55.10	46.18	39.43	34.20	30.00	26.60	23.80	21.50	19.50		
14	4.30	9.80	18.29	34.12	49.15	63.67	77.84	91.72	105.37	118.82	132.11	124.63	108.03	94.81	75.24	61.58	51.61	44.06	38.20	33.50	29.70	26.60	24.00	21.80		
15	4.63	10.56	19.70	36.76	52.95	68.60	83.86	98.81	113.52	128.01	142.33	138.22	119.80	105.15	83.44	68.29	57.23	48.87	42.20	37.20	33.00	29.50	26.60			
16	4.96	11.32	21.12	39.42	56.77	73.55	89.91	105.95	121.71	137.25	152.60	152.27	131.98	115.83	91.92	75.24	63.05	53.83	46.70	41.00	36.30	32.50	29.30			
17	5.30	12.09	22.55	42.08	60.62	78.53	96.00	113.11	129.95	146.54	162.93	166.76	144.55	126.86	100.67	82.40	69.05	58.96	51.10	44.90	39.80	35.60	32.10			
18	5.64	12.85	23.99	44.76	64.48	83.53	102.11	120.32	138.22	155.87	173.30	181.69	157.49	138.22	109.68	89.77	75.24	64.24	55.70	48.90	43.30	38.80	35.00			
19	5.97	13.63	25.43	47.45	68.35	88.55	108.25	127.55	146.53	165.25	183.72	197.04	170.79	149.89	118.95	97.36	81.59	69.66	60.40	53.00	47.00	42.10	37.90			
20	6.31	14.40	26.88	50.16	72.25	93.60	114.41	134.82	154.88	174.66	194.19	212.80	184.45	161.88	128.46	105.15	88.12	75.24	65.20	57.20	50.80	45.40				
21	6.66	15.18	28.33	52.87	76.16	98.66	120.60	142.11	163.26	184.11	204.70	225.06	198.46	174.17	138.22	113.13	94.81	80.95	70.20	61.60	54.60	48.90				
22	7.00	15.97	29.79	55.60	80.08	103.74	126.82	149.43	171.67	193.59	215.24	236.65	212.80	186.76	148.21	121.30	101.66	86.80	75.20	66.00	58.60	52.40				
23	7.34	16.75	31.26	58.33	84.02	108.85	133.06	156.78	180.11	203.12	225.83	248.29	227.47	199.64	158.43	129.67	108.67	92.78	80.40	70.60	62.60	56.00				
24	7.69	17.54	32.73	61.07	87.97	113.97	139.31	164.16	188.59	212.67	236.45	259.97	242.47	212.80	168.87	138.22	115.83	98.90	85.70	75.20	66.70	59.70				
25	8.04	18.33	34.20	63.83	91.93	119.10	145.59	171.56	197.09	222.25	247.11	271.69	257.78	226.24	179.53	146.94	123.15	105.15	91.10	80.40	70.90	63.50				
26	8.38	19.12	35.68	66.59	95.91	124.26	151.89	178.98	205.61	231.87	257.80	283.44	273.40	239.95	190.41	155.85	130.61	111.52	96.70	84.80	75.20					
28	9.08	20.72	38.66	72.14	103.90	134.61	164.55	193.89	222.75	251.19	279.28	307.06	305.54	268.16	212.80	174.17	145.97	124.63	108.00	94.80	84.10					
30	9.78	22.32	41.65	77.72	111.94	145.02	177.28	208.89	239.98	270.62	300.89	330.82	338.86	297.40	236.00	193.16	161.88	138.22	120.00	105.00	93.20					
32	10.49	23.93	44.65	83.33	120.02	155.49	190.08	223.97	257.30	290.16	322.61	354.70	373.30	327.63	259.99	212.80	178.34	152.27	132.00	116.00						
35	11.56	26.36	49.19	91.79	132.22	171.29	209.39	246.73	283.45	319.65	355.39	390.74	425.74	374.76	297.40	243.41	203.99	174.17	151.00	130.00						
40	13.35	30.45	56.82	106.03	152.73	197.87	241.88	285.01	327.42	369.23	410.52	451.36	491.78	457.87	363.35	297.40	249.23	212.80	178.00							
45	15.16	34.58	64.53	120.42	173.45	224.71	274.69	323.67	371.84	419.32	466.21	512.58	558.49	546.35	433.56	354.86	297.40	253.92								
Lube	Type A	Type B											Type C													

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note:

For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

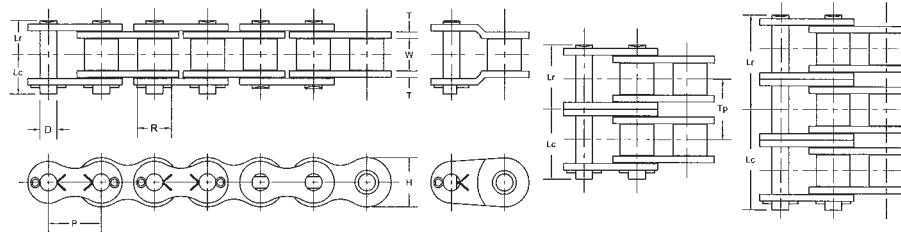
Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

140 ASME/ANSI Roller Chain

#140 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	5.117	5.858	4.117	51	28.427	29.423	27.427	93	51.815	52.835	50.815
10	5.663	6.436	4.663	52	28.984	29.981	27.984	94	52.372	53.392	51.372
11	6.212	7.010	5.212	53	29.541	30.539	28.541	95	52.929	53.950	51.929
12	6.761	7.581	5.761	54	30.097	31.096	29.097	96	53.486	54.507	52.486
13	7.313	8.150	6.313	55	30.654	31.654	29.654	97	54.043	55.064	53.043
14	7.864	8.717	6.864	56	31.211	32.212	30.211	98	54.599	55.621	53.599
15	8.417	9.283	7.417	57	31.767	32.769	30.767	99	55.156	56.179	54.156
16	8.970	9.848	7.970	58	32.324	33.327	31.324	100	55.713	56.736	54.713
17	9.524	10.412	8.524	59	32.881	33.884	31.881	101	56.270	57.293	55.270
18	10.078	10.975	9.078	60	33.438	34.442	32.438	102	56.827	57.850	55.827
19	10.632	11.537	9.632	61	33.995	35.000	32.995	103	57.384	58.408	56.384
20	11.187	12.099	10.187	62	34.551	35.557	33.551	104	57.941	58.965	56.941
21	11.742	12.660	10.742	63	35.108	36.115	34.108	105	58.498	59.522	57.498
22	12.297	13.222	11.297	64	35.665	36.672	34.665	106	59.055	60.079	58.055
23	12.852	13.782	11.852	65	36.222	37.230	35.222	107	59.612	60.636	58.612
24	13.407	14.343	12.407	66	36.779	37.787	35.779	108	60.169	61.194	59.169
25	13.963	14.903	12.963	67	37.336	38.344	36.336	109	60.726	61.751	59.726
26	14.518	15.463	13.518	68	37.892	38.902	36.892	110	61.283	62.308	60.283
27	15.074	16.022	14.074	69	38.449	39.459	37.449	111	61.840	62.865	60.840
28	15.630	16.582	14.630	70	39.006	40.017	38.006	112	62.397	63.422	61.397
29	16.186	17.141	15.186	71	39.563	40.574	38.563	113	62.954	63.980	61.954
30	16.742	17.700	15.742	72	40.120	41.132	39.120	114	63.511	64.537	62.511
31	17.298	18.259	16.298	73	40.677	41.689	39.677	115	64.068	65.094	63.068
32	17.854	18.818	16.854	74	41.234	42.246	40.234	116	64.625	65.651	63.625
33	18.410	19.377	17.410	75	41.790	42.804	40.790	117	65.182	66.208	64.182
34	18.966	19.936	17.966	76	42.347	43.361	41.347	118	65.739	66.765	64.739
35	19.523	20.494	18.523	77	42.904	43.918	41.904	119	66.296	67.323	65.296
36	20.079	21.053	19.079	78	43.461	44.476	42.461	120	66.853	67.880	65.853
37	20.635	21.611	19.635	79	44.018	45.033	43.018	121	67.410	68.437	66.410
38	21.192	22.169	20.192	80	44.575	45.590	43.575	122	67.967	68.994	66.967
39	21.748	22.728	20.748	81	45.132	46.148	44.132	123	68.524	69.551	67.524
40	22.305	23.286	21.305	82	45.689	46.705	44.689	124	69.081	70.108	68.081
41	22.861	23.844	21.861	83	46.246	47.262	45.246	125	69.638	70.666	68.638
42	23.418	24.402	22.418	84	46.802	47.820	45.802	126	70.195	71.223	69.195
43	23.974	24.960	22.974	85	47.359	48.377	46.359	127	70.752	71.780	69.752
44	24.531	25.518	23.531	86	47.916	48.934	46.916	128	71.309	72.337	70.309
45	25.087	26.076	24.087	87	48.473	49.492	47.473	129	71.866	72.894	70.866
46	25.644	26.634	24.644	88	49.030	50.049	48.030	130	72.423	73.451	71.423
47	26.200	27.192	25.200	89	49.587	50.606	48.587	131	72.980	74.009	71.980
48	26.757	27.750	25.757	90	50.144	51.163	49.144	132	73.537	74.566	72.537
49	27.314	28.308	26.314	91	50.701	51.721	49.701	133	74.094	75.123	73.094
50	27.870	28.865	26.870	92	51.258	52.278	50.258	134	74.651	75.680	73.651

160 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
160	2	1.250	1.125	0.562	0.250	1.839	60	Yes	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
160	1	1.268	1.437	2.535	2.705	-	14,900	63,200	6.58
160-2	2	2.417	2.591	4.835	5.008	2.303	20,230	126,400	13.07
160-3	3	3.571	3.740	7.142	7.311	2.303	29,750	189,600	19.60
160-4	4	4.732	4.902	9.465	9.634	2.303	39,270	252,800	26.05
160-5	5	5.882	6.059	11.764	11.941	2.303	46,410	316,000	32.54
160-6	6	7.035	7.205	14.071	14.240	2.303	54,740	379,200	39.03

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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	1400
9	3.87	8.82	16.46	30.72	44.25	57.32	70.07	82.57	94.86	99.90	83.72	71.48	61.96	54.38	48.22	43.15	38.91	35.32							
10	4.33	9.88	18.45	34.42	49.58	64.23	78.52	92.52	106.29	117.00	98.05	83.72	72.57	63.69	56.48	50.54	45.57	41.37							
11	4.80	10.96	20.45	38.15	54.96	71.20	87.03	102.55	117.81	132.86	113.12	96.58	83.72	73.47	65.16	58.31	52.57	47.72	43.60	40.00	34.10	29.60	26.00	23.00	
12	5.28	12.04	22.46	41.91	60.37	78.21	95.61	112.66	129.42	145.95	128.89	110.05	95.39	83.72	74.25	66.44	59.90	54.38	49.60	46.60	38.90	33.70	29.60	26.30	
13	5.75	13.12	24.49	45.70	65.82	85.27	104.24	122.83	141.11	159.13	145.33	124.09	107.56	94.40	83.72	74.91	67.55	61.31	56.00	51.40	43.90	38.00	33.40	29.60	
14	6.23	14.22	26.53	49.50	71.31	92.38	112.92	133.06	152.86	172.38	162.42	138.68	120.20	105.50	93.56	83.72	75.49	68.52	62.60	57.40	49.00	42.50	37.30	33.10	
15	6.71	15.32	28.58	53.33	76.82	99.52	121.66	143.36	164.69	185.72	180.13	153.80	133.31	117.00	103.76	92.85	83.72	75.99	69.40	63.70	54.40	47.10	41.40		
16	7.20	16.42	30.64	57.18	82.37	106.71	130.44	153.70	176.58	199.13	198.44	169.43	146.86	128.89	114.31	102.28	92.23	83.72	76.40	70.20	59.90	51.90	45.60		
17	7.69	17.53	32.72	61.05	87.94	113.93	139.27	164.10	188.53	212.60	217.33	185.56	160.84	141.16	125.19	112.02	101.01	91.69	83.70	76.80	65.60	56.90	49.90		
18	8.18	18.65	34.80	64.94	93.54	121.18	148.14	174.55	200.53	226.14	236.79	202.17	175.24	153.80	136.40	122.05	110.05	99.90	91.20	83.70	71.50	62.00	54.40		
19	8.67	19.77	36.89	68.85	99.17	128.47	157.05	185.05	212.59	239.74	256.79	219.25	190.05	166.79	147.92	132.36	119.35	108.33	98.90	90.80	77.50	67.20	59.00		
20	9.16	20.90	39.00	72.77	104.81	135.79	165.99	195.59	224.70	253.39	277.33	236.79	205.25	180.13	159.75	142.95	128.89	117.00	107.0	98.10	83.70	72.60	63.70		
21	9.66	22.03	41.11	76.70	110.49	143.14	174.97	206.17	236.86	267.10	296.97	254.77	220.83	193.81	171.88	153.80	138.68	125.88	115.0	105.0	90.10	78.10	68.50		
22	10.15	23.16	43.22	80.66	116.18	150.51	183.99	216.80	249.06	280.86	312.27	273.18	236.79	207.82	184.30	164.91	148.70	134.98	123.0	113.0	96.60	83.70			
23	10.65	24.30	45.35	84.62	121.89	157.91	193.04	227.46	261.31	294.68	327.63	292.02	253.12	222.15	197.01	176.29	158.95	144.29	132.0	121.0	103.0	89.50			
24	11.15	25.44	47.48	88.60	127.63	165.34	202.12	238.16	273.60	308.54	343.04	311.27	269.80	236.79	210.00	187.91	169.43	153.80	140.0	129.0	110.0	95.40			
25	11.66	26.59	49.62	92.60	133.38	172.79	211.23	248.89	285.93	322.44	358.50	330.92	286.84	251.74	223.26	199.77	180.13	163.51	149.0	137.0	117.0	101.0			
26	12.16	27.74	51.77	96.60	139.15	180.27	220.37	259.66	298.30	336.40	374.01	350.98	304.22	267.00	236.79	211.88	191.05	173.42	158.0	145.0	124.0	108.0			
28	13.18	30.05	56.08	104.65	150.74	195.29	238.73	281.30	323.16	364.43	405.18	392.24	339.99	298.39	264.63	236.79	213.51	193.81	177.0	162.0	139.0	120.0			
30	14.19	32.38	60.42	112.75	162.40	210.40	257.20	303.06	348.16	392.62	436.52	435.01	377.06	330.92	293.48	262.61	236.79	214.94	196.0	180.0	154.0				
32	15.22	34.72	64.78	120.89	174.13	225.59	275.76	324.94	373.29	420.96	468.04	479.23	415.39	364.56	323.32	289.30	260.86	236.79	216.0	198.0	169.0				
35	16.77	38.24	71.37	133.17	191.82	248.51	303.78	357.95	411.23	463.74	515.60	548.18	475.15	417.01	369.83	330.92	298.39	270.86	247.0	227.0	180.0				
40	19.37	44.18	82.44	153.83	221.58	287.06	350.91	413.48	475.02	535.68	595.58	654.82	580.52	509.49	451.85	404.31	364.56	330.92	302.0	257.0					
45	21.99	50.17	93.62	174.70	251.64	326.00	398.51	469.57	539.46	608.34	676.37	743.65	692.70	607.95	539.16	482.44	435.01	394.87							
Lube	Type A	Type B		Type C																					

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note: For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

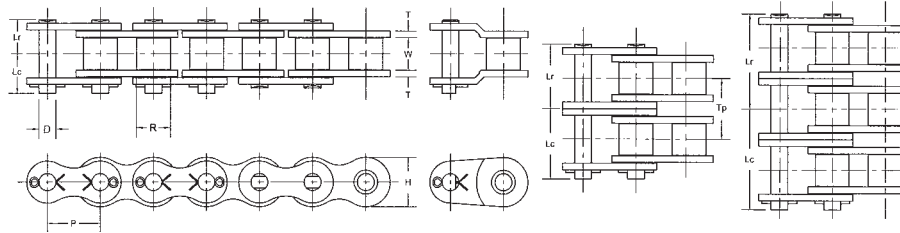
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

160 ASME/ANSI Roller Chain

#160 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	5.848	6.695	4.723	51	32.488	33.627	31.363	93	59.217	60.383	58.092
10	6.472	7.355	5.347	52	33.124	34.264	31.999	94	59.853	61.020	58.728
11	7.099	8.011	5.974	53	33.761	34.901	32.636	95	60.490	61.657	59.365
12	7.727	8.664	6.602	54	34.397	35.539	33.272	96	61.126	62.294	60.001
13	8.357	9.314	7.232	55	35.033	36.176	33.908	97	61.763	62.931	60.638
14	8.988	9.963	7.863	56	35.669	36.813	34.544	98	62.399	63.567	61.274
15	9.619	10.609	8.494	57	36.306	37.451	35.181	99	63.036	64.204	61.911
16	10.252	11.255	9.127	58	36.942	38.088	35.817	100	63.672	64.841	62.547
17	10.884	11.899	9.759	59	37.578	38.725	36.453	101	64.309	65.478	63.184
18	11.518	12.543	10.393	60	38.215	39.362	37.090	102	64.945	66.115	63.820
19	12.151	13.185	11.026	61	38.851	39.999	37.726	103	65.582	66.752	64.457
20	12.785	13.828	11.660	62	39.487	40.637	38.362	104	66.219	67.388	65.094
21	13.419	14.469	12.294	63	40.124	41.274	38.999	105	66.855	68.025	65.730
22	14.053	15.110	12.928	64	40.760	41.911	39.635	106	67.492	68.662	66.367
23	14.688	15.751	13.563	65	41.396	42.548	40.271	107	68.128	69.299	67.003
24	15.323	16.392	14.198	66	42.033	43.185	40.908	108	68.765	69.936	67.640
25	15.957	17.032	14.832	67	42.669	43.822	41.544	109	69.401	70.572	68.276
26	16.592	17.671	15.467	68	43.306	44.459	42.181	110	70.038	71.209	68.913
27	17.228	18.311	16.103	69	43.942	45.096	42.817	111	70.674	71.846	69.549
28	17.863	18.950	16.738	70	44.578	45.733	43.453	112	71.311	72.483	70.186
29	18.498	19.590	17.373	71	45.215	46.371	44.090	113	71.947	73.119	70.822
30	19.134	20.229	18.009	72	45.851	47.008	44.726	114	72.584	73.756	71.459
31	19.769	20.868	18.644	73	46.488	47.645	45.363	115	73.220	74.393	72.095
32	20.405	21.506	19.280	74	47.124	48.282	45.999	116	73.857	75.030	72.732
33	21.040	22.145	19.915	75	47.760	48.919	46.635	117	74.493	75.667	73.368
34	21.676	22.783	20.551	76	48.397	49.556	47.272	118	75.130	76.303	74.005
35	22.312	23.422	21.187	77	49.033	50.193	47.908	119	75.767	76.940	74.642
36	22.947	24.060	21.822	78	49.670	50.829	48.545	120	76.403	77.577	75.278
37	23.583	24.698	22.458	79	50.306	51.466	49.181	121	77.040	78.214	75.915
38	24.219	25.336	23.094	80	50.943	52.103	49.818	122	77.676	78.850	76.551
39	24.855	25.974	23.730	81	51.579	52.740	50.454	123	78.313	79.487	77.188
40	25.491	26.612	24.366	82	52.216	53.377	51.091	124	78.949	80.124	77.824
41	26.127	27.250	25.002	83	52.852	54.014	51.727	125	79.586	80.761	78.461
42	26.763	27.888	25.638	84	53.489	54.651	52.364	126	80.222	81.397	79.097
43	27.399	28.526	26.274	85	54.125	55.288	53.000	127	80.859	82.034	79.734
44	28.035	29.164	26.910	86	54.761	55.925	53.636	128	81.496	82.671	80.371
45	28.671	29.801	27.546	87	55.398	56.562	54.273	129	82.132	83.308	81.007
46	29.307	30.439	28.182	88	56.034	57.199	54.909	130	82.769	83.944	81.644
47	29.943	31.077	28.818	89	56.671	57.836	55.546	131	83.405	84.581	82.280
48	30.580	31.714	29.455	90	57.307	58.473	56.182	132	84.042	85.218	82.917
49	31.216	32.352	30.091	91	57.944	59.109	56.819	133	84.678	85.855	83.553
50	31.852	32.989	30.727	92	58.580	59.746	57.455	134	85.315	86.491	84.190

180 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
	P	W	R	D	T	H		Cottered	Riveted
180	2 1/4	1.406	1.406	0.687	0.281	2.067	54	Yes	Yes
Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
180	1	1.429	1.658	2.858	3.087	-	16,600	81,500	9.00
180-2	2	2.720	2.950	5.440	5.670	2.587	23,120	163,000	17.89
180-3	3	4.027	4.249	8.054	8.276	2.587	34,000	244,500	26.78
180-4	4	5.319	5.544	10.638	10.863	2.587	44,880	326,000	35.67
180-5	5	6.613	6.837	13.226	13.450	2.587	53,040	407,500	44.56
180-6	6	7.907	8.130	15.814	16.037	2.587	62,560	489,000	53.45

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of 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	1150	
9	5.21	11.89	22.19	41.40	59.63	77.25	94.44	111.28	127.84	109.77	91.99	78.54	68.08	59.75	52.99	47.41	42.75	38.81								
10	5.84	13.32	24.86	46.39	66.82	86.56	105.82	124.69	143.24	128.56	107.74	91.99	79.74	69.98	62.06	55.53	50.07	45.45								
11	6.47	14.77	27.55	51.42	74.06	95.95	117.29	138.20	158.77	148.32	124.30	106.13	91.99	80.73	71.60	64.07	57.77	52.44	47.90	46.90	40.50	37.50	34.90	32.50		
12	7.11	16.22	30.27	56.48	81.36	105.40	128.85	151.82	174.42	169.00	141.63	120.92	104.81	91.99	81.58	73.00	65.82	59.75	54.60	50.10	46.20	42.80	39.70	37.10		
13	7.75	17.69	33.00	61.58	88.71	114.92	140.48	165.53	190.16	190.55	159.69	136.35	118.19	103.72	91.99	82.31	74.22	67.37	61.50	56.50	52.10	48.20	44.80			
14	8.40	19.16	35.75	66.72	96.10	124.50	152.19	179.32	206.01	212.96	178.47	152.38	132.08	115.92	102.81	91.99	82.95	75.29	68.70	63.10	58.20	53.90	50.10			
15	9.05	20.64	38.52	71.88	103.53	134.13	163.96	193.20	221.95	236.18	197.93	169.00	146.48	128.56	114.01	102.02	91.99	83.50	76.20	70.00	64.50	59.70	55.50			
16	9.70	22.13	41.30	77.07	111.00	143.81	175.79	207.14	237.97	260.19	218.05	186.17	161.37	141.63	125.60	112.39	101.34	91.99	84.20	77.10	71.10	65.80	61.20			
17	10.36	23.63	44.09	82.28	118.52	153.54	187.69	221.16	254.07	284.96	238.81	203.90	176.74	155.11	137.56	123.09	110.99	100.75	92.00	84.40	77.90	72.20				
18	11.02	25.13	46.90	87.52	126.06	163.32	199.64	235.24	270.25	304.76	260.19	222.15	192.56	169.00	149.88	134.11	120.92	109.77	100.00	92.00	84.80	78.50				
19	11.68	26.64	49.72	92.78	133.64	173.14	211.65	249.39	286.50	323.08	282.17	240.92	208.82	183.27	162.54	145.44	131.14	119.04	109.00	99.80	92.00	85.20				
20	12.35	28.16	52.55	98.07	141.25	183.00	223.70	263.59	302.82	341.49	304.73	260.19	225.53	197.93	175.54	157.07	141.63	128.56	117.00	108.00	99.30	92.00				
21	13.01	29.69	55.40	103.37	148.90	192.90	235.80	277.85	319.20	359.96	327.87	279.94	242.65	212.96	188.87	169.00	152.38	138.32	126.00	116.00	107.00	99.00				
22	13.68	31.22	58.25	108.70	156.57	202.84	247.95	292.17	335.65	378.51	351.57	300.17	260.19	228.35	202.52	181.21	163.39	148.32	135.00	124.00	115.00					
23	14.36	32.75	61.11	114.04	164.27	212.81	260.15	306.54	352.16	397.13	375.81	320.87	278.13	244.10	216.48	193.70	174.66	158.54	145.00	133.00	123.00					
24	15.03	34.29	63.99	119.41	172.00	222.82	272.38	320.96	368.72	415.81	400.58	342.02	296.46	260.19	230.75	206.47	186.17	169.00	154.00	142.00	131.00					
25	15.71	35.84	66.87	124.79	179.75	232.87	284.66	335.42	385.34	434.55	425.88	363.62	315.18	276.62	245.32	219.51	197.93	179.67	164.00	151.00	139.00					
26	16.39	37.39	69.77	130.19	187.53	242.94	296.98	349.94	402.01	453.35	451.69	385.66	334.28	293.38	260.19	232.81	209.92	190.55	174.00	160.00						
28	17.76	40.50	75.58	141.04	203.15	263.19	321.73	379.10	435.51	491.13	504.79	431.00	373.58	327.87	290.78	260.19	234.61	212.96	194.00	178.00						
30	19.13	43.64	81.43	151.95	218.87	283.55	346.61	408.42	469.20	529.12	559.83	477.99	414.32	363.62	322.48	288.56	260.19	236.18	216.00	198.00						
32	20.51	46.79	87.31	162.92	234.67	304.02	371.64	437.90	503.07	567.32	616.74	526.58	456.43	400.58	355.26	317.89	286.63	260.19	238.00							
35	22.59	51.54	96.18	179.47	258.51	334.91	409.40	482.40	554.20	624.97	694.85	602.34	522.10	458.22	406.37	363.62	327.87	297.62	220.00							
40	26.10	59.54	111.10	207.32	298.62	386.87	472.91	557.24	640.17	721.92	802.65	735.92	637.88	559.83	496.50	444.26	400.58	363.62								
45	29.64	67.61	126.17	235.44	339.13	439.34	537.06	632.83	727.01	819.85	911.53	878.13	761.15	668.02	592.44	530.11	477.99	433.89								
Lube	Type A		Type B																				Type C			

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Note:
For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

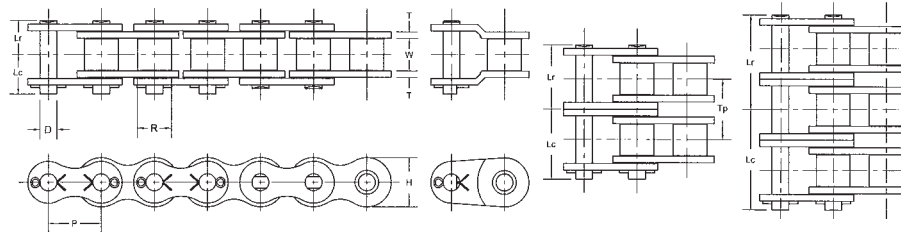
Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.36	1.70	2.00	2.50	2.64	3.30	3.12	3.90	3.68	4.60

180 ASME/ANSI Roller Chain

#180 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	6.579	7.532	5.173	51	36.549	37.830	35.143	93	66.619	67.931	65.213
10	7.281	8.275	5.875	52	37.265	38.547	35.859	94	67.335	68.647	65.929
11	7.986	9.013	6.580	53	37.981	39.264	36.575	95	68.051	69.364	66.645
12	8.693	9.747	7.287	54	38.696	39.981	37.290	96	68.767	70.080	67.361
13	9.402	10.479	7.996	55	39.412	40.698	38.006	97	69.483	70.797	68.077
14	10.111	11.208	8.705	56	40.128	41.415	38.722	98	70.199	71.513	68.793
15	10.822	11.935	9.416	57	40.844	42.132	39.438	99	70.915	72.230	69.509
16	11.533	12.662	10.127	58	41.560	42.849	40.154	100	71.632	72.946	70.226
17	12.245	13.386	10.839	59	42.276	43.566	40.870	101	72.348	73.663	70.942
18	12.957	14.110	11.551	60	42.991	44.283	41.585	102	73.064	74.379	71.658
19	13.670	14.834	12.264	61	43.707	44.999	42.301	103	73.780	75.095	72.374
20	14.383	15.556	12.977	62	44.423	45.716	43.017	104	74.496	75.812	73.090
21	15.096	16.278	13.690	63	45.139	46.433	43.733	105	75.212	76.528	73.806
22	15.810	16.999	14.404	64	45.855	47.150	44.449	106	75.928	77.245	74.522
23	16.524	17.720	15.118	65	46.571	47.867	45.165	107	76.644	77.961	75.238
24	17.238	18.440	15.832	66	47.287	48.583	45.881	108	77.360	78.677	75.954
25	17.952	19.161	16.546	67	48.003	49.300	46.597	109	78.076	79.394	76.670
26	18.667	19.880	17.261	68	48.719	50.017	47.313	110	78.792	80.110	77.386
27	19.381	20.600	17.975	69	49.435	50.733	48.029	111	79.509	80.827	78.103
28	20.096	21.319	18.690	70	50.151	51.450	48.745	112	80.225	81.543	78.819
29	20.810	22.038	19.404	71	50.867	52.167	49.461	113	80.941	82.259	79.535
30	21.525	22.757	20.119	72	51.583	52.883	50.177	114	81.657	82.976	80.251
31	22.240	23.476	20.834	73	52.299	53.600	50.893	115	82.373	83.692	80.967
32	22.955	24.195	21.549	74	53.015	54.317	51.609	116	83.089	84.409	81.683
33	23.670	24.913	22.264	75	53.731	55.033	52.325	117	83.805	85.125	82.399
34	24.385	25.631	22.979	76	54.446	55.750	53.040	118	84.521	85.841	83.115
35	25.101	26.350	23.695	77	55.162	56.467	53.756	119	85.237	86.558	83.831
36	25.816	27.068	24.410	78	55.878	57.183	54.472	120	85.953	87.274	84.547
37	26.531	27.786	25.125	79	56.594	57.900	55.188	121	86.670	87.990	85.264
38	27.247	28.503	25.841	80	57.311	58.616	55.905	122	87.386	88.707	85.980
39	27.962	29.221	26.556	81	58.027	59.333	56.621	123	88.102	89.423	86.696
40	28.677	29.939	27.271	82	58.743	60.049	57.337	124	88.818	90.139	87.412
41	29.393	30.657	27.987	83	59.459	60.766	58.053	125	89.534	90.856	88.128
42	30.108	31.374	28.702	84	60.175	61.483	58.769	126	90.250	91.572	88.844
43	30.824	32.092	29.418	85	60.891	62.199	59.485	127	90.966	92.288	89.560
44	31.539	32.809	30.133	86	61.607	62.916	60.201	128	91.682	93.005	90.276
45	32.255	33.526	30.849	87	62.323	63.632	60.917	129	92.399	93.721	90.993
46	32.971	34.244	31.565	88	63.039	64.349	61.633	130	93.115	94.438	91.709
47	33.686	34.961	32.280	89	63.755	65.065	62.349	131	93.831	95.154	92.425
48	34.402	35.678	32.996	90	64.471	65.782	63.065	132	94.547	95.870	93.141
49	35.118	36.396	33.712	91	65.187	66.498	63.781	133	95.263	96.587	93.857
50	35.833	37.113	34.427	92	65.903	67.215	64.497	134	95.979	97.303	94.573

200 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
200	2 1/2	1.500	1.562	0.781	0.312	2.354	48	Yes	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
200	1	1.542	1.876	3.084	3.418	-	18,600	105,500	11.38
200-2	2	2.953	3.288	5.906	6.241	2.819	27,350	211,000	22.67
200-3	3	4.361	4.852	8.722	9.213	2.819	40,230	316,500	33.96
200-4	4	5.774	6.132	11.548	11.906	2.819	53,100	422,000	45.25
200-5	5	7.195	7.534	14.390	14.729	2.819	62,750	527,500	56.54
200-6	6	8.605	8.939	17.210	17.544	2.819	74,010	633,000	67.83

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																			
	10	15	20	30	40	50	70	100	150	200	250	300	350	400	450	500	550	600	650	700
9	6.52	9.40	12.17	17.53	22.71	27.77	37.59	51.81	74.63	96.68	118.19	139.26	145.90	119.42	100.08	85.45	74.07	65.00		
10	7.31	10.53	13.64	19.65	25.45	31.11	42.11	58.06	83.62	108.34	132.43	156.05	170.88	139.87	117.21	100.08	86.75	76.13		
11	8.10	11.67	15.12	21.78	28.21	34.48	46.68	64.35	92.69	120.08	146.79	172.97	197.15	161.36	135.23	115.46	100.08	87.83	77.90	
12	8.90	12.82	16.61	23.92	30.99	37.88	51.28	70.69	101.82	131.91	161.25	190.01	218.29	183.86	154.08	131.56	114.03	100.08		
13	9.70	13.98	18.11	26.08	33.79	41.30	55.91	77.07	111.02	143.82	175.81	207.16	238.00	207.31	173.74	148.34	128.58	112.85		
14	10.51	15.14	19.62	28.25	36.60	44.74	60.57	83.50	120.27	155.81	190.46	224.43	257.83	231.69	194.17	165.78	143.70	126.11		
15	11.32	16.31	21.13	30.44	39.43	48.21	65.26	89.96	129.57	167.86	205.20	241.79	277.77	256.95	215.34	183.86	159.37	139.87		
16	12.14	17.49	22.66	32.64	42.28	51.69	69.97	96.45	138.92	179.98	220.01	259.24	297.82	283.07	237.23	202.55	175.56	154.08		
17	12.96	18.67	24.19	34.85	45.14	55.18	74.70	102.98	148.33	192.16	234.90	276.78	317.98	310.02	259.81	221.83	192.28	168.75		
18	13.79	19.86	25.73	37.06	48.02	58.70	79.46	109.53	157.77	204.39	249.86	294.41	338.22	337.77	283.07	241.69	209.49	183.86		
19	14.62	21.06	27.28	39.29	50.90	62.23	84.23	116.12	167.26	216.69	264.88	312.11	358.56	366.30	306.98	262.11	227.19	199.39		
20	15.45	22.26	28.83	41.53	53.80	65.77	89.03	122.73	176.78	229.03	279.97	329.89	378.98	395.60	331.53	283.07	245.36	215.34		
21	16.29	23.46	30.39	43.78	56.72	69.33	93.85	129.37	186.35	241.42	295.11	347.74	399.49	425.64	356.71	304.56	263.99			
22	17.13	24.67	31.96	46.03	59.64	72.90	98.69	136.04	195.95	253.86	310.32	365.66	420.07	456.40	382.49	326.57	283.07			
23	17.97	25.88	33.53	48.30	62.57	76.49	103.54	142.73	205.59	266.34	325.58	383.64	440.73	487.87	408.86	349.09	302.59			
24	18.81	27.10	35.11	50.57	65.51	80.08	108.41	149.44	215.26	278.87	340.90	401.69	461.46	520.03	435.81	372.10	322.53			
25	19.66	28.32	36.69	52.85	68.47	83.69	113.30	156.18	224.96	291.44	356.26	419.79	482.26	543.85	463.33	395.60	342.90			
26	20.51	29.55	38.28	55.14	71.43	87.32	118.20	162.94	234.69	304.05	371.68	437.95	503.13	567.38	491.41	419.57	363.68			
Lube	Type A			Type B						Type C										

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.48	1.70	2.18	2.50	2.88	3.30	3.40	3.90	4.01	4.60

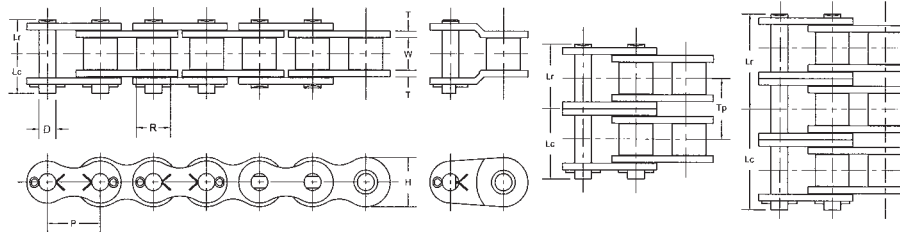
Note: For values to the left of solid black line in HP Table use Factor "A" ... for values to the right use factor "B".

200 ASME/ANSI Roller Chain

#200 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	7.310	8.369	5.748	51	40.610	42.033	39.048	93	74.021	75.479	72.459
10	8.090	9.194	6.528	52	41.405	42.830	39.843	94	74.817	76.275	73.255
11	8.874	10.014	7.312	53	42.201	43.627	40.639	95	75.612	77.071	74.050
12	9.659	10.830	8.097	54	42.996	44.423	41.434	96	76.408	77.867	74.846
13	10.446	11.643	8.884	55	43.791	45.220	42.229	97	77.204	78.663	75.642
14	11.235	12.453	9.673	56	44.587	46.017	43.025	98	77.999	79.459	76.437
15	12.024	13.262	10.462	57	45.382	46.813	43.820	99	78.795	80.255	77.233
16	12.815	14.068	11.253	58	46.178	47.610	44.616	100	79.591	81.051	78.029
17	13.605	14.874	12.043	59	46.973	48.406	45.411	101	80.386	81.847	78.824
18	14.397	15.678	12.835	60	47.768	49.203	46.206	102	81.182	82.643	79.620
19	15.189	16.482	13.627	61	48.564	49.999	47.002	103	81.978	83.439	80.416
20	15.981	17.284	14.419	62	49.359	50.796	47.797	104	82.773	84.235	81.211
21	16.774	18.086	15.212	63	50.155	51.592	48.593	105	83.569	85.031	82.007
22	17.567	18.888	16.005	64	50.950	52.389	49.388	106	84.364	85.827	82.802
23	18.360	19.689	16.798	65	51.746	53.185	50.184	107	85.160	86.623	83.598
24	19.153	20.489	17.591	66	52.541	53.981	50.979	108	85.956	87.419	84.394
25	19.947	21.290	18.385	67	53.336	54.778	51.774	109	86.751	88.215	85.189
26	20.741	22.089	19.179	68	54.132	55.574	52.570	110	87.547	89.011	85.985
27	21.534	22.889	19.972	69	54.927	56.371	53.365	111	88.343	89.807	86.781
28	22.329	23.688	20.767	70	55.723	57.167	54.161	112	89.138	90.603	87.576
29	23.123	24.487	21.561	71	56.518	57.963	54.956	113	89.934	91.399	88.372
30	23.917	25.286	22.355	72	57.314	58.759	55.752	114	90.730	92.195	89.168
31	24.711	26.085	23.149	73	58.109	59.556	56.547	115	91.525	92.991	89.963
32	25.506	26.883	23.944	74	58.905	60.352	57.343	116	92.321	93.787	90.759
33	26.300	27.681	24.738	75	59.701	61.148	58.139	117	93.117	94.583	91.555
34	27.095	28.479	25.533	76	60.496	61.944	58.934	118	93.913	95.379	92.351
35	27.890	29.277	26.328	77	61.292	62.741	59.730	119	94.708	96.175	93.146
36	28.684	30.075	27.122	78	62.087	63.537	60.525	120	95.504	96.971	93.942
37	29.479	30.873	27.917	79	62.883	64.333	61.321	121	96.300	97.767	94.738
38	30.274	31.671	28.712	80	63.678	65.129	62.116	122	97.095	98.563	95.533
39	31.069	32.468	29.507	81	64.474	65.925	62.912	123	97.891	99.359	96.329
40	31.864	33.266	30.302	82	65.269	66.722	63.707	124	98.687	100.155	97.125
41	32.659	34.063	31.097	83	66.065	67.518	64.503	125	99.482	100.951	97.920
42	33.454	34.860	31.892	84	66.861	68.314	65.299	126	100.278	101.747	98.716
43	34.249	35.657	32.687	85	67.656	69.110	66.094	127	101.074	102.543	99.512
44	35.044	36.455	33.482	86	68.452	69.906	66.890	128	101.869	103.339	100.307
45	35.839	37.252	34.277	87	69.247	70.702	67.685	129	102.665	104.135	101.103
46	36.634	38.049	35.072	88	70.043	71.498	68.481	130	103.461	104.931	101.899
47	37.429	38.846	35.867	89	70.839	72.295	69.277	131	104.256	105.727	102.694
48	38.224	39.643	36.662	90	71.634	73.091	70.072	132	105.052	106.522	103.490
49	39.020	40.440	37.458	91	72.430	73.887	70.868	133	105.848	107.318	104.286
50	39.815	41.236	38.253	92	73.226	74.683	71.664	134	106.644	108.114	105.082

240 ASME/ANSI Roller Chain



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Common Dimensions (Inches)									
ASME/ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10ft	Available Construction	
								Cottered	Riveted
240	3	1.875	1.875	0.937	0.375	2.768	40	Yes	Yes

Pin Lengths and Chain Ratings									
ASME/ANSI Chain Number	Number of Strands	Riv. Pin End to C/L of Chain Lr	Cot. Pin End to C/L of Chain Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
240	1	1.900	2.198	3.800	4.098	-	25,400	152,000	15.89
240-2	2	3.626	3.925	7.252	7.551	3.457	37,860	304,000	31.67
240-3	3	5.354	5.654	10.708	11.008	3.457	55,680	456,000	47.45
240-4	4	7.083	7.382	14.166	14.465	3.457	73,490	608,000	63.23
240-5	5	8.812	9.110	17.624	17.922	3.457	86,850	760,000	79.00
240-6	6	10.541	10.838	21.082	21.379	3.457	102,440	912,000	94.80

Horsepower Ratings

Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																			
	5	10	15	20	25	30	40	50	60	80	100	125	150	175	200	250	300	350	400	450
9	5.63	10.51	15.13	19.60	23.96	28.24	36.58	44.72	52.69	68.27	83.45	102.01	120.20	138.09	155.72	190.35	212.73	168.81		
10	6.31	11.77	16.96	21.97	26.85	31.64	40.99	50.11	59.04	76.49	93.51	114.30	134.68	154.73	174.49	213.30	249.15	197.72		
11	6.99	13.05	18.79	24.35	29.76	35.07	45.44	55.54	65.44	84.79	103.64	126.69	149.29	171.50	193.40	236.42	278.58	228.10	187.0	156.0
12	7.68	14.33	20.65	26.75	32.70	38.53	49.91	61.01	71.89	93.14	113.85	139.18	164.00	188.40	212.46	259.72	306.03	259.91	213.0	
13	8.37	15.63	22.51	29.16	35.65	42.01	54.42	66.52	78.38	101.55	124.14	151.74	178.80	205.41	231.64	283.17	333.66	293.06	240.0	
14	9.07	16.93	24.39	31.59	38.62	45.51	58.95	72.07	84.92	110.01	134.48	164.39	193.70	222.53	250.95	306.76	361.46	327.52	268.0	
15	9.77	18.24	26.27	34.04	41.61	49.03	63.51	77.64	91.49	118.52	144.88	177.11	208.69	239.74	270.36	330.49	389.43	363.23	297.0	
16	10.48	19.56	28.17	36.49	44.61	52.56	68.10	83.25	98.09	127.08	155.34	189.89	223.75	257.05	289.88	354.35	417.54	400.15	328.0	
17	11.19	20.88	30.07	38.96	47.63	56.12	72.71	88.88	104.73	135.68	165.85	202.74	238.89	274.44	309.49	378.33	445.79	438.25	359.0	
18	11.90	22.21	31.99	41.44	50.66	59.70	77.34	94.54	111.40	144.31	176.41	215.65	254.10	291.92	329.20	402.42	474.18	477.48	377.0	
19	12.62	23.54	33.91	43.94	53.71	63.28	81.99	100.22	118.09	152.99	187.02	228.62	269.38	309.47	348.99	426.61	502.69	517.81	393.0	
20	13.34	24.89	35.85	46.44	56.77	66.89	86.66	105.93	124.82	161.71	197.67	241.64	284.73	327.10	368.87	450.91	531.32	559.23	407.0	
21	14.06	26.23	37.78	48.95	59.84	70.51	91.35	111.66	131.57	170.46	208.37	254.71	300.13	344.80	388.83	475.31	560.07	601.69	421.0	
22	14.78	27.58	39.73	51.47	62.92	74.14	96.05	117.42	138.35	179.24	219.11	267.84	315.60	362.57	408.86	499.80	588.93	645.18	435.0	
23	15.51	28.94	41.69	54.00	66.02	77.79	100.78	123.19	145.16	188.05	229.88	281.01	331.12	380.40	428.97	524.38	617.89	689.66	448.0	
24	16.24	30.30	43.65	56.54	69.12	81.45	105.52	128.98	151.98	196.90	240.69	294.23	346.69	398.29	449.15	549.05				
25	16.97	31.67	45.61	59.09	72.24	85.12	110.27	134.80	158.84	205.77	251.54	307.49	362.32	416.24	469.39	573.80				
26	17.70	33.04	47.59	61.65	75.36	88.80	115.04	140.63	165.71	214.68	262.43	320.79	378.00	434.25	489.70	598.62				
Lube	Type A						Type B						Type C							

Horsepower values given in the tables are for single strand chains. For multiple strand chains multiply these values by the factors shown below.

Number of Strands	2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B
Factor	1.48	1.70	2.18	2.50	2.88	3.30	3.40	3.90	4.01	4.60

Note:

For values to the left of solid black line in HP Table use Factor "A" . . . for values to the right use factor "B".

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

240 ASME/ANSI Roller Chain

#240 Sprocket Diameters

No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter	No. Teeth	Pitch Diameter	Outside Diameter	Bottom Diameter
9	8.771	10.042	6.896	51	48.732	50.440	46.857	93	88.825	90.575	86.950
10	9.708	11.033	7.833	52	49.687	51.396	47.812	94	89.780	91.530	87.905
11	10.648	12.017	8.773	53	50.641	52.352	48.766	95	90.735	92.485	88.860
12	11.591	12.996	9.716	54	51.595	53.308	49.720	96	91.690	93.441	89.815
13	12.536	13.971	10.661	55	52.550	54.264	50.675	97	92.644	94.396	90.769
14	13.482	14.944	11.607	56	53.504	55.220	51.629	98	93.599	95.351	91.724
15	14.429	15.914	12.554	57	54.459	56.176	52.584	99	94.554	96.306	92.679
16	15.377	16.882	13.502	58	55.413	57.132	53.538	100	95.509	97.262	93.634
17	16.327	17.849	14.452	59	56.367	58.088	54.492	101	96.463	98.217	94.588
18	17.276	18.814	15.401	60	57.322	59.043	55.447	102	97.418	99.172	95.543
19	18.227	19.778	16.352	61	58.276	59.999	56.401	103	98.373	100.127	96.498
20	19.177	20.741	17.302	62	59.231	60.955	57.356	104	99.328	101.082	97.453
21	20.129	21.704	18.254	63	60.186	61.911	58.311	105	100.283	102.038	98.408
22	21.080	22.665	19.205	64	61.140	62.866	59.265	106	101.237	102.993	99.362
23	22.032	23.627	20.157	65	62.095	63.822	60.220	107	102.192	103.948	100.317
24	22.984	24.587	21.109	66	63.049	64.778	61.174	108	103.147	104.903	101.272
25	23.936	25.547	22.061	67	64.004	65.733	62.129	109	104.102	105.859	102.227
26	24.889	26.507	23.014	68	64.958	66.689	63.083	110	105.057	106.814	103.182
27	25.841	27.467	23.966	69	65.913	67.645	64.038	111	106.011	107.769	104.136
28	26.794	28.426	24.919	70	66.868	68.600	64.993	112	106.966	108.724	105.091
29	27.747	29.385	25.872	71	67.822	69.556	65.947	113	107.921	109.679	106.046
30	28.700	30.343	26.825	72	68.777	70.511	66.902	114	108.876	110.634	107.001
31	29.654	31.301	27.779	73	69.731	71.467	67.856	115	109.831	111.590	107.956
32	30.607	32.260	28.732	74	70.686	72.422	68.811	116	110.785	112.545	108.910
33	31.560	33.217	29.685	75	71.641	73.378	69.766	117	111.740	113.500	109.865
34	32.514	34.175	30.639	76	72.595	74.333	70.720	118	112.695	114.455	110.820
35	33.467	35.133	31.592	77	73.550	75.289	71.675	119	113.650	115.410	111.775
36	34.421	36.090	32.546	78	74.505	76.244	72.630	120	114.605	116.365	112.730
37	35.375	37.047	33.500	79	75.459	77.200	73.584	121	115.559	117.321	113.684
38	36.329	38.005	34.454	80	76.414	78.155	74.539	122	116.514	118.276	114.639
39	37.283	38.962	35.408	81	77.369	79.111	75.494	123	117.469	119.231	115.594
40	38.236	39.919	36.361	82	78.323	80.066	76.448	124	118.424	120.186	116.549
41	39.190	40.875	37.315	83	79.278	81.021	77.403	125	119.379	121.141	117.504
42	40.144	41.832	38.269	84	80.233	81.977	78.358	126	120.334	122.096	118.459
43	41.099	42.789	39.224	85	81.188	82.932	79.313	127	121.288	123.051	119.413
44	42.053	43.745	40.178	86	82.142	83.887	80.267	128	122.243	124.006	120.368
45	43.007	44.702	41.132	87	83.097	84.843	81.222	129	123.198	124.962	121.323
46	43.961	45.658	42.086	88	84.052	85.798	82.177	130	124.153	125.917	122.278
47	44.915	46.615	43.040	89	85.006	86.753	83.131	131	125.108	126.872	123.233
48	45.869	47.571	43.994	90	85.961	87.709	84.086	132	126.063	127.827	124.188
49	46.824	48.527	44.949	91	86.916	88.664	85.041	133	127.017	128.782	125.142
50	47.778	49.484	45.903	92	87.871	89.619	85.996	134	127.972	129.737	126.097

Drive Chain Selection

Introduction

Roller chains are one of the most efficient and cost effective ways to transmit mechanical power between shafts. They operate over a wide range of speeds, handle large working loads, have very small energy losses, and are generally inexpensive compared with other methods of transmitting power between rotating shafts. Successful selection involves following several relatively simple steps involving algebraic calculation and the use of Horsepower and Service Factor tables.

For any given set of drive conditions, a number of possible chain and sprocket combinations are possible. The designer therefore, should be aware of several roller chain drive selection principles which, when applied correctly, help to balance overall drive performance and cost. The purpose of this section is to help designers make selections that meet the requirements of the drive, and are cost efficient.

IMPORTANT NOTE: The horsepower ratings and working load ratings published in this catalog are for use ONLY with Hitachi Inspire Series™ SBR® Roller Chains. When operating at or near the capacities shown in these tables we recommend the use of machine cut hardened tooth sprockets.

General Roller Chain Drive Principles

- The recommended number of teeth for the small sprocket is 15. The minimum which should be used is 09. Smoother operation is achieved with more teeth.
- The recommended maximum number of teeth for the large sprocket is 120.
- Speed ratios should be 7:1 or less (optimum) and never more than 10:1.
- The recommended minimum wrap of the small sprocket is 120 degrees.
- The recommended center distance between shafts is 30-50 pitches of chain. There are some exceptions however as follows:
 - Center distance must be greater than ° the sum of the outside diameters of the driver and driven sprockets to prevent interference.
 - For speed ratios greater than 3:1 the center distance should not be less than the outside diameter of the large sprocket minus the outside diameter of the small sprocket to assure a minimum 120 degrees of wrap over the small sprocket.

Required Information For Drive Chain Selection

- Type of input power (electric motor, internal combustion engine with mechanical or hydraulic drive), and type of equipment to be driven.
- Amount of horsepower required to provide sufficient power to the driven shaft.
- Full load speed of the fastest running shaft (rpm).
- Desired speed of the slow running shaft (i.e. the speed ratio). NOTE: *If speeds are variable determine the horsepower to be transmitted at each speed.*
- Diameters of the driver and driven shafts.
- Center distance of the shafts. NOTE: *If this distance is adjustable determine the amount of adjustment.*
- Note the position of the drive and any space limitations that might exist. Usually these limitations are on the maximum sprocket diameter (restricts the use of single strand chains) or on the width of the chains (restricts the use of multiple strand chains).

- Conditions of the drive. It is advisable to consult with Hitachi Maxco, Ltd. engineering personnel when unusual conditions such as widely fluctuating loads, temperatures, or severely abrasive or corrosive environments exist.

Abbreviations Used in Equations

- N** Number of teeth on the large sprocket.
- n** Number of teeth on the small sprocket.
- R** Speed in revolutions per minute (rpm) of the large sprocket.
- r** Speed in revolutions per minute (rpm) of the small sprocket.
- C** Shaft center distance in chain pitches.
- HP** Horsepower of the drive motor or engine.
- SF** Service Factor.

The Drive Chain Selection Procedure

The following nine steps should be used to select the chain and sprocket sizes, determine the minimum center distance, and calculate the chain length in pitches.

Step 1: Determine the Class of the Driven Load

Estimate which of the following best characterizes the condition of the drive:

- Uniform: Smooth operation. Little or no shock loading. Soft start up.
- Moderate: Normal or moderate shock loading.
- Heavy: Severe shock loading. Frequent starting and stopping.

Step 2: Determine the Service Factor

From Table 1 below determine the appropriate Service Factor (SF) for the application.

Table 1: Service Factors

Class of Driven Load	Type of Input Power		
	Internal Combustion Engine with Hydraulic Drive	Electric Motor or Turbine	Internal Combustion Engine with Mechanical Drive
Uniform	1.0	1.0	1.2
Moderate	1.2	1.3	1.4
Heavy	1.4	1.5	1.7

Step 3: Calculate Design Horsepower

$$\text{Design Horsepower (DHP)} = \text{HP} \times \text{SF}$$

The Design Horsepower is equal to the motor horsepower times the Service Factor (SF) found in table 1.

Step 4: Tentative Chain Selection

Make a tentative chain selection from the Quick Selector Chart on page 42 as follows:

- Locate the design horsepower calculated in step 3 by reading up the single, double, triple, or quad chain columns, in that order, until the design horsepower is located. Draw a horizontal line through this value.
- Locate the RPM of the small sprocket on the horizontal axis of the chart. Draw a vertical line through this value.
- The intersection of the two lines should indicate the tentative chain selection.

Drive Chain Selection

Step 5: Select the Number of Teeth for the Small Sprocket

Once a chain size and number of strands is tentatively selected, we now check to see what is the minimum number of teeth required on the small sprocket in order to transmit the Design Horsepower. To do this we must consult the Horsepower Tables found on the preceding pages corresponding to the chain size tentatively selected (you may also check the Horsepower Table of the next smaller chain size).

Note that the horsepower values in the tables are for single strand chains only. The horsepower rating for multiple strand chains is found by multiplying the value in the table by the appropriate “Multi-Strand Factor” shown at the bottom of the page that contains the Horsepower Table and specifications of the chain being considered (See specification pages 12-38).

To more easily use the Horsepower Tables we will calculate a new value (Design Horsepower Table: DHPT) from the following:

$$\text{DHPT} = \text{DHP} / \text{Multi-Strand Factor}$$

Thus the DHPT is the DHP divided by the Multi-Strand Factor. If single strand chains are used then the Factor = 1 and DHPT = DHP.

The number of teeth on the small sprocket is then determined from the following:

1. Determine the DHPT from the above formula.
2. Locate the RPM of the small sprocket on the horsepower table and read down the column until the first value that is equal to or greater than the DHPT. Read across to the first column (No. Of Teeth Small Sprocket). This is the minimum number of teeth required on the small sprocket for the drive to operate successfully.

Note the lubrication method specified in the Horsepower Table. This lubrication method should be used in order to achieve reasonable chain performance. Additional information regarding lubrication may be found in the Engineering Information section on pages 135-137.

Step 6: Determine the Number of Teeth for the Large Sprocket

We use the following to calculate the number of teeth on the large sprocket:

$$N = (r / R) \times n$$

The number of teeth on the large sprocket equals the RPM of the small sprocket (r) divided by the desired RPM of the large sprocket (this is the speed ratio) times the number of teeth of the small sprocket.

If the number of sprocket teeth is too large for the space where the drive is to be located, then additional chain strands and a smaller pitch chain should be specified.

Step 7: Determine the Minimum Shaft Center Distance

The minimum shaft centers, in chain pitches, may be determined by the following formula:

$$C_{\min} = (2N + n) / 6$$

The above is a guide only. The final selection should be determined after consideration of the information given in **General Roller Chain Drive Principles** at the beginning of this section.

Step 8: Check the Final Design

Use the information given in **General Roller Chain Drive Principles** to check the selection. In addition be aware of potential interference due to space limitations which might exist. To reduce the diameter of sprockets it is generally necessary to increase the number of chain strands and drop down to a smaller pitch.

In general, the least expensive drive is one which uses a minimum number of strands. Thus, a larger pitch single strand chain is generally more economical than a multi-strand chain of smaller pitch. This is because, as can be seen by the multi-strand factors, additional strands become less effective in transmitting power while the costs of both chains and sprockets increase with the number of strands.

Step 9: Calculate Chain Length in Pitches

The chain length in pitches (L) is given by the following formula:

$$L = [(N + n) / 2] + (2C) + (K / C)$$

Values for “K” may be found in Table 4 on page 42. Remember that C is the center distances in pitches of chains thus to obtain C (if the center distance in inches is known), use the following formula:

$$C = \text{Center distance (inches)} / \text{Chain Pitch (inches)}$$

Note that whenever possible it is best to utilize an even number of pitches *without an offset link*. Offsets do not possess the same load carrying capacity as the rest of the chain and their use should be avoided when possible.

Slow Speed Selection:

If the linear chain speed (S) of the drive is less than or equal to 160 ft/min we may use a chain one size smaller than that selected by the above method. We verify this selection by calculating the actual chain tension (T) and checking to be sure it is less than the “Rated Working Load” given in the specification tables found on the preceding pages. The procedure is to first calculate linear speed and then chain tension with the following formula:

$$S = (P \times n \times r) / 12$$

P = Chain Pitch in inches
n = Number of teeth on the small sprocket
r = RPM of the small sprocket

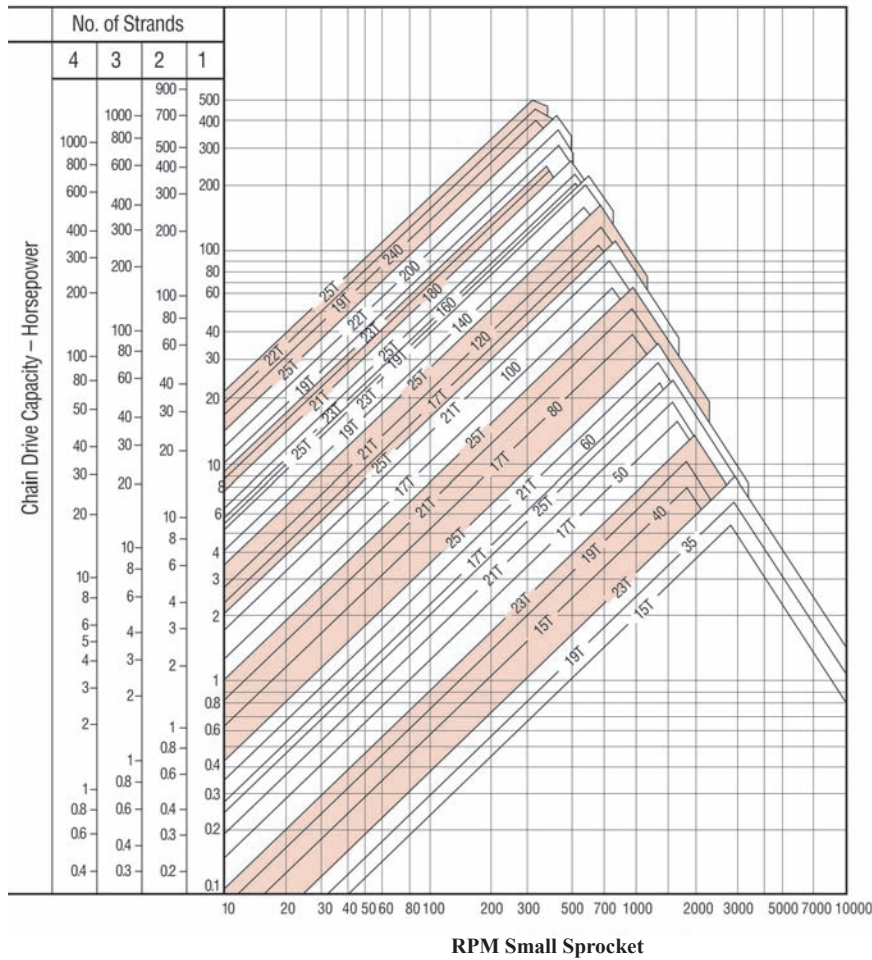
$$T = [(DHP \times 33,000) / S] \times F$$

DHP = Design Horsepower
F = Speed Factor given in Table

Table 3: Slow Speed Factor

Chain Speed (ft/min)	Factor
0 - 49.9	1.0
50 - 99.9	1.2
100 - 160	1.4

Drive Chain Selection



Quick Selector Chart

Table 4: “K” Values for Calculating Chain Length (L)

N-n	K	N-n	K	N-n	K	N-n	K	N-n	K	N-n	K	N-n	K
1	0.03	21	11.17	41	42.58	61	94.25	81	166.19	101	258.39	121	370.86
2	0.10	22	12.26	42	44.68	62	97.37	82	170.32	102	263.54	122	377.02
3	0.23	23	13.40	43	46.84	63	100.54	83	174.50	103	268.73	123	383.22
4	0.41	24	14.59	44	49.04	64	103.75	84	178.73	104	273.97	124	389.48
5	0.63	25	15.83	45	51.29	65	107.02	85	183.01	105	279.27	125	395.79
6	0.91	26	17.12	46	53.60	66	110.34	86	187.34	106	284.67	126	402.14
7	1.24	27	18.47	47	55.95	67	113.71	87	191.73	107	290.01	127	408.55
8	1.62	28	19.86	48	58.36	68	117.13	88	196.16	108	295.45	128	415.01
9	2.05	29	21.30	49	60.82	69	120.60	89	200.64	109	300.95	129	421.52
10	2.53	30	22.80	50	63.33	70	124.12	90	205.18	110	306.50	130	428.08
11	3.06	31	24.34	51	65.88	71	127.69	91	209.76	111	312.09	131	434.69
12	3.65	32	25.94	52	68.49	72	131.31	92	214.40	112	317.74	132	441.36
13	4.28	33	27.58	53	71.15	73	134.99	93	219.08	113	323.44	133	448.07
14	4.96	34	29.28	54	73.86	74	138.71	94	223.82	114	329.19	134	454.83
15	5.70	35	31.03	55	76.62	75	142.48	95	228.61	115	334.99	135	461.64
16	6.48	36	32.83	56	79.44	76	146.31	96	233.44	116	340.84	136	468.51
17	7.32	37	34.68	57	82.30	77	150.18	97	238.33	117	346.75	137	475.42
18	8.21	38	36.58	58	85.21	78	154.11	98	243.27	118	352.70	138	482.39
19	9.14	39	38.53	59	88.17	79	158.09	99	248.26	119	358.70	139	489.41
20	10.13	40	40.53	60	91.19	80	162.11	100	253.30	120	364.76	140	496.47

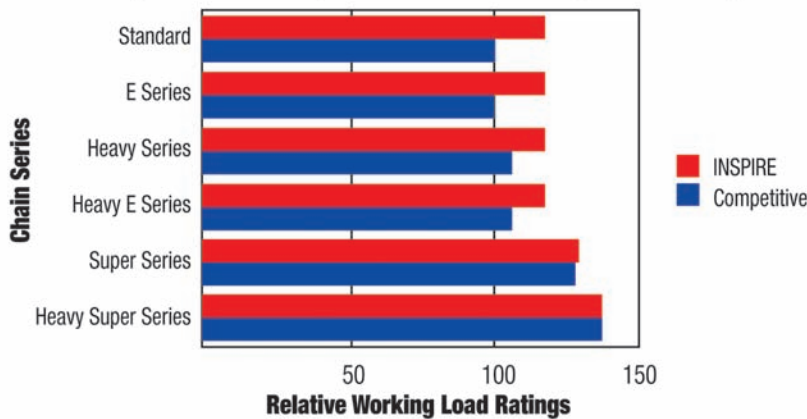
Rated Working Loads / INSPIRE™ SERIES SBR®

The INSPIRE SERIES™ SBR® Treatment improves the rated working loads and horsepower capacities of roller chains used for power transmission applications. The improvements are included in the data presented in this catalog. Multiple strand chains are also improved (to a lesser extent) and therefore the increase in working loads are lower for these chains.

Chains designed primarily for conveyor service (Double Pitch, and Attachment Chains) also benefit from the process. The working loads are not as high as the transmission chains because the design criteria for the attachment link is different and more suited to conveyor service.

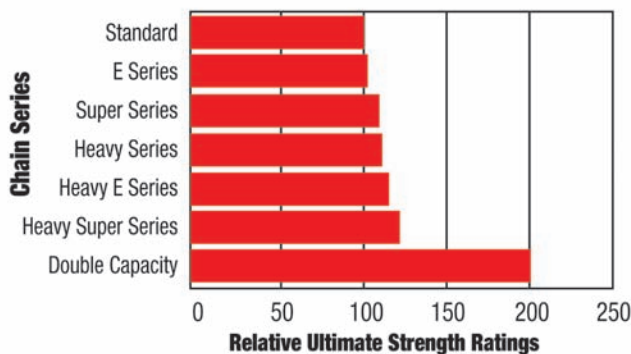


Comparison of Competitive Brand Working Load Ratings



Note in the table to the left that the rated working load of the INSPIRE™ SERIES SBR® is greater than our competitors Heavy (“H”) Series. In some applications it may be possible to replace Heavy Series Chains with our standard product and HE Series (Through Hardened Pin) with our “E” Series. Significant cost savings can be realized in this case. Please contact Hitachi’s product engineering personnel for more information.

Ultimate Strength Rating Guide

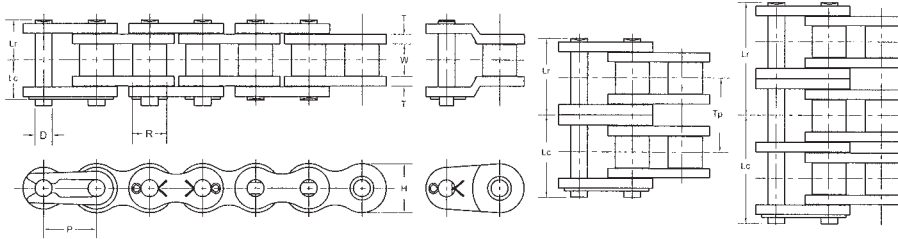


The table on the left is a general comparison of the ultimate strength ratings of different chain series. Contact Hitachi engineering personnel for additional information regarding chain selection for particular applications.

Extra Capacity Chains

Heavy Series Roller Chains

Heavy Series roller chains are built for heavy duty power transmission applications which require additional shock load capacity or link plate strength. They are dimensionally equivalent to the ASME/ANSI standard chains, except that the link plates are one size thicker. Single strand chains operate over standard ASME/ANSI sprockets (hardened teeth recommended), however multiple strand chains require special sprockets due to their increased transverse pitch.



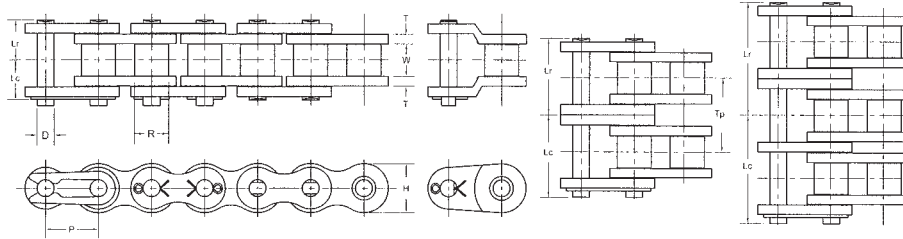
Heavy Series Chain Specifications

		Dimensions (Inches)												
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)	
Single Strand Chains	60H	3/4	0.500	0.469	0.234	0.125	0.691	0.567	0.646	-	2,470	12,300	1.21	
	80H	1	0.625	0.625	0.312	0.156	0.921	0.705	0.819	-	4,140	20,200	1.88	
	100H	1 1/4	0.750	0.750	0.375	0.187	1.154	0.835	0.972	-	6,360	30,800	2.78	
	120H	1 1/2	1.000	0.875	0.437	0.219	1.382	1.039	1.213	-	8,540	41,800	3.91	
	140H	1 3/4	1.000	1.000	0.500	0.250	1.610	1.126	1.307	-	11,310	54,200	5.64	
	160H	2	1.250	1.125	0.562	0.281	1.839	1.339	1.535	-	14,900	68,700	7.28	
	180H	2 1/4	1.406	1.406	0.687	0.312	2.067	1.488	1.720	-	16,600	83,700	10.18	
	200H	2 1/2	1.500	1.562	0.781	0.375	2.354	1.669	2.008	-	18,600	117,000	11.97	
Double Strand Chains	60H-2	3/4	0.500	0.469	0.234	0.125	0.691	1.079	1.165	1.028	4,100	24,600	2.41	
	80H-2	1	0.625	0.625	0.312	0.156	0.921	1.346	1.461	1.283	6,380	40,400	3.72	
	100H-2	1 1/4	0.750	0.750	0.375	0.187	1.154	1.606	1.740	1.539	10,130	61,600	5.50	
	120H-2	1 1/2	1.000	0.875	0.437	0.219	1.382	2.008	2.169	1.925	13,110	83,600	7.75	
	140H-2	1 3/4	1.000	1.000	0.500	0.250	1.610	2.154	2.335	2.055	17,170	108,400	11.13	
	160H-2	2	1.250	1.125	0.562	0.281	1.839	2.555	2.756	2.437	22,440	137,400	14.23	
	180H-2	2 1/4	1.406	1.406	0.687	0.312	2.067	2.839	3.059	2.700	27,370	167,400	20.83	
	200H-2	2 1/2	1.500	1.562	0.781	0.375	2.354	3.213	3.559	3.083	31,110	234,000	23.61	
Triple Strand Chains	60H-3	3/4	0.500	0.469	0.234	0.125	0.691	1.587	1.685	1.028	6,030	36,900	3.62	
	80H-3	1	0.625	0.625	0.312	0.156	0.921	1.988	2.106	1.283	9,380	60,600	5.54	
	100H-3	1 1/4	0.750	0.750	0.375	0.187	1.154	2.378	2.520	1.539	14,900	92,400	8.22	
	120H-3	1 1/2	1.000	0.875	0.437	0.219	1.382	2.965	3.122	1.925	19,280	125,400	11.60	
	140H-3	1 3/4	1.000	1.000	0.500	0.250	1.610	3.185	3.366	2.055	25,250	162,600	16.61	
	160H-3	2	1.250	1.125	0.562	0.281	1.839	3.776	3.972	2.437	33,000	206,100	21.15	
	180H-3	2 1/4	1.406	1.406	0.687	0.312	2.067	4.189	4.421	2.700	40,250	251,100	30.14	
	200H-3	2 1/2	1.500	1.562	0.781	0.375	2.354	4.752	5.102	3.083	45,750	351,000	41.94	

Extra Capacity Chains

HE-Series (Through Hardened Pin) High Strength Heavy Roller Chains

HE-Series roller chains possess alloy steel through hardened pins and one size thicker link plates for maximum toughness. A combination of the features found in Heavy and E-Series chains provide reliable performance in the toughest applications. Single strand chains operate over standard ASME/ANSI sprockets (hardened teeth recommended), however multiple strand chains require special sprockets due to their increased transverse pitch.



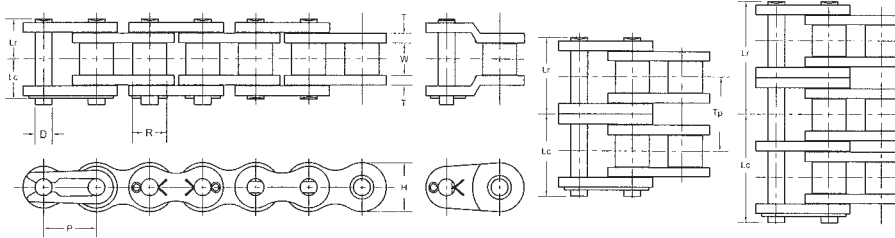
HE-Series High Strength Heavy Roller Chain Specifications

		Dimensions (Inches)											Rated Working Load	Average Ultimate Strength	Average Chain Weight
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	(lbs)	(lbs)	(lbs/ft)		
Single Strand Chains	60HE	3/4	0.500	0.469	0.234	0.125	0.691	0.567	0.646	-	2,470	12,500	1.21		
	80HE	1	0.625	0.625	0.312	0.156	0.921	0.705	0.819	-	4,140	20,900	1.88		
	100HE	1 1/4	0.750	0.750	0.375	0.187	1.154	0.835	0.972	-	6,360	31,900	2.78		
	120HE	1 1/2	1.000	0.875	0.437	0.219	1.382	1.039	1.213	-	8,540	43,000	3.91		
	140HE	1 3/4	1.000	1.000	0.500	0.250	1.610	1.126	1.307	-	11,310	56,200	5.64		
	160HE	2	1.250	1.125	0.562	0.281	1.839	1.339	1.535	-	14,900	72,600	7.28		
	180HE	2 1/4	1.406	1.406	0.687	0.312	2.067	1.488	1.720	-	16,600	89,900	10.18		
	200HE	2 1/2	1.500	1.562	0.781	0.375	2.354	1.669	2.008	-	18,600	125,600	11.97		
Double Strand Chains	60HE-2	3/4	0.500	0.469	0.234	0.125	0.691	1.079	1.165	1.028	4,100	25,000	2.41		
	80HE-2	1	0.625	0.625	0.312	0.156	0.921	1.346	1.461	1.283	6,380	41,800	3.72		
	100HE-2	1 1/4	0.750	0.750	0.375	0.187	1.154	1.606	1.740	1.539	10,130	63,800	5.50		
	120HE-2	1 1/2	1.000	0.875	0.437	0.219	1.382	2.008	2.169	1.925	13,110	86,000	7.75		
	140HE-2	1 3/4	1.000	1.000	0.500	0.250	1.610	2.154	2.335	2.055	17,170	112,400	11.13		
	160HE-2	2	1.250	1.125	0.562	0.281	1.839	2.555	2.756	2.437	22,440	145,200	14.23		
	180HE-2	2 1/4	1.406	1.406	0.687	0.312	2.067	2.839	3.059	2.700	27,370	179,800	20.83		
	200HE-2	2 1/2	1.500	1.562	0.781	0.375	2.354	3.213	3.559	3.083	31,110	251,200	23.61		
Triple Strand Chains	60HE-3	3/4	0.500	0.469	0.234	0.125	0.691	1.587	1.685	1.028	6,030	37,500	3.62		
	80HE-3	1	0.625	0.625	0.312	0.156	0.921	1.988	2.106	1.283	9,380	62,700	5.54		
	100HE-3	1 1/4	0.750	0.750	0.375	0.187	1.154	2.378	2.520	1.539	14,900	95,700	8.22		
	120HE-3	1 1/2	1.000	0.875	0.437	0.219	1.382	2.965	3.122	1.925	19,280	129,000	11.60		
	140HE-3	1 3/4	1.000	1.000	0.500	0.250	1.610	3.185	3.366	2.055	25,250	168,600	16.61		
	160HE-3	2	1.250	1.125	0.562	0.281	1.839	3.776	3.972	2.437	33,000	217,800	21.15		
	180HE-3	2 1/4	1.406	1.406	0.687	0.312	2.067	4.189	4.421	2.700	40,250	269,700	30.14		
	200HE-3	2 1/2	1.500	1.562	0.781	0.375	2.354	4.752	5.102	3.083	45,750	376,800	41.94		

Extra Capacity Chains

E-Series (Through Hardened Pin) High Strength Roller Chains

E-Series roller chains possess alloy steel through hardened pins to significantly improve shock load resistance and ultimate strength. These chains are best used on heavy construction or mining equipment, when superior toughness is required. E-Series roller chains operate over standard ASME/ANSI sprockets (hardened teeth recommended).



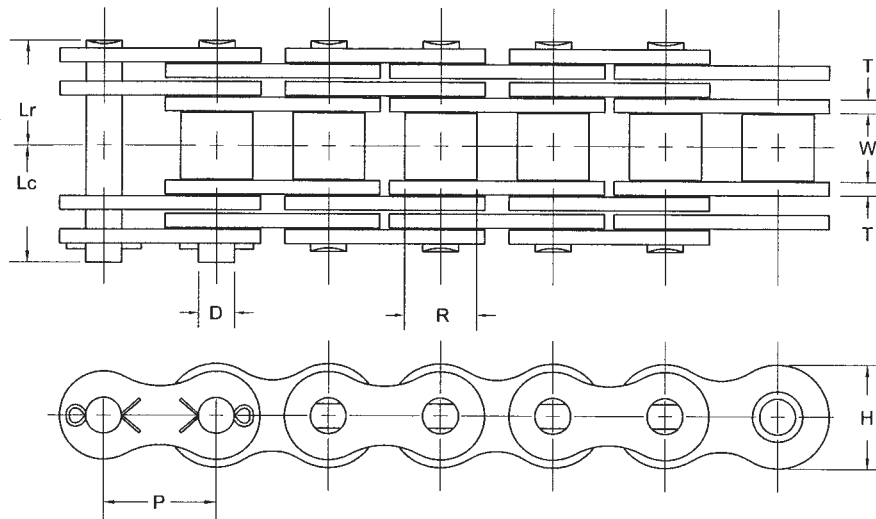
E-Series High Strength Roller Chain Specifications

Dimensions (Inches)													
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
Single Strand Chains	60E	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	-	2,470	10,300	0.98
	80E	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	4,140	17,850	1.69
	100E	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	6,360	26,750	2.62
	120E	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	-	8,540	39,100	3.87
	140E	1 3/4	1.000	1.000	0.500	0.219	1.610	1.063	1.232	-	11,310	51,000	4.98
	160E	2	1.250	1.125	0.562	0.250	1.839	1.268	1.437	-	14,900	66,100	6.58
	180E	2 1/4	1.406	1.406	0.687	0.281	2.067	1.429	1.657	-	16,600	81,600	9.00
	200E	2 1/2	1.500	1.562	0.781	0.312	2.354	1.547	1.878	-	18,600	105,650	11.38
	240E	3	1.875	1.875	0.937	0.375	2.768	1.898	2.201	-	25,400	152,000	15.89
Double Strand Chains	60E-2	3/4	0.500	0.469	0.234	0.094	0.691	0.945	1.012	1.028	4,100	20,600	1.98
	80E-2	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.283	6,380	35,700	3.43
	100E-2	1 1/4	0.750	0.750	0.375	0.156	1.154	1.480	1.622	1.539	10,130	53,500	5.19
	120E-2	1 1/2	1.000	0.875	0.437	0.187	1.382	1.870	2.020	1.925	13,110	78,200	7.77
	140E-2	1 3/4	1.000	1.000	0.500	0.219	1.610	2.028	2.193	2.055	17,170	102,000	9.83
	160E-2	2	1.250	1.125	0.562	0.250	1.839	2.417	2.591	2.437	22,440	132,200	13.07
	180E-2	2 1/4	1.406	1.406	0.687	0.281	2.067	2.720	2.949	2.700	27,370	163,200	17.89
	200E-2	2 1/2	1.500	1.562	0.781	0.312	2.354	2.957	3.291	3.083	31,110	211,300	22.67
	240E-2	3	1.875	1.875	0.937	0.375	2.768	3.626	3.925	3.457	40,120	304,000	31.67
Triple Strand Chains	60E-3	3/4	0.500	0.469	0.234	0.094	0.691	1.386	1.472	1.028	6,180	30,900	2.98
	80E-3	1	0.625	0.625	0.312	0.125	0.921	1.791	1.913	1.283	10,350	53,550	5.16
	100E-3	1 1/4	0.750	0.750	0.375	0.156	1.154	2.185	2.327	1.539	15,900	80,250	7.77
	120E-3	1 1/2	1.000	0.875	0.437	0.187	1.382	2.764	2.913	1.925	21,350	117,300	11.56
	140E-3	1 3/4	1.000	1.000	0.500	0.219	1.610	2.988	3.165	2.055	28,280	153,000	14.72
	160E-3	2	1.250	1.125	0.562	0.250	1.839	3.571	3.740	2.437	37,250	198,300	19.60
	180E-3	2 1/4	1.406	1.406	0.687	0.281	2.067	4.028	4.248	2.700	41,500	244,800	26.78
	200E-3	2 1/2	1.500	1.562	0.781	0.312	2.354	4.366	4.697	3.083	46,500	316,950	33.96
	240E-3	3	1.875	1.875	0.937	0.375	2.768	5.354	5.654	3.457	59,000	456,000	47.45

Extra Capacity Chains

Double Capacity Roller Chains

Double Capacity roller chains possess twice the number of link plates and therefore twice the ultimate strength of standard single strand roller chains. They are primarily designed for high load hoist, pull down, or other tension linkage applications, and operate on standard ASME/ANSI single strand sprockets with hardened teeth. Multiple strand Double Capacity chains are not available.



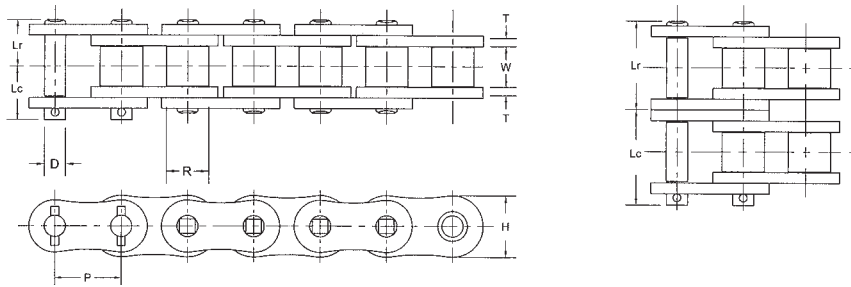
Double Capacity Roller Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
60DC	3/4	0.500	0.469	0.234	0.094	0.691	1.410	1.500	Contact Hitachi Engineering	19,400	1.60
80DC	1	0.625	0.625	0.312	0.125	0.921	1.800	1.920		35,200	1.74
100DC	1 1/4	0.750	0.750	0.375	0.156	1.154	2.200	2.340		52,800	2.72
120DC	1 1/2	1.000	0.875	0.437	0.187	1.382	2.720	2.890		75,000	4.02
140DC	1 3/4	1.000	1.000	0.500	0.219	1.610	3.010	3.200		97,000	5.22
160DC	2	1.250	1.125	0.562	0.250	1.839	3.550	3.750		123,400	6.93
180DC	2 1/4	1.406	1.406	0.687	0.281	2.067	4.000	4.240		158,800	9.50
200DC	2 1/2	1.500	1.562	0.781	0.312	2.354	4.380	4.730		202,000	12.13
240DC	3	1.875	1.875	0.937	0.375	2.768	5.340	5.640		304,000	17.21

Extra Capacity Chains

Super Series Roller Chains

Super Series roller chains utilize special alloy steels for the pins, rollers, and link plates for maximum strength and durability. In addition, quad staked pins provide additional product integrity when challenged in the most severe applications.



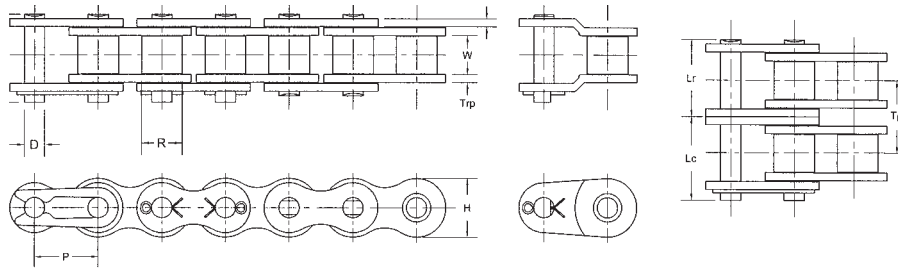
Super Roller Chain Specifications

		Dimensions (Inches)												
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)	
Single Strand Chains	80SU	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	4,200	18,900	1.69	
	100SU	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	6,800	28,600	2.62	
	120SU	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	-	8,800	41,800	3.86	
	140SU	1 3/4	1.000	1.000	0.500	0.219	1.610	1.063	1.232	-	12,100	55,100	4.97	
	160SU	2	1.250	1.125	0.562	0.250	1.839	1.268	1.437	-	15,900	70,500	6.57	
	180SU	2 1/4	1.406	1.406	0.687	0.281	2.067	1.429	1.657	-	18,700	89,000	8.98	
	200SU	2 1/2	1.500	1.562	0.781	0.312	2.354	1.547	1.878	-	21,200	110,200	11.36	
	240SU	3	1.875	1.875	0.937	0.375	2.768	1.898	2.201	-	29,700	163,100	15.86	
Double Strand Chains	80SU-2	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.153	7,140	37,800	3.42	
	100SU-2	1 1/4	0.750	0.750	0.375	0.156	1.154	1.480	1.622	1.409	11,560	57,200	5.19	
	120SU-2	1 1/2	1.000	0.875	0.437	0.187	1.382	1.870	2.020	1.787	14,960	83,600	7.71	
	140SU-2	1 3/4	1.000	1.000	0.500	0.219	1.610	2.028	2.193	1.925	20,570	110,200	9.81	
	160SU-2	2	1.250	1.125	0.562	0.250	1.839	2.417	2.591	2.303	27,030	141,000	13.05	
	180SU-2	2 1/4	1.406	1.406	0.687	0.281	2.067	2.720	2.949	2.587	31,790	178,000	17.85	
	200SU-2	2 1/2	1.500	1.562	0.781	0.312	2.354	2.957	3.291	2.819	36,040	220,400	22.62	
	240SU-2	3	1.875	1.875	0.937	0.375	2.768	3.626	3.925	3.457	50,490	326,200	31.61	

Extra Capacity Chains

Super-H Series Roller Chains

Super-H Series roller chains combine the features of the Super Series, with one size thicker link plates, for even more load carrying capacity. Single strand chains operate on standard ASME/ANSI sprockets (hardened teeth are recommended), however multiple strand chains require special sprockets due to their increased transverse pitch.



Super-H Roller Chain Specifications

		Dimensions (Inches)											
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
Single Strand Chains	80HSU	1	0.625	0.625	0.312	0.156	0.921	0.705	0.819	-	4,600	22,000	1.88
	100HSU	1 1/4	0.750	0.750	0.375	0.187	1.154	0.835	0.972	-	7,300	32,600	2.78
	120HSU	1 1/2	1.000	0.875	0.437	0.219	1.382	1.039	1.213	-	9,500	44,000	3.91
	140HSU	1 3/4	1.000	1.000	0.500	0.250	1.610	1.126	1.307	-	12,800	57,300	5.64
	160HSU	2	1.250	1.125	0.562	0.281	1.839	1.339	1.535	-	16,500	74,000	7.28
	180HSU	2 1/4	1.406	1.406	0.687	0.312	2.067	1.488	1.720	-	19,800	95,000	10.18
	200HSU	2 1/2	1.500	1.562	0.781	0.375	2.354	1.669	2.008	-	22,500	134,000	11.97
Double Strand Chains	80HSU-2	1	0.625	0.625	0.312	0.156	0.921	1.346	1.461	1.283	7,820	44,000	3.72
	100HSU-2	1 1/4	0.750	0.750	0.375	0.187	1.154	1.606	1.740	1.539	12,410	65,200	5.50
	120HSU-2	1 1/2	1.000	0.875	0.437	0.219	1.382	2.008	2.169	1.925	16,150	88,000	7.75
	140HSU-2	1 3/4	1.000	1.000	0.500	0.250	1.610	2.154	2.335	2.055	21,760	114,600	11.13
	160HSU-2	2	1.250	1.125	0.562	0.281	1.839	2.555	2.756	2.437	28,050	148,000	14.23
	180HSU-2	2 1/4	1.406	1.406	0.687	0.312	2.067	2.839	3.059	2.700	33,660	190,000	20.83
	200HSU-2	2 1/2	1.500	1.562	0.781	0.375	2.354	3.213	3.559	3.083	38,250	268,000	23.61

Double Pitch Roller Chains

Double Pitch Roller Chains - General Information

Double Pitch roller chains are produced in accordance with the ASME/ANSI B29.3 (Transmission Series) and B29.4 (Conveyor Series) American roller chain standards. In general, these chains are dimensionally similar to ASME/ANSI standard products except that the pitch is double. They are available in the Transmission Series, Conveyor Series with standard sized roller, and Conveyor Series with large (oversized) roller.

Transmission Series

The Transmission Series is often used on drives with slow to moderate speeds, low chain loads and/or long center distances. Side plates have a “figure-8” contour. The chain number is obtained by adding 2000 to the chain number and an “A” prefix. For example; Double Pitch Transmission Series #40 is A2040, #50 is A2050 etc. Some manufacturers do not use the “A” prefix and denote the chains as 2040, 2050, etc.

Conveyor Series with Standard Roller

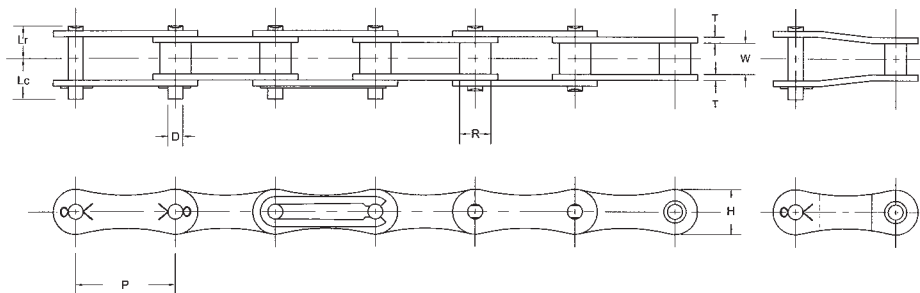
The Conveyor Series with Standard Roller is often used for light to moderate conveyor applications with or without attachments. These chains have straight side plates for improved sliding properties. Pitch sizes of 1 1/2” and higher have “Heavy Series” link plates. The chain number is found by adding 2000 to the chain number and a “C” prefix. Heavy style chains have an “H” suffix. For example; Double Pitch Conveyor Series #50 roller chain with a standard sized roller is C2050, #60 is C2060H because the pitch of C2060H is 2 times .75” (#60) which is 1 1/2”.

Conveyor Series with Large Roller

Large rollers allow for rolling action which reduces friction. The chain number is found in the same way as above except that a “2” is added (C2042, C2102H, etc.).

Sprockets should be produced specially for these chains according to the B29.3 or B29.4 ASME/ANSI standards. It is however possible to use standard ASME/ANSI B29.1 sprockets for the *Transmission Series* and *Conveyor Series with Standard Roller* if the actual number of teeth is 30 or more.

Transmission Series Double Pitch Roller Chains

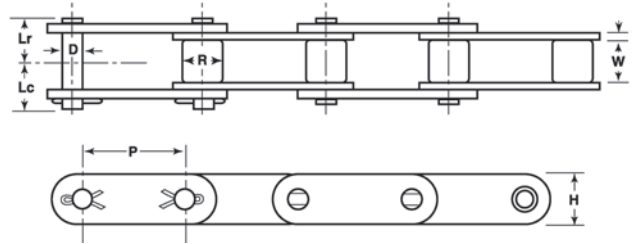


Transmission Series Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
A2040	1.000	0.312	0.312	0.156	0.060	0.450	0.323	0.406	800	4,300	0.29
A2050	1.250	0.375	0.400	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.49
A2060	1.500	0.500	0.469	0.234	0.094	0.670	0.500	0.583	1,900	9,700	0.69
A2080	2.000	0.625	0.625	0.312	0.125	0.890	0.638	0.740	3,300	17,600	1.15

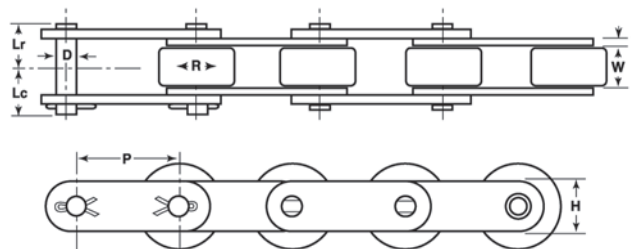
Double Pitch Roller Chains

Conveyor Series Double Pitch Roller Chains



Conveyor Series With Standard Roller Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2040	1	0.312	0.312	0.156	0.060	0.450	0.323	0.406	800	4,300	0.32
C2050	1 1/4	0.375	0.400	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.55
C2060H	1 1/2	0.500	0.469	0.234	0.125	0.670	0.567	0.654	1,900	9,700	0.93
C2080H	2	0.625	0.625	0.312	0.156	0.890	0.701	0.827	3,300	17,600	1.56
C2100H	2 1/2	0.750	0.750	0.375	0.187	1.125	0.831	0.969	5,100	26,400	2.32
C2120H	3	1.000	0.875	0.437	0.219	1.375	1.035	1.209	6,800	37,500	3.30
C2160H	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	11,900	61,700	5.38



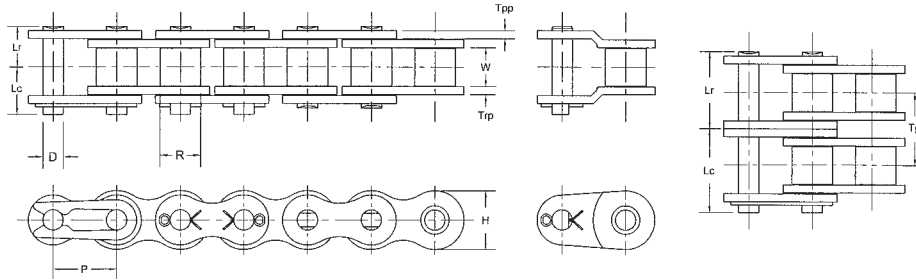
Conveyor Series With Large Roller Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2042	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	800	4,300	0.55
C2052	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.85
C2062H	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	1,900	9,700	1.40
C2082H	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	3,300	17,600	2.25
C2102H	2 1/2	0.750	1.562	0.375	0.187	1.125	0.831	0.969	5,100	26,400	3.78
C2122H	3	1.000	1.750	0.437	0.219	1.375	1.035	1.209	6,800	37,500	5.28
C2162H	4	1.250	2.250	0.562	0.281	1.875	1.335	1.535	11,900	61,700	8.57

British Standard Chains

British Standard Roller Chains

Produced in accordance with the ISO 606B, BS228, and DIN8187 European standards, these chains are often referred to as “metric” chains. They resemble ASME/ANSI standard products and are identical in pitch, however there are other significant dimensional differences which distinguishes them from the ASME/ANSI standard products. British Standard chains should be operated on British Standard sprockets.



British Standard Roller Chain Specifications

* Flat Style Link Plate

		Chain Dimensions Are Given In Inches										Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Trans. Pitch Tp			
Single Strand Chains	06B*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.250	0.280	-	400	2,200	0.30
	08B	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	-	710	4,400	0.40
	10B	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	-	1,100	5,600	0.60
	12B	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	-	1,590	7,200	0.78
	16B	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	-	2,830	15,400	1.75
	20B	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	-	4,410	23,800	2.50
	24B	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	1.050	1.250	-	6,180	40,400	4.90
	28B	1 3/4	1.220	1.100	0.625	0.291	0.250	1.440	1.280	1.530	-	7,710	50,300	6.20
	32B	2	1.220	1.150	0.701	0.272	0.250	1.642	1.285	1.545	-	8,810	61,700	6.70
Double Strand Chains	06B-2*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.450	0.490	0.403	660	4,360	0.55
	08B-2	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.605	0.645	0.548	1,150	7,755	0.85
	10B-2	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.700	0.770	0.653	1,870	11,240	1.20
	12B-2	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.820	0.890	0.766	2,650	14,450	1.50
	16B-2	1	0.670	0.625	0.325	0.154	0.125	0.792	1.320	1.440	1.255	4,630	30,300	3.50
	20B-2	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	1.510	1.660	1.435	7,280	46,700	4.90
	24B-2	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	2.005	2.185	1.904	9,910	80,900	9.80
	28B-2	1 3/4	1.220	1.100	0.625	0.291	0.250	1.440	2.455	2.675	2.345	12,570	94,900	12.40
32B-2	2	1.220	1.150	0.701	0.272	0.250	1.642	2.440	2.680	2.305	14,540	123,000	13.30	

Corrosion Resistant Roller Chains

Corrosion Resistant Chains - General Information

Hitachi Maxco, Ltd. offers a variety of corrosion resistant products to suit the particular needs of almost any application. These range from coated, or plated carbon steels to a number of stainless steel types that may be selected based on the desired combination of wear resistance, corrosion resistance and resistance to extremes in temperature.

- INSPIRE SERIES™:** Our premium INSPIRE SERIES™ SBR® roller chains are coated with a thin film of stainless steel that does offer limited protection against rust in very mild corrosive applications. In general the protection is not as good as nickel plating or that of other “traditional” corrosion resistant products.
- Nickel Plating:** Often used for decorative purposes, Hitachi nickel plated chains are plated prior to assembly to assure uniform coverage of the internal components. The plating is suitable for mild corrosive applications.
(see pages 54-55)
- Perfect Coat Plus™:** A unique dual coating of a mechanically applied zinc alloy and a chemical sealer that provides 30 times more corrosion resistance than conventional nickel plating in salt water testing. The coating is extremely durable and will not chip, flake or peel during assembly.
(see pages 56-58)
- 304SS:** Our standard stainless steel chain product offers excellent resistance to corrosion and operates successfully over a wide range of temperatures. The material is generally nonmagnetic although some magnetic permeability can be found in this chain due to work hardening of the parts during production.
(see pages 59-61)
- 316SS:** 316SS chains offer the most corrosion resistance of any product we offer. In addition they operate successfully at extremes in temperatures. The magnetic permeability of this material is very low and is often considered nonmagnetic. This material however is not considered spark proof.
(see pages 59-61)
- 600SS:** Precipitation hardened stainless steel pins and specially treated rollers provide superior mechanical wear resistance compared with 304SS. The corrosion resistance is slightly reduced and the operating temperature range is less than 304SS.
(see pages 59-61)
- 6000SS:** Specially treated pins and rollers provide superior wear and corrosion resistance compared with 600SS in a majority of applications. We do note that the wear resistant benefits of this series are reduced with increasing temperature however the corrosion resistance benefits remain unchanged.
(see pages 59-61)
- Mega Chain:** A unique design configuration gives this product nearly the same strength as carbon steel chains with corrosion and temperature resistance equal to 304SS. In addition a greater pin/bushing bearing area yields higher working loads and a unique labyrinth seal design protects the internal components from abrasion due to foreign materials.
(see pages 62-63)

Properties of Stainless Steel Chains

Chain	Corrosion Resistance	Temperature Resistance*	Wear Resistance	Strength	Magnetism
Inspire Series™	Slight	14 °F - 150 °F	Excellent	Excellent	Magnetic
Nickel Plate	Fair	14 °F - 150 °F	Excellent	Excellent	Magnetic
Perfect Coat Plus™	Good	14 °F - 150 °F	Excellent	Excellent	Magnetic
304 SS	Very Good	-250 °F - 750 °F	Fair	Fair	Slightly Magnetic
316 SS	Excellent	-250 °F - 950 °F	Fair	Fair	Non-Magnetic
600 SS	Good	-50 °F - 750 °F	Very Good	Fair	Magnetic
6000 SS	Very Good	-250 °F - 140° F	Excellent	Fair	Slightly Magnetic
Mega Chain SS	Very Good	-250 °F - 750 °F	Very Good	Excellent	Slightly Magnetic

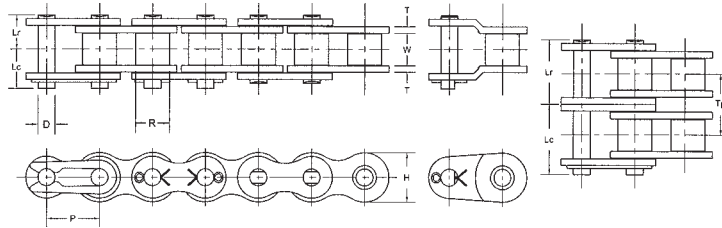
* The temperature range shown is the area where the chains can operate without derating the working load values. In most cases chains can operate at temperatures outside these ranges however the rated working load values are decreased. Please see page 66 for further details on stainless steel chains or contact Hitachi Maxco, Ltd. product engineering for more information.

Corrosion Resistant Roller Chains

ASME/ANSI Standard Nickel Plated Roller Chains

Nickel Plated roller chains generally provide acceptable performance in mild corrosive applications such as general outdoor service, or wash downs with mild detergents. Lubrication is necessary to prevent rust in most cases. The plating provides a bright finish which sometimes is applied for aesthetic reasons. All parts are plated prior to assembly to assure maximum corrosion protection.

Note that the working load ratings for nickel plate chains are not enhanced by the INSPIRE SERIES™ treatment due to the stress relieve baking operation that follows standard plating. Therefore the working load ratings of nickel plated chains are less than our standard carbon steel chains. If higher working loads and corrosion protection are desired please consider our Perfect Coat Plus™ chains on found pages 56-57.



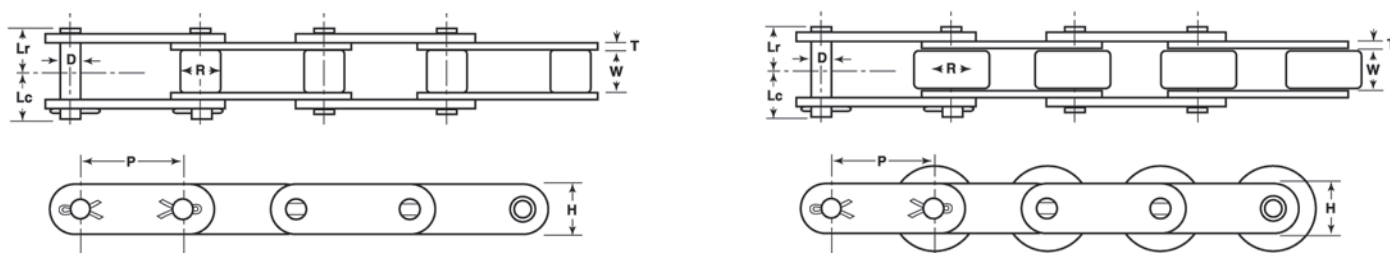
ASME/ANSI Nickel Plated Chain Specifications

* Rollerless

		Dimensions (Inches)											
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
Single Strand Chains	25NP*	1/4	0.125	0.130	0.091	0.030	0.230	0.150	0.190	-	140	1,050	0.10
	35NP*	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.273	-	490	2,400	0.23
	41NP	1/2	0.250	0.306	0.141	0.050	0.382	0.260	0.313	-	500	2,600	0.30
	40NP	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	-	820	4,300	0.40
	50NP	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	-	1,410	7,200	0.66
	60NP	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	-	1,940	9,700	0.98
	80NP	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	3,300	17,600	1.69
	100NP	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	5,080	26,500	2.62
Double Strand Chains	120NP	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	-	6,830	37,500	3.86
	35-2NP*	3/8	0.188	0.200	0.141	0.050	0.354	0.437	0.469	0.398	830	4,800	0.42
	40-2NP	1/2	0.312	0.312	0.156	0.060	0.463	0.606	0.661	0.567	1,400	8,600	0.82
	50-2NP	5/8	0.375	0.400	0.200	0.080	0.577	0.756	0.819	0.712	2,400	14,400	1.34
	60-2NP	3/4	0.500	0.469	0.234	0.094	0.691	0.945	1.012	0.898	3,300	19,400	1.98
80-2NP	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.153	5,610	35,200	3.42	

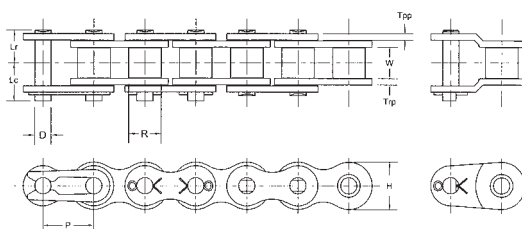
Corrosion Resistant Roller Chains

Double Pitch and British Standard Nickel Plated Roller Chains



Conveyor Series Nickel Plate Double Pitch Chain Specifications

Chain Dimensions Are Given In Inches												
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
Standard Roller	C2040NP	1	0.312	0.312	0.156	0.060	0.450	0.323	0.406	800	4,300	0.32
	C2050NP	1 1/4	0.375	0.400	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.55
	C2060HNP	1 1/2	0.500	0.469	0.234	0.125	0.670	0.567	0.654	1,900	9,700	0.93
	C2080HNP	2	0.625	0.625	0.312	0.156	0.890	0.701	0.827	3,300	17,600	1.56
	C2100HNP	2 1/2	0.750	0.750	0.375	0.187	1.125	0.831	0.969	5,100	26,400	2.32
	C2120HNP	3	1.000	0.875	0.437	0.219	1.375	1.035	1.209	6,800	37,500	3.30
	C2160HNP	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	11,900	61,700	5.38
Large Roller	C2042NP	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	800	4,300	0.55
	C2052NP	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.85
	C2062HNP	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	1,900	9,700	1.40
	C2082HNP	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	3,300	17,600	2.25
	C2102HNP	2 1/2	0.750	1.562	0.375	0.187	1.125	0.831	0.969	5,100	26,400	3.78
	C2122HNP	3	1.000	1.750	0.437	0.219	1.375	1.035	1.209	6,800	37,500	5.28
	C2162HNP	4	1.250	2.250	0.562	0.281	1.875	1.335	1.535	11,900	61,700	8.57



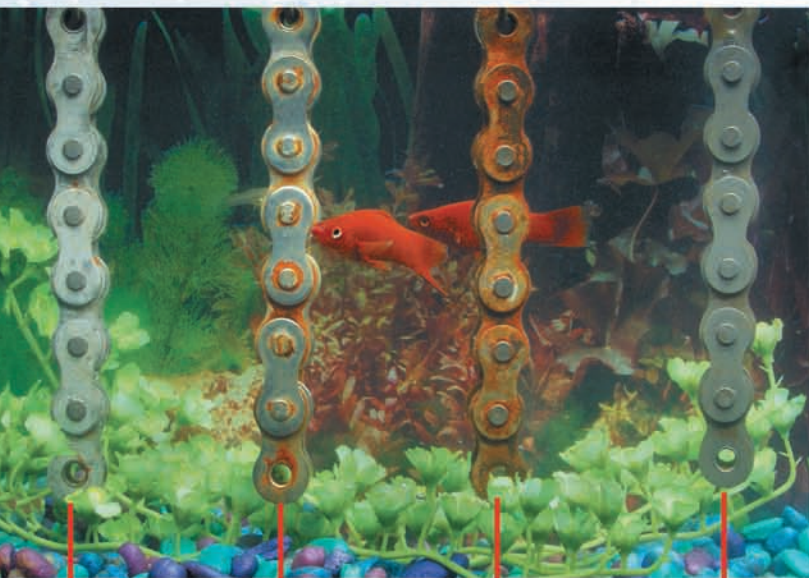
British Standard Nickel Plate Chain Specifications

Chain Dimensions Are Given In Inches												
Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
06BNP*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.250	0.280	400	2,200	0.30
08BNP	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	710	4,400	0.40
10BNP	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	1,100	5,600	0.60
12BNP	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	1,590	7,200	0.78
16BNP	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	2,830	15,400	1.75
20BNP	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	4,410	23,800	2.50
24BNP	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	1.050	1.250	6,180	40,400	4.90



A Mechanical Rust Prevention System

Perfect Coat Plus™ chains offer up to thirty times more protection from corrosive damage compared with conventional nickel plated products. These improved chains feature a mechanical rust prevention system which utilizes a zinc-alloy-iron film coating. The resulting film is extremely durable and will not chip, flake, peel or rust in many mildly corrosive applications.



Traditional Dip-Spin
Zinc-Chrome Coating

Nickel Plated

Carbon Steel

Perfect Coat
Plus™



Carbon Steel Chain



Nickel Plated Chain

After 2 weeks both the carbon steel and nickel plated chains exhibit substantial rust. The chain joints have frozen stiff making the chain difficult to flex.

Salt Water Corrosion Test

Roller chains submerged in and out of an aerated 5% salt water solution (equivalent to seawater). Carbon steel, nickel plated, Dip-Spin Zinc Chromate and Perfect Coat Plus™ chains are tested for 14 days.

The Dip-Spin sample and Perfect Coat Plus™ chain show significantly less rust after two weeks of testing.

Note that rust development on the Dip-Spin sample (Top in photo) begins where the bushing is press fitted into the link plate. When the chain was assembled, the coating chipped, peeled or flaked, causing a corrosive attack at this area. Eventually this rust will spread underneath the plated surface reducing chain life.



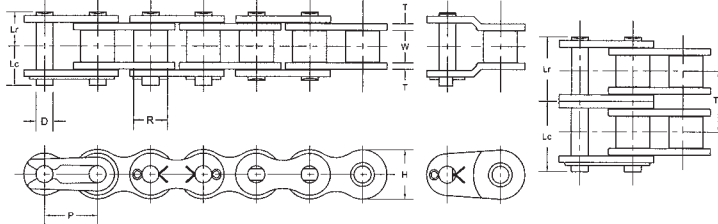
Rust development at the press fit area.

Perfect Coat Plus™ is a significantly more durable coating which does not chip, flake or peel. Virtually no rust developed on this sample.

Corrosion Resistant Roller Chains

ASME/ANSI and British Standard Perfect Coat Plus™ Roller Chains

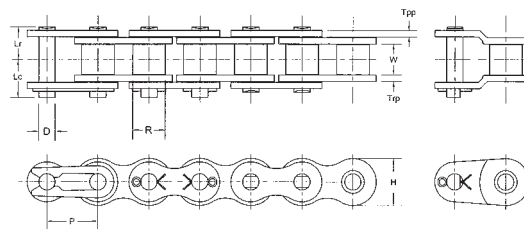
Note: #25 and #41 Chains are not available in Perfect Coat Plus™



ASME/ANSI Perfect Coat Plus™ Chain Specifications

* Rollerless

		Dimensions (Inches)													
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)		
Single Strand Chains	35PCP*	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.273	-	560	2,400	0.23		
	40PCP	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	-	940	4,300	0.40		
	50PCP	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	-	1,620	7,200	0.66		
	60PCP	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	-	2,470	9,900	0.98		
	80PCP	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	4,140	17,600	1.69		
	100PCP	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	6,360	26,400	2.62		
	120PCP	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	-	8,540	39,000	3.86		
Double Strand Chains	35-2PCP*	3/8	0.188	0.200	0.141	0.050	0.354	0.437	0.469	0.398	950	4,800	0.42		
	40-2PCP	1/2	0.312	0.312	0.156	0.060	0.463	0.606	0.661	0.567	1,600	8,600	0.82		
	50-2PCP	5/8	0.375	0.400	0.200	0.080	0.577	0.756	0.819	0.712	2,750	14,400	1.34		
	60-2PCP	3/4	0.500	0.469	0.234	0.094	0.691	0.945	1.012	0.898	4,200	19,800	1.98		
	80-2PCP	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.153	7,040	35,200	3.42		

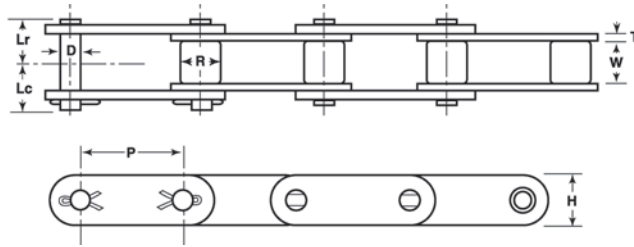


British Standard Perfect Coat Plus™ Chain Specifications

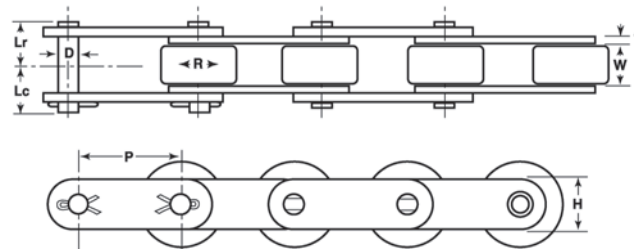
		Chain Dimensions Are Given In Inches											
Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)	
06BPCP*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.250	0.280	400	2,200	0.30	
08BPCP	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	710	4,400	0.40	
10BPCP	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	1,100	5,600	0.60	
12BPCP	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	1,590	7,200	0.78	
16BPCP	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	2,830	15,400	1.75	
20BPCP	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	4,410	23,800	2.50	
24BPCP	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	1.050	1.250	6,180	40,400	4.90	

Corrosion Resistant Roller Chains

Double Pitch Perfect Coat Plus™ Roller Chains



Standard Roller Version



Large Roller Version

Conveyor Series Perfect Coat Plus™ Double Pitch Chain Specifications

		Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
Standard Roller	C2040PCP	1	0.312	0.312	0.156	0.060	0.450	0.323	0.406	800	4,300	0.32
	C2050PCP	1 1/4	0.375	0.400	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.55
	C2060HPCP	1 1/2	0.500	0.469	0.234	0.125	0.670	0.567	0.654	1,900	9,700	0.93
	C2080HPCP	2	0.625	0.625	0.312	0.156	0.890	0.701	0.827	3,300	17,600	1.56
	C2100HPCP	2 1/2	0.750	0.750	0.375	0.187	1.125	0.831	0.969	5,100	26,400	2.32
	C2120HPCP	3	1.000	0.875	0.437	0.219	1.375	1.035	1.209	6,800	37,500	3.30
	C2160HPCP	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	11,900	61,700	5.38
Large Roller	C2042PCP	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	800	4,300	0.55
	C2052PCP	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	1,400	7,200	0.85
	C2062HPCP	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	1,900	9,700	1.40
	C2082HPCP	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	3,300	17,600	2.25
	C2102HPCP	2 1/2	0.750	1.562	0.375	0.187	1.125	0.831	0.969	5,100	26,400	3.78
	C2122HPCP	3	1.000	1.750	0.437	0.219	1.375	1.035	1.209	6,800	37,500	5.28
	C2162HPCP	4	1.250	2.250	0.562	0.281	1.875	1.335	1.535	11,900	61,700	8.57

Corrosion Resistant Roller Chains

Stainless Steel Roller Chains General Information

Hitachi Stainless Steel roller chains are available in a variety of grades to meet the specific requirements of each application. The following are the standard types of stainless steel products available from Hitachi:

- 304SS:** All components are made from 304 series austenitic stainless steels (18-8, ASME 304 Series or better), and have excellent corrosion resistance and good mechanical properties over a wide range of temperatures. Because 304 series stainless is not heat treated, the ultimate strengths and rated working loads are lower than carbon steel, nickel plated, and Perfect Coat Plus™ roller chains.
- 316SS:** These chains are produced from a combination of AISI 316 and a copper enriched modified 316 stainless alloy for superior resistance to stress corrosion cracking and pitting. This series also offers excellent temperature resistance. Strength and rated working loads are equivalent to 300SS.
- 600SS:** Pins are produced from precipitation hardened 600 series stainless steel for an excellent combination of corrosion resistance and wear performance. Bushings and rollers are 304SS with a unique surface treatment that improves wear resistance. The link plates are made from 304 series austenitic stainless steels. Resistance to corrosion of 600SS is slightly reduced compared with the 304SS Series however the working load values are increased by approximately 34%.
- 6000SS:** Superior wear resistance is obtained by through a proprietary surface treatment of the pins and rollers. The corrosion and wear resistance are superior to 600 Series stainless steel in a majority of applications. We do note however the wear resistance benefits of this series are reduced with increasing temperature and 600 series is recommended at temperatures above 300 degrees F.
- Mega Chain:** A unique design configuration gives this product nearly the same strength as carbon steel chains with corrosion resistance equal to 304SS. In addition a greater pin/bushing bearing area yields higher working loads and a unique labyrinth seal design protects the internal components from abrasion due to foreign materials.

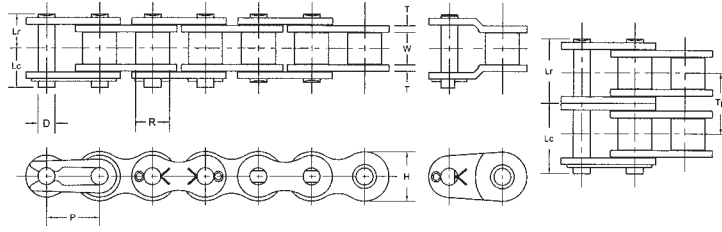
Stainless Steel Component Materials

Stainless Series	Pin	Bushing	Roller	Link Plate
304 SS	304 Austenitic SS	304 Austenitic SS	304 Austenitic SS	304 Austenitic SS
316 SS	316SS	316SS	316SS Modified SS	316 Modified SS
600 SS	17-4 PH SS	304 Austenitic SS	304 Austenitic SS Surface Treatment	304 Austenitic SS
6000 SS	304 Austenitic SS Surface Treatment	304 Austenitic SS	304 Austenitic SS Surface Treatment	304 Austenitic SS
Mega Chain SS	304 Austenitic SS	304 Austenitic SS	304 Austenitic SS	304 Austenitic SS



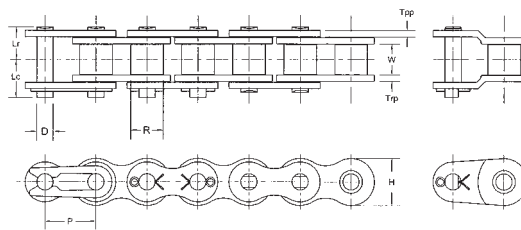
Corrosion Resistant Roller Chains

ASME/ANSI and British Standard Stainless Steel Roller Chains



ASME/ANSI Stainless Steel Chain Specifications

	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	R/L Plate Height H	Dimensions (Inches)			Rated Working Load		Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
								C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	304SS 316SS (lbs)	600SS 6000SS (lbs)		
Single Strand Chains	25SS	1/4	0.125	0.130	0.091	0.030	0.230	0.150	0.190	-	50	N/A	700	0.10
	35SS	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.273	-	115	160	1,400	0.23
	41SS	1/2	0.250	0.306	0.141	0.050	0.382	0.260	0.313	-	140	N/A	1,700	0.30
	40SS	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	-	190	260	2,800	0.40
	50SS	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	-	300	410	4,600	0.66
	60SS	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	-	450	620	6,200	0.98
	80SS	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	770	1,040	10,600	1.69
	100SS	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	1,130	1,530	12,800	2.62
Double Strand Chains	120SS	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	-	1,700	2,300	17,200	3.86
	35-2SS	3/8	0.188	0.200	0.141	0.050	0.354	0.437	0.469	0.398	230	320	2,800	0.42
	40-2SS	1/2	0.312	0.312	0.156	0.060	0.463	0.606	0.661	0.567	380	520	5,600	0.82
	50-2SS	5/8	0.375	0.400	0.200	0.080	0.577	0.756	0.819	0.712	600	820	9,200	1.34
	60-2SS	3/4	0.500	0.469	0.234	0.094	0.691	0.945	1.012	0.898	900	1,240	12,400	1.98
80-2SS	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.153	1,540	2,080	21,200	3.42	

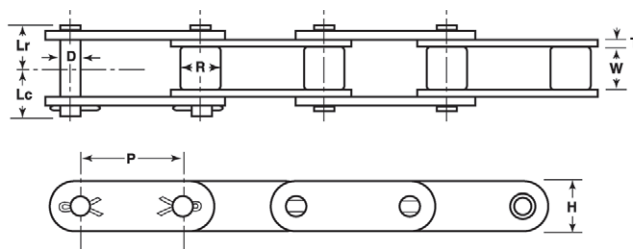


British Standard Stainless Steel Chain Specifications

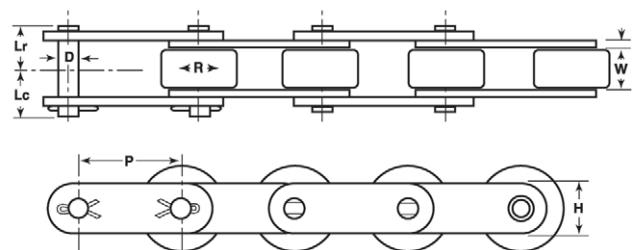
Chain Number	Chain Dimensions Are Given In Inches										Rated Working Load		Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	304SS 316SS (Lbs)	600SS 6000SS (Lbs)			
08BSS	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	210	310	2,200	0.40	
10BSS	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	290	430	3,190	0.60	
12BSS	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	380	570	3,740	0.78	
16BSS	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	900	1,350	8,225	1.75	
20BSS	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	1280	1,920	12,100	2.50	
24BSS	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	1.050	1.250	2,350	3,500	20,875	4.90	

Corrosion Resistant Roller Chains

Double Pitch Stainless Steel Roller Chains



Standard Roller Version



Large Roller Version

Double Pitch Stainless Steel Chain Specifications

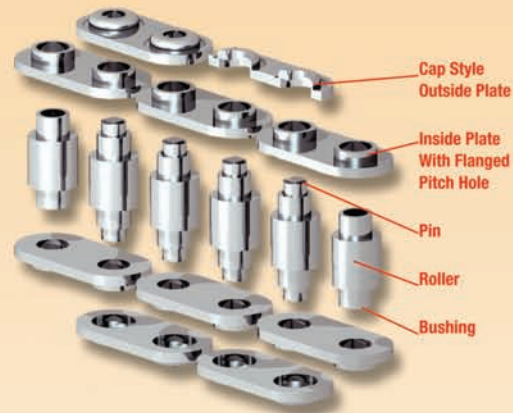
	Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load		Average Ultimate Strength (lbs)	Average Chain Weight (lbs/Ft)
			Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	304SS (lbs)	600SS (lbs)		
Standard Roller	C2040SS	1	0.312	0.312	0.156	0.060	0.450	0.323	0.406	190	260	2,790	0.32
	C2050SS	1 1/4	0.375	0.400	0.200	0.080	0.591	0.402	0.465	300	410	4,560	0.55
	C2060HSS	1 1/2	0.500	0.469	0.234	0.125	0.670	0.567	0.654	500	675	6,150	0.93
	C2080HSS	2	0.625	0.625	0.312	0.156	0.890	0.701	0.827	800	1,080	10,590	1.56
	C2100HSS	2 1/2	0.750	0.750	0.375	0.187	1.125	0.831	0.969	1,200	1,620	12,790	2.32
	C2120HSS	3	1.000	0.875	0.437	0.219	1.375	1.035	1.209	1,790	2,415	17,200	3.30
	C2160HSS	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	2890	3,900	27,650	5.38
Large Roller	C2042SS	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	190	260	2,790	0.55
	C2052SS	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	300	410	4,560	0.85
	C2062HSS	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	500	675	6,150	1.40
	C2082HSS	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	800	1,080	10,590	2.25
	C2102HSS	2 1/2	0.750	1.562	0.375	0.187	1.125	0.831	0.969	1,200	1,620	12,790	3.78
	C2122HSS	3	1.000	1.750	0.437	0.219	1.375	1.035	1.209	1,790	2,415	17,200	5.28
	C2162HSS	4	1.250	2.250	0.562	0.281	1.875	1.335	1.535	2890	3,900	27,650	8.57

*Take a new look
at an old product...*



We've totally re-engineered the traditional stainless steel roller chain product in order to achieve unparalleled strength and wear performance. Now, incredibly, these chains possess ultimate strength ratings which challenge even the best carbon steel products. Wear performance has been increased by 35%-50% due to larger bearing areas and a unique labyrinth seal design.

MEGA CHAIN CONSTRUCTION



ALL PARTS ARE MADE FROM AISI 304 AUSTENITIC STAINLESS STEEL FOR EXCELLENT HEAT AND CORROSION RESISTANCE.

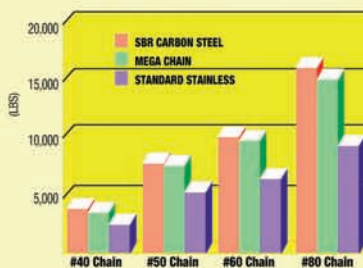
DUAL FUNCTION LINK PLATE CONSTRUCTION

Inside and outside link plates work together to improve strength and wear life in two important ways.

1. The "cap" portion of the outer plate engages the flanged portion of the inside plates under load to significantly improve both ultimate and fatigue strength. The improvement is so dramatic that these chains possess ultimate strength ratings which challenge even the best of the premium carbon steel brands.
2. The unique construction provides a labyrinth seal which helps to protect the pin/bushing wear area from abrasive particles and debris while allowing the penetration of lubricant. This feature, in combination with a larger pin/bushing bearing area, improves wear performance by 35%-50%.

COMPARE ULTIMATE STRENGTH RATINGS

AVERAGE TENSILE STRENGTH



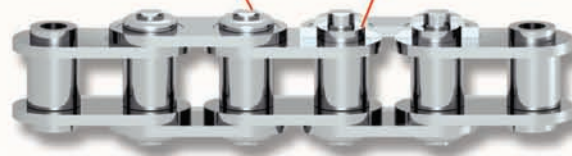
Stainless Steel MEGA CHAIN operates on standard ASME/ANSI sprockets. No special parts are required.

Double strand and double pitch chains are available from the factory.

Attachments are available for both the ANSI/ASME series and the double pitch series.

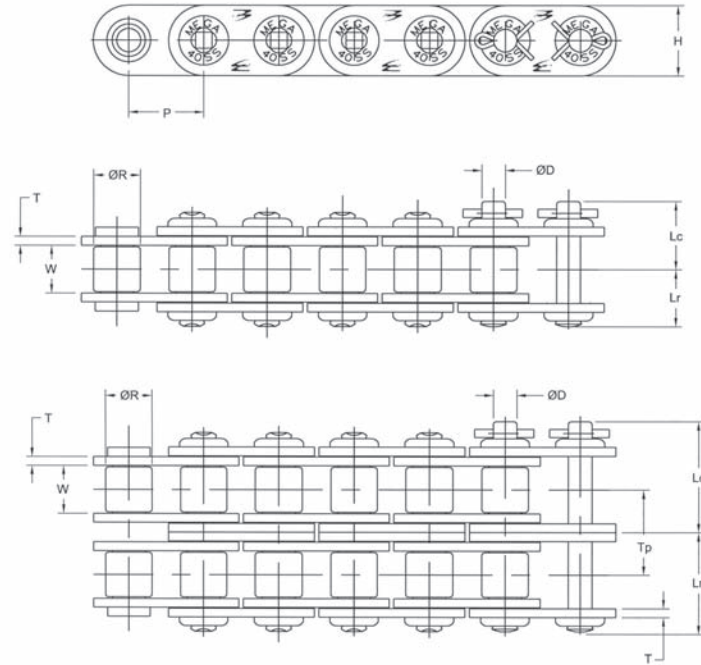
Outside plate "cap" engages the flanged inside plates increasing strength.

Labyrinth seal protects pin / bushing bearing area from contamination while allowing for lubrication.



Corrosion Resistant Roller Chains

Stainless Steel Mega Chain



Stainless Steel Mega Chain Specifications

		Dimensions (Inches)												
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)	
Single Strand Chains	40SS-Mega	1/2	0.312	0.312	0.156	0.060	0.472	0.380	0.460	-	250	3,970	0.53	
	50SS-Mega	5/8	0.375	0.400	0.200	0.080	0.591	0.485	0.580	-	400	7,050	0.90	
	60SS-Mega	3/4	0.500	0.469	0.234	0.094	0.713	0.590	0.690	-	570	9,700	1.30	
	80SS-Mega	1	0.625	0.625	0.312	0.125	0.945	0.775	0.875	-	990	15,850	2.20	
Double Strand Chains	40-2SS-Mega	1/2	0.312	0.312	0.156	0.060	0.472	0.665	0.740	0.567	390	6,620	1.00	
	50-2SS-Mega	5/8	0.375	0.400	0.200	0.080	0.591	0.835	0.920	0.713	600	10,600	1.80	
	60-2SS-Mega	3/4	0.500	0.469	0.234	0.094	0.713	1.050	1.140	0.898	880	15,000	2.55	
	80-2SS-Mega	1	0.625	0.625	0.312	0.125	0.945	1.340	1.440	1.154	1,530	23,810	2.30	
British Standard	08BSS-Mega	1/2	0.305	0.335	0.175	0.060	0.465	0.380	0.455	-	265	4,410	0.54	
	08B-2SS-Mega	1/2	0.305	0.335	0.175	0.060	0.465	0.655	0.730	0.548	400	7,500	1.01	
	12BSS-Mega	3/4	0.460	0.475	0.223	0.070	0.630	0.606	0.661	-	425	7,060	1.02	
	12B-2SS-Mega	3/4	0.460	0.475	0.223	0.070	0.630	0.895	0.985	0.766	635	10,585	1.98	

Corrosion Resistant Roller Chains

Stainless Steel Corrosion Resistance Guide

- 1 High Corrosion Resistance
- 2 Satisfactory Corrosion Resistance
- 3 Partially Corrosion Resistance
- 4 Not Recommended

Corrosive Agent	304SS 6000SS Mega Chain	600SS	316SS	Corrosive Agent	304SS 6000SS Mega Chain	600SS	316SS
Acetic Vapor	3	4	2	Calcium Chloride	2	3	1
Acetic Acid 100% 70 F	1	2	1	Calcium Hypochloride	1	3	1
Acetic Acid 100% Boiling	2	3	1	Calcium Oxychloride	3	4	2
Acetic Acid 50% 70 F	1	1	1	Calcium Sulfate	1	1	1
Acetic Acid 50% Boiling	2	3	1	Carbolic Acid	1	1	1
Acetone	1	1	1	Carbon Disulfide	1	1	1
Alcohol Methyl, Ethyl, Butyl, Propyl	1	1	1	Carbon Monoxide	1	2	1
Aluminum Acetate	1	1	1	Carbon Tetrachloride	1	1	1
Aluminum Chloride	3	3	2	Caustic Lime, Soda, Lye	1	1	1
Aluminum Potasium Sulfate 70 F	1	1	1	Chlorinate Water 70 F	1	1	1
Aluminum Potasium Sulfate Boiling	2	3	1	Chlorine Gas Dry	3	4	2
Aluminum Sulfate 70 F	1	1	1	Chlorine Gas Moist	4	4	3
Aluminum Sulfate Boiling	2	2	1	Chromic Acid 70 F	1	1	1
Ammonia	1	1	1	Chromic Acid Boiling	3	4	1
Ammonium Bicarbonate	1	1	1	Citric Acid 70 F	1	1	1
Ammonium Chloride 70 F	1	1	1	Citric Acid Boiling	3	4	1
Ammonium Chloride Boiling	2	3	1	Calcium Hydroxide 20% Boiling	1	1	1
Ammonium Hydroxide	1	1	1	Coffee Boiling	1	1	1
Ammonium Nitrate	1	1	1	Cola Syrup	1	1	1
Ammonium Sulfate	1	1	1	Copper Acetate	1	1	1
Aniline	1	1	1	Copper Carbonate	1	1	1
Aniline Hydrochloride	3	3	2	Copper Chloride 70 F	3	4	2
Baking Soda	1	1	1	Copper Chloride Boiling	4	4	3
Barium Carbonate	1	1	1	Epson Salts	1	1	1
Barium Chloride 70 F	1	2	1	Feric Chloride	2	3	1
Barium Chloride Hot	2	3	1	Ferric Hydroxide	1	1	1
Barium Nitrate	1	1	1	Ferric Nitrate	1	1	1
Barium Sulfate	1	1	1	Formalin 40%	1	1	1
Beer	1	1	1	Formic Acid	2	3	1
Beet Juice	1	1	1	Fruit Juices	1	2	1
Benzene	1	1	1	Gasoline,	1	1	1
Benzine	1	1	1	Glue	1	1	1
Bleaching powder	2	4	1	Glue acidified	2	3	1
Blood (meat juices)	1	1	1	Glycerine, Glycerol	1	1	1
Borax	1	1	1	Gypsum	1	1	1
Boric Acid	1	1	1	Honey	1	1	1
Bromine	4	4	3	Hydrochloric Acid 70 F	3	3	3
Butyric Acid	1	1	1	Hydrochloric Acid Boiling	4	4	4
Calcium Carbonate	1	1	1	Hydrochloric Acid Fumes	4	4	4

Corrosion Resistant Roller Chains

Stainless Steel Corrosion Resistance Guide

- 1 High Corrosion Resistance
- 2 Satisfactory Corrosion Resistance
- 3 Partially Corrosion Resistance
- 4 Not Recommended

Corrosive Agent	304SS 6000SS Mega Chain	600SS	316SS	Corrosive Agent	304SS 6000SS Mega Chain	600SS	316SS
Hydrogen Peroxide 70 F 30%	1	2	1	Potassium Bichromate	1	1	1
Hydrogen Sulfide Dry	1	1	1	Potassium Chlorate	1	1	1
Hydrogen Sulfide Moist	3	3	3	Potassium Chloride	2	3	1
Hydroxybenzene	1	1	1	Potassium Cyanide	1	1	1
Iodine Dry	1	1	1	Potassium Hydroxide 20%	1	1	1
Iodine Moist	4	4	3	Potassium Nitrate	1	1	1
Kerosene	1	1	1	Potassium Sulfate	1	1	1
Ketchup	1	1	1	Potassium Sulfide	1	1	1
Lactic Acid 150 F 10%	3	3	1	Sal Ammoniac	2	3	1
Lactic Acid 70 F 10%	1	1	1	Salt 150 F	2	3	1
Lard	1	1	1	Salt 70 F	1	2	1
Linseed Oil	1	1	1	Sea Water	2	3	1
Lye 70 F	1	1	1	Sewage (sulfric acid present)	2	3	1
Lye Boiling	2	3	1	Soap	1	1	1
Magnesium Chloride 70 F	2	3	1	Soap and Water Solution	1	1	1
Magnesium Chloride Hot	3	4	2	Sodium Aceate	1	1	1
Malic Acid	1	1	1	Sodium Chloride 70 F 5%	1	2	1
Manganese Chloride	1	1	1	Sodium Chloride Boiling 5%	2	3	1
Marsh Gas	1	1	1	Sodium Cyanide	1	1	1
Mayonaise	1	2	1	Sodium Fluoride	2	3	1
Mercury	1	1	1	Sodium Hydroxide 25%	1	1	1
Milk	1	1	1	Sodium Hypochloride	3	3	1
Nickel Chloride	2	3	1	Sodium Perchlorate	1	3	1
Nickel Sulfate	1	1	1	Sodium Peroxide	1	1	1
Nitric Acid 70 F	1	1	1	Sodium Sulfide	2	3	1
Nitric Acid Concentrated Boiling	3	4	2	Sugar Solution	1	1	1
Nitric Acid Fuming	3	4	2	Sulfur Dioxide	1	3	1
Oil Crude	2	3	1	Sulfuric Acid 70 F 5%	2	3	1
Oil Refined	1	1	1	Sulfuric Acid Boiling 5 %	4	4	2
Oils (Mineral, Vegetable)	1	1	1	Sulfuric Acid Fuming	3	4	1
Oleic Acid	2	3	1	Sulfuric Acid Vapor	2	3	1
Parrifin	1	1	1	Turpentine	1	1	1
Petroleum	1	1	1	Varnish	1	1	1
Phenol	1	1	1	Vinegar	1	1	1
Phosphate	1	1	1	Whiskey	1	1	1
Phosphoric Acid	4	4	3	Wine	1	1	1
Phosphoric Acid 10% 70 F	2	3	2	Wood Pulp	1	1	1
Phosphoric Acid 5% 70 F	1	2	1	Zinc Chloride 70 F	1	1	1
Picric Acid	1	1	1	Zinc Chloride Boiling	3	4	2

Corrosion Resistant Roller Chains

Stainless Steel Chain Selection and Rated Working Loads

Stainless steel chains may be selected by calculating chain tension and multiplying this calculated value by a set of factors given in the tables below. The factors will “derate” the chains based on impact conditions, operating temperatures, chain speed, corrosion circumstance, and the lubrication condition. To calculate chain tension please see page 41 “Slow Speed Selection” for drives and pages 104-105 for conveyors. The Rated Working load given in the chain dimensional tables should be greater than or equal to the calculated chain tension multiplied by the appropriate factors.

$$\text{Rated Working Load} > T \times SF \times TF \times SC \times CF \times LF$$

Where: Rated Working Load is found on pages 59 - 61

- T = Calculated Chain Tension
- SF = Service Factor
- TF = Temperature Factor
- SC = Speed Coefficient
- CF = Corrosion Factor
- LF = Lubrication Factor

Service Factor

Impact Loading	SF
Smooth Operation	1.0
Moderate Impact	1.2
Large Impact Loads	1.5

Speed Coefficient

Chain Speed (ft/min)	SC
0 - 50	1.0
50 - 100	1.2
100 - 150	1.4
150 - 250	1.6

Temperature Factor

Temperature (F)	304SS Mega Chain	600SS	6000SS	316SS
-250 to -50 F	1.0	X	1.0	1.0
-50 to 140 F	1.0	1.0	1.0	1.0
140 to 300 F	1.0	1.0	1.2	1.0
300 to 750 F	1.0	1.0	1.4	1.0
750 to 950 F	1.2	1.8	1.8	1.0
950 to 1100 F	1.5	X	2.1	1.2
1100 to 1300 F	1.8	X	X	1.5
1300 to 1500 F	X	X	X	2.0

X = Not Recommended

Corrosion Factor

Corrosion Rating	CF
1	1.00
2	1.23
3	1.44
4	Do Not Use

See Corrosion Ratings on pages 64 - 65

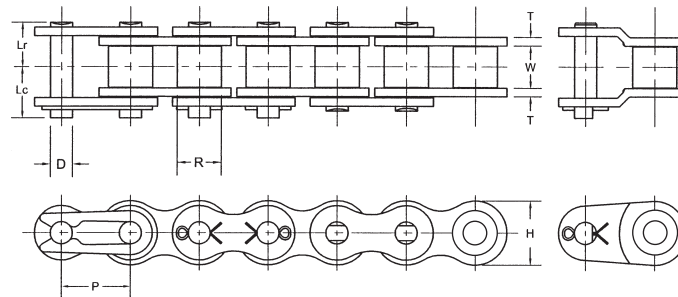
Lubrication Factor

Lubrication	LF
Chain will be lubricated	1.00
No lubrication	1.44

Maintenance Free Roller Chains

ASME/ANSI Standard Self-Lubricating (SL) Chains

Self-Lubricating (SL) roller chains feature oil impregnated sintered steel bushings, which release oil during operation to the critical pin/bushing bearing area, and reabsorb it when the chain is at rest. These chains never need to be lubricated in service and will operate in temperatures from 14 ° F to 158 ° F. Hitachi Self-Lube chains are rollerless and possess oversized sintered steel bushings which operate on standard ASME/ANSI sprockets. **Caution: The ultimate strength and working load ratings of SL series chains are less than their standard carbon steel counterparts and should be considered when replacing existing carbon steel chains.**



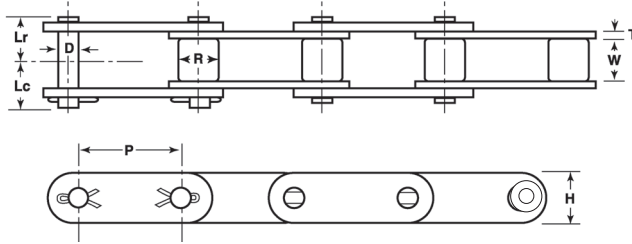
ASME/ANSI Standard Self-Lubricating Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
40SL	1/2	0.312	0.312	0.156	0.060	0.472	0.325	0.365	660	2,900	0.42
50SL	5/8	0.375	0.400	0.200	0.080	0.591	0.400	0.470	1,100	4,400	0.69
60SL	3/4	0.500	0.469	0.234	0.094	0.718	0.500	0.550	1,540	6,400	0.98
80SL	1	0.625	0.625	0.312	0.125	0.949	0.640	0.750	2,650	11,500	1.75
100SL	1 1/4	0.750	0.750	0.375	0.156	1.193	0.770	0.920	3,980	18,500	2.55
120SL	1 1/2	1.000	0.875	0.437	0.187	1.430	0.970	1.130	5,730	26,500	3.75
140SL	1 3/4	1.000	1.000	0.500	0.219	1.660	1.063	1.233	7,710	36,400	5.10
160SL	2	1.250	1.125	0.562	0.250	1.898	1.268	1.438	9,910	47,400	6.60

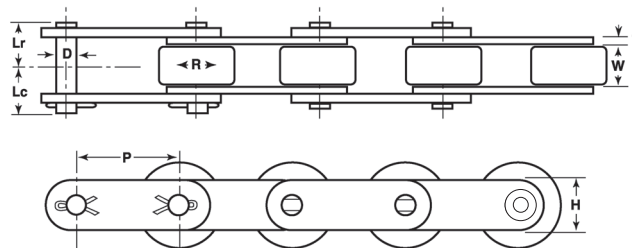
Maintenance Free Roller Chains

Double Pitch Self-Lubricating (SL) Chains

Self-Lubricating (SL) roller chains feature oil impregnated sintered steel bushings, which release oil during operation to the critical pin/bushing bearing area, and reabsorb it when the chain is at rest. These chains never need to be lubricated in service and will operate in temperatures from 14 ° F to 158 ° F. Hitachi Self-Lube Double Pitch Standard Series chains are rollerless and possess oversized sintered steel bushings which operate on standard sprockets. The large roller version utilizes oversized rollers that allow the chains to roll. **Caution: The ultimate strength and working load ratings of SL series chains are less than their standard carbon steel counterparts and should be considered when replacing existing carbon steel chains.**



Standard Series Version



Large Roller Version

Double Pitch Self-Lubricating Chain Specifications

* Indicates Roller Diameter

Chain Dimensions Are Given In Inches												
	Chain Number	Chain Pitch P	Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
Standard Series	C2040SL	1	0.312	0.312	0.156	0.060	0.472	0.325	0.405	700	2,900	0.32
	C2050SL	1 1/4	0.375	0.400	0.200	0.080	0.590	0.400	0.480	1,100	4,400	0.55
	C2060SL	1 1/2	0.500	0.469	0.234	0.094	0.715	0.500	0.590	1,500	6,400	0.80
	C2080SL	2	0.625	0.625	0.312	0.125	0.950	0.640	0.750	2,700	11,500	1.35
	C2080HSL	2	0.625	0.625	0.312	0.156	0.950	0.700	0.830	2,900	13,250	1.55
Large Roller	C2042SL	1	0.312	0.625*	0.156	0.060	0.472	0.325	0.405	700	2,900	0.55
	C2052SL	1 1/4	0.375	0.750*	0.200	0.080	0.590	0.400	0.480	1,100	4,400	0.85
	C2062SL	1 1/2	0.500	0.875*	0.234	0.094	0.715	0.500	0.590	1,500	6,400	1.20
	C2082SL	2	0.625	1.125*	0.312	0.125	0.950	0.640	0.750	2,700	11,500	2.05
	C2082HSL	2	0.625	1.125*	0.312	0.156	0.950	0.700	0.830	2,900	13,250	2.25

Maintenance Free Roller Chains

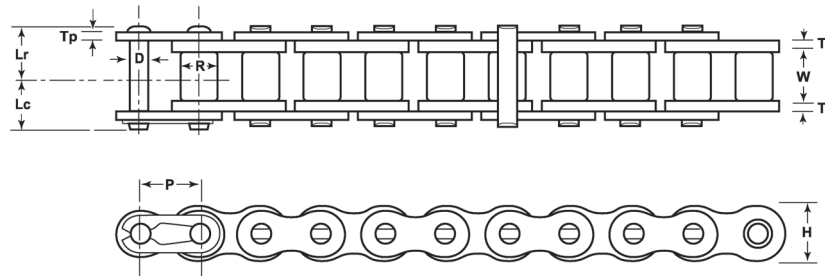
Freedom Series® PT-Type Self Lubricating Chains

Freedom Series® Self-Lubricating chains offer premium performance and value in a sintered maintenance free product. It features the addition of a roller for reduced friction smoother operation over sprockets, and specially coated pins and link plates for rust prevention and improved wear life. They are available in PT-Type, for most drive or power transmission applications, and C-Type, for conveyor applications. Nickel plate or Perfect Coat Plus™ are also available.

The PT-Type chains are made with slightly modified dimensions to achieve the same strength and working load values as ASME/ANSI standard chains (unlike standard SL-Series products which possess reduced ratings). This allows them to be direct replacements on many slow to moderate speed drives. These chains are available in single strand only and will operate on standard ASME/ANSI sprockets.

Normal Operating Temperature 14 ° F to 158 ° F

Also available in Nickel Plate or Perfect Coat Plus™



Freedom Series® PT-Type Self-Lubricating Roller Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Roller Plate Thickness Tr	Pin Plate Thickness Tp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
40FS	1/2	0.312	0.312	0.156	0.080	0.060	0.463	0.350	0.400	820	4,300	0.46
50FS	5/8	0.375	0.400	0.200	0.094	0.080	0.577	0.425	0.485	1,410	7,200	0.72
60FS	3/4	0.500	0.469	0.234	0.125	0.094	0.691	0.545	0.615	1,940	9,700	1.15
80FS	1	0.625	0.625	0.312	0.156	0.125	0.921	0.680	0.790	3,300	17,600	1.80
100FS	1 1/4	0.750	0.750	0.375	0.187	0.156	1.154	0.805	0.955	5,080	26,500	2.85

Maintenance Free Roller Chains

Freedom Series® PT-Type Horsepower Tables

40 Freedom Series PT -Type Horsepower Table

No. Teeth Small Sprk.	Maximum Speed of Small Sprocket (rpm)										
	10	25	50	100	200	300	400	500	700	900	1000
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						

Chain selection for Freedom Series® PT-Type roller chains is the same as for standard products. Use the horsepower tables on this page, and the method described on pages 40-42. The slow speed selection method may also be used if linear chain speeds are less than 160 ft/min. Contact Hitachi engineering for speed/sprocket size combinations not included in the following tables.

50 Freedom Series PT -Type Horsepower Table

No. Teeth Small Sprk.	Maximum Speed of Small Sprocket (rpm)										
	10	25	50	100	200	300	400	500	700	900	1000
11	0.16	0.38	0.71	1.33	2.48	3.58	4.64	5.66	6.67	7.67	
12	0.19	0.42	0.78	1.46	2.72	3.93	5.09	6.22	7.33	8.42	
13	0.20	0.46	0.86	1.59	2.98	4.28	5.55	6.78	7.99		
14	0.21	0.50	0.92	1.73	3.22	4.64	6.00	7.34	8.66		
15	0.23	0.54	0.99	1.86	3.47	5.00	6.47	7.92			
16	0.25	0.58	1.07	2.00	3.73	5.36	6.94	8.48			
17	0.27	0.62	1.14	2.13	3.97	5.72	7.41	9.06			
18	0.28	0.66	1.22	2.27	4.22	6.08	7.88				
19	0.31	0.68	1.29	2.40	4.48	6.45					
20	0.32	0.72	1.35	2.53	4.73	6.82					
21	0.34	0.76	1.43	2.68	4.99	7.18					
22	0.35	0.80	1.50	2.81	5.24	7.56					
23	0.38	0.84	1.58	2.95	5.51	7.93					
24	0.39	0.88	1.66	3.08	5.76	8.30					
25	0.40	0.92	1.73	3.23	6.02	8.67					
26	0.43	0.97	1.81	3.36	6.29	9.05					
28	0.46	1.05	1.96	3.65	6.81	9.81					
30	0.50	1.13	2.10	3.93	7.33						
32	0.54	1.21	2.27	4.21							
35	0.59	1.33	2.49	4.64							
40	0.67	1.54	2.87	5.36							
45	0.76	1.74	4.27	6.08							

60 Freedom Series PT -Type Horsepower Table

No. Teeth Small Sprk.	Maximum Speed of Small Sprocket (rpm)										
	10	25	50	100	150	200	250	300	400	500	600
11	0.29	0.67	1.26	2.35	3.39	4.38	5.36	6.35	8.19	10.20	
12	0.32	0.74	1.38	2.59	3.71	4.81	5.88	6.95	9.00	11.10	
13	0.35	0.80	1.51	2.81	4.06	5.25	6.45	7.58	9.82		
14	0.39	0.87	1.64	3.06	4.40	5.70	7.00	8.21	10.62		
15	0.42	0.94	1.76	3.28	4.73	6.13	7.50	8.85	11.41		
16	0.44	1.01	1.89	3.52	5.08	6.57	8.05	9.45			
17	0.47	1.09	2.01	3.77	5.41	7.02	8.60	10.11			
18	0.51	1.15	2.14	3.99	5.76	7.47	9.15	10.72			
19	0.54	1.22	2.28	4.24	6.11	7.91	9.70	11.44			
20	0.56	1.29	2.40	4.48	6.46	8.36	10.21	12.11			
21	0.59	1.35	2.53	4.73	6.81	8.82	10.80				
22	0.63	1.42	2.67	4.97	7.16	9.27	11.30				
23	0.66	1.50	2.79	5.21	7.51	9.73	11.95				
24	0.68	1.57	2.92	5.46	7.87	10.20					
25	0.72	1.64	3.06	5.71	8.22	10.60					
26	0.75	1.72	3.19	5.95	8.58	11.10					
28	0.82	1.85	3.46	6.45	9.29	12.10					
30	0.87	2.00	3.73	6.94	10.00	13.05					
32	0.94	2.14	3.99	7.45							
35	1.03	2.36	4.40	8.20							
40	1.19	2.72	5.08	9.48							
45	1.35	3.10	5.76	10.80							



Maintenance Free Roller Chains

Freedom Series® PT-Type Horsepower Tables

80 Freedom Series PT -Type Horsepower Table

No. Teeth Small Sprk.	Maximum Speed of Small Sprocket (rpm)										
	10	25	50	75	100	125	150	200	250	300	400
11	0.66	1.52	2.85	4.10	5.27	6.45	7.57	9.88	12.00	14.20	
12	0.73	1.66	3.10	4.50	5.80	7.10	8.32	10.82	13.20		
13	0.80	1.82	3.40	4.90	6.30	7.75	9.10	11.80	14.30		
14	0.86	1.99	3.68	5.30	6.88	8.35	9.90	12.70	15.49		
15	0.93	2.15	3.95	5.70	7.45	9.00	10.66	13.70			
16	0.99	2.30	4.25	6.10	7.90	9.70	11.45	14.75			
17	1.08	2.45	4.55	6.55	8.45	10.32	12.14	15.80			
18	1.15	2.58	4.81	6.95	9.00	11.08	12.91				
19	1.21	2.73	5.10	7.35	9.50	11.61	13.71				
20	1.29	2.89	5.40	7.77	10.00	12.33	14.54				
21	1.35	3.05	5.70	8.20	10.65	13.50	15.33				
22	1.40	3.20	6.00	8.60	11.15	14.22	16.12				
23	1.48	3.36	6.25	9.00	11.78	14.90	16.88				
24	1.55	3.55	6.55	9.45	12.20	15.54					
25	1.62	3.68	6.90	9.90	12.88	16.48					
26	1.70	3.84	7.15	10.31	13.35	17.70					
28	1.85	4.15	7.75	11.16	14.55						
30	1.99	4.45	8.35	12.05	15.52						
32	2.10	4.80	8.95	12.90							
35	2.32	5.30	9.84	14.23							
40	2.66	6.13	11.40	16.45							
45	3.05	6.95	12.90	18.66							

100 Freedom Series PT -Type Horsepower Table

No. Teeth Small Sprk.	Maximum Speed of Small Sprocket (rpm)											
	10	25	50	75	100	125	150	175	200	225	250	
11	1.11	2.55	4.70	6.80	8.90	10.70	12.60	14.50	16.40	18.20		
12	1.25	2.79	5.20	7.50	9.70	11.80	13.90	15.92	18.00			
13	1.35	3.05	5.66	8.13	10.50	12.80	15.10	17.41				
14	1.48	3.28	6.12	8.91	11.40	13.90	16.40	18.80				
15	1.55	3.56	6.58	9.47	12.33	15.00	17.70					
16	1.65	3.80	7.06	10.15	13.11	16.10	18.90					
17	1.80	4.03	7.55	10.88	14.20	17.20						
18	1.90	4.30	8.00	11.52	15.00	18.20						
19	2.00	4.55	8.48	12.21	15.80	19.33						
20	2.11	4.85	8.99	12.94	16.84	20.50						
21	2.22	5.08	9.45	13.71	17.74							
22	2.33	5.33	9.93	14.33	18.52							
23	2.44	5.60	10.44	15.00	19.40							
24	2.56	5.88	10.99	15.80	20.41							
25	2.68	6.11	11.40	16.50	21.31							
26	2.82	6.39	12.00	17.22								
28	3.05	6.92	13.00	18.64								
30	3.27	7.45	14.00	20.10								
32	3.55	8.00	15.00	21.45								
35	3.86	8.80	16.48									
40	4.46	10.20	19.00									
45	5.10	11.50	21.68									

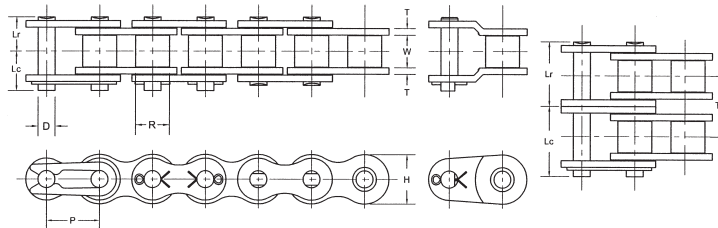
Maintenance Free Roller Chains

Freedom Series® C-Type ASME/ANSI Self Lubricating Chains

The C-Type Freedom Series® chains are made dimensionally equivalent to ASME/ANSI standard chains so that they will fit in the existing conveyor track. Attachments are available for C-Type Freedom Series® products (See pages 90-97 for attachment specifications). These chains are available in ASME/ANSI single strand, double strand, and double pitch. They operate on standard ASME/ANSI sprockets. **Caution: The ultimate strength and working load ratings of FS-C series chains though higher than SL series chains are less than their standard carbon steel counterparts and should be considered when replacing existing carbon steel chains.**

Normal Operating Temperature 14 ° F to 158 ° F

Also available in Nickel Plate or Perfect Coat Plus™

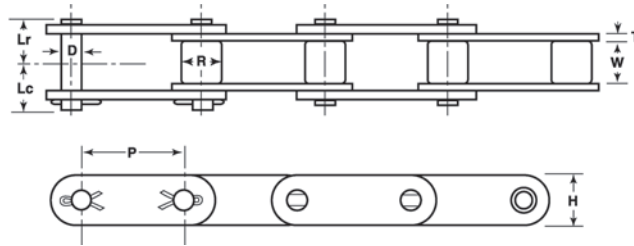


Freedom Series® C-Type ASME/ANSI Self-Lubricating Roller Chain Specifications

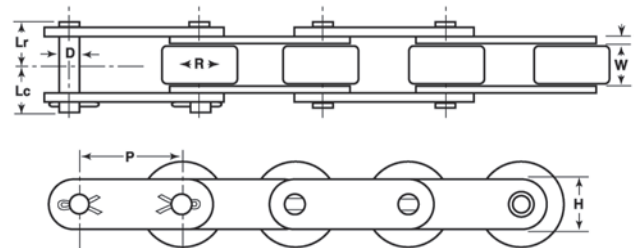
Dimensions (Inches)													
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Transverse Pitch Tp	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
Single Strand Chain	40FS-C	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	-	700	3,500	0.40
	50FS-C	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	-	1,210	5,700	0.66
	60FS-C	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	-	1,700	7,900	0.98
	80FS-C	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	-	2,870	14,000	1.69
	100FS-C	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	-	4,400	21,000	2.62
Double Strand Chains	40-2FS-C	1/2	0.312	0.312	0.156	0.060	0.463	0.606	0.661	0.567	1,190	7,000	0.82
	50-2FS-C	5/8	0.375	0.400	0.200	0.080	0.577	0.756	0.819	0.712	2,060	11,400	1.34
	60-2FS-C	3/4	0.500	0.469	0.234	0.094	0.691	0.945	1.012	0.898	2,890	15,800	1.98
	80-2FS-C	1	0.625	0.625	0.312	0.125	0.921	1.213	1.327	1.153	4,880	28,000	3.42

Maintenance Free Roller Chains

Freedom Series® C-Type Double Pitch Self Lubricating Chains



Standard Roller Version



Large Roller Version

Freedom Series® C-Type Double Pitch Self-Lubricating Roller Chain Specifications

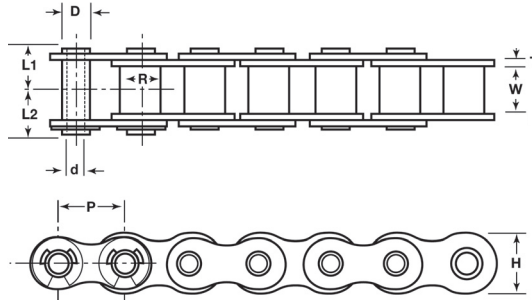
		Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
Standard Roller	C2040FS-C	1	0.312	0.312	0.156	0.060	0.472	0.325	0.405	700	3,500	0.32
	C2050FS-C	1 1/4	0.375	0.400	0.200	0.080	0.590	0.400	0.480	1,210	5,700	0.55
	C2060HFS-C	1 1/2	0.500	0.469	0.234	0.094	0.715	0.500	0.590	2,000	8,400	0.80
	C2080HFS-C	2	0.625	0.625	0.312	0.156	0.950	0.700	0.830	3,400	14,300	1.55
Large Roller	C2042FS-C	1	0.312	0.625	0.156	0.060	0.472	0.325	0.405	700	3,500	0.55
	C2052FS-C	1 1/4	0.375	0.750	0.200	0.080	0.590	0.400	0.480	1,210	5,700	0.85
	C2062HFS-C	1 1/2	0.500	0.875	0.234	0.094	0.715	0.500	0.590	2,000	8,400	1.20
	C2082HFS-C	2	0.625	1.125	0.312	0.156	0.950	0.700	0.830	3,400	14,300	2.25

Hollow Pin Chain Products

Carbon Steel Hollow Pin Chains

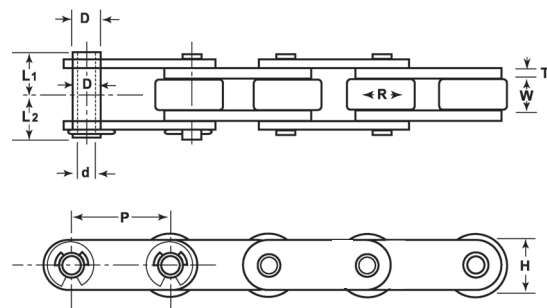
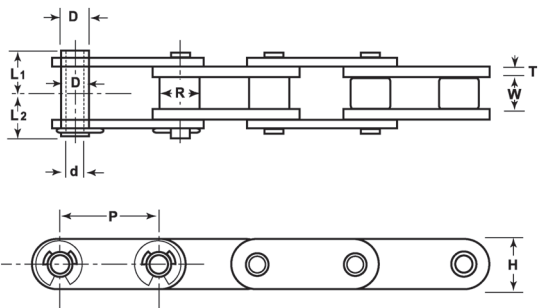
Hollow Pin chains offer versatility in conveyor design, and allow for the insertion of through rods or other attachments. Hitachi Hollow Pin Chains feature cold forged seamless hollow pins for greater dimensional accuracy and superior wear performance.

Also available in Nickel Plate or Perfect Coat Plus™



ASME/ANSI Hollow Pin Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches								Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
40HP	1/2	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.39
50HP	5/8	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	4,400	710	0.65
60HP	3/4	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	0.98
80HP	1	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	1.66



Double Pitch Hollow Pin Chain Specifications

* Indicates Roller Diameter

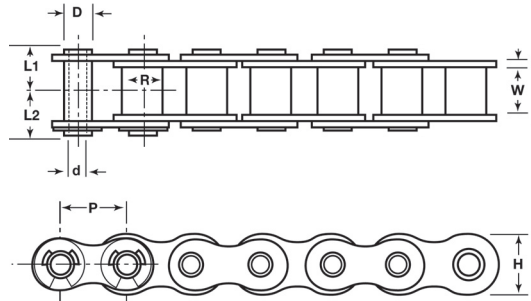
	Chain Number	Chain Dimensions Are Given In Inches									Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Chain Pitch P	Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
Standard Series	C2040HP	1	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.30
	C2050HP	1 1/4	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	4,400	700	0.50
	C2060HP	1 1/2	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	0.75
	C2080HP	2	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	1.35
Large Roller	C2042HP	1	0.312	0.625*	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.55
	C2052HP	1 1/4	0.375	0.750*	0.280	0.202	0.080	0.591	0.405	0.455	4,400	700	0.85
	C2062HP	1 1/2	0.500	0.875*	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	1.20
	C2082HP	2	0.625	1.125*	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	2.10

Hollow Pin Chain Products

Self Lubricating (SL) Hollow Pin Chains

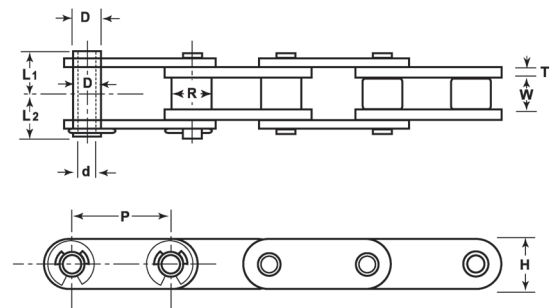
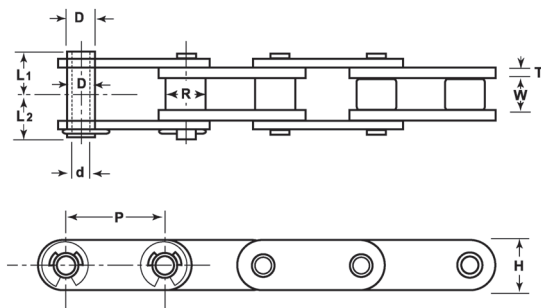
Self Lubricated Hollow Pin Chains possess oil impregnated sintered steel bushings and do not require lubrication in service.

Also available in Nickel Plate, Perfect Coat Plus™ or with the Freedom Series® Treatment



ASME/ANSI Hollow Pin Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches								Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
40HP-SL	1/2	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.39
50HP-SL	5/8	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	4,400	710	0.65
60HP-SL	3/4	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	0.98
80HP-SL	1	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	1.66



Double Pitch Hollow Pin Chain Specifications

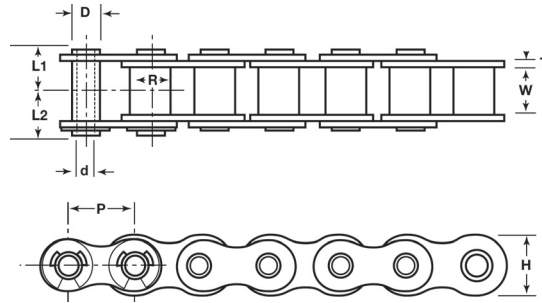
* Indicates Roller Diameter

	Chain Number	Chain Dimensions Are Given In Inches									Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Chain Pitch P	Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
Standard Series	C2040HP-SL	1	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.30
	C2050HP-SL	1 1/4	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	4,400	700	0.50
	C2060HP-SL	1 1/2	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	0.75
	C2080HP-SL	2	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	1.35
Large Roller	C2042HP-SL	1	0.312	0.625*	0.222	0.158	0.060	0.472	0.330	0.363	2,900	400	0.55
	C2052HP-SL	1 1/4	0.375	0.750*	0.280	0.202	0.080	0.591	0.405	0.455	4,400	700	0.85
	C2062HP-SL	1 1/2	0.500	0.875*	0.327	0.238	0.094	0.718	0.510	0.560	6,400	950	1.20
	C2082HP-SL	2	0.625	1.125*	0.446	0.318	0.125	0.949	0.640	0.760	11,500	1,720	2.10

Hollow Pin Chain Products

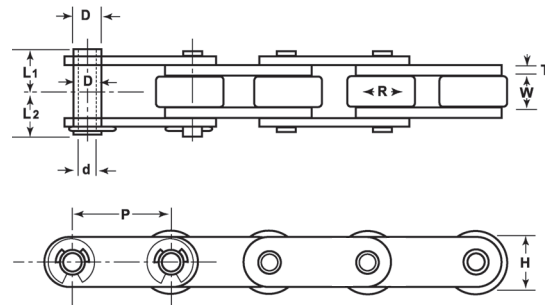
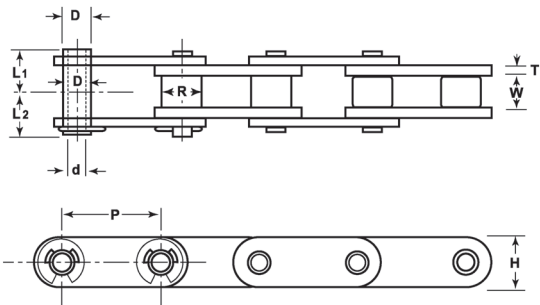
300 Series Stainless Steel Hollow Pin Chains

304 Series Stainless Steel is our standard product and provides excellent corrosion and heat resistance. It is popular for many food processing applications. 316SS products are available as a made-to-order item.



ASME/ANSI 304SS Hollow Pin Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches								Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
40SSHP	1/2	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	1,720	100	0.39
50SSHP	5/8	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	2,650	160	0.65
60SSHP	3/4	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	3,840	230	0.98
80SSHP	1	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	6,970	400	1.66



Double Pitch 304SS Hollow Pin Chain Specifications

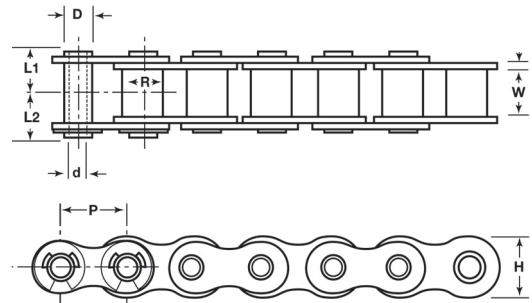
* Indicates Roller Diameter

	Chain Number	Chain Dimensions Are Given In Inches									Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Chain Pitch P	Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
Standard Roller	C2040SS-HP	1	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	1,720	100	0.30
	C2050SS-HP	1 1/4	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	2,650	160	0.50
	C2060SS-HP	1 1/2	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	3,840	230	0.75
	C2080SS-HP	2	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	6,970	400	1.35
Large Roller	C2042SS-HP	1	0.312	0.625*	0.222	0.158	0.060	0.472	0.330	0.363	1,720	100	0.55
	C2052SS-HP	1 1/4	0.375	0.750*	0.280	0.202	0.080	0.591	0.405	0.455	2,650	160	0.85
	C2062SS-HP	1 1/2	0.500	0.875*	0.327	0.238	0.094	0.718	0.510	0.560	3,840	230	1.20
	C2082SS-HP	2	0.625	1.125*	0.446	0.318	0.125	0.949	0.640	0.760	6,970	400	2.10

Hollow Pin Chain Products

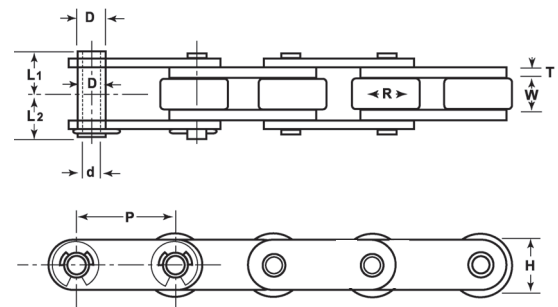
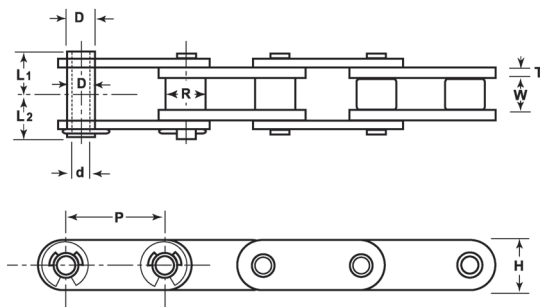
6000 Series™ Stainless Steel Hollow Pin Chains

Hitachi's unique 6000 Series stainless steel provides additional wear resistance while maintaining the corrosion resistance of 304SS. **Caution:** The wear resistance benefits of 6000 Series Stainless Steel are reduced with increasing temperatures. If operating conditions exceed 750 °F Type 304 or 316 stainless steel are recommended.



ASME/ANSI 6000 Series™ SS Hollow Pin Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches								Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
40SS-HP	1/2	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	1,720	150	0.39
50SS-HP	5/8	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	2,650	240	0.65
60SS-HP	3/4	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	3,840	345	0.98
80SS-HP	1	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	6,970	600	1.66



Double Pitch 6000 Series™ SS Hollow Pin Chain Specifications

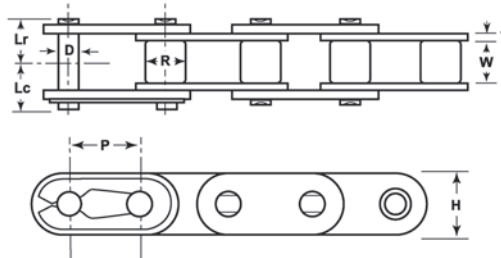
* Indicates Roller Diameter

	Chain Number	Chain Dimensions Are Given In Inches									Average Ultimate Strength (Lbs)	Rated Working Load (Lbs)	Average Chain Weight (Lbs/ft)
		Chain Pitch P	Inside Width W	Bushing Diameter R	Hollow Pin OD D	Hollow Pin ID d	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L1	Cot. Pin Length L2			
Standard Series	C2040SS-HP	1	0.312	0.312	0.222	0.158	0.060	0.472	0.330	0.363	1,720	150	0.30
	C2050SS-HP	1 1/4	0.375	0.400	0.280	0.202	0.080	0.591	0.405	0.455	2,650	240	0.50
	C2060SS-HP	1 1/2	0.500	0.469	0.327	0.238	0.094	0.718	0.510	0.560	3,840	345	0.75
	C2080SS-HP	2	0.625	0.625	0.446	0.318	0.125	0.949	0.640	0.760	6,970	600	1.35
Large Roller	C2042SS-HP	1	0.312	0.625*	0.222	0.158	0.060	0.472	0.330	0.363	1,720	150	0.55
	C2052SS-HP	1 1/4	0.375	0.750*	0.280	0.202	0.080	0.591	0.405	0.455	2,650	240	0.85
	C2062SS-HP	1 1/2	0.500	0.875*	0.327	0.238	0.094	0.718	0.510	0.560	3,840	345	1.20
	C2082SS-HP	2	0.625	1.125*	0.446	0.318	0.125	0.949	0.640	0.760	6,970	600	2.10

Specialty Roller Chain Products

Straight Side Bar Roller Chains

Straight Side Bar chains possess flat, rather than contoured link plates, for better sliding properties on conveyors. The fatigue strength, and chain weight, are slightly higher than ASME/ANSI standard products.

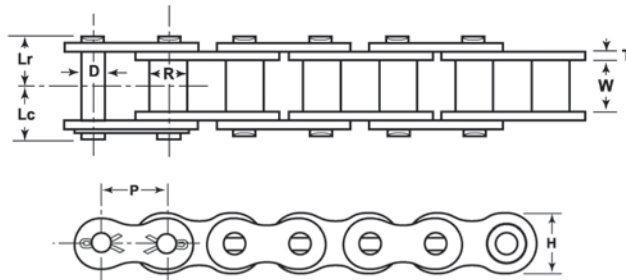


ASME/ANSI Straight Side Bar Roller Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
40F	1/2	0.312	0.312	0.156	0.060	0.463	0.325	0.365	940	4,300	0.40
50F	5/8	0.375	0.400	0.200	0.080	0.577	0.400	0.470	1,620	7,200	0.66
60F	3/4	0.500	0.469	0.234	0.094	0.691	0.500	0.550	2,410	9,700	0.98
80F	1	0.625	0.625	0.312	0.125	0.921	0.640	0.750	4,140	17,600	1.70
100F	1 1/4	0.750	0.750	0.375	0.156	1.154	0.770	0.920	6,360	26,500	2.60
120F	1 1/2	1.000	0.875	0.437	0.187	1.382	0.970	1.130	8,540	37,500	3.90

Rollerless SBR[®] Chains

Rollerless chains are designed for high load tension linkage such as hoists, lifts, or reciprocating motion equipment. They possess the same strength and working load values as ASME/ANSI standard chains. Offset links are not available for these chains. Chain numbers are the same as ASME/ANSI chains except that they end in a "5" instead of a "0".



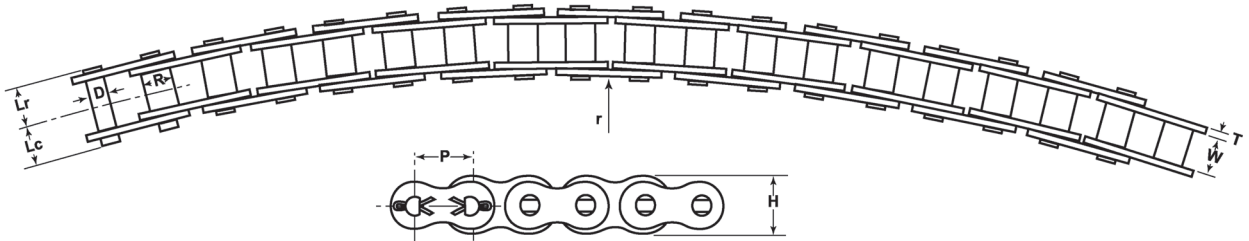
ASME/ANSI Rollerless Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
65	3/4	0.500	0.330	0.234	0.094	0.691	0.504	0.555	2,410	9,700	0.81
85	1	0.625	0.448	0.312	0.125	0.921	0.646	0.732	4,140	17,600	1.41
105	1 1/4	0.750	0.533	0.375	0.156	1.154	0.776	0.484	6,360	26,500	2.08
125	1 1/2	1.000	0.627	0.437	0.187	1.382	0.976	1.126	8,540	37,500	3.04

Specialty Roller Chain Products

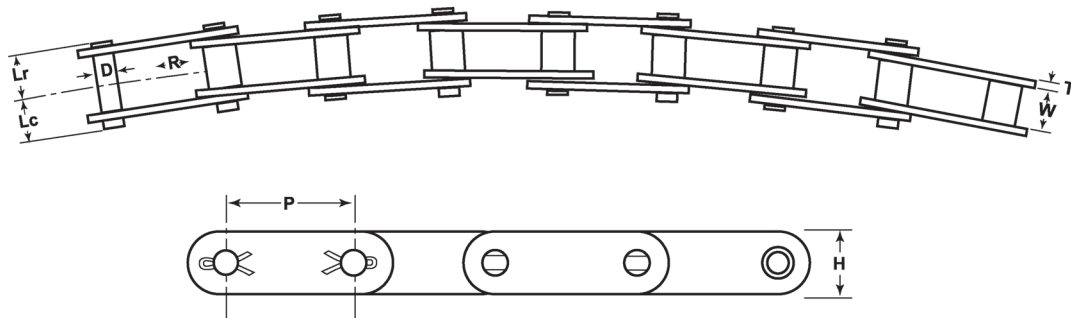
Side Bow (Curved) Roller Chains

Side Bow (curved) chains are designed to allow operation around a curve. They are produced with additional pin/bushing, and link plate clearances which allow for travel in a curved path and/or chain twist.



ASME/ANSI Side Bow (Curved) Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Minimum Curve Radius r	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc				
40SB	1/2	0.312	0.312	0.141	0.060	0.463	0.335	0.405	13.78	400	3,300	0.42
50SB	5/8	0.375	0.400	0.175	0.080	0.577	0.415	0.415	15.75	710	5,000	0.70
60SB	3/4	0.500	0.469	0.200	0.094	0.691	0.520	0.590	19.69	950	6,600	0.98
80SB	1	0.625	0.625	0.281	0.125	0.921	0.660	0.770	23.62	1,720	13,000	1.62



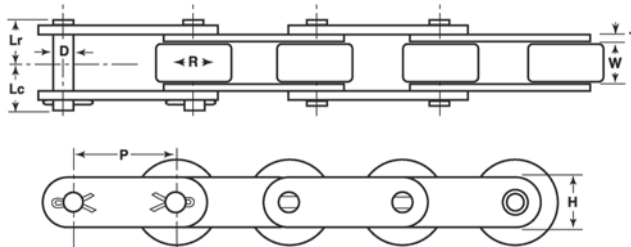
Double Pitch Side Bow (Curved) Chain Specifications

	Chain Number	Chain Dimensions Are Given In Inches								Minimum Curve Radius r	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc				
Standard Roller	C2040SB	1	0.312	0.312	0.141	0.060	0.450	0.335	0.405	27.56	400	3,510	0.32
	C2050SB	1 1/4	0.375	0.400	0.175	0.080	0.591	0.400	0.465	31.50	710	5,460	0.55
	C2060SB	1 1/2	0.500	0.469	0.200	0.094	0.670	0.565	0.655	39.37	950	7,300	0.80
	C2080SB	2	0.626	0.625	0.281	0.156	0.890	0.700	0.825	47.25	1,720	13,000	1.56
Large Roller	C2042SB	1	0.312	0.625	0.141	0.060	0.450	0.335	0.405	27.56	400	3,510	0.55
	C2052SB	1 1/4	0.375	0.750	0.175	0.080	0.591	0.415	0.415	31.50	700	5,460	0.85
	C2062SB	1 1/2	0.500	0.875	0.200	0.125	0.670	0.520	0.590	39.37	950	7,300	1.35
	C2082SB	2	0.626	1.125	0.281	0.156	0.890	0.700	0.825	47.25	1,720	13,000	5.38

SBR[®] Specialty Roller Chain Products

Carbon and Stainless Steel Plastic Roller Double Pitch Chains

Plastic Roller Double Pitch chains are available in both carbon steel and 304 series austenitic stainless steel. The roller is made from a poly-acetal resin which provides smooth quiet operation, resists corrosion, and is ideal for a wide variety of conveyor applications. Attachments are available. Care must be taken not to exceed the “maximum roller loads” given in the tables below when the chain is directly carrying weight. Rated working loads (allowable chain tensions) are reduced due to the pressure between the sprocket and the plastic roller.



Plastic Roller Double Pitch Carbon Chain Specifications

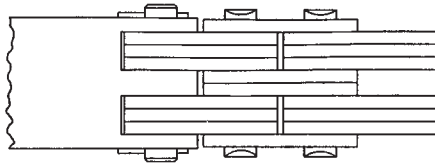
	Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load		Roller Crush Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Chain Tension (Lbs)	Roller Load (Lbs)		
Carbon Steel	C2042-D	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	100	45	550	0.33
	C2052-D	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	160	70	770	0.57
	C2062H-D	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	230	110	880	0.98
	C2082H-D	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	400	200	1,540	1.77
Stainless Steel	C2042SS-D	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	100	45	550	0.33
	C2052SS-D	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	155	70	770	0.57
	C2062HSS-D	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	230	110	880	0.98
	C2082HSS-D	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	400	200	1,540	1.77

Leaf Chains

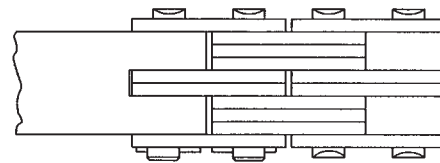
General Information and Leaf Chain Selection

Leaf Chains are made for high load, slow speed tension linkage applications. Often they are specified for reciprocating motion lifting devices such as fork lifts, or as counterweight chains for elevators or telescoping equipment such as cranes. The chains are typically supplied to a specific length and connected to a clevis at each end. The clevis may accommodate “male” ends (inside links) or “female” ends (outside links) as required.

Leaf chains are available in three series; AL, BL, and LL. The AL and BL series are based on American standard chains, while the LL series is based on British Standard chains. In designing new applications we recommend selecting BL series chains in preference to AL series. BL series leaf chains are made according to the ASME/ANSI B29.8 American Standard. AL series leaf chains have been discontinued by the ASME/ANSI standards group and therefore may be more difficult to obtain in the future. LL series leaf chains are made in accordance with the ISO 606 international standard.



Chain with Female Clevis / Male End



Chain with Male Clevis / Female End

A chain with an even number of pitches has one male and one female end. A chain with an odd number of pitches may have either two male or two female ends. When ordering lengths with an odd number of pitches the end type for the chain or the type of clevis must be specified.

Leaf Chain Selection

Use the following formula to verify the selection of a leaf chain:

$$\text{Hitachi Minimum Tensile Strength} > T \times DF \times SF$$

- T** Calculated Maximum Chain Tension
- DF** Duty Factor
- SF** Service Factor

Hitachi Minimum Tensile Strength Ratings may be found on pages 82-84
 Selection of the BL-Series is preferable to that of the AL-Series.



Service Factor (SF)

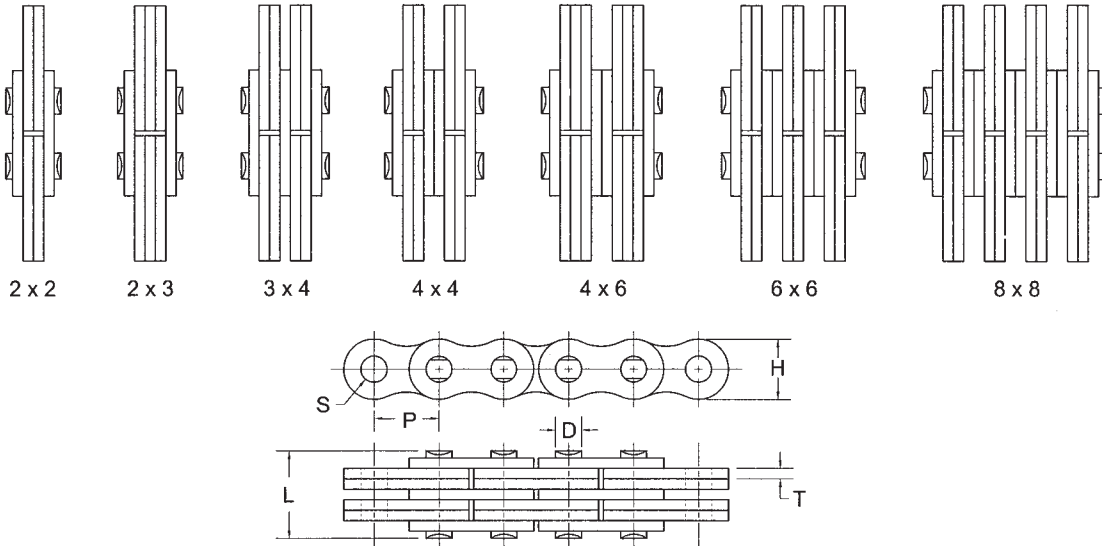
Impact Loading	SF
Smooth Operation	1.0
Moderate Impact	1.3
Large Impact Loads	1.5

Duty Factor (DF)

Leaf Chain Series	Cycles per Day	DF
AL-Series	10	9
	100	12
BL-Series	1,000	9

Leaf Chains

AL-Series Leaf Chain Specifications



AL-Series Leaf Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches							Minimum Ultimate Strength		Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Lacing	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L	Clevis Hole Dia. S (min.)	ASME ANSI (Lbs)	Hitachi (Lbs)		
AL422	1/2	2 x 2	0.156	0.060	0.406	0.331	0.1598	3,300	3,700	4,200	0.24
AL444		4 x 4				0.587		6,600	7,500	8,400	0.47
AL466		6 x 6				0.831		9,900	12,600	12,600	0.70
AL522	5/8	2 x 2	0.200	0.080	0.500	0.425	0.2019	5,500	6,200	6,800	0.39
AL544		4 x 4				0.760		11,000	12,300	13,700	0.78
AL566		6 x 6				1.102		16,500	18,500	21,200	1.16
AL622	3/4	2 x 2	0.234	0.094	0.598	0.550	0.2374	7,500	8,700	9,700	0.54
AL644		4 x 4				0.894		15,000	17,400	19,400	1.13
AL666		6 x 6				1.295		22,500	26,000	29,100	1.65
AL822	1	2 x 2	0.312	0.125	0.795	0.665	0.3149	13,000	14,500	16,300	0.95
AL844		4 x 4				1.169		26,000	29,100	32,600	1.94
AL866		6 x 6				1.705		39,000	43,600	48,900	2.84
AL1022	1 1/4	2 x 2	0.375	0.156	0.965	0.783	0.3775	19,000	22,000	24,200	1.65
AL1044		4 x 4				1.437		38,000	44,100	48,500	3.23
AL1066		6 x 6				2.118		57,000	66,100	72,700	4.86
AL1222	1 1/2	2 x 2	0.437	0.187	1.150	0.965	0.4417	27,000	30,900	34,200	2.25
AL1244		4 x 4				1.732		54,000	61,700	68,300	4.42
AL1266		6 x 6				2.508		81,000	92,600	102,500	6.60
AL1422	1 3/4	2 x 2	0.500	0.219	1.346	1.114	0.5047	34,000	41,900	46,100	3.35
AL1444		4 x 4				2.028		68,000	83,800	92,100	6.42
AL1466		6 x 6				2.909		102,000	125,700	138,300	9.49
AL1622	2	2 x 2	0.562	0.250	1.587	1.263	0.5669	43,000	54,000	60,700	4.27
AL1644		4 x 4				2.311		86,000	108,000	121,300	8.48
AL1666		6 x 6				3.350		129,000	162,000	181,900	12.68

Leaf Chains

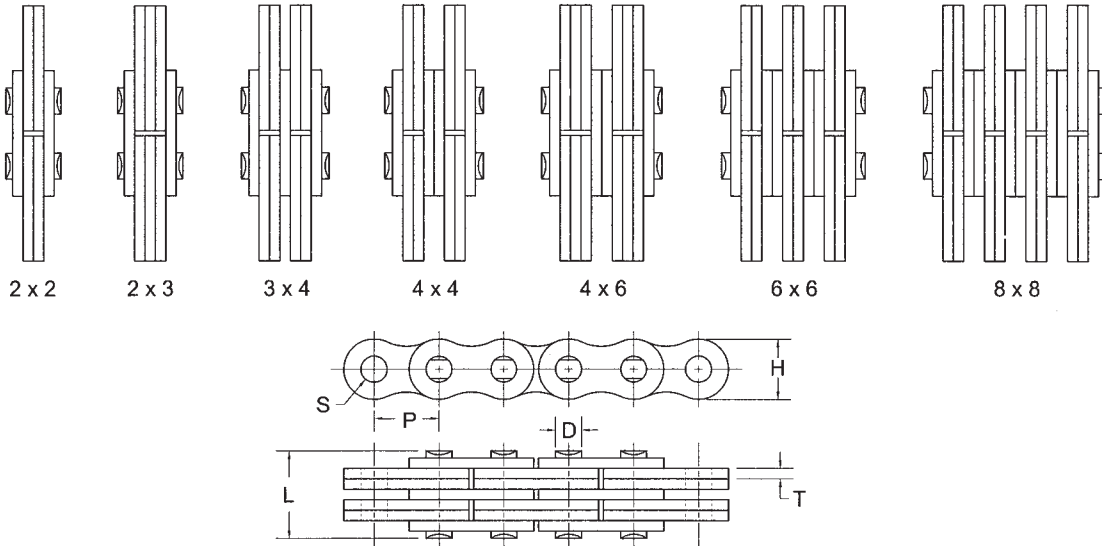
BL-Series Leaf Chain Specifications

BL-Series Leaf Chain Specifications

Chain Number	Chain Pitch P	Lacing	Chain Dimensions Are Given In Inches					Minimum Ultimate Strength		Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
			Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L	Clevis Hole Dia. S (min.)	ASME ANSI (Lbs)	Hitachi (Lbs)		
BL422	1/2	2 x 2	0.200	0.080	0.463	0.425	0.2019	5,000	5,500	6,200	0.43
BL423		2 X 3				0.504		5,000	5,500	6,200	0.53
BL434		3 X 4				0.673		7,500	8,400	9,100	0.72
BL444		4 X 4				0.760		10,000	11,000	12,200	0.82
BL446		4 X 6				0.925		10,000	11,000	12,200	1.06
BL466		6 X 6				1.102		15,000	16,500	18,400	1.27
BL522	5/8	2 x 2	0.234	0.094	0.557	0.500	0.2374	7,500	8,800	9,600	0.68
BL523		2 X 3				0.602		7,500	8,800	9,600	0.80
BL534		3 X 4				0.807		11,000	13,200	14,400	1.08
BL544		4 X 4				0.894		15,000	17,600	19,200	1.21
BL546		4 X 6				1.106		15,000	17,600	19,200	1.52
BL566		6 X 6				1.295		22,500	25,800	28,700	1.78
BL622	3/4	2 x 2	0.312	0.125	0.691	0.673	0.3153	11,000	14,300	15,900	1.03
BL623		2 X 3				0.780		11,000	14,300	15,900	1.27
BL634		3 X 4				1.051		16,500	21,500	23,800	1.80
BL644		4 X 4				1.169		22,000	28,700	31,700	2.04
BL646		4 X 6				1.453		22,000	28,700	31,700	2.79
BL666		6 X 6				1.709		33,000	42,800	47,600	3.08
BL822	1	2 x 2	0.375	0.156	0.950	0.783	0.3779	19,000	23,200	25,600	1.73
BL823		2 X 3				0.957		19,000	23,200	25,600	2.13
BL834		3 X 4				1.291		28,500	34,800	38,700	2.94
BL844		4 X 4				1.445		38,000	46,300	51,400	3.33
BL846		4 X 6				1.787		38,000	46,300	51,400	4.19
BL866		6 X 6				2.122		57,000	69,000	76,700	5.00
BL888	8 X 8	2.789	76,000	92,600	102,800	6.67					
BL1022	1 1/4	2 x 2	0.437	0.187	1.154	0.965	0.4409	26,000	31,700	35,300	2.51
BL1023		2 X 3				1.138		26,000	31,700	35,300	3.12
BL1034		3 X 4				1.539		39,000	49,600	55,100	4.37
BL1044		4 X 4				1.736		52,000	63,500	70,500	4.98
BL1046		4 X 6				2.118		52,000	63,500	70,500	6.19
BL1066		6 X 6				2.512		78,000	95,200	105,800	7.44
BL1088	8 X 8	3.288	104,000	127,000	141,000	9.90					
BL1222	1 1/2	2 x 2	0.500	0.219	1.382	1.114	0.5047	34,000	41,900	46,500	3.21
BL1223		2 X 3				1.362		34,000	41,900	46,500	4.34
BL1234		3 X 4				1.807		51,000	67,200	74,700	6.08
BL1244		4 X 4				2.012		68,000	83,800	93,000	6.90
BL1246		4 X 6				2.480		68,000	83,800	93,000	7.97
BL1266		6 X 6				2.913		102,000	125,400	139,600	9.68
BL1288	8 X 8	3.814	136,000	167,600	186,000	12.46					
BL1422	1 3/4	2 x 2	0.562	0.250	1.610	1.267	0.5665	43,000	55,100	60,600	4.87
BL1423		2 X 3				1.543		43,000	55,100	60,600	5.98
BL1434		3 X 4				2.051		64,500	90,400	90,400	7.80
BL1444		4 X 4				2.315		86,000	109,100	121,300	8.65
BL1446		4 X 6				2.819		86,000	109,100	121,300	12.00
BL1466		6 X 6				3.354		129,000	163,600	181,900	15.01
BL1622	2	2 x 2	0.687	0.281	1.839	1.425	0.6937	65,000	79,400	88,200	6.57
BL1623		2 X 3				1.736		65,000	79,400	88,200	8.12
BL1634		3 X 4				2.334		97,500	124,600	138,900	11.32
BL1644		4 X 4				2.610		130,000	158,700	176,400	12.67
BL1646		4 X 6				3.173		130,000	158,700	176,400	16.09
BL1666		6 X 6				3.803		195,000	238,100	264,500	19.18
BL1688	8 X 8	4.433	260,000	317,500	352,700	22.27					

Leaf Chains

LL-Series (British Standard) Leaf Chain Specifications













LL-Series Leaf Chain Specifications











Chain Number	Chain Dimensions Are Given In Inches							Minimum Ultimate Strength		Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Lacing	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length L	Clevis Hole Dia. S (min.)	ASME ANSI (Lbs)	Hitachi (Lbs)		
LL0822	1/2	2 x 2	0.175	0.050	0.430	0.299	0.1756	-	4,000	4,400	0.21
LL0844		4 x 4				0.512		-	8,000	8,800	0.40
LL0866		6 x 6				0.724		-	12,000	13,200	0.60
LL1022	5/8	2 x 2	0.200	0.065	0.540	0.366	0.2004	-	5,000	5,500	0.32
LL1044		4 x 4				0.634		-	10,000	11,000	0.63
LL1066		6 x 6				0.902		-	15,000	16,500	0.94
LL1222	3/4	2 x 2	0.225	0.070	0.635	0.421	0.2256	-	6,500	7,150	0.42
LL1244		4 x 4				0.728		-	13,000	14,300	0.82
LL1266		6 x 6				1.035		-	19,500	21,450	1.22
LL1622	1	2 x 2	0.326	0.125	0.830	1.972	0.3268	-	13,000	14,300	0.99
LL1644		4 x 4				1.189		-	26,000	28,600	1.95
LL1666		6 x 6				1.701		-	39,000	42,900	2.89
LL2022	1 1/4	2 x 2	0.400	0.085	1.040	0.791	0.4020	-	21,350	23,500	1.46
LL2044		4 x 4				1.382		-	42,700	47,000	2.84
LL2066		6 x 6				1.972		-	64,050	70,500	4.23
LL2422	1 1/2	2 x 2	0.576	0.158	1.315	1.118	0.5768	-	38,200	42,000	2.70
LL2444		4 x 4				1.945		-	76,400	84,000	5.23
LL2466		6 x 6				2.772		-	114,600	126,000	7.75
LL2822	1 3/4	2 x 2	0.625	0.250	1.460	1.339	0.6268	-	45,000	49,500	3.64
LL2844		4 x 4				2.362		-	90,000	99,000	7.08
LL2866		6 x 6				3.386		-	135,000	148,500	10.54
LL3222	2	2 x 2	0.700	0.250	1.660	1.378	0.7020	-	58,500	64,350	3.97
LL3244		4 x 4				2.402		-	117,000	128,700	7.71
LL3266		6 x 6				3.425		-	175,500	193,050	11.44

Attachment Chains

Attachment Chain Nomenclature

Type	Description	Standard Attachments	
		ASME/ANSI Standard	Double Pitch
A	Bent Lug One Side A-1: One Hole A-2: Two Holes		
		A-1	A-1 or A-2
K	Bent Lug Both Sides K-1: One Hole K-2: Two Holes		
		K-1	K-1 or K-2
SA	Straight Lug One Side SA-1: One Hole SA-2: Two Holes		
		SA-1	SA-1 or SA-2
SK	Straight Lug Both Sides SK-1: One Hole SK-2: Two Holes		
		SK-1	SK-1 or SK-2
D	Extended Pins D-1: One Pin Extended D-3: Both Pins Extended		
		D-1 or D-3	D-1 or D-3

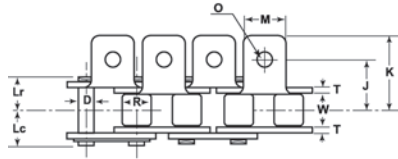
ASME/ANSI Specialty Attachments

WA	Wide Contour Bent Lug One Side WA-1: One Hole WA-2: Two Holes		
		WA-1	WA-2
WK	Wide Contour Bent Lug Both Sides WK-1: One Hole WK-2: Two Holes		
		WK-1	WK-2
WSA	Wide Contour Straight Lug One Side WSA-1: One Hole WSA-2: Two Holes		
		WSA-1	WSA-2
WSK	Wide Contour Straight Lug Both Sides WSK-1: One Hole WSK-2: Two Holes		
		WSK-1	WSK-2
AA	Double Lug Bent Top & Bottom One Side AA-1: One Hole		
		AA-1	
KK	Double Lug Bent Top & Bottom Both Sides KK-1: One Hole		
		KK-1	

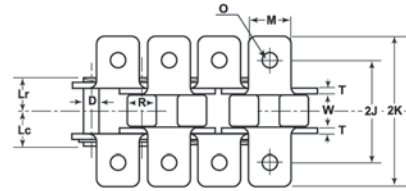
Attachment Chains

ASME/ANSI Standard Carbon and Stainless Steel Attachments

A-1 and K-1 Attachments

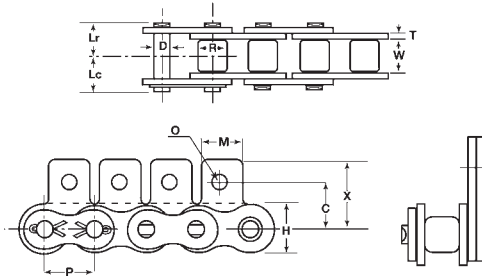


A-1 Attachment

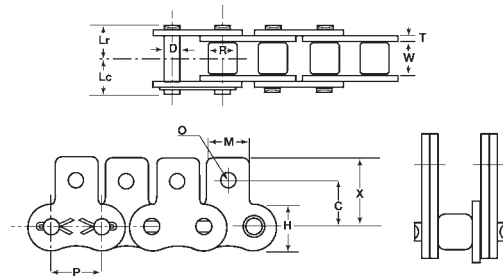


K-1 Attachment

SA-1 and SK-1 Attachments

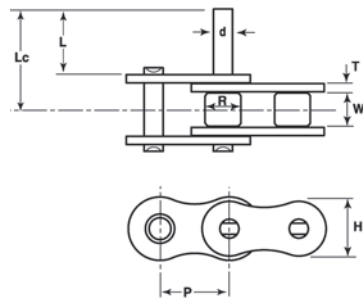


SA-1 Attachment

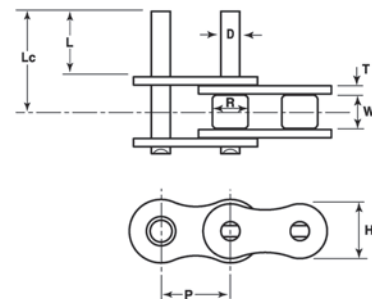


SK-1 Attachment

D-1 and D-3 Attachments



D-1 Attachment



D-3 Attachment

Attachment Chains

ASME/ANSI Standard Carbon and Stainless Steel Attachments

A-1 and K-1 Attachment Specifications

Chain Number	A-1 and K-1 Attachments							A-1 Additional Wgt./Att. (Lbs/Pc)	K-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1 Width 2K		
35	0.312	0.106	0.252	0.375	0.750	0.563	1.126	0.0018	0.0036
40	0.375	0.142	0.311	0.500	1.000	0.681	1.362	0.0044	0.0088
50	0.500	0.205	0.406	0.625	1.250	0.917	1.835	0.0066	0.0132
60	0.625	0.205	0.469	0.750	1.500	1.106	2.213	0.0154	0.0308
80	0.750	0.268	0.626	1.000	2.000	1.413	2.827	0.0287	0.0574
100	1.000	0.346	0.780	1.250	2.500	1.744	3.488	0.0572	0.1144
120	1.125	0.413	0.906	1.500	3.000	2.154	4.307	0.0968	0.1936
140	1.375	0.472	1.126	1.750	3.500	2.488	4.976	0.1562	0.3124
160	1.500	0.551	1.252	2.000	4.000	2.831	5.661	0.2134	0.4268

SA-1, SK-1, D-1, and D-3 Attachment Specifications

Chain Number	SA-1 and SK-1 Attachments				SA-1 Additional Wgt./Att. (Lbs/Pc)	SK-1 Additional Wgt./Att. (Lbs/Pc)	D-1 and D-3 Attachments			D-1 Additional Wgt./Att. (Lbs/Pc)	D-3 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	C/L Chain Att. Hole C	C/L Chain Top Att. X			Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain End of Pin Lc		
35	0.312	0.106	0.375	0.571	0.0018	0.0036	0.141	0.375	0.579	0.0010	0.0020
40	0.375	0.142	0.500	0.728	0.0044	0.0088	0.156	0.375	0.661	0.0022	0.0044
50	0.500	0.205	0.625	0.906	0.0066	0.0132	0.200	0.470	0.827	0.0044	0.0088
60	0.625	0.205	0.720	1.051	0.0154	0.0308	0.234	0.562	1.020	0.0066	0.0132
80	0.750	0.268	0.970	1.358	0.0287	0.0574	0.312	0.750	1.335	0.0154	0.0308
100	1.000	0.346	1.250	1.693	0.0572	0.1144	0.375	0.937	1.650	0.0254	0.0508
120	1.125	0.413	1.440	2.024	0.0968	0.1936	0.437	1.125	2.024	0.0440	0.0880
140	1.375	0.472	1.750	2.484	0.1562	0.3124	0.500	1.312	2.264	0.0660	0.1320
160	1.500	0.551	2.000	2.736	0.2134	0.4268	0.562	1.500	2.654	0.0990	0.1980

Base Chain Specifications

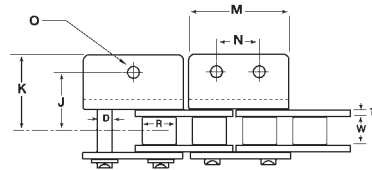
* Rollerless

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load			Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	300SS 316SS (Lbs)	600SS 6000SS (Lbs)	
35*	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.272	490	115	160	0.23
40	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	820	190	260	0.40
50	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,410	300	410	0.66
60	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,940	450	620	0.98
80	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	3,300	770	1,040	1.69
100	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	5,080	1,130	1,530	2.62
120	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	6,830	1,700	2,300	3.86
140	1 3/4	1.000	1.000	0.500	0.219	1.610	1.063	1.232	9,000	2,030	2,750	4.97
160	2	1.250	1.125	0.562	0.250	1.839	1.268	1.437	11,900	2,780	3,760	6.57

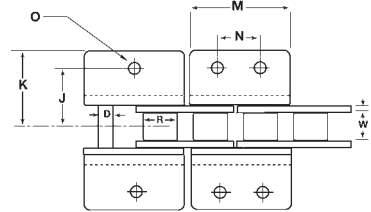
Attachment Chains

ASME/ANSI Specialty Carbon and Stainless Steel Attachments

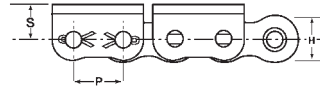
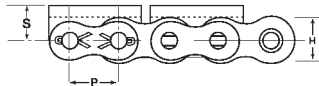
**WA-1, WA-2,
WK-1, WK-2
Attachments**



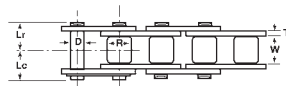
WA-1 WA-2 Attachment



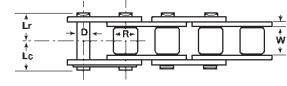
WK-1 WK-2 Attachment



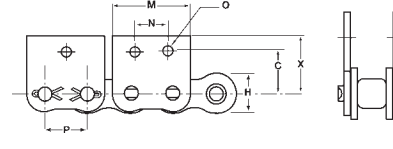
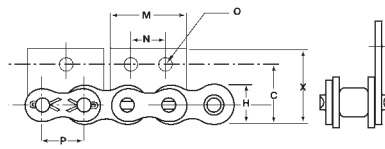
**WSA-1, WSA-2,
WSK-1, WSK-2
Attachments**



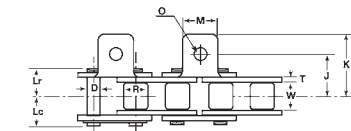
WSA-1 WSA-2 Attachment



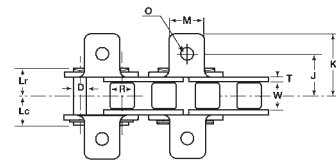
WSK-1 WSK-2 Attachment



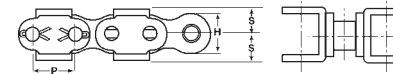
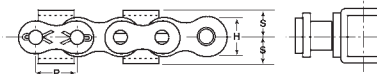
**AA-1 KK-1
Attachments**



AA-1 Attachment



KK-1 Attachment



Attachment Chains

ASME/ANSI Specialty Carbon and Stainless Steel Attachments

WA-1, WA-2, WK-1 and WK-2 Attachment Specifications

Chain Number	WA-1, WA-2, WK-1 and WK-2 Attachments								WA-1/WA2 Additional Wgt./Att. (Lbs/Pc)	WK-1/WK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	WK-1/WK-2 Width 2K		
40	0.957	0.142	0.500	0.311	0.500	1.000	0.681	1.362	0.0070	0.0140
50	1.197	0.205	0.625	0.406	0.625	1.250	0.917	1.835	0.0150	0.0300
60	1.437	0.205	0.750	0.469	0.750	1.500	1.106	2.213	0.0260	0.0520
80	1.913	0.268	1.000	0.626	1.000	2.000	1.413	2.827	0.0620	0.1240
100	2.402	0.346	1.250	0.780	1.250	2.500	1.744	3.488	0.1210	0.2420

WSA-1, WSA-2, WSK-1, and WSK-2 Attachment Specifications

Chain Number	WSA-1, WSA-2, WSK-1 and WSK-2 Attachments					WSA-1/WSA-2 Additional Wgt./Att. (Lbs/Pc)	WSA-1/WSA-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch O	C/L Chain Att. Hole C	C/L Chain Top Att. X		
40	0.957	0.142	0.500	0.500	0.728	0.0070	0.0140
50	1.197	0.205	0.625	0.625	0.906	0.0150	0.0300
60	1.437	0.205	0.750	0.720	1.051	0.0260	0.0520
80	1.913	0.268	1.000	0.970	1.358	0.0620	0.1240
100	2.402	0.346	1.250	1.250	1.693	0.1210	0.2420

AA-1 and KK-1 Attachment Specifications

Chain Number	AA-1 and KK-1 Attachments							AA-1 Additional Wgt./Att. (Lbs/Pc)	KK-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1 Width 2K		
40	0.375	0.142	0.311	0.500	1.000	0.681	1.362	0.0070	0.0140
50	0.500	0.205	0.406	0.625	1.250	0.917	1.835	0.0130	0.0260
60	0.625	0.205	0.469	0.750	1.500	1.106	2.213	0.0240	0.0480
80	0.750	0.268	0.626	1.000	2.000	1.413	2.827	0.0510	0.1020
100	1.000	0.346	0.780	1.250	2.500	1.744	3.488	0.1060	0.2120

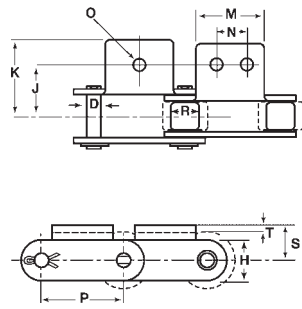
Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load			Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	300SS 316SS (Lbs)	600SS 6000SS (Lbs)	
40	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	820	190	260	0.40
50	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,410	300	410	0.66
60	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,940	450	620	0.98
80	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	3,300	770	1,040	1.69
100	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	5,080	1,130	1,530	2.62

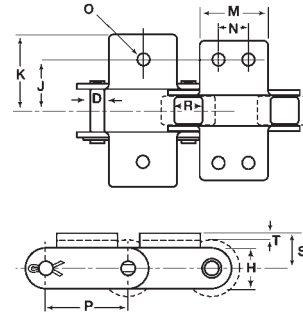
Attachment Chains

Double Pitch Carbon and Stainless Steel Attachments

**A-1, A-2,
K-1, K-2
Attachments**

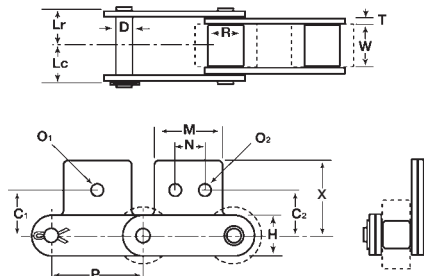


A-1 A-2 Attachment

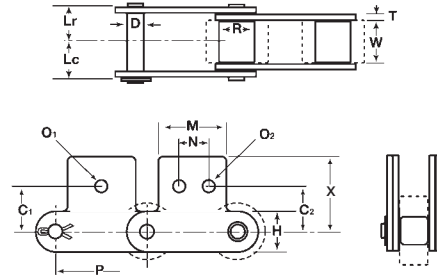


K-1 K-2 Attachment

**SA-1, SA-2,
SK-1, SK-2
Attachments**



SA-1 SA-2 Attachment



SK-1 SK-2 Attachment

Attachment Chains

Double Pitch Carbon and Stainless Steel Attachments

A-1, A-2, K-1 and K-2 Attachment Specifications

Chain Number		A-1, A-2, K-1 and K-2 Attachments							W-1/A2 Additional Wgt./Att. (Lbs/Pc)	K-1/K-2 Additional Wgt./Att. (Lbs/Pc)	
		Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K			K-1/K-2 Width 2K
C2040	C2042	0.750	0.142	0.375	0.360	0.500	1.000	0.750	1.500	0.007	0.014
C2050	C2052	0.937	0.205	0.470	0.437	0.625	1.250	0.953	1.906	0.014	0.028
C2060H	C2062H	1.125	0.205	0.562	0.580	0.842	1.685	1.228	2.456	0.033	0.066
C2080H	C2082H	1.500	0.268	0.750	0.750	1.093	2.187	1.600	3.200	0.070	0.140
C2100H	C2102H	1.875	0.346	0.937	0.920	1.310	2.620	1.970	3.940	0.142	0.284
C2120H	C2122H	2.250	0.413	1.125	1.090	1.562	3.125	2.437	4.874	0.226	0.452
C2160H	C2162H	3.000	0.551	1.500	1.437	2.062	4.125	3.000	6.000	0.583	1.166

SA-1, SA-2, SK-1 and SK-2 Attachment Specifications

Chain Number		SA-1, SA-2, SK-1 and SK-2 Attachments							SA-1/SA-2 Additional Wgt./Att. (Lbs/Pc)	SK-1/SK-2 Additional Wgt./Att. (Lbs/Pc)
		Tab Width M	Att. Hole Diameter O	Att. Hole Diameter O2	Att. Hole Pitch N	C/L Chain Att. Hole C	C/L Chain Att. Hole C2	C/L Chain Top Att. X		
C2040	C2042	0.750	0.205	0.142	0.375	0.437	0.531	0.780	0.060	0.120
C2050	C2052	0.937	0.268	0.205	0.470	0.562	0.625	0.970	0.013	0.026
C2060H	C2062H	1.125	0.346	0.205	0.562	0.690	0.750	1.200	0.032	0.064
C2080H	C2082H	1.500	0.413	0.268	0.750	0.875	1.000	1.580	0.070	0.140
C2100H	C2102H	1.875	0.551	0.346	0.937	1.125	1.250	1.980	0.146	0.292
C2120H	C2122H	2.250	0.630	0.413	1.125	1.312	1.470	2.410	0.216	0.432
C2160H	C2162H	3.000	0.827	0.551	1.500	1.750	2.000	3.000	0.517	1.034

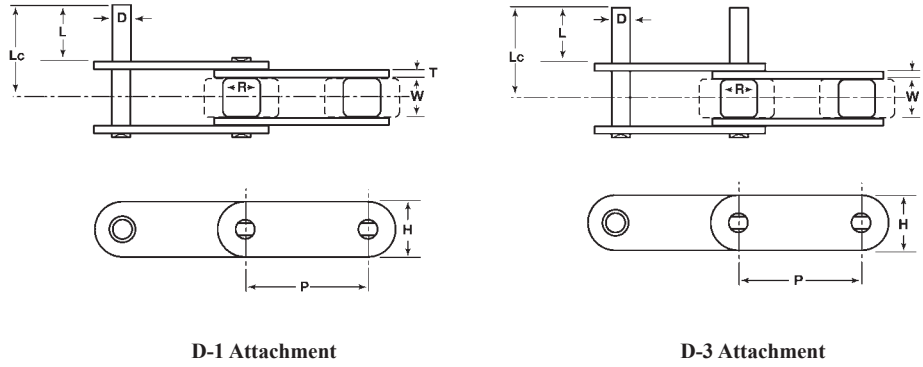
Base Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load			Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	300SS 316SS (Lbs)	600SS 6000SS (Lbs)	
C2040	1	0.312	0.312	0.156	0.060	0.450	0.325	0.405	800	190	260	0.32
C2042			0.625									0.55
C2050	1 1/4	0.375	0.400	0.200	0.080	0.591	0.400	0.480	1,400	300	410	0.55
C2052			0.750									0.85
C2060H	1 1/2	0.500	0.469	0.234	0.125	0.670	0.565	0.655	1,900	500	675	0.93
C2062H			0.875									1.40
C2080H	2	0.625	0.625	0.312	0.156	0.890	0.700	0.830	3,300	800	1,080	1.56
C2082H			1.125									2.25
C2100H	2 1/2	0.750	0.750	0.375	0.187	1.125	0.830	0.970	5,100	1,200	1,620	2.32
C2102H			1.562									3.78
C2120H	3	1.000	0.875	0.437	0.219	1.375	1.035	1.205	6,800	1,790	2,415	3.30
C2122H			1.750									5.28
C2160H	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	11,900	2,890	3,900	5.38
C2162H			2.250									8.57

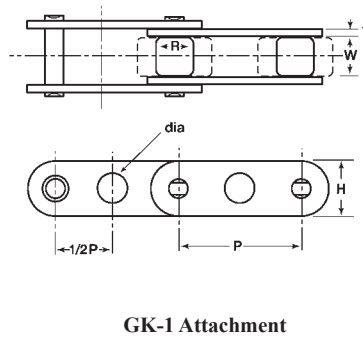
Attachment Chains

Double Pitch Carbon and Stainless Steel Attachments

D-1 and D-3 Attachments



GK-1 Attachments



Attachment Chains

Double Pitch Carbon and Stainless Steel Attachments

D-1, D-3 and GK-1 Attachment Specifications

Chain Number		D-1 and D-3 Attachments			D-1 Additional Wgt./Att. (Lbs/Pc)	D-3 Additional Wgt./Att. (Lbs/Pc)	GK-1 Attachments					
		Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain End of Pin Lc			GK-1 Attachment Hole Diameter					
					dia							
C2040	C2042	0.156	0.375	0.661	0.0010	0.0020	0.160					
C2050	C2052	0.200	0.470	0.831	0.0022	0.0044	0.200	0.205	0.240	0.250	0.315	0.325
C2060H	C2062H	0.234	0.562	1.083	0.0044	0.0088	0.240	0.250	0.280	0.320		
C2080H	C2082H	0.312	0.750	1.402	0.0066	0.0132	0.315	0.320				
C2100H	C2102H	0.375	0.937	1.701	0.0154	0.0308	0.400					
C2120H	C2122H	0.437	1.125	2.087	0.0254	0.0508	0.475					
C2160H	C2162H	0.562	1.500	2.717	0.0440	0.0880	-					

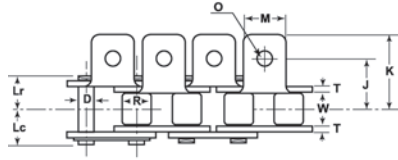
Base Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load			Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	300SS 316SS (Lbs)	600SS 6000SS (Lbs)	
C2040	1	0.312	0.312	0.156	0.060	0.450	0.325	0.405	800	190	260	0.32
C2042			0.625									0.55
C2050	1 1/4	0.375	0.400	0.200	0.080	0.591	0.400	0.480	1,400	300	410	0.55
C2052			0.750									0.85
C2060H	1 1/2	0.500	0.469	0.234	0.125	0.670	0.565	0.655	1,900	500	675	0.93
C2062H			0.875									1.40
C2080H	2	0.625	0.625	0.312	0.156	0.890	0.700	0.830	3,300	800	1,080	1.56
C2082H			1.125									2.25
C2100H	2 1/2	0.750	0.750	0.375	0.187	1.125	0.830	0.970	5,100	1,200	1,620	2.32
C2102H			1.562									3.78
C2120H	3	1.000	0.875	0.437	0.219	1.375	1.035	1.205	6,800	1,790	2,415	3.30
C2122H			1.750									5.28
C2160H	4	1.250	1.125	0.562	0.281	1.875	1.335	1.535	11,900	2,890	3,900	5.38
C2162H			2.250									8.57

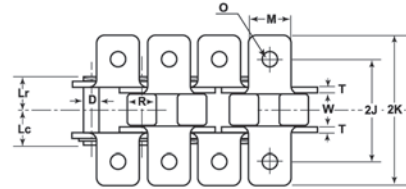
Attachment Chains

British Standard Carbon and Stainless Steel Attachments

A-1 and K-1 Attachments

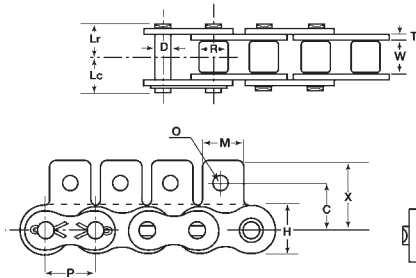


A-1 Attachment

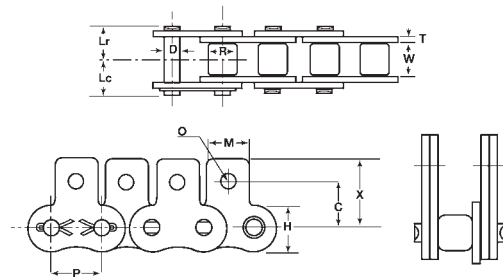


K-1 Attachment

SA-1 and SK-1 Attachments

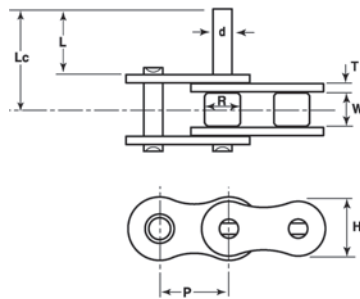


SA-1 Attachment

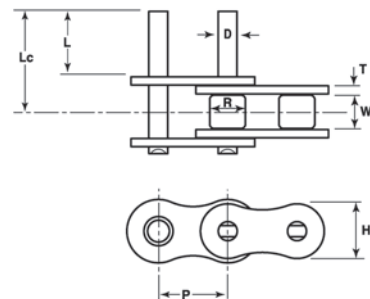


SK-1 Attachment

D-1 and D-3 Attachments



D-1 Attachment



D-3 Attachment

Attachment Chains

British Standard Carbon and Stainless Steel Attachments

A-1 and K-1 Attachment Specifications

Chain Number	A-1 and K-1 Attachments						K-1 Width 2K	A-1 Additional Wgt./Att. (Lbs/Pc)	K-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K			
08B	0.433	0.169	0.335	0.543	1.087	0.823	1.646	0.0044	0.0088
10B	0.551	0.209	0.413	0.622	1.244	0.953	1.906	0.0054	0.0107
12B	0.709	0.252	0.480	0.693	1.386	1.075	2.150	0.0115	0.0229
16B	0.945	0.331	0.669	1.142	2.283	1.650	3.299	0.0321	0.0643
20B	1.181	0.413	0.827	1.358	2.717	1.941	3.882	0.0587	0.1173

SA-1, SK-1, D-1, and D-3 Attachment Specifications

Chain Number	SA-1 and SK-1 Attachments				SA-1 Additional Wgt./Att. (Lbs/Pc)	SK-1 Additional Wgt./Att. (Lbs/Pc)	D-1 and D-3 Attachments			D-1 Additional Wgt./Att. (Lbs/Pc)	D-3 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	C/L Chain Att. Hole C	C/L Chain Top Att. X			Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain End of Pin Lc		
08B	0.433	0.169	0.539	0.819	0.0044	0.0088	0.175	0.375	0.667	0.0025	0.0050
10B	0.551	0.209	0.650	0.980	0.0054	0.0107	0.200	0.470	0.799	0.0044	0.0088
12B	0.709	0.252	0.728	1.106	0.0115	0.0229	0.225	0.562	0.956	0.0063	0.0126
16B	0.945	0.331	1.079	1.575	0.0321	0.0643	0.325	0.750	1.390	0.0160	0.0320
20B	1.181	0.413	1.299	1.870	0.0587	0.1173	0.400	0.937	1.650	0.0271	0.0542

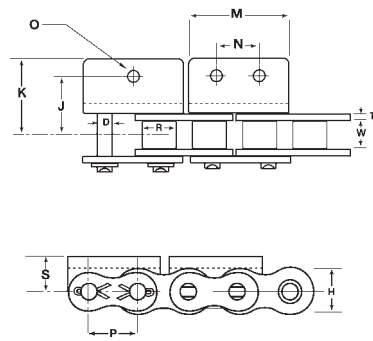
Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load			Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	304SS 316SS (Lbs)	600SS 6000SS (Lbs)	
08B	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	640	210	310	0.40
10B	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	990	290	430	0.60
12B	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	1,430	380	570	0.78
16B	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	2,550	900	1,350	1.75
20B	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	3,970	1,280	1,920	2.50

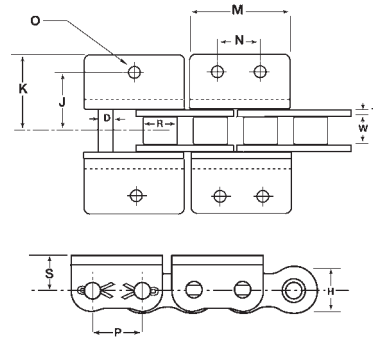
Attachment Chains

British Standard Specialty Carbon and Stainless Steel Attachments

**WA-1, WA-2,
WK-1, WK-2
Attachments**

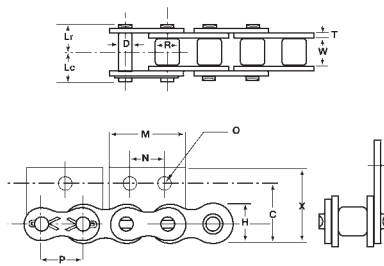


WA-1 WA-2 Attachment

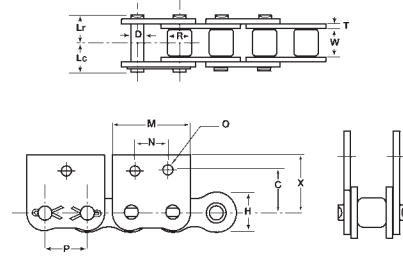


WK-1 WK-2 Attachment

**WSA-1, WSA-2,
WSK-1, WSK-2
Attachments**



WSA-1 WSA-2 Attachment



WSK-1 WSK-2 Attachment

Attachment Chains

British Standard Specialty Carbon and Stainless Steel Attachments

WA-1, WA-2, WK-1 and WK-2 Attachment Specifications

Chain Number	WA-1, WA-2, WK-1 and WK-2 Attachments								WA-1/WA2 Additional Wgt./Att. (Lbs/Pc)	WK-1/WK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	WK-1/WK-2 Width 2K		
08B	0.965	0.169	0.500	0.335	0.543	1.087	0.823	1.646	0.0070	0.0140
10B	1.205	0.209	0.625	0.413	0.622	1.244	0.953	1.906	0.0122	0.0244
12B	1.386	0.252	0.750	0.480	0.693	1.386	1.075	2.150	0.0194	0.0387
16B	1.827	0.331	1.000	0.669	1.142	2.283	1.650	3.299	0.0620	0.1240
20B	2.291	0.413	1.250	0.827	1.358	2.717	1.941	3.882	0.1070	0.2141

WSA-1, WSA-2, WSK-1, and WSK-2 Attachment Specifications

Chain Number	WSA-1, WSA-2, WSK-1 and WSK-2 Attachments					WSA-1/WSA-2 Additional Wgt./Att. (Lbs/Pc)	WSA-1/WSA-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	C/L Chain Att. Hole C	C/L Chain Top Att. X		
08B	0.965	0.169	0.500	0.539	0.819	0.0070	0.0140
10B	1.205	0.209	0.625	0.650	0.980	0.0122	0.0244
12B	1.386	0.252	0.750	0.728	1.106	0.0194	0.0387
16B	1.827	0.331	1.000	1.079	1.575	0.0620	0.1240
20B	2.291	0.413	1.250	1.299	1.870	0.1070	0.2141

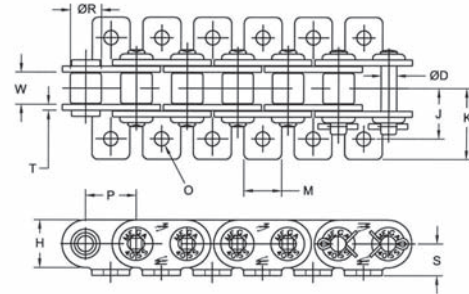
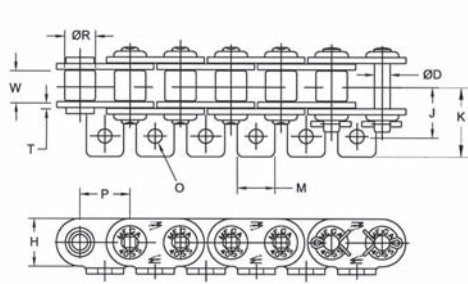
Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load			Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Dia. D	Roller Plate Thick. Trp	Pin Plate Thick. Tpp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel (Lbs)	304SS 316SS (Lbs)	600SS 6000SS (Lbs)	
08B	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.330	0.380	640	210	310	0.40
10B	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.375	0.435	990	290	430	0.60
12B	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.440	0.490	1,430	380	570	0.78
16B	1	0.670	0.625	0.325	0.154	0.125	0.792	0.690	0.810	2,550	900	1,350	1.75
20B	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.790	0.950	3,970	1,280	1,920	2.50

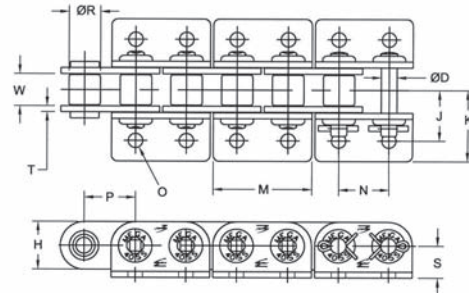
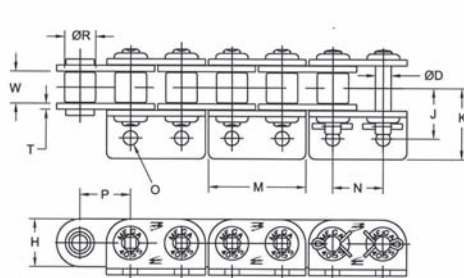
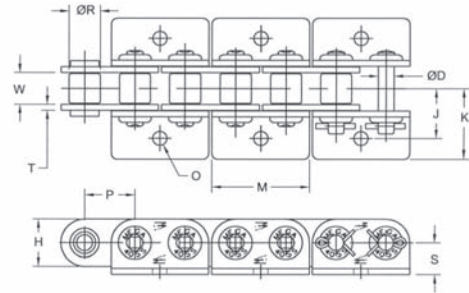
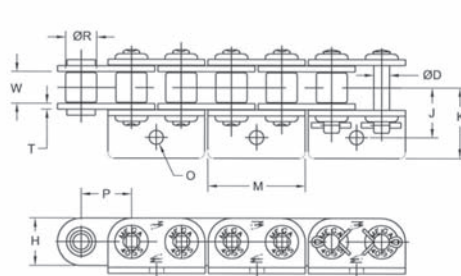
Attachment Chains

Stainless Steel Mega Chain ASME/ANSI Standard Attachments

**A-1, & K-1,
Attachments**



**WA-1, WA-2,
WK-1, WK-2
Attachments**





Attachment Chains

Stainless Steel Mega Chain ASME/ANSI Standard Attachments

A-1 and K-1 Attachment Specifications

Chain Number	A-1 and K-1 Attachments							A-1 Additional Wgt./Att. (Lbs/Pc)	K-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1 Width 2K		
40SS-MEGA	.375	0.142	0.314	0.500	1.000	0.700	1.400	0.002	0.004
50SS-MEGA	0.500	0.205	0.406	0.625	1.250	0.920	1.840	0.005	0.010
60SS-MEGA	0.625	0.205	0.469	0.750	1.500	1.110	2.220	0.007	0.014
80SS-MEGA	0.750	0.268	0.625	1.000	2.000	1.440	2.880	0.016	0.032

WA-1, WA-2, WK-1 and WK-2 Attachment Specifications

Chain Number	WA-1, WA-2, WK-1 and WK-2 Attachments								WA-1/WA2 Additional Wgt./Att. (Lbs/Pc)	WK-1/WK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	WK-1/WK-2 Width 2K		
40SS-MEGA	0.970	0.177	0.500	0.315	0.500	1.000	0.700	1.400	0.0075	0.0150
50SS-MEGA	1.210	0.217	0.625	0.406	0.625	1.250	0.921	1.8342	0.0160	0.0320
60SS-MEGA	1.460	0.260	0.750	0.469	0.750	1.500	1.110	2.220	0.0280	0.0560
80SS-MEGA	1.950	0.354	1.000	0.626	1.000	2.000	1.440	2.880	0.0650	0.1300

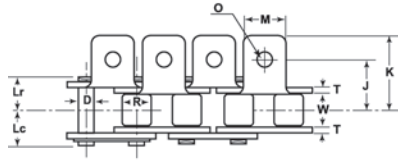
Base Chain Specifications

Chain Number	Dimensions (Inches)										
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (lbs/ft)
	40SS-Mega	1/2	0.312	0.312	0.156	0.060	0.472	0.380	0.460	250	3,970
50SS-Mega	5/8	0.375	0.400	0.200	0.080	0.591	0.485	0.580	400	7,050	0.90
60SS-Mega	3/4	0.500	0.469	0.234	0.094	0.713	0.590	0.690	570	9,700	1.30
80SS-Mega	1/2	0.625	0.625	0.312	0.125	0.945	0.775	0.875	990	15,850	2.20

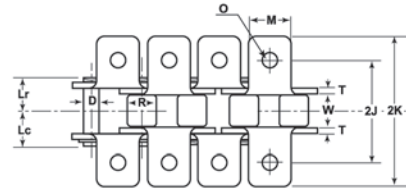
Attachment Chains

Freedom Series C-Type ASME/ANSI Standard Attachments

A-1 and K-1 Attachments

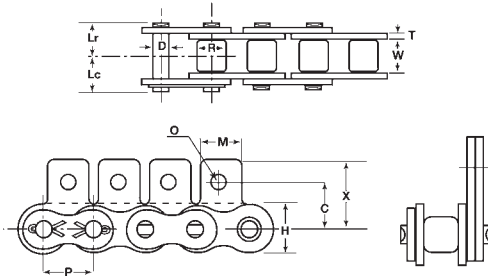


A-1 Attachment

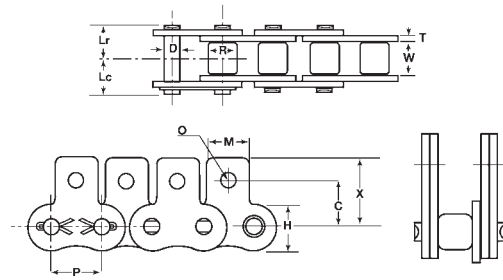


K-1 Attachment

SA-1 and SK-1 Attachments

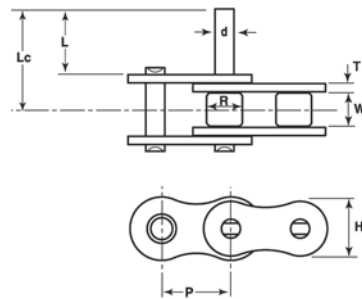


SA-1 Attachment

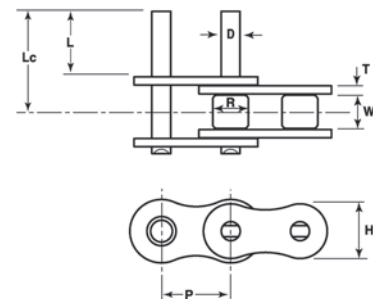


SK-1 Attachment

D-1 and D-3 Attachments



D-1 Attachment



D-3 Attachment

Attachment Chains

Freedom Series C-Type ASME/ANSI Standard Attachments

A-1 and K-1 Attachment Specifications

Chain Number	A-1 and K-1 Attachments							A-1 Additional Wgt./Att. (Lbs/Pc)	K-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1 Width 2K		
40	0.375	0.142	0.311	0.500	1.000	0.681	1.362	0.0044	0.0088
50	0.500	0.205	0.406	0.625	1.250	0.917	1.835	0.0066	0.0132
60	0.625	0.205	0.469	0.750	1.500	1.106	2.213	0.0154	0.0308
80	0.750	0.268	0.626	1.000	2.000	1.413	2.827	0.0287	0.0574
100	1.000	0.346	0.780	1.250	2.500	1.744	3.488	0.0572	0.1144

SA-, SK-1, D-1, and D-3 Attachment Specifications

Chain Number	SA-1 and SK-1 Attachments				SA-1 Additional Wgt./Att. (Lbs/Pc)	SK-1 Additional Wgt./Att. (Lbs/Pc)	D-1 and D-3 Attachments			D-1 Additional Wgt./Att. (Lbs/Pc)	D-3 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	C/L Chain Att. Hole C	C/L Chain Top Att. X			Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain End of Pin Lc		
40	0.375	0.142	0.500	0.728	0.0044	0.0088	0.141	0.375	0.661	0.0022	0.0044
50	0.500	0.205	0.625	0.906	0.0066	0.0132	0.200	0.470	0.827	0.0044	0.0088
60	0.625	0.205	0.720	1.051	0.0154	0.0308	0.234	0.562	1.020	0.0066	0.0132
80	0.750	0.268	0.970	1.358	0.0287	0.0574	0.312	0.750	1.335	0.0154	0.0308
100	1.000	0.346	1.250	1.693	0.0572	0.1144	0.375	0.937	1.650	0.0254	0.0508

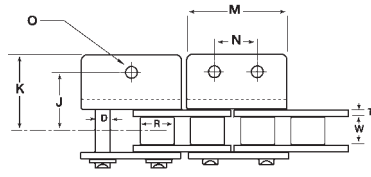
Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (lbs)	Average Ultimate Strength (lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
40FS-C	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	700	3,500	0.40
50FS-C	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,210	5,700	0.66
60FS-C	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,700	7,900	0.98
80FS-C	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	2,870	14,000	1.69

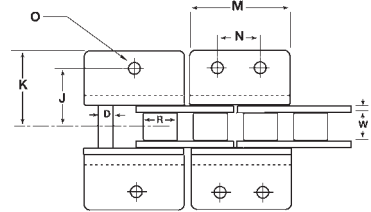
Attachment Chains

Freedom Series C-Type ASME/ANSI Specialty Attachments

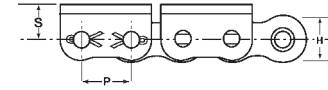
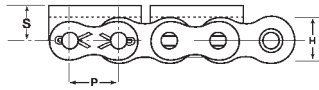
**WA-1, WA-2,
WK-1, WK-2
Attachments**



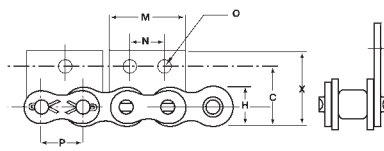
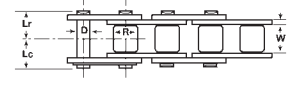
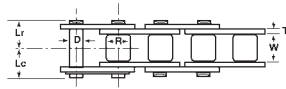
WA-1 WA-2 Attachment



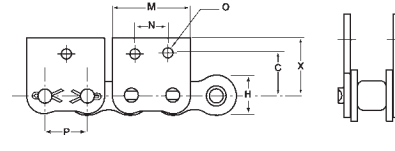
WK-1 WK-2 Attachment



**WSA-1, WSA-2,
WSK-1, WSK-2
Attachments**

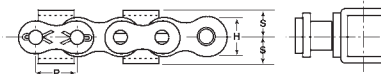
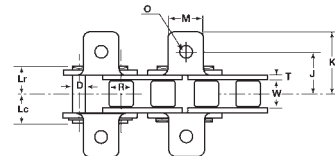
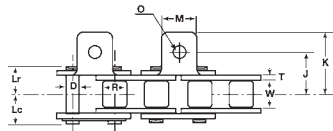


WSA-1 WSA-2 Attachment

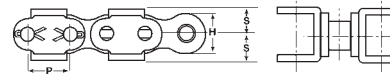


WSK-1 WSK-2 Attachment

**AA-1 KK-1
Attachments**



AA-1 Attachment



KK-1 Attachment

Attachment Chains

Freedom Series C-Type ASME/ANSI Specialty Attachments

WA-1, WA-2, WK-1 and WK-2 Attachment Specifications

Chain Number	WA-1, WA-2, WK-1 and WK-2 Attachments								WA-1/WA2 Additional Wgt./Att. (Lbs/Pc)	WK-1/WK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	WK-1/WK-2 Width 2K		
40FS-C	0.957	0.142	0.500	0.311	0.500	1.000	0.681	1.362	0.0070	0.0140
50FS-C	1.197	0.205	0.625	0.406	0.625	1.250	0.917	1.835	0.0150	0.0300
60FS-C	1.437	0.205	0.750	0.469	0.750	1.500	1.106	2.213	0.0260	0.0520
80FS-C	1.913	0.268	1.000	0.626	1.000	2.000	1.413	2.827	0.0620	0.1240

WSA-1, WSA-2, WSK-1, and WSK-2 Attachment Specifications

Chain Number	WSA-1, WSA-2, WSK-1 and WSK-2 Attachments					WSA-1/WSA-2 Additional Wgt./Att. (Lbs/Pc)	WSK-1/WSK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch O	C/L Chain Att. Hole C	C/L Chain Top Att. X		
40FS-C	0.957	0.142	0.500	0.500	0.728	0.0070	0.0140
50FS-C	1.197	0.205	0.625	0.625	0.906	0.0150	0.0300
60FS-C	1.437	0.205	0.750	0.720	1.051	0.0260	0.0520
80FS-C	1.913	0.268	1.000	0.970	1.358	0.0620	0.1240

AA-1 and KK-1 Attachment Specifications

Chain Number	AA-1 and KK-1 Attachments							AA-1 Additional Wgt./Att. (Lbs/Pc)	KK-1 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1 Width 2K		
40FS-C	0.375	0.142	0.311	0.500	1.000	0.681	1.362	0.0070	0.0140
50FS-C	0.500	0.205	0.406	0.625	1.250	0.917	1.835	0.0130	0.0260
60FS-C	0.625	0.205	0.469	0.750	1.500	1.106	2.213	0.0240	0.0480
80FS-C	0.750	0.268	0.626	1.000	2.000	1.413	2.827	0.0510	0.1020

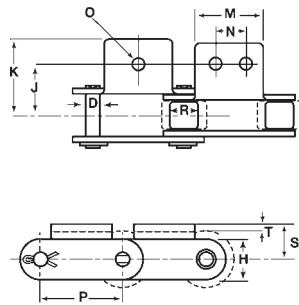
Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
40FS-C	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	700	3,500	0.40
50FS-C	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,210	5,700	0.66
60FS-C	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,700	7,900	0.98
80FS-C	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	2,870	14,000	1.69

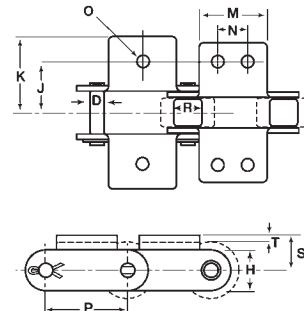
Attachment Chains

Freedom Series C-Type Double Pitch Attachments

**A-1, A-2,
K-1, K-2
Attachments**

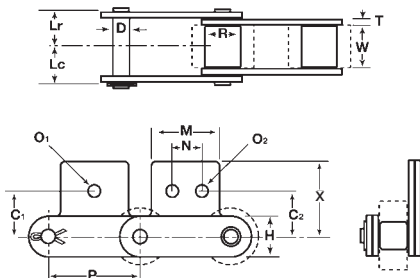


A-1 A-2 Attachment

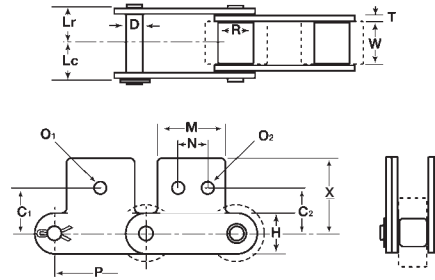


K-1 K-2 Attachment

**SA-1, SA-2,
SK-1, SK-2
Attachments**



SA-1 SA-2 Attachment



SK-1 SK-2 Attachment

Attachment Chains

Freedom Series C-Type Double Pitch Attachments

A-1, A-2, K-1 and K-2 Attachment Specifications

Chain Number	A-1, A-2, K-1 and K-2 Attachments								A-1/A2 Additional Wgt./Att. (Lbs/Pc)	K-1/K-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	Across Att. Holes 2J	C/L Chain Att. Edge K	K-1/K-2 Width 2K		
C2040FS-C C2042FS-C	0.750	0.142	0.375	0.360	0.500	1.000	0.750	1.500	0.007	0.014
C2050FS-C C2052FS-C	0.937	0.205	0.470	0.437	0.625	1.250	0.953	1.906	0.014	0.028
C2060HFS-C C2062HFS-C	1.125	0.205	0.562	0.580	0.842	1.685	1.228	2.456	0.033	0.066
C2080HFS-C C2082HFS-C	1.500	0.268	0.750	0.750	1.093	2.187	1.600	3.200	0.070	0.140

SA-1, SA-2, SK-1 and SK-2 Attachment Specifications

Chain Number	SA-1, SA-2, SK-1 and SK-2 Attachments							SA-1/SA-2 Additional Wgt./Att. (Lbs/Pc)	SK-1/SK-2 Additional Wgt./Att. (Lbs/Pc)
	Tab Width M	Att. Hole Diameter O	Att. Hole Diameter O2	Att. Hole Pitch N	C/L Chain Att. Hole C	C/L Chain Att. Hole C2	C/L Chain Top Att. X		
C2040FS-C C2042FS-C	0.750	0.205	0.142	0.375	0.437	0.531	0.780	0.060	0.120
C2050FS-C C2052FS-C	0.937	0.268	0.205	0.470	0.562	0.625	0.970	0.013	0.026
C2060HFS-C C2062HFS-C	1.125	0.346	0.205	0.562	0.690	0.750	1.200	0.032	0.064
C2080HFS-C C2082HFS-C	1.500	0.413	0.268	0.750	0.875	1.000	1.580	0.070	0.140

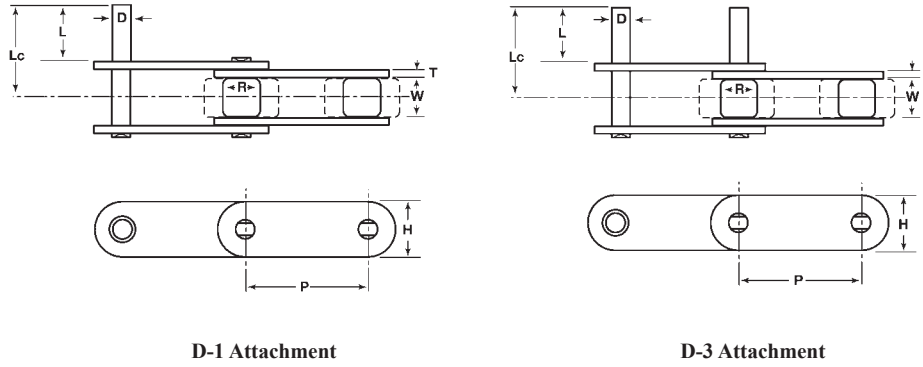
Base Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2040FS-C C2042FS-C	1	0.312	0.312 0.625	0.156	0.060	0.450	0.325	0.405	600	3,500	0.32 0.55
C2050FS-C C2052FS-C	1 1/4	0.375	0.400 0.750	0.200	0.080	0.591	0.400	0.480	1,000	5,700	0.55 0.85
C2060HFS-C C2062HFS-C	1 1/2	0.500	0.469 0.875	0.234	0.125	0.670	0.565	0.655	2,000	8,300	0.93 1.40
C2080HFS-C C2082HFS-C	2	0.625	0.625 1.125	0.312	0.156	0.890	0.700	0.830	3,400	14,300	5.38 8.57

Attachment Chains

Freedom Series C-Type Double Pitch Attachments

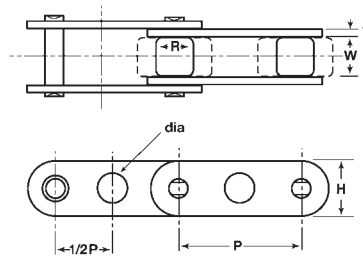
D-1 and D-3 Attachments



D-1 Attachment

D-3 Attachment

GK-1 Attachments



GK-1 Attachment

Attachment Chains

Freedom Series C-Type Double Pitch Attachments

D-1, D-3 and GK-1 Attachment Specifications

Hitachi Roller Chain Number	D-1 and D-3 Attachments			D-1 Additional Wgt./Att. (Lbs/Pc)	D-3 Additional Wgt./Att. (Lbs/Pc)	GK-1 Attachments					
	Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain End of Pin Lc			GK-1 Attachment Hole Diameter dia					
C2040FS-C C2042FS-C	0.156	0.375	0.661	0.0010	0.0020	0.160					
C2050FS-C C2052FS-C	0.200	0.470	0.831	0.0022	0.0044	0.200	0.205	0.240	0.250	0.315	0.325
C2060HFS-C C2062HFS-C	0.234	0.562	1.083	0.0044	0.0088	0.240	0.250	0.280	0.320		
C2080HFS-C C2082HFS-C	0.312	0.750	1.402	0.0066	0.0132	0.315	0.320				

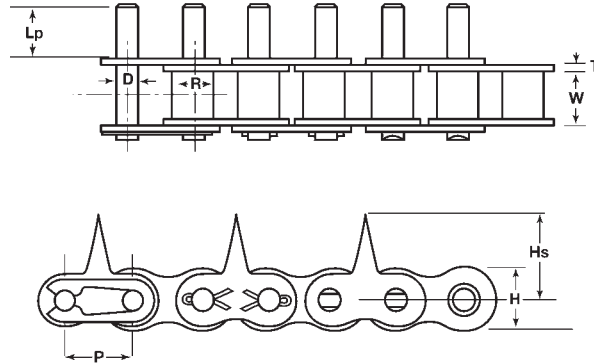
Base Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2040FS-C C2042FS-C	1	0.312	0.312 0.625	0.156	0.060	0.450	0.325	0.405	600	3,500	0.32 0.55
C2050FS-C C2052FS-C	1 1/4	0.375	0.400 0.750	0.200	0.080	0.591	0.400	0.480	1,000	5,700	0.55 0.85
C2060HFS-C C2062HFS-C	1 1/2	0.500	0.469 0.875	0.234	0.125	0.670	0.565	0.655	2,000	8,300	0.93 1.40
C2080HFS-C C2082HFS-C	2	0.625	0.625 1.125	0.312	0.156	0.890	0.700	0.830	3,400	14,300	5.38 8.57

Specialty Attachment Chains

Thermoformer Spike Chain

50 Thermoformer chain can be supplied in a variety of arrangements depending on the Original Equipment Manufacturer's specifications. The chains may be riveted or all spring clip construction. Spring clip construction is more expensive but allows for easy change out if a spike gets dull or damaged. Sometimes an SK-1, or SK-0 attachment is supplied on the roller link in the direction opposite the spike and is used as a rail guide. The spacing of the guide attachment is usually every 8th although sometimes it can be located every 6th or 4th but always on the roller link.. D-3 attachments are typically furnished as shown but occasionally they may be spaced every 4th, 6th, or 8th, or may not be present.

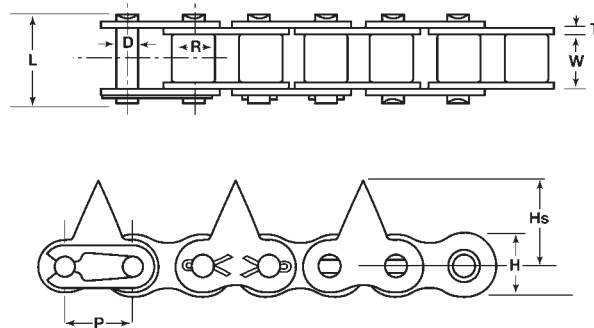


#50 Spike Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Height of Spike Hs	Ext. Pin Projection Lp			
50 Spike	5/8	0.375	0.400	0.200	0.080	0.577	0.688	0.375	1,410	7,200	0.81

Stainless Steel Sticker Chains

40 Stainless Steel Sticker chains are made from 304 austenitic stainless steel and used mainly in the poultry industry to convey the gizzard through a processing machine.



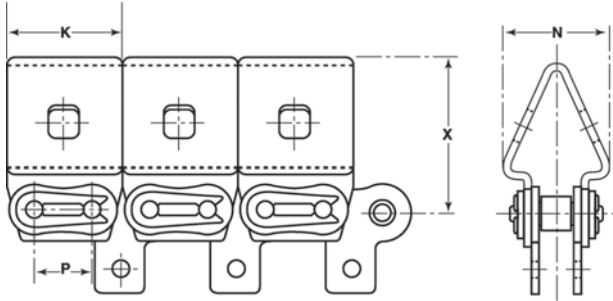
#40 Sticker Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Height of Sticker Hs	Overall Pin Length L			
40SS Sticker	1/2	0.312	0.312	0.156	0.060	0.463	0.898	0.690	190	2,800	0.50

Specialty Attachment Chains

Book Binding Chain

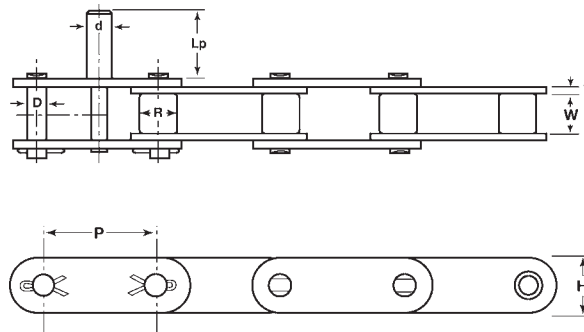
Book Binding chains possess are used on saddle binding machines to convey sorted and collated books or magazines for trimming and stitching. The user inserts plastic spacers into the square holes of the chain's saddle attachment to accommodate the size of the book or magazine. These chains are supplied in carbon steel, carbon steel with nickel plated saddles, or all nickel plated.



#40 Bindery Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Height of Saddle X	Width of Saddle N	Length of Saddle K			
40 Bindery Type 1	1/2	0.312	0.312	0.156	0.060	0.463	1.310	0.82	0.890	810	4,300	1.20
40 Bindery Type 2	1/2	0.312	0.312	0.156	0.060	0.463	1.354	0.86	0.890	810	4,300	1.20

Citrus Chains



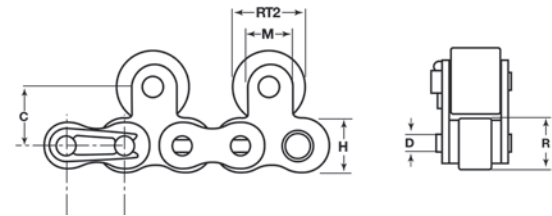
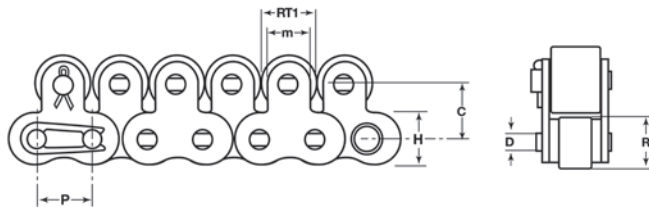
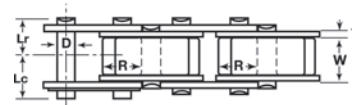
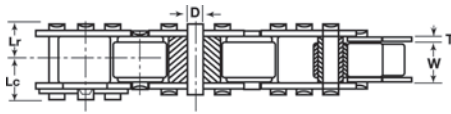
Citrus Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Extended Pin Dia. d	Extended Pin Proj. Lp			
C2060H with 1/2" D-5	1 1/2	0.500	0.469	0.234	0.125	0.670	1/2	1.625	1,900	9,700	1.20
C2060H with 9/16" D-5	1 1/2	0.500	0.469	0.234	0.125	0.670	9/16	1.625	1,900	9,700	1.25

Free Flow Chains

ASME/ANSI Top Roller Chains

ASME/ANSI Top Roller chains are available with steel or engineered plastic top rollers on every link or every 2nd link. These chains are often used on accumulating conveyors. Note that the top roller diameter is different depending on the attachment spacing. The base chain may be carbon steel, nickel plated, Perfect Coat Plus™, or stainless steel.



Top Roller Every Pitch

Top Roller Every 2nd Pitch

Top Roller Base Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches								Allowable Top Roller Load	
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel Top Roller (Lbs)	Engineered Plastic Top Roller (Lbs)
40TR	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	145	45
50TR	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	220	65
60TR	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	350	110
80TR	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	590	200
100TR	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.484	880	290

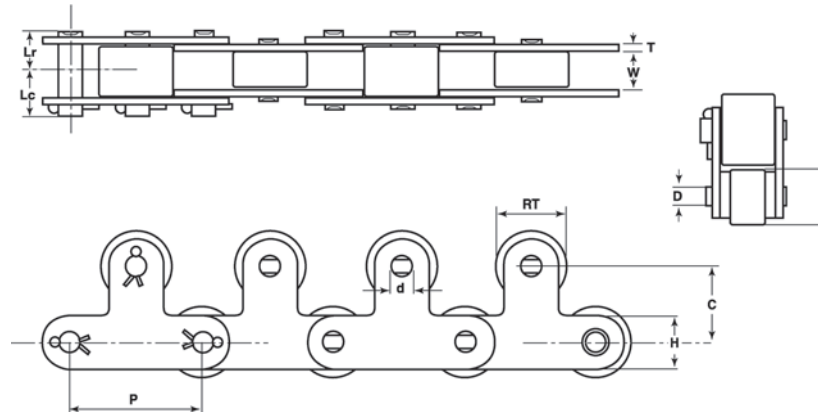
Top Roller Attachment Specifications

Chain Number	Chain Dimensions are Given in Inches					Average Chain Weight			
	Top Roller Diameter		Tab Width M	C/L Chain Att. Hole C	Att. Pin Diameter d	Steel Roller		Plastic Roller	
	RT1	RT2				TR Ev. Link (Lbs/Ft)	TR Ev. 2nd (Lbs/Ft)	TR Ev. Link (Lbs/Ft)	TR Ev. 2nd (Lbs/Ft)
40TR	0.435	0.625	0.375	0.500	0.156	1.23	0.95	0.62	0.57
50TR	0.590	0.750	0.500	0.625	0.200	1.61	1.45	1.05	0.95
60TR	0.710	0.875	0.625	0.720	0.234	2.42	2.15	1.55	1.35
80TR	0.945	1.125	0.750	0.970	0.312	4.10	3.55	2.60	2.30
100TR	1.180	1.562	1.000	1.250	0.375	6.25	5.95	4.05	3.65

Free Flow Chains

Double Pitch Top Roller Chains

Double Pitch Top Roller chains generally have a top roller on each pitch, and are available with steel or engineered plastic top rollers. The base chain may be carbon steel, nickel plated, Perfect Coat Plus™, or stainless steel, and have standard or large (carrier) rollers.



Top Roller Base Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Allowable Top Roller Load	
		Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Carbon Steel Top Roller (Lbs)	Engineered Plastic Top Roller (Lbs)
C2040 C2042	1	0.312	0.312 0.625	0.156	0.060	0.450	0.325	0.405	145	45
C2050 C2052	1 1/4	0.375	0.400 0.750	0.200	0.080	0.591	0.400	0.480	220	65
C2060H C2062H	1 1/2	0.500	0.469 0.875	0.234	0.125	0.670	0.565	0.655	350	110
C2080H C2082H	2	0.625	0.625 1.125	0.312	0.156	0.890	0.700	0.830	590	200
C2100H C2102H	2 1/2	0.750	0.750 1.562	0.375	0.187	1.125	0.830	0.970	880	290

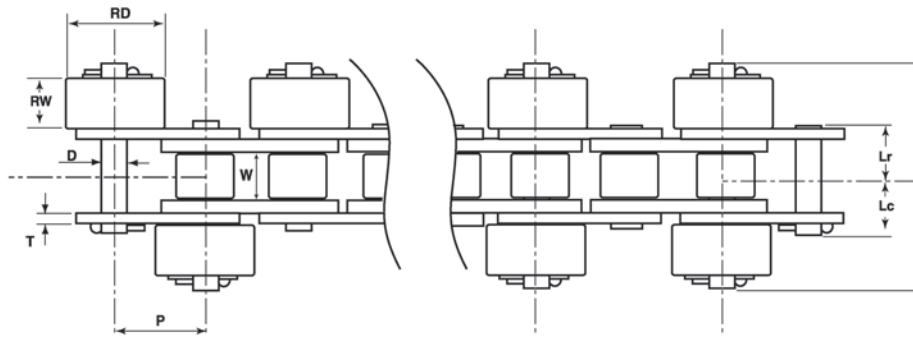
Top Roller Attachment Specifications

Chain Number	Chain Dimensions are Given in Inches			Average Chain Weight	
	Top Roller Diameter RT	C/L Chain Att. Hole C	Att. Pin Diameter d	Steel Top Roller (Lbs/Ft)	Plastic Top Roller (Lbs/Ft)
C2040 C2042	0.625	0.590	0.156	0.90 1.15	0.60 0.85
C2050 C2052	0.750	0.750	0.200	1.35 1.70	0.95 1.30
C2060H C2062H	0.875	0.905	0.234	2.50 2.95	1.85 2.35
C2080H C2082H	1.125	1.140	0.312	3.80 4.55	2.90 3.65
C2100H C2102H	1.562	1.400	0.375	6.10 7.65	4.40 5.90

Free Flow Chains

ASME/ANSI and Double Pitch Side Roller Chains

ASME/ANSI and Double Pitch Side Roller chains are available with steel or engineered plastic outboard rollers. Assemblies are generally staggered on every pitch or on both sides every 2nd pitch. The base chain may be carbon steel, nickel plated, Perfect Coat Plus™, or stainless steel.



Staggered Every Pin

Aligned Every 2nd Pin

ASME/ANSI Side Roller Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches										Average Chain Weight		Allowable Outboard Roller Load	
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	Link Plate Height H	Chain Pin Length Lr + Lc	OBR Pin Length L	Outboard Roller Diameter RD	Outboard Roller Width RW	Steel Outboard Roller (Lbs/Ft)	Plastic Outboard Roller (Lbs/Ft)	Steel Outboard Roller (Lbs)	Plastic Outboard Roller (Lbs)
40SR	1/2	0.312	0.312	0.156	0.060	0.463	0.705	0.755	0.625	0.305	1.12	0.65	145	45
50SR	5/8	0.375	0.400	0.200	0.080	0.577	0.867	0.910	0.750	0.370	1.65	0.95	220	65
60SR	3/4	0.500	0.469	0.234	0.094	0.691	1.059	1.185	0.875	0.495	2.45	1.40	350	110
80SR	1	0.625	0.625	0.312	0.125	0.921	1.378	1.490	1.125	0.625	4.00	2.40	590	200
100SR	1 1/4	0.750	0.750	0.375	0.156	1.154	1.260	1.800	1.562	0.750	6.75	3.75	880	290

Double Pitch Side Roller Chain Specifications

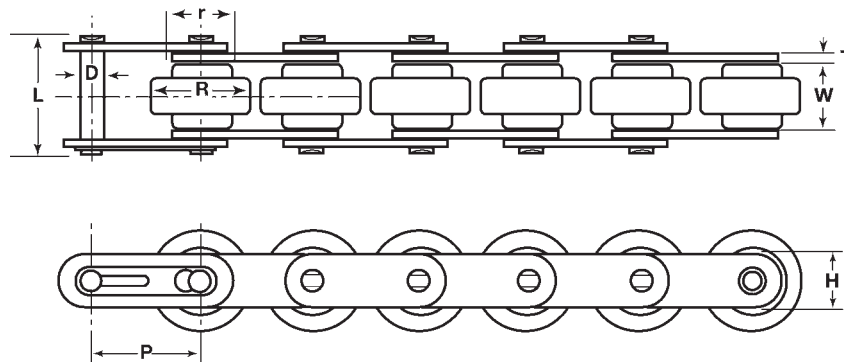
Chain Number	Chain Dimensions Are Given In Inches										Average Chain Weight		Allowable Outboard Roller Load	
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thick. T	Link Plate Height H	Chain Pin Length Lr + Lc	OBR Pin Length L	OBR Dia. RD	OBR Width RW	Carbon Steel OBR (Lbs/Ft)	Eng'r. Plastic OBR (Lbs/Ft)	Carbon Steel OBR (Lbs)	Eng'r. Plastic OBR (Lbs)
C2040SR	1	0.312	0.312	0.156	0.060	0.450	0.730	0.755	0.625	0.305	0.70	0.45	145	45
C2050SR	1 1/4	0.375	0.400	0.200	0.080	0.591	0.880	0.910	0.750	0.370	1.05	0.70	220	65
C2060HSR	1 1/2	0.500	0.469	0.234	0.125	0.670	1.220	1.185	0.875	0.495	1.70	1.20	350	110
C2080HSR	2	0.625	0.625	0.312	0.156	0.890	1.530	1.490	1.125	0.625	2.90	2.10	590	200
C2100HSR	2 1/2	0.750	0.750	0.375	0.187	1.125	1.800	1.800	1.562	0.750	4.70	3.20	880	290
C2042SR	1	0.312	0.625	0.156	0.060	0.450	0.730	0.755	0.905	0.305	0.90	0.85	145	45
C2052SR	1 1/4	0.375	0.750	0.200	0.080	0.591	0.880	0.910	1.062	0.370	1.35	1.15	220	65
C2062HSR	1 1/2	0.500	0.875	0.234	0.125	0.670	1.220	1.185	1.187	0.495	2.05	1.75	350	110

Free Flow Chains

Triple Speed Plastic Roller Chains

Triple Speed chains are used primarily on accumulating assembly line conveyors. This chain operates in a specially designed aluminum track. Small rollers turn the large rollers by friction as the chain travels in the track causing materials on the top of the chain to travel at approximately 2.5 times the linear speed of the chain. These chains are often available in carbon steel or nickel plated.

Large Roller Materials:	Standard:	Inhibits static electricity
	Special:	Electro-Conductive
Small Roller Materials:	Standard:	Engineered plastic for maximum load capacity
	Special:	High friction plastic



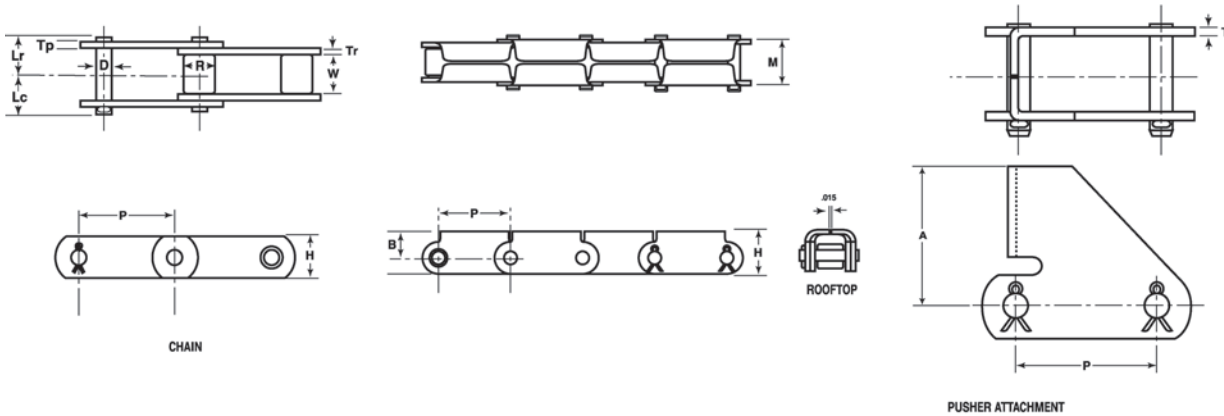
Triple Speed Plastic Roller Chain Specifications

Chain Number	Chain Pitch P	Chain Dimensions Are Given In Inches							Rated Working Load (Lbs)	Maximum Roller Load (Lbs)	Average Chain Weight (Lbs/Ft)
		Large Roller Width W	Large Roller Diameter R	Small Roller Diameter r	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Cot. Pin Length L			
C2042TS	1	0.883	0.960	0.625	0.156	0.060	0.450	0.730	220	40	0.50
C2052TS	1 1/4	1.095	1.187	0.827	0.200	0.080	0.591	0.880	330	55	0.75
C2062HTS	1 1/2	1.242	1.405	0.875	0.234	0.125	0.670	1.220	485	85	1.50

81X Chains and Attachments

81X, 81XH, and 81XHS

81X Series chains are built to rigid specifications for use in the Forest Products industry on lumber conveyors, trimmer saws, stackers, and transfer conveyors. They are also commonly used on veneer dryers and gypsum board ovens. The heavy (H) and extra heavy (HS) versions of 81X operate on standard 81X sprockets with hardened teeth.



81X Plain Chain Specifications

Chain Number	Chain Dimensions Are Given In Inches									Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Roller Plate Thickness Tr	Pin Plate Thickness Tp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc		
81X	2.609	1.062	0.906	0.437	0.156	0.156	1.125	0.945	1.125	25,000	2.40
81XH	"	"	"	"	0.312	0.219	1.265	1.190	1.340	40,000	3.50
81XHS	"	"	"	"	0.312	0.312	1.265	1.270	1.430	42,000	4.60

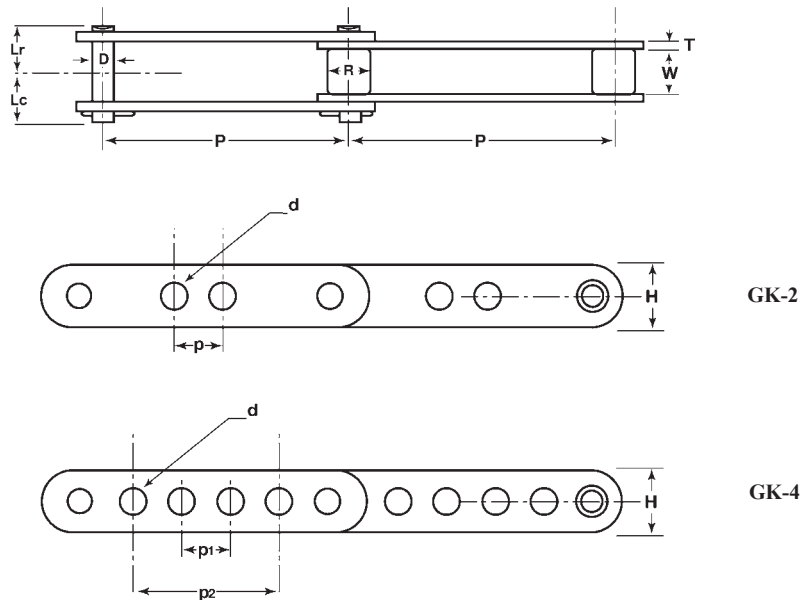
81X Attachment Specifications

Chain Number	Chain Dimensions Are Given In Inches										Pusher Attachment Height A	Roof Top Attachment Height B	Roof Top Attachment Width M
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Roller Plate Thickness Tr	Pin Plate Thickness Tp	Link Plate Height H	Riv. Pin Length LR	Cot. Pin Length LC				
81X	2.609	1.062	0.906	0.437	0.156	0.156	1.125	1.890	2.070	2.562	1.25	2.50	

81X Chains and Attachments

3939 Chains (8" Pitch 81X)

3939 chain is an 8 inch pitch version of 81X and is sometimes referred to as 8081X Chain. The spacing of the G-2 or G-4 attachment holes depends on the Original Equipment Manufacturer (OEM).



3939 G-2 Attachment Specifications

Chain Number	Chain Pitch P	Inside Width W	Chain Dimensions Are Given In Inches							G-2 Attachment Pitch p	G-2 Attachment Hole Dia. d
			Roller Diameter R	Pin Diameter D	Roller Plate Thickness Tr	Pin Plate Thickness Tp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc		
3939 G-2	8	1.062	0.906	0.437	0.156	0.156	1.125	0.945	1.125	1.50	0.283
										3.00	
										3.63	
										4.00	

3939 G-4 Attachment Specifications

Chain Number	Chain Pitch P	Inside Width W	Chain Dimensions Are Given In Inches							G-4 Attachment Pitch p1	G-4 Attachment Pitch p2	G-4 Attachment Hole Dia. d
			Roller Diameter R	Pin Diameter D	Roller Plate Thickness Tr	Pin Plate Thickness Tp	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
3939 G-4	8	1.062	0.906	0.437	0.156	0.156	1.125	0.945	1.125	1.50	3.000	0.283
											3.625	
											4.000	

Conveyor Chain Selection

A careful assessment of the conditions surrounding a conveyor is necessary for accurate conveyor chain selection. This section discusses the basic considerations required. Roller chains are often used for light to moderate material handling applications. Environmental conditions may require the use of special materials, plating or coatings. Please contact Hitachi engineering personnel for assistance.

Basic Information

1. Type of chain conveyor.
2. Conveyor layout including sprocket locations, inclines (if any), and the number of strands of chain (**N**) to be used.
3. Amount of material (**M** lbs/ft) and type of material to be conveyed.
4. Estimated weight of chain, slats or attachments (if any), and other moving parts of the conveyor attached to the chain (**W** lbs/ft).
5. Linear Chain speed (**S** ft/min). Also obtain Speed Factor from Table 2.
6. Environment in which the chain will operate, including temperature, corrosion circumstance, lubrication condition etc. Determine friction coefficient **f** (Table 1).

Perform the following steps to select chain size:

Step 1: Estimate the Chain Tension

Use the formula below to estimate conveyor pull (P_{est}), and chain tension (T_{est}). *Note: For this step the chain weight is 0 however the weight of slats and other moving parts of the conveyor should be estimated for the variable **W**.*

$$P_{est} = (M + W) * f * \text{Speed Factor}$$

and

$$T_{est} = P_{est} / N$$

Note: that **f** is the friction coefficient (see Table 1).

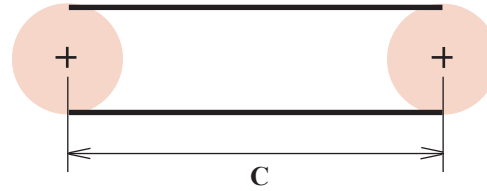
Step 2: Make a Tentative Chain Selection

Using the T_{est} value make a tentative chain selection. The rated working load should be greater than T_{est} . Normally the chain is selected based on desired pitch to achieve a specific attachment spacing. For example, if slats are to be bolted to K type attachment every 1.5 inches, we may use a 1/2" pitch chain (i.e. 40) every 3rd, or a 3/4" pitch chain (i.e. 60) every 2nd, or a 1 1/2" pitch chain (i.e. 120 or C2060H) every pitch. The selected chain should have a rated working load greater than the calculated T_{est} .

Step 3: Calculate Actual Conveyor Pull (P)

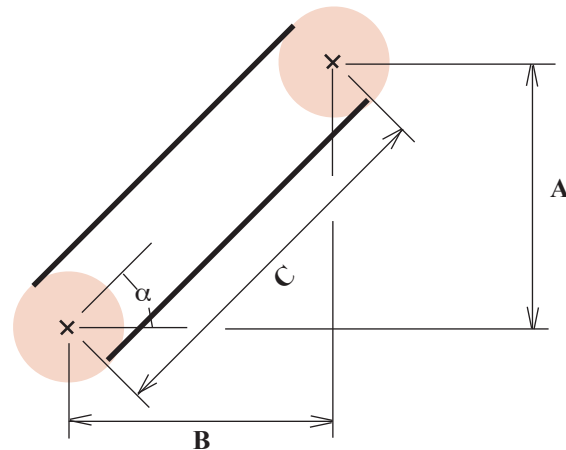
From the layouts on the right use the appropriate formula to calculate conveyor pull (**P**). Note that a conveyor may possess a combination of horizontal, vertical, and inclined sections. In this case use the appropriate formula on each individual section remembering to add together in turn the tensions calculated for each section.

Horizontal Conveyor



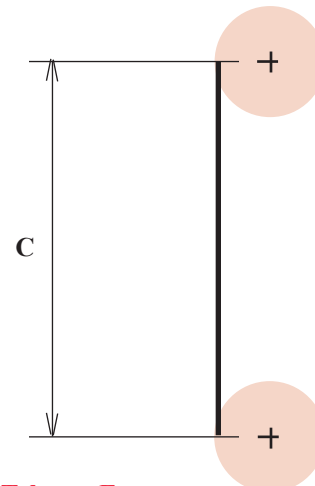
$$P = (2.1W + M) * f * C$$

Incline Conveyor



$$P = [(M+W) * (f * C * \cos\alpha + C * \sin\alpha)] + 1.1W(f * C * \cos\alpha - C * \sin\alpha)$$

Vertical Conveyor



$$P = [(M+W) * C] + 1/2 \text{ Take up Force}$$

Note: C is the center distance in feet in the above formulas

Conveyor Chain Selection

Table 1: Coefficient of Friction (f)

Type of Carrier	Dry	Lubricated
Standard Roller	.21	.14
Large Roller	.12	.08
Top Roller	.09	.06
Chain Sliding on Steel	.33	.24

Table 2: Speed Factor (SF)

Chain Speed	Speed Factor
0 to 50 ft/min	1.0
50 to 100 ft/min	1.2
100 to 150 ft/min	1.4
150 to 230 ft/min	1.6
230 to 300 ft/min	2.2
300 to 350 ft/min	2.8
350 to 400 ft/min	3.2
More than 400 ft/min	Contact Hitachi

Table 3: Multi-Strand Factor (MSF)

Number of Strands	Multi-Strand Factor
1	1.0
2	1.2
3	1.3
4	1.4
More Than 4	Contact Hitachi

Table 4: Temperature Factor (TF)

Chain Temperature	Temperature Factor
-20 F to -4 F	4.0
-4 F to 15 F	3.0
15 F to 300 F	1.0
300 F to 390 F	1.3
390 F to 450 F	2.0
More Than 450 F	Contact Hitachi

Step 4: Calculate Maximum Chain Tension (T)

The maximum chain tension equals the conveyor pull (P) divided by the number of chain strands carrying the load time a multi-strand factor (MSF) which takes into account “uneven loading.

$$T = [(P/N)] * (MSF) * (SF) * (TF)$$

Note: SF = Speed Factor given in Table 2.
MSF = Multi-strand Factor given in Table 3.
TF = Temperature Factor given in Table 4.
N = Number of Strands.

Step 5: Check the “Rated Working Load” of Chain

Next, check that the “Rated Working Load” of the chain selected is greater than the calculated maximum chain tension (T) determined above. If the “Rated Working Load” is greater, the chain may be used. If it is lower, select a stronger chain. If no “Rated Working Load” is given for the chain, contact the Hitachi product engineering department.

Step 6: Check the “Allowable Roller Load” of Chain

For chains that roll instead of slide check the “Allowable Roller Load” in the table below. Downward load per roller should not exceed the values given in the table. Roller Load may be calculated from:

$$\text{Roller Load} = W_r / N_r$$

Note: W_r is the total weight carried by rollers.
 N_r is the number of rollers supporting the weight.

Table 5: Allowable Roller Load

Chain Number	Steel Standard Roller	Steel Large Roller	Plastic Large Roller
40	33	-	-
50	44	-	-
60	66	-	-
80	120	-	-
100	180	-	-
120	260	-	-
140	300	-	-
160	430	-	-
C2040	33	143	44
C2050	44	220	66
C2060H	66	350	110
C2080H	120	590	200
C2100H	180	880	290
C2120H	260	1,320	
C2160H	430	2,160	

HI-MAX® Standard Performance Chains

A High Quality “Economical” Roller Chain

Hitachi HI-MAX® Standard Performance Roller Chains are designed and built to offer solid performance at an economical price. Built in our modern factory in Taiwan, these chains are certified to meet or exceed all applicable ASME/ANSI standards.



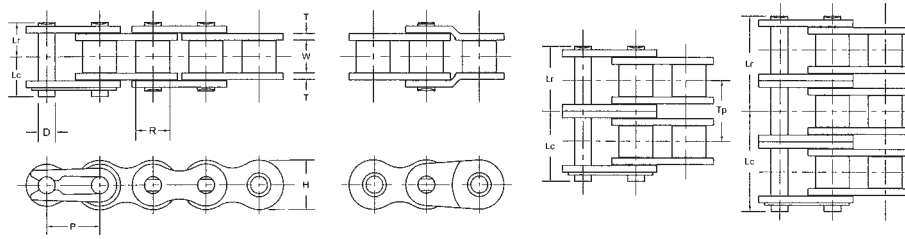
Compare INSPIRE SERIES™ SBR® with HI-MAX®

The proprietary patent pending surface treatment and stainless steel blast coating are only available on INSPIRE SERIES™ SBR® series. These features allow for significantly higher working loads and horsepower capacities compared with HI-MAX® chains or any other competitive brand.

Then Why Choose HI-MAX®?

For those applications which don't require the additional performance features of the INSPIRE SERIES™ SBR® series product, HI-MAX® is an excellent choice. Hitachi stocks a wide range of HI-MAX® chains for your convenience.





Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
25	1/4	0.125	0.130	0.091	0.030	0.228	0.300	0.340	-	125	880	0.10
25-2	"	"	"	"	"	"	0.550	0.590	0.252	215	1,760	0.19
25-3	"	"	"	"	"	"	0.800	0.840	"	290	2,640	0.29

Note: #25 Chain is Rollerless

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

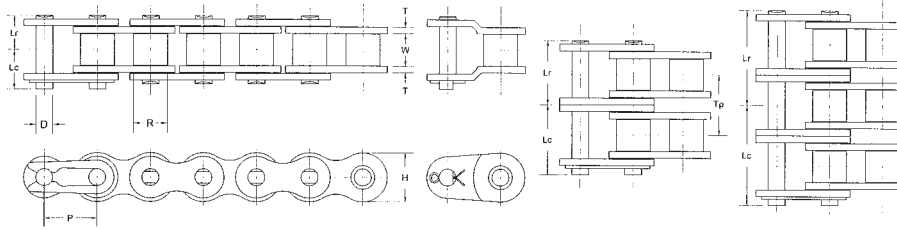
Number-Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10,000
11	0.03	0.05	0.14	0.23	0.31	0.39	0.50	0.62	0.73	0.83	0.98	1.15	1.32	1.38	1.16	0.99	0.86	0.75	0.67	0.60	0.54	0.49	0.45	0.41	0.35
12	0.03	0.06	0.16	0.25	0.34	0.43	0.55	0.68	0.80	0.92	1.07	1.26	1.45	1.57	1.32	1.12	0.97	0.86	0.76	0.68	0.61	0.56	0.51	0.47	0.40
13	0.04	0.06	0.17	0.27	0.37	0.47	0.60	0.74	0.87	1.00	1.17	1.38	1.58	1.77	1.49	1.27	1.10	0.96	0.86	0.77	0.69	0.63	0.57	0.53	0.45
14	0.04	0.07	0.19	0.30	0.40	0.50	0.65	0.80	0.94	1.08	1.27	1.49	1.71	1.93	1.66	1.42	1.23	1.08	0.96	0.86	0.77	0.70	0.64	0.59	0.50
15	0.04	0.07	0.20	0.32	0.43	0.54	0.70	0.86	1.01	1.17	1.36	1.61	1.85	2.08	1.84	1.57	1.36	1.20	1.06	0.95	0.86	0.78	0.71	0.65	0.56
16	0.04	0.08	0.22	0.34	0.47	0.58	0.76	0.92	1.09	1.25	1.46	1.72	1.98	2.23	2.03	1.73	1.50	1.32	1.17	1.05	0.94	0.86	0.78	0.72	0.61
17	0.05	0.08	0.23	0.37	0.50	0.62	0.81	0.99	1.16	1.33	1.56	1.84	2.11	2.38	2.22	1.90	1.64	1.44	1.28	1.14	1.03	0.94	0.86	0.79	0.67
18	0.05	0.09	0.25	0.39	0.53	0.66	0.86	1.05	1.24	1.42	1.66	1.96	2.25	2.53	2.42	2.07	1.79	1.57	1.39	1.25	1.12	1.02	0.93	0.86	0.73
19	0.05	0.09	0.26	0.41	0.56	0.70	0.91	1.11	1.31	1.50	1.76	2.07	2.38	2.69	2.62	2.24	1.94	1.70	1.51	1.35	1.22	1.11	1.01	0.93	0.79
20	0.06	0.10	0.28	0.44	0.59	0.74	0.96	1.17	1.38	1.59	1.86	2.19	2.52	2.84	2.83	2.42	2.10	1.84	1.63	1.46	1.32	1.20	1.09	1.00	0.86
21	0.06	0.11	0.29	0.46	0.62	0.78	1.01	1.24	1.46	1.68	1.96	2.31	2.66	2.99	3.05	2.60	2.26	1.98	1.76	1.57	1.42	1.29	1.17	1.08	0.92
22	0.06	0.11	0.31	0.48	0.66	0.82	1.07	1.30	1.53	1.76	2.06	2.43	2.79	3.15	3.27	2.79	2.42	2.12	1.88	1.69	1.52	1.38	1.26	1.16	0.99
23	0.06	0.12	0.32	0.51	0.69	0.86	1.12	1.37	1.61	1.85	2.16	2.55	2.93	3.30	3.50	2.98	2.59	2.27	2.01	1.80	1.62	1.47	1.35	1.24	1.06
24	0.07	0.13	0.34	0.53	0.72	0.90	1.17	1.43	1.69	1.94	2.27	2.67	3.07	3.46	3.73	3.18	2.76	2.42	2.15	1.92	1.73	1.57	1.44	1.32	1.12
25	0.07	0.13	0.35	0.56	0.75	0.94	1.22	1.50	1.76	2.02	2.37	2.79	3.21	3.61	3.96	3.38	2.93	2.57	2.28	2.04	1.84	1.67	1.53	1.40	1.20
26	0.07	0.14	0.37	0.58	0.79	0.98	1.28	1.56	1.84	2.11	2.47	2.91	3.34	3.77	4.19	3.59	3.11	2.73	2.42	2.17	1.95	1.77	1.62	1.49	1.27
28	0.08	0.15	0.40	0.63	0.85	1.07	1.38	1.69	1.99	2.29	2.68	3.15	3.62	4.09	4.54	4.01	3.47	3.05	2.70	2.42	2.18	1.98	1.81	1.66	1.42
30	0.08	0.16	0.43	0.68	0.92	1.15	1.49	1.82	2.15	2.46	2.88	3.40	3.90	4.40	4.89	4.45	3.85	3.38	3.00	2.68	2.42	2.20	2.01	1.84	1.57
32	0.09	0.17	0.46	0.73	0.98	1.23	1.60	1.95	2.30	2.64	3.09	3.64	4.18	4.72	5.25	4.90	4.25	3.73	3.30	2.96	2.67	2.42	2.21	2.03	1.73
35	0.10	0.19	0.51	0.80	1.08	1.36	1.76	2.15	2.53	2.91	3.41	4.01	4.61	5.20	5.78	5.60	4.86	4.26	3.78	3.38	3.05	2.77	2.53	2.32	1.98
40	0.12	0.22	0.58	0.92	1.25	1.57	2.03	2.48	2.93	3.36	3.93	4.64	5.32	6.00	6.68	6.85	5.93	5.21	4.62	4.13	3.73	3.38	3.09	2.83	2.42
45	0.13	0.25	0.66	1.05	1.42	1.78	2.31	2.82	3.32	3.82	4.47	5.26	6.05	6.82	7.58	8.17	7.08	6.21	5.51	4.93	4.45	4.04	3.69	3.38	2.89
Lube	Type A					Type B										Type C									

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#35 HI-MAX®



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches										Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Bushing Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp				
35	3/8	0.188	0.200	0.141	0.050	0.354	0.228	0.276	-		430	2,310	0.22
35-2	"	"	"	"	"	"	0.425	0.472	0.398		730	4,620	0.46
35-3	"	"	"	"	"	"	0.626	0.673	"		1,080	6,930	0.70

Note: #35 Chain is Rollerless

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundry line.

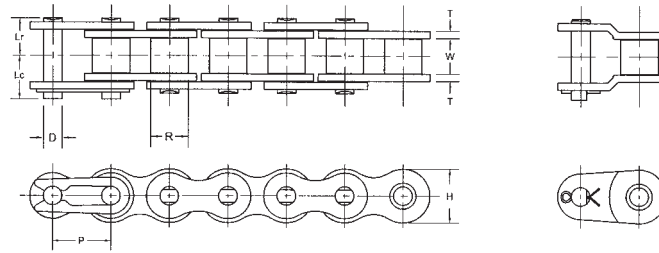
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	50	100	300	500	700	900	1200	1500	1800	2100	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
11	0.10	0.18	0.49	0.77	1.05	1.31	1.70	2.08	2.45	2.82	3.30	2.94	2.33	1.91	1.60	1.37	1.18	1.04	0.92	0.82	0.74	0.67	0.62	0.57	0.52
12	0.11	0.20	0.54	0.85	1.15	1.44	1.87	2.29	2.70	3.10	3.62	3.35	2.66	2.17	1.82	1.56	1.35	1.18	1.05	0.94	0.85	0.77	0.70	0.64	0.60
13	0.12	0.22	0.59	0.93	1.26	1.57	2.04	2.49	2.94	3.38	3.95	3.77	3.00	2.45	2.05	1.75	1.52	1.33	1.18	1.06	0.95	0.87	0.79	0.73	0.68
14	0.13	0.24	0.63	1.01	1.36	1.71	2.21	2.70	3.18	3.66	4.28	4.22	3.35	2.74	2.30	1.96	1.70	1.49	1.32	1.18	1.07	0.97	0.88	0.81	0.76
15	0.14	0.25	0.68	1.08	1.47	1.84	2.38	2.91	3.43	3.94	4.61	4.68	3.71	3.04	2.55	2.17	1.88	1.65	1.47	1.31	1.18	1.07	0.98	0.90	0.84
16	0.15	0.27	0.73	1.16	1.57	1.97	2.55	3.12	3.68	4.22	4.94	5.15	4.09	3.35	2.81	2.40	2.08	1.82	1.62	1.45	1.30	1.18	1.08	0.99	0.92
17	0.16	0.29	0.78	1.24	1.68	2.10	2.73	3.33	3.93	4.51	5.28	5.64	4.48	3.67	3.07	2.62	2.27	2.00	1.77	1.58	1.43	1.30	1.18	1.09	1.01
18	0.17	0.31	0.83	1.32	1.78	2.24	2.90	3.54	4.18	4.80	5.61	6.15	4.88	3.99	3.35	2.86	2.48	2.17	1.93	1.73	1.56	1.41	1.29	1.18	1.09
19	0.18	0.33	0.88	1.40	1.89	2.37	3.07	3.76	4.43	5.09	5.95	6.67	5.29	4.33	3.63	3.10	2.69	2.36	2.09	1.87	1.69	1.53	1.40	1.28	1.19
20	0.19	0.35	0.93	1.48	2.00	2.51	3.25	3.97	4.68	5.38	6.29	7.20	5.72	4.68	3.92	3.35	2.90	2.55	2.26	2.02	1.82	1.65	1.51	1.39	1.29
21	0.20	0.37	0.98	1.56	2.11	2.64	3.42	4.19	4.93	5.67	6.63	7.75	6.15	5.03	4.22	3.60	3.12	2.74	2.43	2.17	1.95	1.78	1.62	1.49	1.38
22	0.21	0.38	1.03	1.64	2.22	2.78	3.60	4.40	5.19	5.96	6.97	8.21	6.59	5.40	4.52	3.86	3.35	2.94	2.61	2.33	2.10	1.91	1.74	1.60	1.49
23	0.22	0.40	1.08	1.72	2.33	2.92	3.78	4.62	5.44	6.25	7.31	8.62	7.05	5.77	4.83	4.13	3.58	3.14	2.79	2.49	2.25	2.04	1.86	1.71	1.58
24	0.23	0.42	1.14	1.80	2.44	3.05	3.96	4.84	5.70	6.55	7.66	9.02	7.51	6.15	5.15	4.40	3.81	3.35	2.97	2.66	2.40	2.17	1.99	1.82	1.69
25	0.24	0.44	1.19	1.88	2.55	3.19	4.13	5.05	5.95	6.84	8.00	9.43	7.99	6.54	5.48	4.68	4.05	3.56	3.16	2.82	2.55	2.31	2.11	1.94	1.80
26	0.25	0.46	1.24	1.96	2.66	3.33	4.31	5.27	6.21	7.14	8.35	9.84	8.47	6.93	5.81	4.96	4.30	3.77	3.35	3.00	2.70	2.45	2.24	2.05	1.90
28	0.27	0.50	1.34	2.12	2.88	3.61	4.67	5.71	6.73	7.23	9.05	10.70	9.47	7.75	6.49	5.55	4.81	4.22	3.74	3.35	3.02	2.74	2.50	2.30	2.12
30	0.29	0.54	1.45	2.29	3.10	3.89	5.03	6.15	7.25	8.33	9.74	11.50	10.50	8.59	7.20	6.15	5.33	4.68	4.15	3.71	3.35	3.04	2.77	2.55	2.36
32	0.31	0.58	1.55	2.45	3.32	4.17	5.40	6.60	7.77	8.93	10.40	12.30	11.60	9.47	7.93	6.77	5.87	5.15	4.57	4.00	3.69	3.35	3.06	2.81	
35	0.34	0.64	1.71	2.70	3.66	4.59	5.95	7.27	8.55	9.84	11.50	13.60	13.20	10.80	9.08	7.75	6.72	5.90	5.23	4.68	4.22	3.83	3.50	3.21	
40	0.39	0.73	1.97	3.12	4.23	5.30	6.87	8.40	9.89	11.40	13.30	15.70	16.20	13.20	11.10	9.47	8.21	7.20	6.39	5.72	5.15	4.68			
45	0.45	0.83	2.24	3.55	4.80	6.02	7.80	9.53	11.20	12.90	15.10	17.80	19.30	15.80	13.20	11.30	9.79	8.59	7.62	6.82					
Lube	Type A					Type B					Type C														

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#41 HI-MAX[®]



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hitachi Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
41	1/2	0.250	0.306	0.141	0.050	0.382	0.260	0.313	-	500	2,600	0.28

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

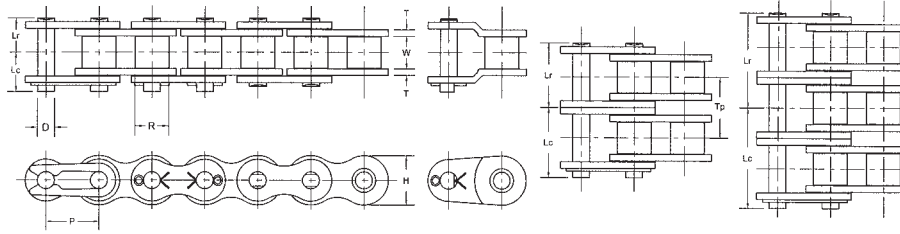
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	5000	6000	7000	8000
11	0.03	0.07	0.13	0.24	0.44	0.64	0.82	1.01	1.37	1.71	1.88	1.71	1.36	1.11	0.93	0.74	0.61	0.51	0.43	0.34	0.28	0.20	0.15	0.12	0.10
12	0.03	0.07	0.14	0.26	0.49	0.70	0.91	1.11	1.50	1.88	2.07	1.95	1.55	1.27	1.06	0.84	0.69	0.58	0.49	0.39	0.32	0.23	0.17	0.14	0.11
13	0.04	0.08	0.15	0.28	0.53	0.76	0.99	1.21	1.63	2.05	2.25	2.20	1.75	1.43	1.20	0.95	0.78	0.65	0.56	0.44	0.36	0.26	0.20	0.16	0.13
14	0.04	0.09	0.16	0.31	0.57	0.83	1.07	1.31	1.77	2.22	2.44	2.46	1.95	1.60	1.34	1.06	0.87	0.73	0.62	0.49	0.40	0.29	0.22	0.17	0.14
15	0.04	0.09	0.18	0.33	0.62	0.89	1.15	1.41	1.91	2.39	2.63	2.73	2.17	1.77	1.49	1.18	0.96	0.81	0.69	0.55	0.45	0.32	0.24	0.19	0.16
16	0.04	0.10	0.19	0.36	0.66	0.95	1.24	1.51	2.05	2.57	2.82	3.01	2.39	1.95	1.64	1.30	1.06	0.89	0.76	0.60	0.49	0.35	0.27	0.21	0.17
17	0.05	0.11	0.20	0.38	0.71	1.02	1.32	1.61	2.18	2.74	3.01	3.29	2.61	2.14	1.79	1.42	1.16	0.98	0.83	0.66	0.54	0.39	0.29	0.23	0.19
18	0.05	0.12	0.22	0.40	0.75	1.08	1.40	1.72	2.32	2.91	3.20	3.59	2.85	2.33	1.95	1.55	1.27	1.06	0.91	0.72	0.59	0.42	0.32	0.25	0.20
19	0.05	0.12	0.23	0.43	0.80	1.15	1.49	1.82	2.46	3.90	3.40	3.89	3.09	2.53	2.12	1.68	1.38	1.15	0.98	0.78	0.64	0.46	0.35	0.28	0.22
20	0.06	0.13	0.24	0.45	0.84	1.21	1.57	1.92	2.60	3.26	3.59	4.20	3.33	2.73	2.29	1.81	1.49	1.24	1.06	0.84	0.69	0.49	0.38	0.30	0.24
21	0.06	0.14	0.26	0.48	0.89	1.28	1.66	2.03	2.74	3.44	3.78	4.46	3.59	2.94	2.46	1.95	1.60	1.34	1.14	0.91	0.74	0.53	0.40	0.32	0.26
22	0.06	0.14	0.27	0.50	0.93	1.35	1.74	2.13	2.89	3.62	3.98	4.69	3.85	3.15	2.64	2.09	1.71	1.44	1.23	0.97	0.80	0.57	0.43	0.34	0.28
23	0.06	0.15	0.28	0.53	0.98	1.41	1.83	2.24	3.03	3.80	4.17	4.92	4.11	3.37	2.82	2.24	1.83	1.54	1.31	1.04	0.85	0.61	0.46	0.37	0.30
24	0.07	0.16	0.29	0.55	1.03	1.48	1.92	2.34	3.17	3.97	4.37	5.15	4.38	3.59	3.01	2.39	1.95	1.64	1.40	1.11	0.91	0.65	0.49	0.39	0.32
25	0.07	0.17	0.31	0.57	1.07	1.55	2.00	2.45	3.31	4.15	4.57	5.38	4.66	3.81	3.20	2.54	2.08	1.74	1.49	1.18	0.96	0.69	0.53	0.43	0.36
26	0.07	0.17	0.32	0.60	1.12	1.61	2.09	2.55	3.46	4.33	4.76	5.61	4.94	4.05	3.39	2.69	2.20	1.85	1.58	1.25	1.02	0.73	0.56	0.46	0.39
28	0.08	0.19	0.35	0.65	1.21	1.75	2.25	2.77	3.74	4.69	5.16	6.08	5.52	4.52	3.79	3.01	2.46	2.06	1.76	1.40	1.14	0.82	0.62	0.52	0.45
30	0.08	0.20	0.38	0.70	1.31	1.88	2.44	2.98	4.03	5.06	5.56	6.55	6.13	5.01	4.20	3.33	2.73	2.29	1.95	1.55	1.27	0.91	0.69	0.60	0.53
32	0.09	0.22	0.40	0.75	1.40	2.02	2.61	3.20	4.33	5.42	5.96	7.03	6.75	5.52	4.63	3.67	3.01	2.52	2.15	1.71	1.40	1.00	0.79	0.70	0.63
35	0.10	0.24	0.44	0.83	1.54	2.22	2.88	3.52	4.76	5.97	6.57	7.74	7.72	6.32	5.29	4.20	3.44	2.88	2.46	1.95	1.60	1.14	0.90	0.81	0.74
40	0.12	0.27	0.51	0.96	1.78	2.57	3.33	4.07	5.50	6.90	7.59	8.94	9.43	7.72	6.47	5.13	4.20	3.52	3.01	2.39	1.95	1.40	1.00	0.85	0.78
45	0.14	0.31	0.58	1.08	2.02	2.92	3.78	4.62	6.25	7.84	8.62	10.20	11.30	9.21	7.72	6.13	5.01	4.20	3.59	2.85	2.33	1.71	1.25	0.95	0.88
Lube	Type A					Type B					Type C														

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#40 HI-MAX[®]



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
40	1/2	0.312	0.312	0.156	0.060	0.465	0.323	0.368	-	730	4,070	0.42
40-2	"	"	"	"	"	"	0.602	0.669	0.567	1,235	8,140	0.80
40-3	"	"	"	"	"	"	0.892	0.937	"	1,825	12,210	1.19

Horsepower Ratings

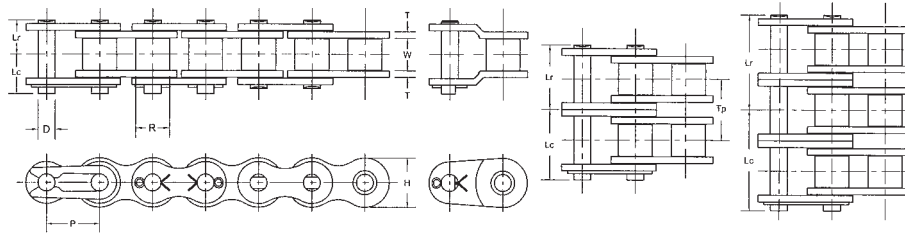
Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundry line.

Number Teeth Small Sprocket	Maximum Speed of 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
11	0.05	0.12	0.23	0.43	0.80	1.16	1.50	1.83	2.48	3.11	3.42	4.03	4.63	5.22	4.66	3.70	3.03	2.54	2.17	1.32	1.41	1.01	0.77	0.61	0.50
12	0.06	0.14	0.25	0.47	0.88	1.27	1.65	2.01	2.73	3.42	3.76	4.43	5.09	5.74	5.31	4.22	3.45	2.89	2.47	1.45	1.60	1.15	0.87	0.69	0.57
13	0.06	0.15	0.28	0.52	0.96	1.39	1.80	2.20	2.97	3.73	4.10	4.83	5.55	6.26	5.99	4.76	3.89	3.26	2.79	1.58	1.81	1.29	0.98	0.78	0.64
14	0.07	0.16	0.30	0.56	1.04	1.50	1.95	2.38	3.22	4.04	4.44	5.23	6.01	6.78	6.70	5.31	4.35	3.65	3.11	1.71	2.02	1.45	1.10	0.87	0.71
15	0.07	0.17	0.32	0.60	1.12	1.62	2.10	2.56	3.47	4.35	4.78	5.64	6.47	7.30	7.43	5.88	4.82	4.04	3.45	1.85	2.24	1.60	1.22	0.97	0.79
16	0.08	0.19	0.35	0.65	1.20	1.74	2.25	2.75	3.72	4.66	5.13	6.04	6.94	7.83	8.18	6.49	5.31	4.45	3.80	1.98	2.47	1.77	1.34	1.07	0.87
17	0.08	0.20	0.37	0.69	1.29	1.85	2.40	2.93	3.97	4.98	5.48	6.45	7.41	8.36	8.96	7.11	5.82	4.88	4.17	2.11	2.71	1.94	1.47	1.17	0.96
18	0.09	0.21	0.39	0.73	1.37	1.97	2.55	3.12	4.22	5.30	5.82	6.86	7.88	8.89	9.76	7.75	6.34	5.31	4.54	2.25	2.95	2.11	1.60	1.27	
19	0.09	0.22	0.42	0.78	1.45	2.09	2.71	3.31	4.48	5.62	6.17	7.27	8.36	9.42	10.50	8.40	6.88	5.76	4.92	2.38	3.20	2.29	1.74	1.38	
20	0.10	0.24	0.44	0.82	1.53	2.21	2.86	3.50	4.73	5.94	6.53	7.69	8.83	9.96	11.10	9.07	7.43	6.22	5.31	2.52	3.45	2.47	1.88	1.49	
21	0.11	0.25	0.46	0.87	1.62	2.33	3.02	3.69	4.99	6.26	6.88	8.11	9.31	10.50	11.70	9.76	7.99	6.70	5.72	2.66	3.71	2.66	2.02	1.60	
22	0.11	0.26	0.49	0.91	1.70	2.45	3.17	3.88	5.25	6.58	7.23	8.52	9.79	11.00	12.30	10.50	8.57	7.18	6.13	2.79	3.98	2.85	2.17	1.72	
23	0.12	0.27	0.51	0.96	1.78	2.57	3.33	4.07	5.51	6.90	7.59	8.94	10.30	11.60	12.90	11.20	9.16	7.68	6.55	2.93	4.26	3.05	2.32	1.84	
24	0.13	0.29	0.54	1.00	1.87	2.69	3.48	4.26	5.76	7.23	7.95	9.36	10.80	12.10	13.50	11.90	9.76	8.18	6.99	3.07	4.54	3.25	2.47	1.96	
25	0.13	0.30	0.56	1.05	1.95	2.81	3.64	4.45	6.02	7.55	8.30	9.78	11.20	12.70	14.10	12.70	10.40	8.70	7.43	3.21	4.82	3.45	2.63		
26	0.14	0.31	0.58	1.09	2.04	2.93	3.80	4.64	6.28	7.88	8.66	10.20	11.70	13.20	14.70	13.50	11.00	9.23	7.88	3.34	5.12	3.66	2.79		
28	0.15	0.34	0.63	1.18	2.20	3.18	4.11	5.03	6.81	8.54	9.39	11.10	12.70	14.30	15.90	15.00	12.30	10.30	8.80	3.62	5.72	4.09	3.11		
30	0.16	0.37	0.68	1.27	2.38	3.42	4.43	5.42	7.33	9.20	10.10	11.90	13.70	15.40	17.20	16.70	13.60	11.40	9.76	3.90	6.34	4.54	3.45		
32	0.17	0.39	0.73	1.36	2.55	3.67	4.75	5.81	7.86	9.86	10.80	12.80	14.70	16.50	18.40	18.40	15.00	12.60	10.80	4.18	7.00	5.00			
35	0.19	0.43	0.81	1.50	2.81	4.04	5.24	6.40	8.66	10.90	11.90	14.10	16.20	18.20	20.30	21.00	17.20	14.40	12.30	4.61	8.00	5.70			
40	0.22	0.50	0.93	1.74	3.24	4.67	6.05	7.39	10.00	12.50	13.80	16.30	18.70	21.10	23.40	25.70	21.00	17.60	15.00	5.32	9.80	7.00			
45	0.25	0.57	1.06	1.97	3.68	5.30	6.87	8.40	11.40	14.20	15.70	18.50	21.20	23.90	26.60	30.50	25.10	21.00	17.90	6.05	11.70				
Lube	Type A					Type B								Type C											

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
50	5/8	0.375	0.400	0.200	0.080	0.604	0.398	0.459	-	1,260	6,820	0.68
50-2	"	"	"	"	"	"	0.756	0.815	0.712	2,145	13,640	1.37
50-3	"	"	"	"	"	"	1.114	1.167	"	3,150	20,460	2.05

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

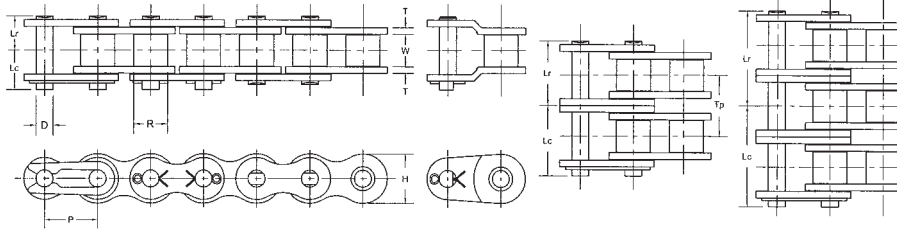
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2100	2400	2700	3000	3500	4000	4500	5000	5500	6000
11	0.11	0.24	0.45	0.84	1.56	2.25	2.92	3.57	4.83	6.06	6.66	7.95	8.13	6.65	5.58	4.42	3.62	3.04	2.59	2.06	1.68	1.41	1.20	1.04	0.92
12	0.12	0.26	0.49	0.92	1.72	2.47	3.21	3.92	5.31	6.65	7.31	8.62	9.26	7.58	6.35	5.04	4.13	3.46	2.95	2.34	1.92	1.61	1.37	1.19	1.04
13	0.13	0.29	0.54	1.00	1.87	2.70	3.50	4.27	5.78	7.25	7.97	9.40	10.40	8.55	7.16	5.69	4.65	3.90	3.33	2.64	2.16	1.81	1.55	1.34	
14	0.14	0.31	0.58	1.09	2.03	2.92	3.79	4.63	6.27	7.86	8.44	10.20	11.70	9.55	8.01	6.35	5.20	4.36	3.72	2.95	2.42	2.03	1.73	1.50	
15	0.15	0.34	0.63	1.17	2.19	3.15	4.08	4.99	6.75	8.47	9.31	11.00	12.60	10.60	8.88	7.05	5.77	4.83	4.13	3.27	2.68	2.25	1.92	1.66	
16	0.16	0.36	0.67	1.26	2.34	3.38	4.37	5.35	7.24	9.08	9.98	11.80	13.50	11.70	9.78	7.76	6.35	5.32	4.55	3.61	2.95	2.47	2.11	1.83	
17	0.17	0.39	0.72	1.34	2.50	3.61	4.67	5.71	7.73	9.69	10.00	12.60	14.40	12.80	10.70	8.00	6.96	5.83	4.98	3.95	3.23	2.71	2.31	2.01	
18	0.18	0.41	0.76	1.43	2.66	3.83	4.97	6.07	8.22	10.30	11.30	13.40	15.30	13.90	11.70	9.26	7.58	6.35	5.42	4.30	3.52	2.95	2.52		
19	0.19	0.43	0.81	1.51	2.82	4.07	5.27	6.44	8.72	10.90	12.00	14.20	16.30	15.10	12.70	10.00	8.22	6.89	5.88	4.67	3.82	3.20	2.73		
20	0.20	0.46	0.86	1.60	2.98	4.30	5.57	6.80	9.21	11.50	12.70	15.00	17.20	16.30	13.70	10.80	8.88	7.44	6.35	5.04	4.13	3.46	2.95		
21	0.21	0.48	0.90	1.69	3.14	4.53	5.87	7.17	9.71	12.20	13.40	15.80	18.10	17.60	14.70	11.70	9.55	8.01	6.84	5.42	4.44	3.72	3.18		
22	0.22	0.51	0.95	1.77	3.31	4.76	6.17	7.54	10.20	12.80	14.10	16.60	19.10	18.80	15.80	12.50	10.20	8.59	7.33	5.82	4.76	3.99	3.41		
23	0.23	0.53	1.00	1.86	3.47	5.00	6.47	7.91	10.70	13.40	14.80	17.40	20.00	20.10	16.90	13.40	11.00	9.18	7.84	6.22	5.09	4.27			
24	0.25	0.56	1.04	1.95	3.63	5.23	6.78	8.29	11.20	14.10	15.50	18.20	20.90	21.40	18.00	14.30	11.70	9.78	8.35	6.63	5.42	4.55			
25	0.26	0.58	1.09	2.03	3.80	5.47	7.08	8.66	11.70	14.70	16.20	19.00	21.90	22.80	19.10	15.20	12.40	10.40	8.88	7.05	5.77	4.83			
26	0.27	0.61	1.14	2.12	3.96	5.70	7.39	9.03	12.20	15.30	16.90	19.90	22.80	24.20	20.30	16.10	13.20	11.00	9.42	7.47	6.12	5.13			
28	0.29	0.66	1.23	2.30	4.29	6.18	8.01	9.79	13.20	16.60	18.30	21.50	24.70	27.00	22.60	18.00	14.70	12.30	10.50	8.35	6.84	5.73			
30	0.31	0.71	1.33	2.48	4.62	6.66	8.63	10.50	14.30	17.90	19.70	23.20	26.60	30.00	25.10	19.90	16.30	13.70	11.70	9.26	7.58				
32	0.33	0.70	1.42	2.66	4.96	7.14	9.25	11.30	15.30	19.20	21.10	24.90	28.60	32.20	27.70	22.00	18.00	15.10	12.90	10.20	8.35				
35	0.37	0.84	1.57	2.93	5.46	7.86	10.20	12.50	16.90	21.10	23.20	27.40	31.50	35.50	32.60	25.10	20.60	17.20	14.70	11.70	9.55				
40	0.43	0.97	1.81	3.38	6.31	9.08	11.80	14.40	19.50	24.40	26.80	31.60	36.30	41.00	38.70	30.70	25.10	21.00	18.00	14.30					
45	0.48	1.10	2.06	3.84	7.16	10.30	13.40	16.30	22.10	27.70	30.50	35.90	41.30	46.50	46.10	36.60	30.00	25.10	21.40						
Lube	Type A						Type B						Type C												

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6

#60 HI-MAX®



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
60	3/4	0.500	0.469	0.234	0.094	0.689	0.492	0.557	-	1,755	9,680	0.97
60-2	"	"	"	"	"	"	0.945	1.004	0.898	2,990	19,360	2.03
60-3	"	"	"	"	"	"	1.392	1.455	"	4,395	29,040	3.02

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundry line.

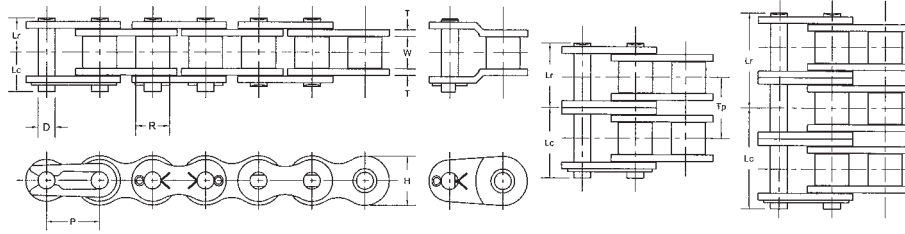
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2500	3000	3500	4000	4500
11	0.18	0.41	0.77	1.44	2.07	2.69	3.87	5.02	6.13	7.23	8.30	9.36	10.40	11.40	12.50	11.90	9.41	7.70	6.45	5.51	3.94	3.00	2.38	1.95	1.63
12	0.20	0.45	0.85	1.58	2.26	2.95	4.25	5.51	6.74	7.94	9.12	10.30	11.40	12.60	13.70	13.50	10.70	8.77	7.35	6.28	4.49	3.42	2.71	2.22	1.86
13	0.22	0.50	0.92	1.73	2.49	3.22	4.64	6.01	7.34	8.65	9.94	11.20	12.50	13.70	14.90	15.20	12.10	9.89	8.29	7.08	5.06	3.85	3.06	2.50	
14	0.24	0.54	1.00	1.87	2.69	3.49	5.02	6.51	7.96	9.37	10.80	12.10	13.50	14.80	16.20	17.00	13.50	11.10	9.26	7.91	5.66	4.31	3.42	2.80	
15	0.25	0.58	1.08	2.01	2.90	3.76	5.41	7.01	8.57	10.10	11.60	13.10	14.50	16.00	17.40	18.80	15.00	12.30	10.30	8.77	6.28	4.77	3.79	3.10	
16	0.27	0.62	1.16	2.16	3.11	4.03	5.80	7.52	9.19	10.80	12.40	14.00	15.60	17.10	18.70	20.20	16.50	13.50	11.30	9.66	6.91	5.26	4.17	3.42	
17	0.29	0.66	1.24	2.31	3.32	4.30	6.20	8.03	9.81	11.60	13.30	15.00	16.70	18.30	19.90	21.60	18.10	14.80	12.40	10.60	7.57	5.76	4.57	3.74	
18	0.31	0.70	1.31	2.45	3.53	4.58	6.59	8.54	10.40	12.30	14.10	15.90	17.70	19.50	21.20	22.90	19.70	16.10	13.50	11.50	8.25	6.28	4.98	4.08	
19	0.33	0.75	1.39	2.60	3.74	4.85	6.99	9.05	11.10	13.00	15.00	16.90	18.80	20.60	22.50	24.30	21.40	17.50	14.60	12.50	8.95	6.81	5.40	4.42	
20	0.35	0.79	1.47	2.75	3.96	5.13	7.38	9.57	11.70	13.80	15.80	17.90	19.80	21.80	23.80	25.70	23.10	18.90	15.80	13.50	9.66	7.35	5.83		
21	0.36	0.83	1.55	2.90	4.17	5.40	7.78	10.10	12.30	14.50	16.70	18.80	20.90	23.00	25.10	27.10	24.80	20.30	17.00	14.50	10.40	7.91	6.28		
22	0.38	0.87	1.63	3.05	4.39	5.68	8.19	10.60	13.00	15.30	17.50	19.80	22.00	24.20	26.40	28.50	26.60	21.80	18.20	15.60	11.10	8.48	6.73		
23	0.40	0.92	1.71	3.19	4.60	5.96	8.59	11.10	13.60	16.00	18.40	20.80	23.10	25.40	27.70	29.90	28.40	23.30	19.50	16.70	11.90	9.07	7.19		
24	0.42	0.96	1.79	3.35	4.82	6.24	8.99	11.60	14.20	16.80	19.30	21.70	24.20	26.60	29.00	31.30	30.30	24.80	20.80	17.80	12.70	9.66	7.67		
25	0.44	1.00	1.87	3.50	5.04	6.52	9.40	12.20	14.90	17.50	20.10	22.70	25.30	27.80	30.30	32.70	32.20	26.40	22.10	18.90	13.50	10.30	8.20		
26	0.46	1.05	1.95	3.65	5.25	6.81	9.80	12.70	15.50	18.30	21.00	23.70	26.40	29.00	31.60	34.10	34.20	28.00	23.40	20.00	14.30	10.90	8.70		
28	0.50	1.13	2.12	3.95	5.69	7.37	10.60	13.80	16.80	19.80	22.80	25.70	28.50	31.40	34.20	37.00	38.20	31.30	26.20	22.40	16.00	12.20			
30	0.54	1.20	2.28	4.26	6.13	7.94	11.40	14.80	18.10	21.40	24.50	27.70	30.80	33.80	36.80	39.80	42.40	34.70	29.10	24.80	17.80	13.50			
32	0.57	1.31	2.45	4.56	6.57	8.52	12.30	15.90	19.40	22.90	26.30	29.70	33.00	36.30	39.50	42.70	46.70	38.20	32.00	27.30	19.60	14.90			
35	0.63	1.44	2.69	5.03	7.24	9.38	13.50	17.50	21.40	25.20	29.00	32.70	36.30	39.90	43.50	47.10	53.40	43.70	36.60	31.30	22.40	17.00			
40	0.73	1.67	3.11	5.81	8.37	10.80	15.60	20.20	24.70	29.10	33.50	37.70	42.00	46.10	50.30	54.40	62.50	53.40	44.70	38.20	27.30				
45	0.83	1.89	3.53	6.60	9.50	12.30	17.70	23.00	28.10	33.10	38.00	42.00	47.70	52.40	57.10	61.70	70.90	63.70	53.40	45.60	32.60				
Lube	Type A				Type B								Type C												

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6

#80 HI-MAX[®]



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
80	1	0.625	0.625	0.312	0.125	0.941	0.634	0.740	-	2,970	16,720	1.61
80-2	"	"	"	"	"	"	1.205	1.323	1.153	5,050	33,440	3.53
80-3	"	"	"	"	"	"	1.783	1.890	"	7,425	50,160	5.23

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

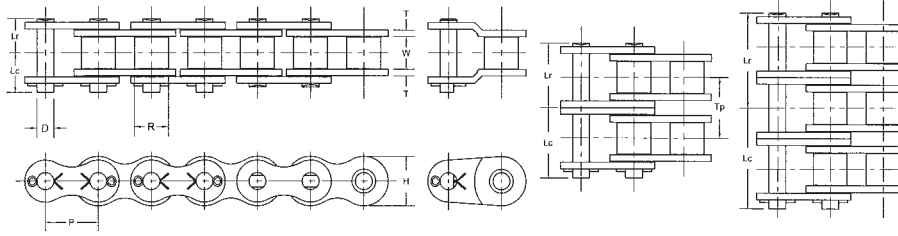
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																								
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2700	3000	3400
11	0.42	0.97	1.80	3.36	4.84	6.28	9.04	11.70	14.30	16.90	19.40	21.90	23.00	19.60	17.00	14.90	11.80	9.69	8.12	6.93	6.01	5.27	4.42	3.77	1.70
12	0.47	1.06	1.98	3.69	5.32	6.89	9.93	12.90	15.70	18.50	21.30	24.00	26.20	22.30	19.40	17.00	13.50	11.00	9.25	7.90	6.85	6.01	5.04	4.30	
13	0.51	1.16	2.16	4.03	5.80	7.52	10.80	14.00	17.10	20.02	23.20	26.20	29.10	25.20	21.80	19.20	15.20	12.50	10.40	8.91	7.72	6.78	5.68	4.85	
14	0.55	1.25	2.34	4.36	6.29	8.14	11.70	15.20	18.60	21.90	25.10	28.40	31.50	28.20	24.40	21.40	17.00	13.90	11.70	9.96	8.63	7.57	6.35	5.42	
15	0.59	1.35	2.52	4.70	6.77	8.77	12.60	16.40	20.00	23.60	27.10	30.60	34.00	31.20	27.10	23.80	18.90	15.40	12.90	11.00	9.57	8.40	7.04	6.01	
16	0.63	1.45	2.70	5.04	7.26	9.41	13.50	17.60	21.50	25.30	29.00	32.80	36.40	34.40	29.80	26.20	20.80	17.00	14.20	12.20	10.50	9.25	7.76	6.62	
17	0.68	1.55	2.88	5.38	7.75	10.00	14.50	18.70	22.90	27.00	31.00	35.00	38.90	37.70	32.70	28.70	22.70	18.60	15.60	13.30	11.50	10.10	8.49	7.25	
18	0.72	1.64	3.07	5.72	8.25	10.70	15.40	19.90	24.40	28.70	33.00	37.20	41.40	41.10	35.60	31.20	24.80	20.30	17.00	14.50	12.60	11.00	9.25	7.90	
19	0.76	1.74	3.25	6.07	8.74	11.30	16.30	21.20	25.80	30.40	35.00	39.40	43.80	44.50	38.60	33.90	26.90	22.00	18.40	15.70	13.60	12.00	10.00	8.57	
20	0.81	1.84	3.44	6.41	9.24	12.00	17.20	22.30	27.30	32.20	37.00	41.70	46.30	48.10	41.70	36.60	29.00	23.80	19.90	17.00	14.70	12.90	10.80		
20	0.85	1.94	3.62	6.76	9.74	12.60	18.20	23.50	28.80	33.90	39.00	43.90	48.90	51.70	44.80	39.40	31.20	25.60	21.40	18.30	15.90	13.90	11.70		
22	0.90	2.04	3.81	7.11	10.20	13.30	19.10	24.80	30.30	35.70	41.00	46.20	51.40	55.50	48.10	42.20	33.50	27.40	23.00	19.60	17.00	14.90	12.50		
23	0.94	2.14	4.00	7.46	10.70	13.90	20.10	26.00	31.80	37.40	43.00	48.50	53.90	59.30	51.40	45.10	35.80	29.30	24.60	21.00	18.20	15.90	13.40		
24	0.98	2.24	4.19	7.81	11.30	14.60	21.00	27.20	33.20	39.20	45.00	50.80	56.40	62.00	54.80	48.10	38.20	31.20	25.20	22.30	19.40	17.00	14.20		
25	1.03	2.34	4.37	8.16	11.80	15.20	21.90	28.40	34.70	40.90	47.00	53.00	59.00	64.80	58.20	51.10	40.60	33.20	27.80	23.80	20.60	18.10	15.10		
26	1.07	2.45	4.56	8.52	12.30	15.90	22.90	29.70	36.20	42.70	49.10	55.30	61.50	67.60	61.80	54.20	43.00	35.20	29.50	25.20	21.80	19.20	16.10		
27	1.16	2.65	4.94	9.23	13.30	17.20	24.80	32.10	39.30	46.30	53.20	59.90	66.70	73.30	69.00	60.60	48.10	39.40	33.00	28.20	24.40	21.40			
28	1.25	2.85	5.33	8.94	14.30	18.50	26.70	34.60	42.30	49.90	57.00	64.60	71.80	78.90	76.60	67.20	53.30	43.60	36.60	31.20	27.10	23.80			
32	1.34	3.06	5.71	10.70	15.30	19.90	28.60	37.10	45.40	53.50	61.40	69.20	77.00	84.60	84.30	74.00	58.70	48.10	40.30	34.40	29.80	26.20			
35	1.48	3.37	6.29	11.70	16.90	21.90	31.60	40.90	50.00	58.90	67.60	76.30	84.80	93.30	96.50	84.70	67.20	55.00	46.10	39.40	34.10				
40	1.71	3.89	7.27	13.60	19.50	25.30	36.40	47.20	57.70	68.00	78.10	88.10	98.00	108.0	117.0	103.0	82.10	67.20	56.30	48.10	20.00				
45	1.94	4.42	8.25	15.40	22.20	28.70	41.40	53.60	65.60	77.20	88.70	100.0	111.0	122.0	133.0	123.0	98.00	80.20	67.20	54.10					
Lube	Type A			Type B												Type C									

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#100 HI-MAX®



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
100	1 1/4	0.750	0.750	0.375	0.156	1.138	0.791	0.909	-	4,550	25,300	2.51
100-2	"	"	"	"	"	"	1.496	1.614	1.409	7,750	50,600	5.04
100-3	"	"	"	"	"	"	2.201	2.319	"	11,385	75,900	7.51

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundry line.

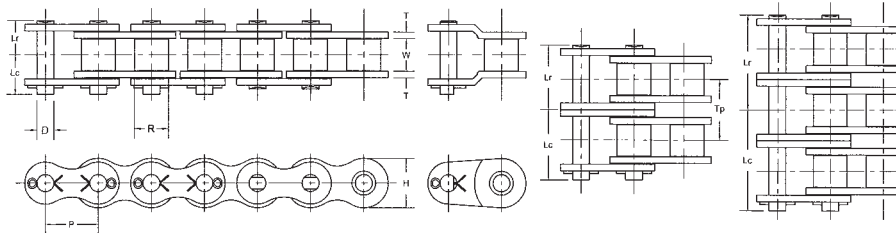
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																							
	10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	2200	2400	2600
11	0.81	1.85	3.45	6.44	9.28	12.00	17.30	22.40	27.40	32.30	37.10	32.80	27.50	23.40	20.30	17.80	15.80	14.20	11.60	9.71	8.29	7.19	6.31	1.29
12	0.89	2.03	3.79	7.08	10.20	13.20	19.00	24.60	30.10	35.50	40.80	37.30	31.30	26.70	23.20	20.30	18.00	16.10	13.20	11.10	9.45	8.19	7.19	
13	0.97	2.22	4.13	7.72	11.10	14.40	20.70	26.90	32.80	38.70	44.50	42.10	35.30	30.10	26.10	22.90	20.30	18.20	14.90	12.50	10.60	9.23	8.10	
14	1.05	2.40	4.48	8.36	12.00	15.60	22.50	29.10	35.60	41.90	48.20	47.00	39.40	33.70	29.20	25.60	22.70	20.30	16.60	13.90	11.90	10.30	9.05	
15	1.13	2.59	4.83	9.01	13.00	16.80	24.20	31.40	38.30	45.20	51.90	52.20	43.70	37.30	32.40	28.40	25.20	22.50	18.40	15.50	13.20	11.40	10.00	
16	1.22	2.77	5.17	9.66	13.90	18.00	26.00	33.60	41.10	48.40	55.60	57.50	48.20	41.10	35.70	31.30	27.70	24.80	20.30	17.00	14.50	12.60	11.10	
17	1.30	2.96	5.52	10.30	14.80	19.20	27.70	35.90	43.90	51.70	59.40	63.00	52.80	45.00	39.00	34.30	30.40	27.20	22.30	18.70	15.90	13.80		
18	1.38	3.15	5.88	11.00	15.80	20.50	29.50	38.20	46.70	55.00	63.20	68.60	57.50	49.10	42.50	37.30	33.10	29.60	24.20	20.30	17.40	15.00		
19	1.46	3.34	6.23	11.60	16.70	21.70	31.20	40.50	49.50	58.30	67.00	74.40	62.30	53.20	46.10	40.50	35.90	32.10	26.30	22.00	18.80	16.30		
20	1.55	3.53	6.58	12.30	17.70	22.90	33.00	42.80	52.30	61.60	70.80	79.80	67.30	57.50	49.80	43.70	38.80	34.70	28.40	23.80	20.30	17.60		
21	1.63	3.72	6.94	13.00	18.70	24.20	34.80	45.10	55.10	65.00	74.60	84.20	72.40	61.80	53.60	47.00	41.70	37.30	30.60	25.60	21.90	19.00		
22	1.71	3.91	7.30	13.60	19.60	25.40	36.60	47.40	58.00	68.30	78.50	88.50	77.70	66.30	57.50	50.40	44.70	40.00	32.80	27.50	23.40	20.30		
23	1.80	4.10	7.66	14.30	20.60	26.70	38.40	49.80	60.80	71.70	82.30	92.80	83.00	70.90	61.40	53.90	47.80	42.80	35.00	29.40	25.10			
24	1.88	4.30	8.02	15.00	21.50	27.90	40.20	52.10	63.70	75.00	86.20	97.20	88.50	75.60	65.50	57.50	51.00	45.60	37.30	31.30	26.70			
25	1.97	4.49	8.38	15.60	22.50	29.20	42.00	54.40	66.60	78.40	90.10	102.0	94.10	80.30	69.60	61.10	54.20	48.50	39.70	33.30	28.40			
26	2.05	4.68	8.74	16.30	23.50	30.40	43.80	56.80	69.40	81.80	94.00	106.0	99.80	85.20	73.80	64.80	57.50	51.40	42.10	35.30	30.10			
28	2.22	5.07	9.47	17.70	25.50	33.00	47.50	61.50	75.20	88.60	102.0	115.0	112.0	95.20	82.50	72.40	64.20	57.50	47.00	39.40	33.70			
30	2.40	5.47	10.20	19.00	27.40	35.50	51.20	66.30	81.00	95.50	110.0	124.0	124.0	106.0	91.50	80.30	71.20	63.70	52.20	43.70				
32	2.57	5.86	10.90	20.40	29.40	38.10	54.90	71.10	86.90	102.0	118.0	133.0	136.0	116.0	101.0	88.50	78.50	70.20	57.50	48.20				
35	2.83	6.46	12.00	22.50	32.40	42.00	60.40	78.30	95.70	113.0	130.0	146.0	156.0	133.0	115.0	101.0	89.80	80.30	65.80	55.10				
40	3.27	7.46	13.90	26.00	37.40	48.50	69.80	90.40	111.0	130.0	150.0	169.0	188.0	163.0	141.0	124.0	110.0	98.10	80.30					
45	3.71	8.47	15.80	29.50	42.50	55.00	79.30	103.0	126.0	148.0	170.0	192.0	213.0	194.0	168.0	148.0	131.0	117.0						
Lube	Type A			Type B						Type C														

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#120 HI-MAX[®]



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
120	1 1/2	1.000	0.875	0.437	0.187	1.378	0.992	1.126	-	6,120	37,400	3.75
120-2	"	"	"	"	"	"	1.886	2.020	1.787	10,400	74,800	8.22
120-3	"	"	"	"	"	"	2.780	2.913	"	15,300	112,200	12.27

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

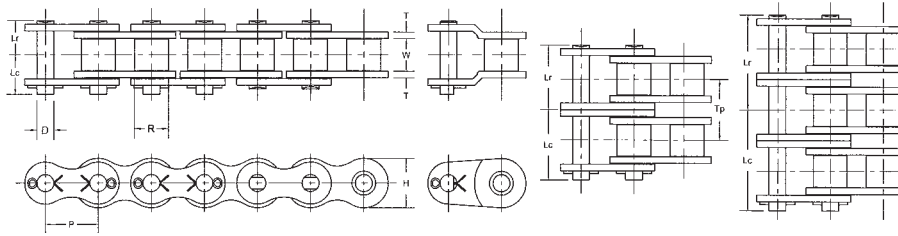
Number Teeth Small Sprocket	Maximum Speed of Small Sprocket (rpm)																							
	10	20	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
11	1.37	3.12	5.83	10.90	15.70	20.30	29.20	37.90	46.30	54.60	46.30	37.80	31.80	27.10	23.50	20.60	18.30	16.40	14.80	13.40	12.20	11.20	10.40	9.59
12	1.50	3.43	6.40	11.90	17.20	22.30	32.10	41.60	50.90	59.90	52.80	43.20	36.20	30.90	26.80	23.50	20.90	18.70	16.80	15.30	13.90	12.80	11.80	10.90
13	1.64	3.74	6.98	13.00	18.80	24.30	35.00	45.40	55.50	65.30	59.50	48.70	40.80	34.90	30.20	26.50	23.50	21.00	19.00	17.20	15.70	14.40	13.30	12.30
14	1.78	4.05	7.56	14.10	20.30	26.30	37.90	49.10	60.10	70.80	66.50	54.40	45.60	39.00	33.80	29.60	26.30	23.50	21.20	19.20	17.60	16.10	14.90	
15	1.91	4.37	8.15	15.20	21.90	28.40	40.90	53.00	64.70	76.30	73.80	60.40	50.60	43.20	37.40	32.90	29.10	26.10	23.50	21.30	19.50	17.00	16.50	
16	2.05	4.68	8.74	16.30	23.50	30.40	43.80	56.80	69.40	81.80	81.30	66.50	55.70	47.60	41.20	36.20	32.10	28.70	25.90	23.50	21.50	19.70	18.20	
17	2.19	5.00	9.33	17.40	25.10	32.50	46.80	60.60	74.10	87.30	89.00	72.80	61.00	52.10	45.20	39.60	35.20	31.50	28.40	25.80	23.50	21.60	19.90	
18	2.33	5.32	9.92	18.50	26.70	34.60	49.80	64.50	78.80	92.90	97.00	79.40	66.50	56.80	49.20	43.20	38.30	34.30	30.90	28.10	25.60	23.50		
19	2.47	5.64	10.50	19.60	28.30	36.60	52.80	68.40	83.60	98.50	105.0	86.10	72.10	61.60	53.40	46.80	41.50	37.20	33.50	30.40	27.80	25.50		
20	2.61	5.96	11.10	20.70	29.90	38.70	55.80	72.20	88.30	104.0	114.0	92.90	77.90	66.50	57.60	50.60	44.90	40.10	36.20	32.90	30.00	27.50		
21	2.75	6.28	11.70	21.90	31.50	40.80	58.80	76.20	93.10	110.0	122.0	100.0	83.80	71.60	62.00	54.40	48.30	43.20	39.00	35.40	32.30	29.50		
22	2.90	6.60	12.30	23.00	33.10	42.90	61.80	80.10	97.90	115.0	131.0	107.0	89.90	76.70	66.50	58.40	51.80	46.30	41.80	37.90	34.60			
23	3.04	6.93	12.90	24.10	34.80	45.00	64.90	84.00	103.0	121.0	139.0	115.0	96.10	82.00	71.10	62.40	55.30	49.50	44.60	40.50	37.00			
24	3.18	7.25	13.50	25.30	36.40	47.10	67.90	88.00	108.0	127.0	146.0	122.0	102.0	87.40	75.80	66.50	59.00	52.80	47.60	43.20	39.40			
25	3.32	7.58	14.10	26.40	38.00	49.30	71.00	91.90	112.0	132.0	152.0	130.0	109.0	92.90	80.60	70.70	62.70	56.10	50.60	45.90	41.30			
26	3.47	7.91	14.80	27.50	39.70	51.40	74.00	95.90	117.0	138.0	159.0	138.0	115.0	98.60	85.40	75.00	66.50	59.50	53.70	48.70				
28	3.76	8.57	16.00	29.80	43.00	55.70	80.20	104.0	127.0	150.0	172.0	154.0	129.0	110.0	95.50	83.80	74.30	66.50	60.00	54.40				
30	4.05	9.23	17.20	32.10	46.30	60.00	86.40	112.0	137.0	161.0	185.0	171.0	143.0	122.0	106.0	92.90	82.40	73.80	66.50					
32	4.34	9.90	18.50	34.50	49.60	64.30	92.60	120.0	147.0	173.0	199.0	188.0	158.0	135.0	117.0	102.0	90.80	81.30	73.30					
35	4.78	10.90	20.30	38.00	54.70	70.90	102.0	132.0	162.0	190.0	219.0	215.0	180.0	154.0	133.0	117.0	104.0	92.90						
40	5.52	12.60	23.50	43.90	63.20	81.80	118.0	153.0	187.0	220.0	253.0	263.0	220.0	188.0	163.0	143.0	127.0							
45	6.27	14.30	26.70	49.80	71.70	92.90	134.0	173.0	212.0	250.0	287.0	314.0	263.0	224.0	195.0	171.0								
Lube	Type A	Type B										Type C												

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

#140 HI-MAX[®]



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
140	1 3/4	1.000	1.000	0.500	0.219	1.654	1.075	1.240	-	8,100	47,300	5.02
140-2	"	"	"	"	"	"	2.037	2.195	1.925	13,770	94,600	9.95
140-3	"	"	"	"	"	"	3.000	3.165	"	20,250	141,900	14.89

Horsepower Ratings

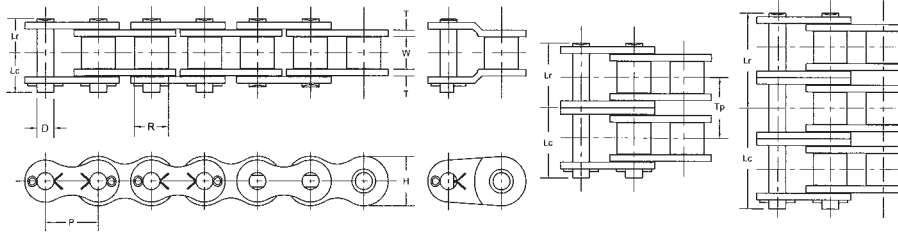
Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundry line.

Number Teeth Small Sprocket	Maximum Speed of 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
11	2.12	4.83	9.02	16.80	24.20	31.40	38.40	45.20	52.00	58.60	65.20	71.60	75.20	66.00	52.40	42.90	35.90	30.70	26.60	23.30	20.70	18.50	16.70	15.20
12	2.33	5.31	9.91	18.50	26.60	34.50	42.20	49.70	57.10	64.40	71.60	78.70	85.70	75.20	59.70	48.90	41.00	35.00	30.30	26.60	23.60	21.10	19.00	17.30
13	2.54	5.79	10.80	20.20	29.00	37.60	46.00	54.20	62.20	70.20	78.00	85.80	93.50	84.80	67.30	55.10	46.20	39.40	34.20	30.00	26.50	23.80	21.50	19.50
14	2.75	6.27	11.70	21.80	31.50	40.80	49.80	58.70	67.40	76.00	84.50	93.00	101.0	94.80	75.20	61.60	51.60	44.10	38.20	33.50	29.70	26.60	24.00	21.80
15	2.96	6.76	12.60	23.50	33.90	43.90	53.70	63.20	72.70	81.90	91.10	100.0	109.0	105.0	83.40	68.30	57.20	48.90	42.40	37.20	33.00	29.50	26.60	
16	3.18	7.24	13.50	25.20	36.30	47.10	57.50	67.80	77.90	87.80	97.20	107.0	117.0	116.0	91.90	75.20	63.10	53.80	46.70	41.00	36.30	32.50	29.30	
17	3.39	7.73	14.40	26.90	38.80	50.30	61.40	72.40	83.20	93.80	104.0	115.0	125.0	127.0	101.0	82.40	69.10	59.00	51.10	44.90	39.80	35.60	32.10	
18	3.61	8.23	15.40	28.60	41.30	53.50	65.30	77.00	88.50	99.80	111.0	122.0	133.0	138.0	110.0	89.80	75.20	64.20	55.70	48.90	43.30	38.80	35.00	
19	3.82	8.72	16.30	30.40	43.70	56.70	69.30	81.60	93.80	106.0	118.0	129.0	141.0	150.0	119.0	97.40	81.60	69.70	60.40	53.00	47.00	42.10	37.90	
20	4.04	9.22	17.20	32.10	46.20	59.90	73.20	86.30	99.10	112.0	124.0	137.0	149.0	161.0	128.0	105.0	88.10	75.20	65.20	57.20	50.80	45.40		
21	4.25	9.72	18.10	33.80	48.70	63.10	77.20	91.00	104.0	118.0	131.0	144.0	157.0	170.0	138.0	113.0	94.80	80.90	70.20	61.60	54.60	48.90		
22	4.48	10.20	19.10	35.60	51.30	66.40	81.20	95.60	110.0	124.0	138.0	151.0	165.0	178.0	148.0	121.0	102.0	86.80	75.20	66.00	58.60	52.40		
23	4.70	10.70	20.00	37.30	53.80	69.70	85.20	100.0	115.0	130.0	145.0	159.0	173.0	187.0	158.0	130.0	109.0	92.80	80.40	70.60	62.60	56.00		
24	4.92	11.20	20.90	39.10	56.30	72.90	89.20	105.0	121.0	136.0	151.0	166.0	181.0	196.0	169.0	138.0	116.0	98.90	85.70	75.20	66.70	59.70		
25	5.14	11.70	21.90	40.80	58.80	76.20	93.20	110.0	126.0	142.0	158.0	174.0	189.0	205.0	180.0	147.0	123.0	105.0	91.10	80.00	70.90	63.50		
26	5.37	12.20	22.80	42.60	61.40	79.50	97.20	115.0	132.0	148.0	165.0	181.0	198.0	214.0	190.0	156.0	131.0	112.0	96.70	84.80	75.20			
28	5.81	13.30	24.70	46.20	66.50	86.20	105.0	124.0	143.0	161.0	179.0	197.0	214.0	232.0	213.0	174.0	146.0	125.0	108.0	94.80	84.10			
30	6.26	14.30	26.70	49.70	71.60	92.80	113.0	134.0	154.0	173.0	193.0	212.0	231.0	249.0	236.0	193.0	162.0	138.0	120.0	105.0	93.20			
32	6.71	15.30	28.60	53.30	76.80	99.50	122.0	143.0	165.0	186.0	206.0	227.0	247.0	267.0	260.0	213.0	178.0	152.0	132.0	116.0				
35	7.40	16.90	31.50	58.70	84.60	110.0	134.0	158.0	181.0	205.0	227.0	250.0	272.0	295.0	297.0	243.0	204.0	174.0	151.0	130.0				
40	8.54	19.50	36.40	67.90	97.70	127.0	155.0	182.0	210.0	236.0	263.0	289.0	315.0	340.0	363.0	297.0	249.0	213.0	178.0					
45	9.70	22.10	41.30	77.10	111.0	144.0	176.0	207.0	238.0	268.0	298.0	328.0	357.0	387.0	434.0	355.0	297.0	237.0						
Lube	Type A	Type B										Type C												

- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands Factor	Multi-Strand Factors				
	2	3	4	5	6
	1.7	2.5	3.3	3.9	4.6



Chain Dimensions

Note: Rated Working Load is to be used only in conjunction with "slow speed selection method" (see page 41).

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp			
160	2	1.250	1.125	0.562	0.250	1.890	1.281	1.467	-	10,700	60,500	6.77
160-2	"	"	"	"	"	"	2.433	2.618	2.303	18,200	121,000	13.44
160-3	"	"	"	"	"	"	3.585	3.770	"	26,800	181,500	20.14

Horsepower Ratings

Please consult Hitachi Maxco product engineering for horsepower ratings to the right of the black boundary line.

Number Teeth Small Sprocket	Maximum Speed of 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
11	3.07	7.01	13.10	24.40	35.20	45.60	55.70	65.60	75.40	85.00	94.50	96.60	83.70	73.50	65.20	58.30	52.60	47.70	43.60	40.00	34.10	29.60	26.00	23.00
12	3.38	7.70	14.40	26.80	38.60	50.10	61.20	72.10	82.80	93.40	104.0	110.0	95.40	83.70	74.20	66.40	59.90	54.40	49.60	45.60	38.90	33.70	29.60	26.30
13	3.68	8.40	15.70	29.20	42.10	54.60	66.70	78.60	90.30	102.0	113.0	124.0	108.0	94.40	83.70	74.90	67.50	61.30	56.00	51.40	43.90	38.00	33.40	29.60
14	3.99	9.10	17.00	31.70	45.60	59.10	72.30	85.20	97.80	110.0	123.0	135.0	120.0	105.0	93.60	83.70	75.50	68.50	62.60	57.40	49.00	42.50	37.30	33.10
15	4.30	9.80	18.30	34.10	49.20	63.70	77.90	91.70	105.0	119.0	132.0	145.0	133.0	117.0	104.0	92.80	83.70	76.00	69.40	63.70	54.40	47.10	41.40	
16	4.61	10.50	19.60	36.60	52.70	68.30	83.50	98.40	113.0	127.0	142.0	156.0	147.0	129.0	114.0	102.0	92.20	83.70	76.40	70.20	59.90	51.90	45.60	
17	4.92	11.20	20.90	39.10	56.30	72.90	89.10	105.0	121.0	136.0	151.0	166.0	161.0	141.0	125.0	112.0	101.0	91.70	83.70	75.80	65.60	56.90	49.90	
18	5.23	11.90	22.30	41.60	59.90	77.60	94.80	112.0	128.0	145.0	161.0	177.0	175.0	154.0	136.0	122.0	110.0	99.90	91.20	83.70	71.50	62.00	54.40	
19	5.55	12.70	23.60	44.10	63.50	82.20	101.0	118.0	136.0	153.0	171.0	188.0	190.0	167.0	148.0	132.0	119.0	108.0	98.90	90.80	77.50	67.20	59.00	
20	5.86	13.40	25.00	46.60	67.10	86.90	106.0	125.0	144.0	162.0	180.0	198.0	205.0	180.0	160.0	143.0	129.0	117.0	107.0	98.10	83.70	72.60	63.70	
21	6.18	14.10	26.30	49.10	70.70	91.60	112.0	132.0	152.0	171.0	190.0	209.0	221.0	194.0	172.0	154.0	139.0	126.0	115.0	105.0	90.10	78.10	65.50	
22	6.50	14.80	27.70	51.60	74.40	96.30	118.0	139.0	159.0	180.0	200.0	220.0	237.0	208.0	184.0	165.0	149.0	135.0	123.0	113.0	96.60	83.70		
23	6.82	15.60	29.00	54.20	78.00	101.0	124.0	146.0	167.0	189.0	210.0	231.0	251.0	222.0	197.0	176.0	159.0	144.0	132.0	121.0	103.0	98.50		
24	7.14	16.30	30.40	56.70	81.70	106.0	129.0	152.0	175.0	197.0	220.0	241.0	263.0	237.0	210.0	188.0	169.0	154.0	140.0	129.0	110.0	95.40		
25	7.46	17.00	31.80	59.30	85.40	111.0	135.0	159.0	183.0	206.0	229.0	252.0	275.0	275.0	252.0	223.0	200.0	180.0	164.0	149.0	137.0	117.0	101.0	
26	7.78	17.80	33.10	61.80	89.10	115.0	141.0	166.0	191.0	215.0	239.0	263.0	287.0	287.0	267.0	237.0	212.0	191.0	173.0	158.0	145.0	124.0	108.0	
28	8.43	19.20	35.90	67.00	96.50	125.0	153.0	180.0	207.0	233.0	259.0	285.0	311.0	298.0	265.0	237.0	214.0	194.0	177.0	162.0	139.0	120.0		
30	9.08	20.70	38.70	72.20	104.0	135.0	165.0	194.0	223.0	251.0	279.0	307.0	335.0	331.0	293.0	263.0	237.0	215.0	196.0	180.0	154.0			
32	9.74	22.20	41.50	77.40	111.0	144.0	176.0	208.0	239.0	269.0	300.0	329.0	359.0	365.0	323.0	289.0	261.0	237.0	216.0	198.0	169.0			
35	10.70	24.50	45.70	85.20	123.0	159.0	194.0	229.0	263.0	297.0	330.0	363.0	395.0	395.0	417.0	370.0	331.0	298.0	271.0	247.0	227.0	180.0		
40	12.40	28.30	52.80	98.50	142.0	184.0	225.0	265.0	304.0	343.0	381.0	419.0	457.0	457.0	494.0	452.0	404.0	365.0	331.0	302.0	257.0			
45	14.10	32.10	59.90	112.0	161.0	209.0	255.0	301.0	345.0	389.0	433.0	476.0	519.0	519.0	561.0	538.0	482.0	418.0	348.0	271.0	189.0			
Lube	Type A	Type B											Type C											

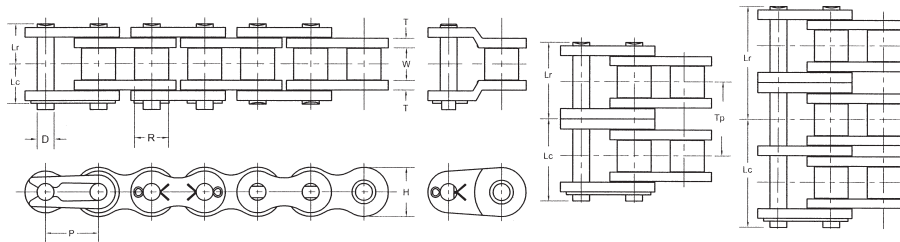
- Type A: Manual or Drip Lubrication
- Type B: Bath or Sliger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

Horsepower values given in the tables are for single strand chains. Multiple strand chains use the "Multi-Strand Factors" below:

Number of Strands	Multi-Strand Factors				
	2	3	4	5	6
Factor	1.7	2.5	3.3	3.9	4.6

Heavy Series HI-MAX[®]

Heavy Series Roller Chains are built for heavy duty power transmission applications which require additional shock load capacity or link plate strength. They are dimensionally equivalent to the ASME/ANSI standard chains except that the link plates are one size thicker. Single strand chains operate over standard ASME/ANSI sprockets (hardened teeth recommended), however multiple strand chains require special sprockets due to their increased transverse pitch.



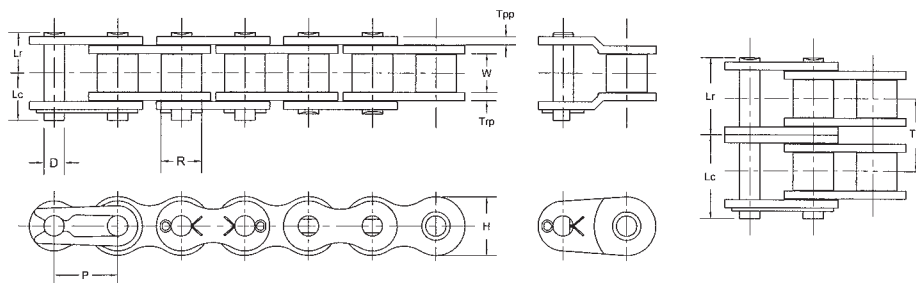
Heavy Series Roller Chain Specifications

* Rollerless

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches										Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Transverse Pitch Tp				
25H*	1/4	0.125	0.130	0.091	0.039	0.228	0.177	0.201	-	140	1,230	0.13	
50H	5/8	0.375	0.400	0.200	0.094	0.604	0.429	0.488	-	1,400	7,250	0.74	
60H	3/4	0.500	0.469	0.234	0.125	0.689	0.555	0.654	-	1,965	9,680	1.21	
80H	1	0.625	0.625	0.312	0.156	0.945	0.705	0.819	-	3,325	17,600	1.98	
100H	1 1/4	0.750	0.750	0.375	0.187	1.138	0.854	0.980	-	5,100	26,400	2.98	
60H-2	3/4	0.500	0.469	0.234	0.125	0.689	1.071	1.169	1.028	3,350	23,300	2.47	
80H-2	1	0.625	0.625	0.312	0.156	0.945	1.346	1.461	1.283	5,655	40,500	3.97	
100H-2	1 1/4	0.750	0.750	0.375	0.187	1.138	1.624	1.750	1.539	8,680	59,400	5.90	
60H-3	3/4	0.500	0.469	0.234	0.125	0.689	1.583	1.681	1.028	4,900	34,950	3.46	
80H-3	1	0.625	0.625	0.312	0.156	0.945	1.988	2.102	1.283	8,300	60,750	5.64	
100H-3	1 1/4	0.750	0.750	0.375	0.187	1.138	2.394	2.520	1.539	12,750	89,100	8.53	

British Standard HI-MAX[®]

Produced in accordance with the ISO 606B, BS228, and DIN8187 European standards, these chains are often referred to as “metric” chains. They resemble ASME/ANSI standard products and are identical in pitch, however there are other significant dimensional differences which distinguishes them from the American standard roller chains. British Standard chains should be operated on British Standard sprockets.



British Standard Roller Chain Specifications

* Flat Style Link Plate

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches										Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Roller Plate Thickness T _{rp}	Pin Plate Thickness T _{pp}	Link Plate Height H	Riv. Pin Length L _r	Cot. Pin Length L _c	Transverse Pitch T _p		
05B*	0.315	0.118	0.197	0.091	0.030	0.030	0.276	0.152	0.189	-	1,320	0.11
06B*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.240	0.291	-	2,300	0.26
08B	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.323	0.374	-	4,070	0.44
10B	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.378	0.437	-	5,800	0.62
12B	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.437	0.496	-	7,260	0.83
16B	1	0.670	0.625	0.325	0.154	0.125	0.792	0.697	0.795	-	16,000	1.78
20B	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	0.807	0.925	-	23,100	2.58
24B	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	1.049	1.274	-	41,150	5.10
05B-2*	0.315	0.118	0.197	0.091	0.030	0.030	0.276	0.262	0.301	0.222	2,640	0.20
06B-2*	3/8	0.225	0.250	0.129	0.049	0.039	0.323	0.441	0.484	0.403	4,600	0.50
08B-2	1/2	0.305	0.335	0.175	0.060	0.060	0.457	0.602	0.657	0.548	8,140	0.87
10B-2	5/8	0.380	0.400	0.200	0.065	0.065	0.571	0.705	0.764	0.653	11,600	1.13
12B-2	3/4	0.460	0.475	0.225	0.070	0.070	0.626	0.819	0.882	0.766	14,520	1.53
16B-2	1	0.670	0.625	0.325	0.154	0.125	0.792	1.324	1.384	1.255	32,000	3.52
20B-2	1 1/4	0.770	0.750	0.400	0.178	0.138	1.024	1.525	1.643	1.435	46,200	5.13
24B-2	1 1/2	1.000	1.000	0.576	0.233	0.193	1.315	2.001	2.226	1.904	82,300	9.93

Double Pitch HI-MAX®

Double Pitch Roller Chains - General Information

Double Pitch roller chains are produced in accordance with the ASME/ANSI B29.3 (Transmission Series) and B29.4 (Conveyor Series) American roller chain standards. In general, these chains are dimensionally similar to ASME/ANSI standard products except that the pitch is double. They are available in the Transmission Series, Conveyor Series with standard sized roller, and Conveyor Series with large (oversized) roller.

Transmission Series

The Transmission Series is often used on drives with slow to moderate speeds, low chain loads and/or long center distances. Side plates have a “figure-8” contour. The chain number is obtained by adding 2000 to the chain number and an “A” prefix. For example; Double Pitch Transmission Series #40 is A2040, #50 is A2050 etc. Some manufacturers do not use the “A” prefix and denote the chains as 2040, 2050, etc.

Conveyor Series with Standard Roller

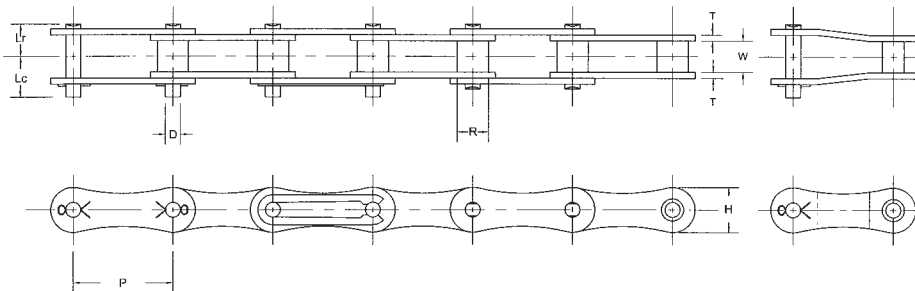
The Conveyor Series with Standard Roller is often used for light to moderate conveyor applications with or without attachments. These chains have straight side plates for improved sliding properties. Pitch sizes of 1 1/2” and higher have “Heavy Series” link plates. The chain number is found by adding 2000 to the chain number and a “C” prefix. Heavy style chains have an “H” suffix. For example; Double Pitch Conveyor Series #50 roller chain with a standard sized roller is C2050, #60 is C2060H because the pitch of C2060H is 2 times .75” (#60) which is 1 1/2”.

Conveyor Series with Large Roller

Large rollers allow for rolling action which reduces friction. The chain number is found in the same way as above except that a “2” is added (C2042, C2102H, etc.).

Sprockets should be produced specially for these chains according to the B29.3 or B29.4 ASME/ANSI standards. It is however possible to use standard ASME/ANSI B29.1 sprockets for the *Transmission Series* and *Conveyor Series with Standard Roller* if the actual number of teeth is 30 or more.

Transmission Series Double Pitch Roller Chains

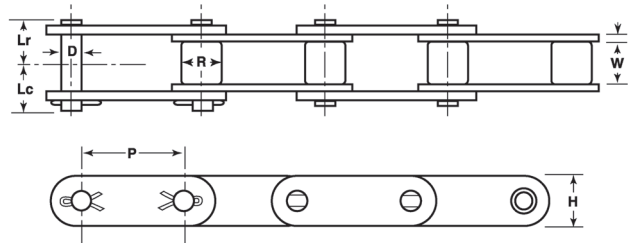


Transmission Series Specifications

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
A2040	1.000	0.312	0.312	0.156	0.060	0.461	0.323	0.366	540	4,070	0.27
A2050	1.250	0.375	0.400	0.200	0.080	0.575	0.398	0.459	855	6,820	0.44

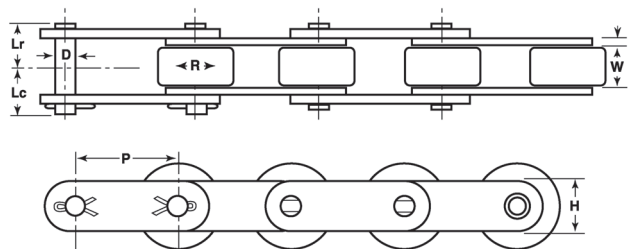
Double Pitch HI-MAX[®]

Conveyor Series Double Pitch Roller Chains



Conveyor Series With Standard Roller Specifications

Hi-Max Roller Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2040	1	0.312	0.312	0.156	0.060	0.461	0.323	0.394	594	4,070	0.33
C2050	1 1/4	0.375	0.400	0.200	0.080	0.575	0.398	0.496	968	6,820	0.57
C2060H	1 1/2	0.500	0.469	0.234	0.125	0.673	0.555	0.654	1,408	9,680	0.98
C2080H	2	0.625	0.625	0.312	0.156	0.906	0.705	0.819	2,398	17,600	1.63
C2100H	2 1/2	0.750	0.750	0.375	0.187	1.138	0.854	0.980	3,828	26,400	2.37
C2120H	3	1.000	0.875	0.437	0.219	1.378	1.062	1.204	5,368	35,200	3.22



Conveyor Series With Large Roller Specifications

Hitachi Roller Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
C2042	1	0.312	0.625	0.156	0.060	0.461	0.323	0.394	594	4,070	0.58
C2052	1 1/4	0.375	0.750	0.200	0.080	0.575	0.398	0.496	968	6,820	0.89
C2062H	1 1/2	0.500	0.875	0.234	0.125	0.673	0.555	0.654	1,408	9,680	1.47
C2082H	2	0.625	1.125	0.312	0.156	0.906	0.705	0.819	2,398	17,600	1.94
C2102H	2 1/2	0.750	1.562	0.375	0.187	1.138	0.854	0.980	3,828	26,400	3.82
C2122H	3	1.000	1.750	0.437	0.219	1.378	1.062	1.204	5,368	35,200	5.01

Technical Data

Installation, Lubrication and Maintenance Information

Certain minimum standards for installing and maintaining roller chains are assumed in designing, producing and specifying these products for service. If reasonable attention is paid to a few installation and maintenance procedures, roller chains will generally provide years of trouble free service life.

The following are guidelines intended to help users get the most out of their roller chain purchase. We note that this information is offered only as a guide. Original Equipment Manufacturers may offer information which conflicts with some items in this section. In these cases the user should follow the maintenance procedures as described by the Original Equipment Manufacturer.

Steps Recommended for Installing Roller Chains on Drives

Review the following steps when installing a new roller chain drive:

1. Make sure all components are in good operating condition.
2. Make sure sprockets and shafts are properly aligned.
3. Connect the chain on the sprockets.
4. Assure correct lubrication.
5. Adjust the chain tension properly
6. Assure appropriate guarding is in place.

Condition of Components

All components including chains, sprockets, shafts, bearings etc. should be in good running condition. Make sure that parts which exhibit excessive wear are replaced. We recommend that new chains operate on new sprocket tooth faces. This can sometimes be accomplished by rotating the sprocket, end for end, on non-reversing drives, so that the driving surface of the tooth is “unused”.

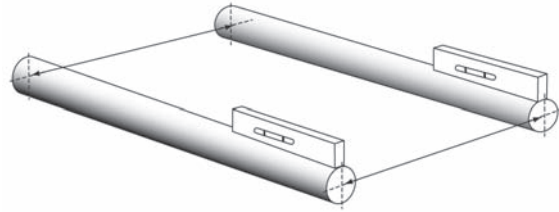
Alignment Of Shafts and Sprockets

Correct alignment is necessary to prevent uneven loading and damaging loads on chains and sprocket teeth. Often poor alignment will manifest itself in rapid chain stretch or unusual wear on the chain link plates.

There are two steps necessary to achieve proper alignment as follows:

1. Make sure that the shafts are parallel.
2. Make sure the sprockets are “in line” and not offset.

The following two step procedure is recommended to assure properly aligned sprockets and shafts:



Shaft Alignment

Shafts should be parallel within fairly close limits. We suggest using a machinist level or feeler bar to make sure the shafts are in the same plane. If shafts can move axially, lock them in place before attempting to align them.

Tolerance for shaft alignment:

Single strand chain drives:

.050 in/ft (4.2 mm/m) or 1/4 degree

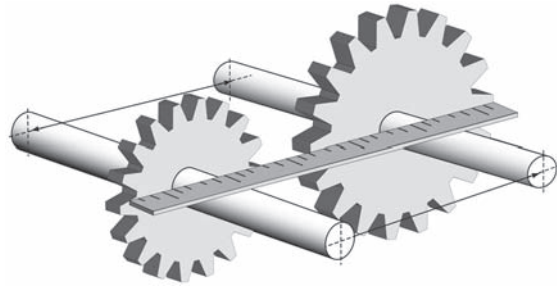
High speed, high horsepower or multiple strand chain drives use the following formula:

$$\text{Tolerance} = .00133 * C / (P * n) \text{ [in/ft]}$$

or

$$\text{Tolerance} = .111C / (P * n) \text{ [mm/m]}$$

Note: C = shaft center in inches or millimeters.
P = chain pitch in inches or millimeters.
n = number of chain strands.



Sprocket Alignment

Use a straight edge (or piano wire) to align sprockets as shown above.

Tolerance For Sprocket alignment

Maximum Offset = 0.045P [inches or millimeters]

Note: P = chain pitch in inches or millimeters

Technical Data

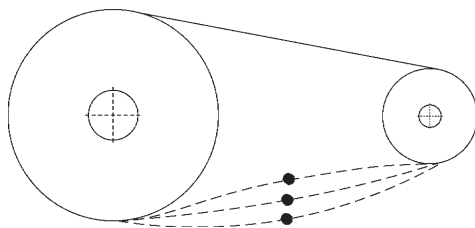
Installation, Lubrication and Maintenance Information

Chain Tension Adjustment

The correct amount of slack in a roller chain drive is necessary for smooth operation. Measurement of mid-span movement is the best way to check that the chain is properly tensioned. After rotating one sprocket so that one side is tight use a straight edge to measure movement. Adjust center distances or idlers to achieve approximately 4% - 6% mid-span movement on drives which are horizontal to 45 degrees. . . 2% - 3% on drives which are 45 degrees to vertical, or subject to high shock loading.

Recommended Mid-Span Movement

Drive Position	Tangent Length Between Sprockets inches or (mm)					
	10 (254)	20 (508)	30 (762)	50 (1270)	70 (1778)	100 (2540)
Horizontal to 45 degrees	0.4 - 0.6 (10 - 15)	0.8 - 1.2 (20 - 30)	1.2 - 1.8 (30 - 46)	2.0 - 3.0 (51 - 76)	2.8 - 4.2 (71 - 107)	4.0 - 6.0 (102 - 152)
45 degrees to Vertical	0.2 - 0.3 (5 - 8)	0.4 - 0.6 (10 - 15)	0.6 - 0.9 (15 - 23)	1.0 - 1.5 (25 - 38)	1.4 - 2.1 (36 - 53)	2.0 - 3.0 (51 - 76)

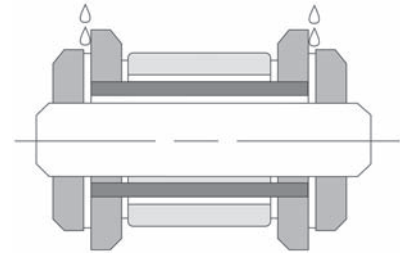


Chain Tension Adjustment

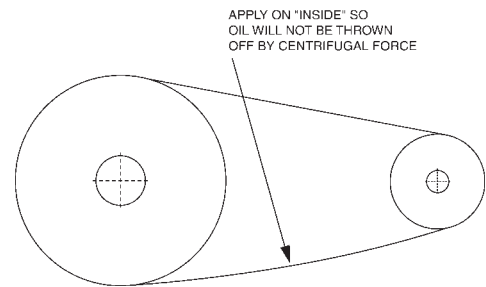
Lubrication

The most effective way to assure long trouble free chain life is with proper lubrication. The correct selection of oil and the method of application depends on chain speed, chain load and temperature. The use of high quality non-detergent oils are recommended. Additives in oil may cause sludge build up and reduce the effectiveness of lubrication by preventing penetration into the chain joint.

The highest viscosity oil which, under the conditions of the drive can penetrate into the chain, will form the thickest film and offer the best protection to the drive. Oils should be applied to the inside of the slack side to prevent from being thrown off by centrifugal force. It should also be applied between the link plates to lubricate the pin/bushing bearing area and between the roller edges and roller link plates to lubricate the roller/bushing bearing area.



Lubricate between link plates and at the roller edge



Apply lubricant to the inside of the slack side

Recommended Oil Viscosity vs Operating Temperature

Lubricants for roller chain drives should have the following qualities:

1. Low enough viscosity to effectively penetrate into the chains internal bearing surfaces.
2. High enough viscosity to provide and maintain a sufficient film of lubricant under the existing load conditions.
3. Be clean and free of corrodents or contaminants.
4. Have the ability to maintain good lubricating properties under the existing load and temperature conditions.

The table below provides the recommended grade of oil at various operating temperature ranges:

Recommended Grade of Oil	Temperature degrees F	Temperature degrees C
SAE 5	-50F to 50F	-46C to 10C
SAE 10	-20F - 80F	-29C to 27C
SAE 20	10F - 110F	-12C to 43C
SAE 30	20F - 130F	-7C to 54C
SAE 40	30F - 140F	-1C to 60C
SAE 50	40F - 150F	4C to 65C

Technical Data

Installation, Lubrication and Maintenance Information

Methods of Application for Lubricants

In the horsepower tables three type of lubricant application methods are included as part of the chains capacity as follows:

- Type A: Manual or Drip Lubrication
- Type B: Oil Bath or Slinger Disc Lubrication
- Type C: Oil Stream or Pressure Spray Lubrication

This means that the chain is rated at a certain horsepower capacity provided the lubrication method recommendation is followed. If these recommendations are ignored chain life can be severely reduced.

Manual Lubrication (Type A)

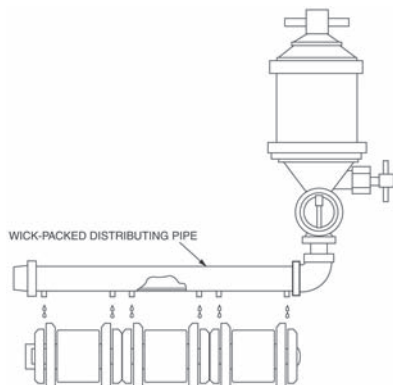
IMPORTANT: Manual lubrication is to be applied only when the chain drive is stopped and power is locked out.

Oil is applied periodically with a brush or oil spout can. Lubrication once every eight hours of operation is suggested but sometimes this period is extended. The amount of oil and the frequency it is applied should be sufficient to prevent a red rust discoloration of the oil. The discoloration suggests that additional oil applied more frequently is required. If this occurs the chain should be cleaned, re-lubricated and reinstalled prior to further use.

Drip Lubrication (Type A)

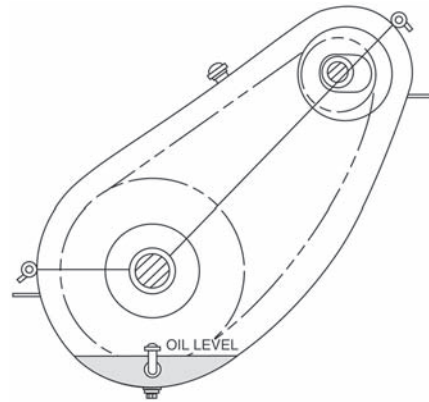
Oil is dripped between the link plates and between the roller and the roller link plates at some regular rate from a drip lubricator. Drip rates range from 4 - 20 drips per minute depending on chain speed. As with manual lubrication, the rate at which oil is applied should be sufficient to prevent red rust discoloration of the oil. Care should be taken to prevent windage from misdirecting the drops. Also the oil levels should be checked periodically to assure that the reservoir is not dry.

Multiple strand chains require a distribution pipe which can feed oil to all the rows of link plates. A wick packed distribution pipe is often required for this purpose as illustrated below.



Oil Bath Lubrication (Type B)

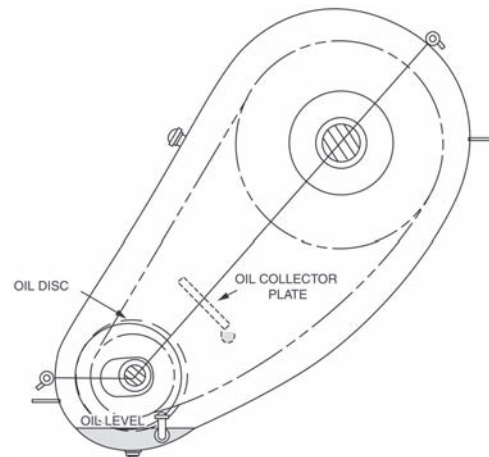
A short section of chain runs through an oil sump at the bottom of the chain casing. The level of oil should reach the pitch line of the chain at its lowest point of operation. Horizontal or nearly horizontal drives which require long sections of chain to be run through the bath, are not ideal candidates for this method of lubrication. Oil foaming and/or overheating of the oil can result when long sections of chain run through the bath.



Oil Bath Lubrication Method

Slinger Disc Lubrication (Type B)

The chain operates above the oil in a slinger disc lubricator. A disc, mounted to the shaft dips into the oil and slings it at a collector plate. The oil runs into a trough (or gutter) and is distributed to the chain. The diameter of the disc should be sized to produce linear speeds at the rim of between 600 ft/min. and 800 ft/min. Lower speeds may not effectively pick up the oil and higher speeds may cause overheating and foaming of the oil.



Slinger Disc Lubrication Method

Technical Data

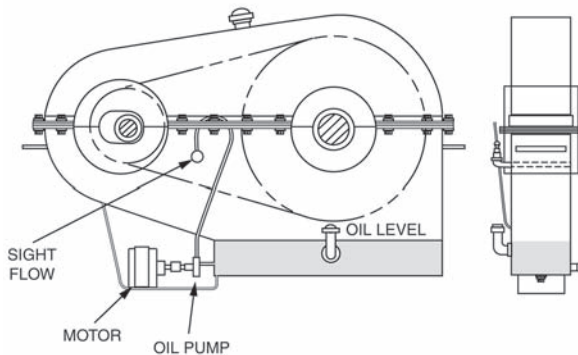
Installation, Lubrication and Maintenance Information

In both the oil bath and slinger disc lubrication methods the temperature of the oil and chain should not exceed 180°F (82°C). The volume of oil applied to the chain should be sufficient to prevent discoloration. After each 8 hours of operation the oil levels in both the oil bath and slinger disc should be checked and filled as required. In addition, the lubrication system should be checked for leaks, foaming, and overheating.

Oil Stream or Pressure Spray Lubrication (Type C)

An oil pump delivers oil under pressure, through a flexible hose, to nozzles, which direct a stream or spray onto the chain. The oil should be delivered evenly across the entire chain width on the inside of the slack portion of the chain strand.

Excess oil collects in the bottom of the casing and is returned to the pumps reservoir. Cooling may be accomplished by heat dissipation through the casing or by a heat exchanger. As with the oil bath and slinger disc methods oil levels should be checked every 8 hours and filled as required. The system should be checked for leaks, foaming and overheating.



Oil Stream or Pressure Spray Lubrication Method

The table below gives the required oil flow necessary in oil stream or pressure spray lubricators according to the horsepower transmitted by the drive.

Transmitted Power		Minimum Oil Required		Transmitted Power		Minimum Oil Required	
HP	KW	gal/min	liter/min	HP	KW	gal/min	liter/min
50	37	0.25	0.95	500	373	2.50	9.46
100	75	0.50	1.89	600	447	3.00	11.40
150	112	0.75	2.84	800	597	3.75	14.20
200	149	1.00	3.78	1,000	746	4.75	18.00
300	224	1.50	5.68	1,500	1,119	7.00	26.50
400	298	2.00	7.57	2,000	1,491	10.00	37.90

Drive Chain Maintenance

In order to obtain maximum service life a maintenance plan should be established which assures the following:

1. The drive is properly lubricated.
2. Damaged or worn out chains, sprockets, bearings etc. are replaced.
3. Sprockets and shafts are properly aligned.
4. Chains are correctly tensioned.
5. Any interferences are eliminated.
6. Appropriate guarding is in place and properly installed.

Roller chains should be inspected after the first 50 hours of operation for the following:

1. Damage to chains and sprockets.
2. Excessive chain or sprocket wear.
3. Interferences.
4. Lubrication system.
5. Proper chain tension (adjust if necessary).

Chain Wear

In most roller chain drive applications the chain is considered worn out when it has elongated by 3%. Since elongation is caused by pin/bushing wear these components are weakened by wear. In addition as the chain gets longer it may not operate over the sprocket correctly.

On drives with more than 68 teeth on the largest sprocket use the following formula to determine the maximum permissible chain elongation:

$$200 / N [\%]$$

N = Number of teeth on the large sprocket.

Dividing the number of teeth of the large sprocket into 200 gives the allowable elongation as a percentage. For example if the number of teeth on the large sprocket is 100 . . . The allowable elongation is 200 / 100 = 2%.

When measuring the length of a chain use a pair of calipers and measure over at least 8 pitches on the tight side of the strand.

Sprocket Tooth Wear

The following may indicate that sprocket teeth are worn out and that the sprocket should be replaced:

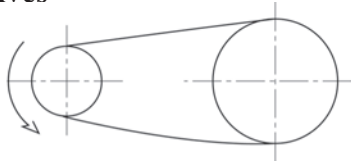
1. Teeth are hooked.
2. Tooth thickness is reduced by 10%.
3. Binding or clinging when a new chain engages or disengages the tooth.

Technical Data

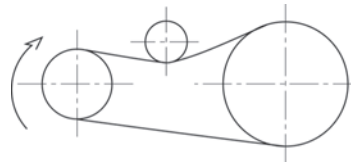
Drive Configurations

The following are permissible configurations for roller chain drives:

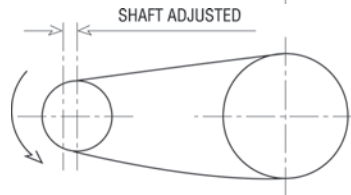
Horizontal Drives



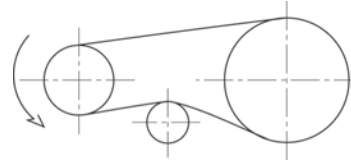
- A. Slack adjusted. Generally the slack is on the bottom side.



- B. When the chain slack is on the upper side, a chain tensioner is used.

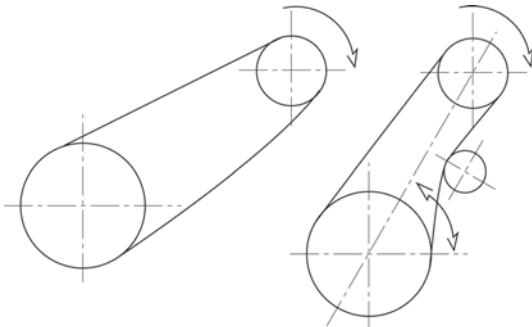


- C. For short center distances (less than 20 pitches) shaft centers may be adjustable



- D. A chain tensioner is required when center distances are long (greater than 50 pitches).

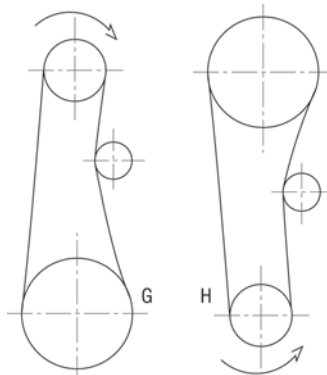
Inclined Drives



- E. Inclined operation should be no greater than 60° without a chain tensioner.

- F. A tensioner is required if too much slack causes the chain to fall off the large sprocket at the bottom.

Vertical Drives



- G. When the large sprocket is on the bottom, a chain tensioner is suggested so that the chain does not fall off the sprocket.



- H. When the small sprocket is on the bottom use of a chain tensioner is required.

Trouble Shooting Guide

Below are listed some causes and remedies for common roller chain drive problems. Please contact Hitachi's product engineering department for additional help in evaluating and solving chain problems.

Problem	Possible Cause	Suggested Remedy
Excessive Noise	Misalignment. Excessive Slack. Chain and/or sprockets are worn out. Too few sprocket teeth. Inadequate Lubrication. Obstruction. Loose casing or shaft mounts.	Align shafts and sprockets. Adjust chain tension. Replace chain and/or sprockets. Re-size chain drive. Lubricate properly. Remove obstruction. Tighten fasteners.
Chain Clings to Sprocket Teeth	Misalignment. Sprockets are worn out.	Align shafts and sprockets. Replace sprockets.
Chain Climbs the Sprocket Teeth	Chains and/or sprockets are worn out. Excessive slack. Extreme overload.	Replace chains and/or sprockets. Adjust chain tension. Eliminate cause of overload.
Rust on Chains	Exposure to moisture. Water in lubricant. Inadequate lubrication.	Use corrosion resistant chain. Change lubricant. Protect from water. Establish proper lubrication.
Wear on One Side of Sprocket Teeth	Misalignment.	Align shafts and sprockets.
Stiff Chain	Misalignment. Inadequate Lubrication. Corrosion. Excessive chain loads. Material build up in the chain joint. Peening of link plate edges.	Align shafts and sprockets. Provide proper lubrication. Replace with corrosion resistant chain. Evaluate drive chain selection. Shield drive from foreign matter. Interference. Identify and eliminate obstruction.
Link Plate Breakage	Severe shock loading. Vibration. Pulsating drive conditions. Excessive chain loads.	Reduce shock (i.e. install shock absorber). Install device to absorb vibration. Evaluate drive chain selection.
Breakage of Pins, Bushings, or Rollers	Chain speed is too high. Extreme overload. Heavy shock or suddenly applied loads. Corrosive damage. Material build up in sprocket tooth pockets.	Evaluate drive chain selection. Eliminate cause of overload. Reduce shock or install a stronger chain. Install corrosion resistant chain. Remove material. Protect drive from foreign matter.

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
1	0.021	0.031	0.042	0.052	0.063	0.083	0.104	0.125	0.146	0.167	0.188	0.208	0.250	0.333
2	0.042	0.063	0.083	0.104	0.125	0.167	0.208	0.250	0.292	0.333	0.375	0.417	0.500	0.667
3	0.063	0.094	0.125	0.156	0.188	0.250	0.313	0.375	0.438	0.500	0.563	0.625	0.750	1.000
4	0.083	0.125	0.167	0.208	0.250	0.333	0.417	0.500	0.583	0.667	0.750	0.833	1.000	1.333
5	0.104	0.156	0.208	0.260	0.313	0.417	0.521	0.625	0.729	0.833	0.938	1.042	1.250	1.667
6	0.125	0.188	0.250	0.313	0.375	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.500	2.000
7	0.146	0.219	0.292	0.365	0.438	0.583	0.729	0.875	1.021	1.167	1.313	1.458	1.750	2.333
8	0.167	0.250	0.333	0.417	0.500	0.667	0.833	1.000	1.167	1.333	1.500	1.667	2.000	2.667
9	0.188	0.281	0.375	0.469	0.563	0.750	0.938	1.125	1.313	1.500	1.688	1.875	2.250	3.000
10	0.208	0.313	0.417	0.521	0.625	0.833	1.042	1.250	1.458	1.667	1.875	2.083	2.500	3.333
11	0.229	0.344	0.458	0.573	0.688	0.917	1.146	1.375	1.604	1.833	2.063	2.292	2.750	3.667
12	0.250	0.375	0.500	0.625	0.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	3.000	4.000
13	0.271	0.406	0.542	0.677	0.813	1.083	1.354	1.625	1.896	2.167	2.438	2.708	3.250	4.333
14	0.292	0.438	0.583	0.729	0.875	1.167	1.458	1.750	2.042	2.333	2.625	2.917	3.500	4.667
15	0.313	0.469	0.625	0.781	0.938	1.250	1.563	1.875	2.188	2.500	2.813	3.125	3.750	5.000
16	0.333	0.500	0.667	0.833	1.000	1.333	1.667	2.000	2.333	2.667	3.000	3.333	4.000	5.333
17	0.354	0.531	0.708	0.885	1.063	1.417	1.771	2.125	2.479	2.833	3.188	3.542	4.250	5.667
18	0.375	0.563	0.750	0.938	1.125	1.500	1.875	2.250	2.625	3.000	3.375	3.750	4.500	6.000
19	0.396	0.594	0.792	0.990	1.188	1.583	1.979	2.375	2.771	3.167	3.563	3.958	4.750	6.333
20	0.417	0.625	0.833	1.042	1.250	1.667	2.083	2.500	2.917	3.333	3.750	4.167	5.000	6.667
21	0.438	0.656	0.875	1.094	1.313	1.750	2.188	2.625	3.063	3.500	3.938	4.375	5.250	7.000
22	0.458	0.688	0.917	1.146	1.375	1.833	2.292	2.750	3.208	3.667	4.125	4.583	5.500	7.333
23	0.479	0.719	0.958	1.198	1.438	1.917	2.396	2.875	3.354	3.833	4.313	4.792	5.750	7.667
24	0.500	0.750	1.000	1.250	1.500	2.000	2.500	3.000	3.500	4.000	4.500	5.000	6.000	8.000
25	0.521	0.781	1.042	1.302	1.563	2.083	2.604	3.125	3.646	4.167	4.688	5.208	6.250	8.333
26	0.542	0.813	1.083	1.354	1.625	2.167	2.708	3.250	3.792	4.333	4.875	5.417	6.500	8.667
27	0.563	0.844	1.125	1.406	1.688	2.250	2.813	3.375	3.938	4.500	5.063	5.625	6.750	9.000
28	0.583	0.875	1.167	1.458	1.750	2.333	2.917	3.500	4.083	4.667	5.250	5.833	7.000	9.333
29	0.604	0.906	1.208	1.510	1.813	2.417	3.021	3.625	4.229	4.833	5.438	6.042	7.250	9.667
30	0.625	0.938	1.250	1.563	1.875	2.500	3.125	3.750	4.375	5.000	5.625	6.250	7.500	10.000
31	0.646	0.969	1.292	1.615	1.938	2.583	3.229	3.875	4.521	5.167	5.813	6.458	7.750	10.333
32	0.667	1.000	1.333	1.667	2.000	2.667	3.333	4.000	4.667	5.333	6.000	6.667	8.000	10.667
33	0.688	1.031	1.375	1.719	2.063	2.750	3.438	4.125	4.813	5.500	6.188	6.875	8.250	11.000
34	0.708	1.063	1.417	1.771	2.125	2.833	3.542	4.250	4.958	5.667	6.375	7.083	8.500	11.333
35	0.729	1.094	1.458	1.823	2.188	2.917	3.646	4.375	5.104	5.833	6.563	7.292	8.750	11.667
36	0.750	1.125	1.500	1.875	2.250	3.000	3.750	4.500	5.250	6.000	6.750	7.500	9.000	12.000
37	0.771	1.156	1.542	1.927	2.313	3.083	3.854	4.625	5.396	6.167	6.938	7.708	9.250	12.333
38	0.792	1.188	1.583	1.979	2.375	3.167	3.958	4.750	5.542	6.333	7.125	7.917	9.500	12.667
39	0.813	1.219	1.625	2.031	2.438	3.250	4.063	4.875	5.688	6.500	7.313	8.125	9.750	13.000
40	0.833	1.250	1.667	2.083	2.500	3.333	4.167	5.000	5.833	6.667	7.500	8.333	10.000	13.333

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
41	0.854	1.281	1.708	2.135	2.563	3.417	4.271	5.125	5.979	6.833	7.688	8.542	10.250	13.667
42	0.875	1.313	1.750	2.188	2.625	3.500	4.375	5.250	6.125	7.000	7.875	8.750	10.500	14.000
43	0.896	1.344	1.792	2.240	2.688	3.583	4.479	5.375	6.271	7.167	8.063	8.958	10.750	14.333
44	0.917	1.375	1.833	2.292	2.750	3.667	4.583	5.500	6.417	7.333	8.250	9.167	11.000	14.667
45	0.938	1.406	1.875	2.344	2.813	3.750	4.688	5.625	6.563	7.500	8.438	9.375	11.250	15.000
46	0.958	1.438	1.917	2.396	2.875	3.833	4.792	5.750	6.708	7.667	8.625	9.583	11.500	15.333
47	0.979	1.469	1.958	2.448	2.938	3.917	4.896	5.875	6.854	7.833	8.813	9.792	11.750	15.667
48	1.000	1.500	2.000	2.500	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	12.000	16.000
49	1.021	1.531	2.042	2.552	3.063	4.083	5.104	6.125	7.146	8.167	9.188	10.208	12.250	16.333
50	1.042	1.563	2.083	2.604	3.125	4.167	5.208	6.250	7.292	8.333	9.375	10.417	12.500	16.667
51	1.063	1.594	2.125	2.656	3.188	4.250	5.313	6.375	7.438	8.500	9.563	10.625	12.750	17.000
52	1.083	1.625	2.167	2.708	3.250	4.333	5.417	6.500	7.583	8.667	9.750	10.833	13.000	17.333
53	1.104	1.656	2.208	2.760	3.313	4.417	5.521	6.625	7.729	8.833	9.938	11.042	13.250	17.667
54	1.125	1.688	2.250	2.813	3.375	4.500	5.625	6.750	7.875	9.000	10.125	11.250	13.500	18.000
55	1.146	1.719	2.292	2.865	3.438	4.583	5.729	6.875	8.021	9.167	10.313	11.458	13.750	18.333
56	1.167	1.750	2.333	2.917	3.500	4.667	5.833	7.000	8.167	9.333	10.500	11.667	14.000	18.667
57	1.188	1.781	2.375	2.969	3.563	4.750	5.938	7.125	8.313	9.500	10.688	11.875	14.250	19.000
58	1.208	1.813	2.417	3.021	3.625	4.833	6.042	7.250	8.458	9.667	10.875	12.083	14.500	19.333
59	1.229	1.844	2.458	3.073	3.688	4.917	6.146	7.375	8.604	9.833	11.063	12.292	14.750	19.667
60	1.250	1.875	2.500	3.125	3.750	5.000	6.250	7.500	8.750	10.000	11.250	12.500	15.000	20.000
61	1.271	1.906	2.542	3.177	3.813	5.083	6.354	7.625	8.896	10.167	11.438	12.708	15.250	20.333
62	1.292	1.938	2.583	3.229	3.875	5.167	6.458	7.750	9.042	10.333	11.625	12.917	15.500	20.667
63	1.313	1.969	2.625	3.281	3.938	5.250	6.563	7.875	9.188	10.500	11.813	13.125	15.750	21.000
64	1.333	2.000	2.667	3.333	4.000	5.333	6.667	8.000	9.333	10.667	12.000	13.333	16.000	21.333
65	1.354	2.031	2.708	3.385	4.063	5.417	6.771	8.125	9.479	10.833	12.188	13.542	16.250	21.667
66	1.375	2.063	2.750	3.438	4.125	5.500	6.875	8.250	9.625	11.000	12.375	13.750	16.500	22.000
67	1.396	2.094	2.792	3.490	4.188	5.583	6.979	8.375	9.771	11.167	12.563	13.958	16.750	22.333
68	1.417	2.125	2.833	3.542	4.250	5.667	7.083	8.500	9.917	11.333	12.750	14.167	17.000	22.667
69	1.438	2.156	2.875	3.594	4.313	5.750	7.188	8.625	10.063	11.500	12.938	14.375	17.250	23.000
70	1.458	2.188	2.917	3.646	4.375	5.833	7.292	8.750	10.208	11.667	13.125	14.583	17.500	23.333
71	1.479	2.219	2.958	3.698	4.438	5.917	7.396	8.875	10.354	11.833	13.313	14.792	17.750	23.667
72	1.500	2.250	3.000	3.750	4.500	6.000	7.500	9.000	10.500	12.000	13.500	15.000	18.000	24.000
73	1.521	2.281	3.042	3.802	4.563	6.083	7.604	9.125	10.646	12.167	13.688	15.208	18.250	24.333
74	1.542	2.313	3.083	3.854	4.625	6.167	7.708	9.250	10.792	12.333	13.875	15.417	18.500	24.667
75	1.563	2.344	3.125	3.906	4.688	6.250	7.813	9.375	10.938	12.500	14.063	15.625	18.750	25.000
76	1.583	2.375	3.167	3.958	4.750	6.333	7.917	9.500	11.083	12.667	14.250	15.833	19.000	25.333
77	1.604	2.406	3.208	4.010	4.813	6.417	8.021	9.625	11.229	12.833	14.438	16.042	19.250	25.667
78	1.625	2.438	3.250	4.063	4.875	6.500	8.125	9.750	11.375	13.000	14.625	16.250	19.500	26.000
79	1.646	2.469	3.292	4.115	4.938	6.583	8.229	9.875	11.521	13.167	14.813	16.458	19.750	26.333
80	1.667	2.500	3.333	4.167	5.000	6.667	8.333	10.000	11.667	13.333	15.000	16.667	20.000	26.667

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
81	1.688	2.531	3.375	4.219	5.063	6.750	8.438	10.125	11.813	13.500	15.188	16.875	20.250	27.000
82	1.708	2.563	3.417	4.271	5.125	6.833	8.542	10.250	11.958	13.667	15.375	17.083	20.500	27.333
83	1.729	2.594	3.458	4.323	5.188	6.917	8.646	10.375	12.104	13.833	15.563	17.292	20.750	27.667
84	1.750	2.625	3.500	4.375	5.250	7.000	8.750	10.500	12.250	14.000	15.750	17.500	21.000	28.000
85	1.771	2.656	3.542	4.427	5.313	7.083	8.854	10.625	12.396	14.167	15.938	17.708	21.250	28.333
86	1.792	2.688	3.583	4.479	5.375	7.167	8.958	10.750	12.542	14.333	16.125	17.917	21.500	28.667
87	1.813	2.719	3.625	4.531	5.438	7.250	9.063	10.875	12.688	14.500	16.313	18.125	21.750	29.000
88	1.833	2.750	3.667	4.583	5.500	7.333	9.167	11.000	12.833	14.667	16.500	18.333	22.000	29.333
89	1.854	2.781	3.708	4.635	5.563	7.417	9.271	11.125	12.979	14.833	16.688	18.542	22.250	29.667
90	1.875	2.813	3.750	4.688	5.625	7.500	9.375	11.250	13.125	15.000	16.875	18.750	22.500	30.000
91	1.896	2.844	3.792	4.740	5.688	7.583	9.479	11.375	13.271	15.167	17.063	18.958	22.750	30.333
92	1.917	2.875	3.833	4.792	5.750	7.667	9.583	11.500	13.417	15.333	17.250	19.167	23.000	30.667
93	1.938	2.906	3.875	4.844	5.813	7.750	9.688	11.625	13.563	15.500	17.438	19.375	23.250	31.000
94	1.958	2.938	3.917	4.896	5.875	7.833	9.792	11.750	13.708	15.667	17.625	19.583	23.500	31.333
95	1.979	2.969	3.958	4.948	5.938	7.917	9.896	11.875	13.854	15.833	17.813	19.792	23.750	31.667
96	2.000	3.000	4.000	5.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	24.000	32.000
97	2.021	3.031	4.042	5.052	6.063	8.083	10.104	12.125	14.146	16.167	18.188	20.208	24.250	32.333
98	2.042	3.063	4.083	5.104	6.125	8.167	10.208	12.250	14.292	16.333	18.375	20.417	24.500	32.667
99	2.063	3.094	4.125	5.156	6.188	8.250	10.313	12.375	14.438	16.500	18.563	20.625	24.750	33.000
100	2.083	3.125	4.167	5.208	6.250	8.333	10.417	12.500	14.583	16.667	18.750	20.833	25.000	33.333
101	2.104	3.156	4.208	5.260	6.313	8.417	10.521	12.625	14.729	16.833	18.938	21.042	25.250	33.667
102	2.125	3.188	4.250	5.313	6.375	8.500	10.625	12.750	14.875	17.000	19.125	21.250	25.500	34.000
103	2.146	3.219	4.292	5.365	6.438	8.583	10.729	12.875	15.021	17.167	19.313	21.458	25.750	34.333
104	2.167	3.250	4.333	5.417	6.500	8.667	10.833	13.000	15.167	17.333	19.500	21.667	26.000	34.667
105	2.188	3.281	4.375	5.469	6.563	8.750	10.938	13.125	15.313	17.500	19.688	21.875	26.250	35.000
106	2.208	3.313	4.417	5.521	6.625	8.833	11.042	13.250	15.458	17.667	19.875	22.083	26.500	35.333
107	2.229	3.344	4.458	5.573	6.688	8.917	11.146	13.375	15.604	17.833	20.063	22.292	26.750	35.667
108	2.250	3.375	4.500	5.625	6.750	9.000	11.250	13.500	15.750	18.000	20.250	22.500	27.000	36.000
109	2.271	3.406	4.542	5.677	6.813	9.083	11.354	13.625	15.896	18.167	20.438	22.708	27.250	36.333
110	2.292	3.438	4.583	5.729	6.875	9.167	11.458	13.750	16.042	18.333	20.625	22.917	27.500	36.667
111	2.313	3.469	4.625	5.781	6.938	9.250	11.563	13.875	16.188	18.500	20.813	23.125	27.750	37.000
112	2.333	3.500	4.667	5.833	7.000	9.333	11.667	14.000	16.333	18.667	21.000	23.333	28.000	37.333
113	2.354	3.531	4.708	5.885	7.063	9.417	11.771	14.125	16.479	18.833	21.188	23.542	28.250	37.667
114	2.375	3.563	4.750	5.938	7.125	9.500	11.875	14.250	16.625	19.000	21.375	23.750	28.500	38.000
115	2.396	3.594	4.792	5.990	7.188	9.583	11.979	14.375	16.771	19.167	21.563	23.958	28.750	38.333
116	2.417	3.625	4.833	6.042	7.250	9.667	12.083	14.500	16.917	19.333	21.750	24.167	29.000	38.667
117	2.438	3.656	4.875	6.094	7.313	9.750	12.188	14.625	17.063	19.500	21.938	24.375	29.250	39.000
118	2.458	3.688	4.917	6.146	7.375	9.833	12.292	14.750	17.208	19.667	22.125	24.583	29.500	39.333
119	2.479	3.719	4.958	6.198	7.438	9.917	12.396	14.875	17.354	19.833	22.313	24.792	29.750	39.667
120	2.500	3.750	5.000	6.250	7.500	10.000	12.500	15.000	17.500	20.000	22.500	25.000	30.000	40.000

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162
Number of Pitches	Conversion To Feet													
121	2.521	3.781	5.042	6.302	7.563	10.083	12.604	15.125	17.646	20.167	22.688	25.208	30.250	40.333
122	2.542	3.813	5.083	6.354	7.625	10.167	12.708	15.250	17.792	20.333	22.875	25.417	30.500	40.667
123	2.563	3.844	5.125	6.406	7.688	10.250	12.813	15.375	17.938	20.500	23.063	25.625	30.750	41.000
124	2.583	3.875	5.167	6.458	7.750	10.333	12.917	15.500	18.083	20.667	23.250	25.833	31.000	41.333
125	2.604	3.906	5.208	6.510	7.813	10.417	13.021	15.625	18.229	20.833	23.438	26.042	31.250	41.667
126	2.625	3.938	5.250	6.563	7.875	10.500	13.125	15.750	18.375	21.000	23.625	26.250	31.500	42.000
127	2.646	3.969	5.292	6.615	7.938	10.583	13.229	15.875	18.521	21.167	23.813	26.458	31.750	42.333
128	2.667	4.000	5.333	6.667	8.000	10.667	13.333	16.000	18.667	21.333	24.000	26.667	32.000	42.667
129	2.688	4.031	5.375	6.719	8.063	10.750	13.438	16.125	18.813	21.500	24.188	26.875	32.250	43.000
130	2.708	4.063	5.417	6.771	8.125	10.833	13.542	16.250	18.958	21.667	24.375	27.083	32.500	43.333
131	2.729	4.094	5.458	6.823	8.188	10.917	13.646	16.375	19.104	21.833	24.563	27.292	32.750	43.667
132	2.750	4.125	5.500	6.875	8.250	11.000	13.750	16.500	19.250	22.000	24.750	27.500	33.000	44.000
133	2.771	4.156	5.542	6.927	8.313	11.083	13.854	16.625	19.396	22.167	24.938	27.708	33.250	44.333
134	2.792	4.188	5.583	6.979	8.375	11.167	13.958	16.750	19.542	22.333	25.125	27.917	33.500	44.667
135	2.813	4.219	5.625	7.031	8.438	11.250	14.063	16.875	19.688	22.500	25.313	28.125	33.750	45.000
136	2.833	4.250	5.667	7.083	8.500	11.333	14.167	17.000	19.833	22.667	25.500	28.333	34.000	45.333
137	2.854	4.281	5.708	7.135	8.563	11.417	14.271	17.125	19.979	22.833	25.688	28.542	34.250	45.667
138	2.875	4.313	5.750	7.188	8.625	11.500	14.375	17.250	20.125	23.000	25.875	28.750	34.500	46.000
139	2.896	4.344	5.792	7.240	8.688	11.583	14.479	17.375	20.271	23.167	26.063	28.958	34.750	46.333
140	2.917	4.375	5.833	7.292	8.750	11.667	14.583	17.500	20.417	23.333	26.250	29.167	35.000	46.667
141	2.938	4.406	5.875	7.344	8.813	11.750	14.688	17.625	20.563	23.500	26.438	29.375	35.250	47.000
142	2.958	4.438	5.917	7.396	8.875	11.833	14.792	17.750	20.708	23.667	26.625	29.583	35.500	47.333
143	2.979	4.469	5.958	7.448	8.938	11.917	14.896	17.875	20.854	23.833	26.813	29.792	35.750	47.667
144	3.000	4.500	6.000	7.500	9.000	12.000	15.000	18.000	21.000	24.000	27.000	30.000	36.000	48.000
145	3.021	4.531	6.042	7.552	9.063	12.083	15.104	18.125	21.146	24.167	27.188	30.208	36.250	48.333
146	3.042	4.563	6.083	7.604	9.125	12.167	15.208	18.250	21.292	24.333	27.375	30.417	36.500	48.667
147	3.063	4.594	6.125	7.656	9.188	12.250	15.313	18.375	21.438	24.500	27.563	30.625	36.750	49.000
148	3.083	4.625	6.167	7.708	9.250	12.333	15.417	18.500	21.583	24.667	27.750	30.833	37.000	49.333
149	3.104	4.656	6.208	7.760	9.313	12.417	15.521	18.625	21.729	24.833	27.938	31.042	37.250	49.667
150	3.125	4.688	6.250	7.813	9.375	12.500	15.625	18.750	21.875	25.000	28.125	31.250	37.500	50.000
151	3.146	4.719	6.292	7.865	9.438	12.583	15.729	18.875	22.021	25.167	28.313	31.458	37.750	50.333
152	3.167	4.750	6.333	7.917	9.500	12.667	15.833	19.000	22.167	25.333	28.500	31.667	38.000	50.667
153	3.188	4.781	6.375	7.969	9.563	12.750	15.938	19.125	22.313	25.500	28.688	31.875	38.250	51.000
154	3.208	4.813	6.417	8.021	9.625	12.833	16.042	19.250	22.458	25.667	28.875	32.083	38.500	51.333
155	3.229	4.844	6.458	8.073	9.688	12.917	16.146	19.375	22.604	25.833	29.063	32.292	38.750	51.667
156	3.250	4.875	6.500	8.125	9.750	13.000	16.250	19.500	22.750	26.000	29.250	32.500	39.000	52.000
157	3.271	4.906	6.542	8.177	9.813	13.083	16.354	19.625	22.896	26.167	29.438	32.708	39.250	52.333
158	3.292	4.938	6.583	8.229	9.875	13.167	16.458	19.750	23.042	26.333	29.625	32.917	39.500	52.667
159	3.313	4.969	6.625	8.281	9.938	13.250	16.563	19.875	23.188	26.500	29.813	33.125	39.750	53.000
160	3.333	5.000	6.667	8.333	10.000	13.333	16.667	20.000	23.333	26.667	30.000	33.333	40.000	53.333

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
161	3.354	5.031	6.708	8.385	10.063	13.417	16.771	20.125	23.479	26.833	30.188	33.542	40.250	53.667
162	3.375	5.063	6.750	8.438	10.125	13.500	16.875	20.250	23.625	27.000	30.375	33.750	40.500	54.000
163	3.396	5.094	6.792	8.490	10.188	13.583	16.979	20.375	23.771	27.167	30.563	33.958	40.750	54.333
164	3.417	5.125	6.833	8.542	10.250	13.667	17.083	20.500	23.917	27.333	30.750	34.167	41.000	54.667
165	3.438	5.156	6.875	8.594	10.313	13.750	17.188	20.625	24.063	27.500	30.938	34.375	41.250	55.000
166	3.458	5.188	6.917	8.646	10.375	13.833	17.292	20.750	24.208	27.667	31.125	34.583	41.500	55.333
167	3.479	5.219	6.958	8.698	10.438	13.917	17.396	20.875	24.354	27.833	31.313	34.792	41.750	55.667
168	3.500	5.250	7.000	8.750	10.500	14.000	17.500	21.000	24.500	28.000	31.500	35.000	42.000	56.000
169	3.521	5.281	7.042	8.802	10.563	14.083	17.604	21.125	24.646	28.167	31.688	35.208	42.250	56.333
170	3.542	5.313	7.083	8.854	10.625	14.167	17.708	21.250	24.792	28.333	31.875	35.417	42.500	56.667
171	3.563	5.344	7.125	8.906	10.688	14.250	17.813	21.375	24.938	28.500	32.063	35.625	42.750	57.000
172	3.583	5.375	7.167	8.958	10.750	14.333	17.917	21.500	25.083	28.667	32.250	35.833	43.000	57.333
173	3.604	5.406	7.208	9.010	10.813	14.417	18.021	21.625	25.229	28.833	32.438	36.042	43.250	57.667
174	3.625	5.438	7.250	9.063	10.875	14.500	18.125	21.750	25.375	29.000	32.625	36.250	43.500	58.000
175	3.646	5.469	7.292	9.115	10.938	14.583	18.229	21.875	25.521	29.167	32.813	36.458	43.750	58.333
176	3.667	5.500	7.333	9.167	11.000	14.667	18.333	22.000	25.667	29.333	33.000	36.667	44.000	58.667
177	3.688	5.531	7.375	9.219	11.063	14.750	18.438	22.125	25.813	29.500	33.188	36.875	44.250	59.000
178	3.708	5.563	7.417	9.271	11.125	14.833	18.542	22.250	25.958	29.667	33.375	37.083	44.500	59.333
179	3.729	5.594	7.458	9.323	11.188	14.917	18.646	22.375	26.104	29.833	33.563	37.292	44.750	59.667
180	3.750	5.625	7.500	9.375	11.250	15.000	18.750	22.500	26.250	30.000	33.750	37.500	45.000	60.000
181	3.771	5.656	7.542	9.427	11.313	15.083	18.854	22.625	26.396	30.167	33.938	37.708	45.250	60.333
182	3.792	5.688	7.583	9.479	11.375	15.167	18.958	22.750	26.542	30.333	34.125	37.917	45.500	60.667
183	3.813	5.719	7.625	9.531	11.438	15.250	19.063	22.875	26.688	30.500	34.313	38.125	45.750	61.000
184	3.833	5.750	7.667	9.583	11.500	15.333	19.167	23.000	26.833	30.667	34.500	38.333	46.000	61.333
185	3.854	5.781	7.708	9.635	11.563	15.417	19.271	23.125	26.979	30.833	34.688	38.542	46.250	61.667
186	3.875	5.813	7.750	9.688	11.625	15.500	19.375	23.250	27.125	31.000	34.875	38.750	46.500	62.000
187	3.896	5.844	7.792	9.740	11.688	15.583	19.479	23.375	27.271	31.167	35.063	38.958	46.750	62.333
188	3.917	5.875	7.833	9.792	11.750	15.667	19.583	23.500	27.417	31.333	35.250	39.167	47.000	62.667
189	3.938	5.906	7.875	9.844	11.813	15.750	19.688	23.625	27.563	31.500	35.438	39.375	47.250	63.000
190	3.958	5.938	7.917	9.896	11.875	15.833	19.792	23.750	27.708	31.667	35.625	39.583	47.500	63.333
191	3.979	5.969	7.958	9.948	11.938	15.917	19.896	23.875	27.854	31.833	35.813	39.792	47.750	63.667
192	4.000	6.000	8.000	10.000	12.000	16.000	20.000	24.000	28.000	32.000	36.000	40.000	48.000	64.000
193	4.021	6.031	8.042	10.052	12.063	16.083	20.104	24.125	28.146	32.167	36.188	40.208	48.250	64.333
194	4.042	6.063	8.083	10.104	12.125	16.167	20.208	24.250	28.292	32.333	36.375	40.417	48.500	64.667
195	4.063	6.094	8.125	10.156	12.188	16.250	20.313	24.375	28.438	32.500	36.563	40.625	48.750	65.000
196	4.083	6.125	8.167	10.208	12.250	16.333	20.417	24.500	28.583	32.667	36.750	40.833	49.000	65.333
197	4.104	6.156	8.208	10.260	12.313	16.417	20.521	24.625	28.729	32.833	36.938	41.042	49.250	65.667
198	4.125	6.188	8.250	10.313	12.375	16.500	20.625	24.750	28.875	33.000	37.125	41.250	49.500	66.000
199	4.146	6.219	8.292	10.365	12.438	16.583	20.729	24.875	29.021	33.167	37.313	41.458	49.750	66.333
200	4.167	6.250	8.333	10.417	12.500	16.667	20.833	25.000	29.167	33.333	37.500	41.667	50.000	66.667

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
201	4.188	6.281	8.375	10.469	12.563	16.750	20.938	25.125	29.313	33.500	37.688	41.875	50.250	67.000
202	4.208	6.313	8.417	10.521	12.625	16.833	21.042	25.250	29.458	33.667	37.875	42.083	50.500	67.333
203	4.229	6.344	8.458	10.573	12.688	16.917	21.146	25.375	29.604	33.833	38.063	42.292	50.750	67.667
204	4.250	6.375	8.500	10.625	12.750	17.000	21.250	25.500	29.750	34.000	38.250	42.500	51.000	68.000
205	4.271	6.406	8.542	10.677	12.813	17.083	21.354	25.625	29.896	34.167	38.438	42.708	51.250	68.333
206	4.292	6.438	8.583	10.729	12.875	17.167	21.458	25.750	30.042	34.333	38.625	42.917	51.500	68.667
207	4.313	6.469	8.625	10.781	12.938	17.250	21.563	25.875	30.188	34.500	38.813	43.125	51.750	69.000
208	4.333	6.500	8.667	10.833	13.000	17.333	21.667	26.000	30.333	34.667	39.000	43.333	52.000	69.333
209	4.354	6.531	8.708	10.885	13.063	17.417	21.771	26.125	30.479	34.833	39.188	43.542	52.250	69.667
210	4.375	6.563	8.750	10.938	13.125	17.500	21.875	26.250	30.625	35.000	39.375	43.750	52.500	70.000
211	4.396	6.594	8.792	10.990	13.188	17.583	21.979	26.375	30.771	35.167	39.563	43.958	52.750	70.333
212	4.417	6.625	8.833	11.042	13.250	17.667	22.083	26.500	30.917	35.333	39.750	44.167	53.000	70.667
213	4.438	6.656	8.875	11.094	13.313	17.750	22.188	26.625	31.063	35.500	39.938	44.375	53.250	71.000
214	4.458	6.688	8.917	11.146	13.375	17.833	22.292	26.750	31.208	35.667	40.125	44.583	53.500	71.333
215	4.479	6.719	8.958	11.198	13.438	17.917	22.396	26.875	31.354	35.833	40.313	44.792	53.750	71.667
216	4.500	6.750	9.000	11.250	13.500	18.000	22.500	27.000	31.500	36.000	40.500	45.000	54.000	72.000
217	4.521	6.781	9.042	11.302	13.563	18.083	22.604	27.125	31.646	36.167	40.688	45.208	54.250	72.333
218	4.542	6.813	9.083	11.354	13.625	18.167	22.708	27.250	31.792	36.333	40.875	45.417	54.500	72.667
219	4.563	6.844	9.125	11.406	13.688	18.250	22.813	27.375	31.938	36.500	41.063	45.625	54.750	73.000
220	4.583	6.875	9.167	11.458	13.750	18.333	22.917	27.500	32.083	36.667	41.250	45.833	55.000	73.333
221	4.604	6.906	9.208	11.510	13.813	18.417	23.021	27.625	32.229	36.833	41.438	46.042	55.250	73.667
222	4.625	6.938	9.250	11.563	13.875	18.500	23.125	27.750	32.375	37.000	41.625	46.250	55.500	74.000
223	4.646	6.969	9.292	11.615	13.938	18.583	23.229	27.875	32.521	37.167	41.813	46.458	55.750	74.333
224	4.667	7.000	9.333	11.667	14.000	18.667	23.333	28.000	32.667	37.333	42.000	46.667	56.000	74.667
225	4.688	7.031	9.375	11.719	14.063	18.750	23.438	28.125	32.813	37.500	42.188	46.875	56.250	75.000
226	4.708	7.063	9.417	11.771	14.125	18.833	23.542	28.250	32.958	37.667	42.375	47.083	56.500	75.333
227	4.729	7.094	9.458	11.823	14.188	18.917	23.646	28.375	33.104	37.833	42.563	47.292	56.750	75.667
228	4.750	7.125	9.500	11.875	14.250	19.000	23.750	28.500	33.250	38.000	42.750	47.500	57.000	76.000
229	4.771	7.156	9.542	11.927	14.313	19.083	23.854	28.625	33.396	38.167	42.938	47.708	57.250	76.333
230	4.792	7.188	9.583	11.979	14.375	19.167	23.958	28.750	33.542	38.333	43.125	47.917	57.500	76.667
231	4.813	7.219	9.625	12.031	14.438	19.250	24.063	28.875	33.688	38.500	43.313	48.125	57.750	77.000
232	4.833	7.250	9.667	12.083	14.500	19.333	24.167	29.000	33.833	38.667	43.500	48.333	58.000	77.333
233	4.854	7.281	9.708	12.135	14.563	19.417	24.271	29.125	33.979	38.833	43.688	48.542	58.250	77.667
234	4.875	7.313	9.750	12.188	14.625	19.500	24.375	29.250	34.125	39.000	43.875	48.750	58.500	78.000
235	4.896	7.344	9.792	12.240	14.688	19.583	24.479	29.375	34.271	39.167	44.063	48.958	58.750	78.333
236	4.917	7.375	9.833	12.292	14.750	19.667	24.583	29.500	34.417	39.333	44.250	49.167	59.000	78.667
237	4.938	7.406	9.875	12.344	14.813	19.750	24.688	29.625	34.563	39.500	44.438	49.375	59.250	79.000
238	4.958	7.438	9.917	12.396	14.875	19.833	24.792	29.750	34.708	39.667	44.625	49.583	59.500	79.333
239	4.979	7.469	9.958	12.448	14.938	19.917	24.896	29.875	34.854	39.833	44.813	49.792	59.750	79.667
240	5.000	7.500	10.000	12.500	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	60.000	80.000

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
241	5.021	7.531	10.042	12.552	15.063	20.083	25.104	30.125	35.146	40.167	45.188	50.208	60.250	80.333
242	5.042	7.563	10.083	12.604	15.125	20.167	25.208	30.250	35.292	40.333	45.375	50.417	60.500	80.667
243	5.063	7.594	10.125	12.656	15.188	20.250	25.313	30.375	35.438	40.500	45.563	50.625	60.750	81.000
244	5.083	7.625	10.167	12.708	15.250	20.333	25.417	30.500	35.583	40.667	45.750	50.833	61.000	81.333
245	5.104	7.656	10.208	12.760	15.313	20.417	25.521	30.625	35.729	40.833	45.938	51.042	61.250	81.667
246	5.125	7.688	10.250	12.813	15.375	20.500	25.625	30.750	35.875	41.000	46.125	51.250	61.500	82.000
247	5.146	7.719	10.292	12.865	15.438	20.583	25.729	30.875	36.021	41.167	46.313	51.458	61.750	82.333
248	5.167	7.750	10.333	12.917	15.500	20.667	25.833	31.000	36.167	41.333	46.500	51.667	62.000	82.667
249	5.188	7.781	10.375	12.969	15.563	20.750	25.938	31.125	36.313	41.500	46.688	51.875	62.250	83.000
250	5.208	7.813	10.417	13.021	15.625	20.833	26.042	31.250	36.458	41.667	46.875	52.083	62.500	83.333
251	5.229	7.844	10.458	13.073	15.688	20.917	26.146	31.375	36.604	41.833	47.063	52.292	62.750	83.667
252	5.250	7.875	10.500	13.125	15.750	21.000	26.250	31.500	36.750	42.000	47.250	52.500	63.000	84.000
253	5.271	7.906	10.542	13.177	15.813	21.083	26.354	31.625	36.896	42.167	47.438	52.708	63.250	84.333
254	5.292	7.938	10.583	13.229	15.875	21.167	26.458	31.750	37.042	42.333	47.625	52.917	63.500	84.667
255	5.313	7.969	10.625	13.281	15.938	21.250	26.563	31.875	37.188	42.500	47.813	53.125	63.750	85.000
256	5.333	8.000	10.667	13.333	16.000	21.333	26.667	32.000	37.333	42.667	48.000	53.333	64.000	85.333
257	5.354	8.031	10.708	13.385	16.063	21.417	26.771	32.125	37.479	42.833	48.188	53.542	64.250	85.667
258	5.375	8.063	10.750	13.438	16.125	21.500	26.875	32.250	37.625	43.000	48.375	53.750	64.500	86.000
259	5.396	8.094	10.792	13.490	16.188	21.583	26.979	32.375	37.771	43.167	48.563	53.958	64.750	86.333
260	5.417	8.125	10.833	13.542	16.250	21.667	27.083	32.500	37.917	43.333	48.750	54.167	65.000	86.667
261	5.438	8.156	10.875	13.594	16.313	21.750	27.188	32.625	38.063	43.500	48.938	54.375	65.250	87.000
262	5.458	8.188	10.917	13.646	16.375	21.833	27.292	32.750	38.208	43.667	49.125	54.583	65.500	87.333
263	5.479	8.219	10.958	13.698	16.438	21.917	27.396	32.875	38.354	43.833	49.313	54.792	65.750	87.667
264	5.500	8.250	11.000	13.750	16.500	22.000	27.500	33.000	38.500	44.000	49.500	55.000	66.000	88.000
265	5.521	8.281	11.042	13.802	16.563	22.083	27.604	33.125	38.646	44.167	49.688	55.208	66.250	88.333
266	5.542	8.313	11.083	13.854	16.625	22.167	27.708	33.250	38.792	44.333	49.875	55.417	66.500	88.667
267	5.563	8.344	11.125	13.906	16.688	22.250	27.813	33.375	38.938	44.500	50.063	55.625	66.750	89.000
268	5.583	8.375	11.167	13.958	16.750	22.333	27.917	33.500	39.083	44.667	50.250	55.833	67.000	89.333
269	5.604	8.406	11.208	14.010	16.813	22.417	28.021	33.625	39.229	44.833	50.438	56.042	67.250	89.667
270	5.625	8.438	11.250	14.063	16.875	22.500	28.125	33.750	39.375	45.000	50.625	56.250	67.500	90.000
271	5.646	8.469	11.292	14.115	16.938	22.583	28.229	33.875	39.521	45.167	50.813	56.458	67.750	90.333
272	5.667	8.500	11.333	14.167	17.000	22.667	28.333	34.000	39.667	45.333	51.000	56.667	68.000	90.667
273	5.688	8.531	11.375	14.219	17.063	22.750	28.438	34.125	39.813	45.500	51.188	56.875	68.250	91.000
274	5.708	8.563	11.417	14.271	17.125	22.833	28.542	34.250	39.958	45.667	51.375	57.083	68.500	91.333
275	5.729	8.594	11.458	14.323	17.188	22.917	28.646	34.375	40.104	45.833	51.563	57.292	68.750	91.667
276	5.750	8.625	11.500	14.375	17.250	23.000	28.750	34.500	40.250	46.000	51.750	57.500	69.000	92.000
277	5.771	8.656	11.542	14.427	17.313	23.083	28.854	34.625	40.396	46.167	51.938	57.708	69.250	92.333
278	5.792	8.688	11.583	14.479	17.375	23.167	28.958	34.750	40.542	46.333	52.125	57.917	69.500	92.667
279	5.813	8.719	11.625	14.531	17.438	23.250	29.063	34.875	40.688	46.500	52.313	58.125	69.750	93.000
280	5.833	8.750	11.667	14.583	17.500	23.333	29.167	35.000	40.833	46.667	52.500	58.333	70.000	93.333

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
281	5.854	8.781	11.708	14.635	17.563	23.417	29.271	35.125	40.979	46.833	52.688	58.542	70.250	93.667
282	5.875	8.813	11.750	14.688	17.625	23.500	29.375	35.250	41.125	47.000	52.875	58.750	70.500	94.000
283	5.896	8.844	11.792	14.740	17.688	23.583	29.479	35.375	41.271	47.167	53.063	58.958	70.750	94.333
284	5.917	8.875	11.833	14.792	17.750	23.667	29.583	35.500	41.417	47.333	53.250	59.167	71.000	94.667
285	5.938	8.906	11.875	14.844	17.813	23.750	29.688	35.625	41.563	47.500	53.438	59.375	71.250	95.000
286	5.958	8.938	11.917	14.896	17.875	23.833	29.792	35.750	41.708	47.667	53.625	59.583	71.500	95.333
287	5.979	8.969	11.958	14.948	17.938	23.917	29.896	35.875	41.854	47.833	53.813	59.792	71.750	95.667
288	6.000	9.000	12.000	15.000	18.000	24.000	30.000	36.000	42.000	48.000	54.000	60.000	72.000	96.000
289	6.021	9.031	12.042	15.052	18.063	24.083	30.104	36.125	42.146	48.167	54.188	60.208	72.250	96.333
290	6.042	9.063	12.083	15.104	18.125	24.167	30.208	36.250	42.292	48.333	54.375	60.417	72.500	96.667
291	6.063	9.094	12.125	15.156	18.188	24.250	30.313	36.375	42.438	48.500	54.563	60.625	72.750	97.000
292	6.083	9.125	12.167	15.208	18.250	24.333	30.417	36.500	42.583	48.667	54.750	60.833	73.000	97.333
293	6.104	9.156	12.208	15.260	18.313	24.417	30.521	36.625	42.729	48.833	54.938	61.042	73.250	97.667
294	6.125	9.188	12.250	15.313	18.375	24.500	30.625	36.750	42.875	49.000	55.125	61.250	73.500	98.000
295	6.146	9.219	12.292	15.365	18.438	24.583	30.729	36.875	43.021	49.167	55.313	61.458	73.750	98.333
296	6.167	9.250	12.333	15.417	18.500	24.667	30.833	37.000	43.167	49.333	55.500	61.667	74.000	98.667
297	6.188	9.281	12.375	15.469	18.563	24.750	30.938	37.125	43.313	49.500	55.688	61.875	74.250	99.000
298	6.208	9.313	12.417	15.521	18.625	24.833	31.042	37.250	43.458	49.667	55.875	62.083	74.500	99.333
299	6.229	9.344	12.458	15.573	18.688	24.917	31.146	37.375	43.604	49.833	56.063	62.292	74.750	99.667
300	6.250	9.375	12.500	15.625	18.750	25.000	31.250	37.500	43.750	50.000	56.250	62.500	75.000	100.000
301	6.271	9.406	12.542	15.677	18.813	25.083	31.354	37.625	43.896	50.167	56.438	62.708	75.250	100.333
302	6.292	9.438	12.583	15.729	18.875	25.167	31.458	37.750	44.042	50.333	56.625	62.917	75.500	100.667
303	6.313	9.469	12.625	15.781	18.938	25.250	31.563	37.875	44.188	50.500	56.813	63.125	75.750	101.000
304	6.333	9.500	12.667	15.833	19.000	25.333	31.667	38.000	44.333	50.667	57.000	63.333	76.000	101.333
305	6.354	9.531	12.708	15.885	19.063	25.417	31.771	38.125	44.479	50.833	57.188	63.542	76.250	101.667
306	6.375	9.563	12.750	15.938	19.125	25.500	31.875	38.250	44.625	51.000	57.375	63.750	76.500	102.000
307	6.396	9.594	12.792	15.990	19.188	25.583	31.979	38.375	44.771	51.167	57.563	63.958	76.750	102.333
308	6.417	9.625	12.833	16.042	19.250	25.667	32.083	38.500	44.917	51.333	57.750	64.167	77.000	102.667
309	6.438	9.656	12.875	16.094	19.313	25.750	32.188	38.625	45.063	51.500	57.938	64.375	77.250	103.000
310	6.458	9.688	12.917	16.146	19.375	25.833	32.292	38.750	45.208	51.667	58.125	64.583	77.500	103.333
311	6.479	9.719	12.958	16.198	19.438	25.917	32.396	38.875	45.354	51.833	58.313	64.792	77.750	103.667
312	6.500	9.750	13.000	16.250	19.500	26.000	32.500	39.000	45.500	52.000	58.500	65.000	78.000	104.000
313	6.521	9.781	13.042	16.302	19.563	26.083	32.604	39.125	45.646	52.167	58.688	65.208	78.250	104.333
314	6.542	9.813	13.083	16.354	19.625	26.167	32.708	39.250	45.792	52.333	58.875	65.417	78.500	104.667
315	6.563	9.844	13.125	16.406	19.688	26.250	32.813	39.375	45.938	52.500	59.063	65.625	78.750	105.000
316	6.583	9.875	13.167	16.458	19.750	26.333	32.917	39.500	46.083	52.667	59.250	65.833	79.000	105.333
317	6.604	9.906	13.208	16.510	19.813	26.417	33.021	39.625	46.229	52.833	59.438	66.042	79.250	105.667
318	6.625	9.938	13.250	16.563	19.875	26.500	33.125	39.750	46.375	53.000	59.625	66.250	79.500	106.000
319	6.646	9.969	13.292	16.615	19.938	26.583	33.229	39.875	46.521	53.167	59.813	66.458	79.750	106.333
320	6.667	10.000	13.333	16.667	20.000	26.667	33.333	40.000	46.667	53.333	60.000	66.667	80.000	106.667

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
321	6.688	10.031	13.375	16.719	20.063	26.750	33.438	40.125	46.813	53.500	60.188	66.875	80.250	107.000
322	6.708	10.063	13.417	16.771	20.125	26.833	33.542	40.250	46.958	53.667	60.375	67.083	80.500	107.333
323	6.729	10.094	13.458	16.823	20.188	26.917	33.646	40.375	47.104	53.833	60.563	67.292	80.750	107.667
324	6.750	10.125	13.500	16.875	20.250	27.000	33.750	40.500	47.250	54.000	60.750	67.500	81.000	108.000
325	6.771	10.156	13.542	16.927	20.313	27.083	33.854	40.625	47.396	54.167	60.938	67.708	81.250	108.333
326	6.792	10.188	13.583	16.979	20.375	27.167	33.958	40.750	47.542	54.333	61.125	67.917	81.500	108.667
327	6.813	10.219	13.625	17.031	20.438	27.250	34.063	40.875	47.688	54.500	61.313	68.125	81.750	109.000
328	6.833	10.250	13.667	17.083	20.500	27.333	34.167	41.000	47.833	54.667	61.500	68.333	82.000	109.333
329	6.854	10.281	13.708	17.135	20.563	27.417	34.271	41.125	47.979	54.833	61.688	68.542	82.250	109.667
330	6.875	10.313	13.750	17.188	20.625	27.500	34.375	41.250	48.125	55.000	61.875	68.750	82.500	110.000
331	6.896	10.344	13.792	17.240	20.688	27.583	34.479	41.375	48.271	55.167	62.063	68.958	82.750	110.333
332	6.917	10.375	13.833	17.292	20.750	27.667	34.583	41.500	48.417	55.333	62.250	69.167	83.000	110.667
333	6.938	10.406	13.875	17.344	20.813	27.750	34.688	41.625	48.563	55.500	62.438	69.375	83.250	111.000
334	6.958	10.438	13.917	17.396	20.875	27.833	34.792	41.750	48.708	55.667	62.625	69.583	83.500	111.333
335	6.979	10.469	13.958	17.448	20.938	27.917	34.896	41.875	48.854	55.833	62.813	69.792	83.750	111.667
336	7.000	10.500	14.000	17.500	21.000	28.000	35.000	42.000	49.000	56.000	63.000	70.000	84.000	112.000
337	7.021	10.531	14.042	17.552	21.063	28.083	35.104	42.125	49.146	56.167	63.188	70.208	84.250	112.333
338	7.042	10.563	14.083	17.604	21.125	28.167	35.208	42.250	49.292	56.333	63.375	70.417	84.500	112.667
339	7.063	10.594	14.125	17.656	21.188	28.250	35.313	42.375	49.438	56.500	63.563	70.625	84.750	113.000
340	7.083	10.625	14.167	17.708	21.250	28.333	35.417	42.500	49.583	56.667	63.750	70.833	85.000	113.333
341	7.104	10.656	14.208	17.760	21.313	28.417	35.521	42.625	49.729	56.833	63.938	71.042	85.250	113.667
342	7.125	10.688	14.250	17.813	21.375	28.500	35.625	42.750	49.875	57.000	64.125	71.250	85.500	114.000
343	7.146	10.719	14.292	17.865	21.438	28.583	35.729	42.875	50.021	57.167	64.313	71.458	85.750	114.333
344	7.167	10.750	14.333	17.917	21.500	28.667	35.833	43.000	50.167	57.333	64.500	71.667	86.000	114.667
345	7.188	10.781	14.375	17.969	21.563	28.750	35.938	43.125	50.313	57.500	64.688	71.875	86.250	115.000
346	7.208	10.813	14.417	18.021	21.625	28.833	36.042	43.250	50.458	57.667	64.875	72.083	86.500	115.333
347	7.229	10.844	14.458	18.073	21.688	28.917	36.146	43.375	50.604	57.833	65.063	72.292	86.750	115.667
348	7.250	10.875	14.500	18.125	21.750	29.000	36.250	43.500	50.750	58.000	65.250	72.500	87.000	116.000
349	7.271	10.906	14.542	18.177	21.813	29.083	36.354	43.625	50.896	58.167	65.438	72.708	87.250	116.333
350	7.292	10.938	14.583	18.229	21.875	29.167	36.458	43.750	51.042	58.333	65.625	72.917	87.500	116.667
351	7.313	10.969	14.625	18.281	21.938	29.250	36.563	43.875	51.188	58.500	65.813	73.125	87.750	117.000
352	7.333	11.000	14.667	18.333	22.000	29.333	36.667	44.000	51.333	58.667	66.000	73.333	88.000	117.333
353	7.354	11.031	14.708	18.385	22.063	29.417	36.771	44.125	51.479	58.833	66.188	73.542	88.250	117.667
354	7.375	11.063	14.750	18.438	22.125	29.500	36.875	44.250	51.625	59.000	66.375	73.750	88.500	118.000
355	7.396	11.094	14.792	18.490	22.188	29.583	36.979	44.375	51.771	59.167	66.563	73.958	88.750	118.333
356	7.417	11.125	14.833	18.542	22.250	29.667	37.083	44.500	51.917	59.333	66.750	74.167	89.000	118.667
357	7.438	11.156	14.875	18.594	22.313	29.750	37.188	44.625	52.063	59.500	66.938	74.375	89.250	119.000
358	7.458	11.188	14.917	18.646	22.375	29.833	37.292	44.750	52.208	59.667	67.125	74.583	89.500	119.333
359	7.479	11.219	14.958	18.698	22.438	29.917	37.396	44.875	52.354	59.833	67.313	74.792	89.750	119.667
360	7.500	11.250	15.000	18.750	22.500	30.000	37.500	45.000	52.500	60.000	67.500	75.000	90.000	120.000

Technical Data

Conversions: Chain Pitches to Feet

Chain Pitch	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4
Chain Size	25	35 06B	40 41 08B	50 10B	60 12B	80 C2040 C2042 16B	100 C2050 C2052 20B	120 C2060H C2062H 24B	140 28B	160 C2080H C2082H 32B	180 36B	200 C2100H C2102H 40B	240 C2120H C2122H	C2160H C2162H
Number of Pitches	Conversion To Feet													
361	7.521	11.281	15.042	18.802	22.563	30.083	37.604	45.125	52.646	60.167	67.688	75.208	90.250	120.333
362	7.542	11.313	15.083	18.854	22.625	30.167	37.708	45.250	52.792	60.333	67.875	75.417	90.500	120.667
363	7.563	11.344	15.125	18.906	22.688	30.250	37.813	45.375	52.938	60.500	68.063	75.625	90.750	121.000
364	7.583	11.375	15.167	18.958	22.750	30.333	37.917	45.500	53.083	60.667	68.250	75.833	91.000	121.333
365	7.604	11.406	15.208	19.010	22.813	30.417	38.021	45.625	53.229	60.833	68.438	76.042	91.250	121.667
366	7.625	11.438	15.250	19.063	22.875	30.500	38.125	45.750	53.375	61.000	68.625	76.250	91.500	122.000
367	7.646	11.469	15.292	19.115	22.938	30.583	38.229	45.875	53.521	61.167	68.813	76.458	91.750	122.333
368	7.667	11.500	15.333	19.167	23.000	30.667	38.333	46.000	53.667	61.333	69.000	76.667	92.000	122.667
369	7.688	11.531	15.375	19.219	23.063	30.750	38.438	46.125	53.813	61.500	69.188	76.875	92.250	123.000
370	7.708	11.563	15.417	19.271	23.125	30.833	38.542	46.250	53.958	61.667	69.375	77.083	92.500	123.333
371	7.729	11.594	15.458	19.323	23.188	30.917	38.646	46.375	54.104	61.833	69.563	77.292	92.750	123.667
372	7.750	11.625	15.500	19.375	23.250	31.000	38.750	46.500	54.250	62.000	69.750	77.500	93.000	124.000
373	7.771	11.656	15.542	19.427	23.313	31.083	38.854	46.625	54.396	62.167	69.938	77.708	93.250	124.333
374	7.792	11.688	15.583	19.479	23.375	31.167	38.958	46.750	54.542	62.333	70.125	77.917	93.500	124.667
375	7.813	11.719	15.625	19.531	23.438	31.250	39.063	46.875	54.688	62.500	70.313	78.125	93.750	125.000
376	7.833	11.750	15.667	19.583	23.500	31.333	39.167	47.000	54.833	62.667	70.500	78.333	94.000	125.333
377	7.854	11.781	15.708	19.635	23.563	31.417	39.271	47.125	54.979	62.833	70.688	78.542	94.250	125.667
378	7.875	11.813	15.750	19.688	23.625	31.500	39.375	47.250	55.125	63.000	70.875	78.750	94.500	126.000
379	7.896	11.844	15.792	19.740	23.688	31.583	39.479	47.375	55.271	63.167	71.063	78.958	94.750	126.333
380	7.917	11.875	15.833	19.792	23.750	31.667	39.583	47.500	55.417	63.333	71.250	79.167	95.000	126.667
381	7.938	11.906	15.875	19.844	23.813	31.750	39.688	47.625	55.563	63.500	71.438	79.375	95.250	127.000
382	7.958	11.938	15.917	19.896	23.875	31.833	39.792	47.750	55.708	63.667	71.625	79.583	95.500	127.333
383	7.979	11.969	15.958	19.948	23.938	31.917	39.896	47.875	55.854	63.833	71.813	79.792	95.750	127.667
384	8.000	12.000	16.000	20.000	24.000	32.000	40.000	48.000	56.000	64.000	72.000	80.000	96.000	128.000
385	8.021	12.031	16.042	20.052	24.063	32.083	40.104	48.125	56.146	64.167	72.188	80.208	96.250	128.333
386	8.042	12.063	16.083	20.104	24.125	32.167	40.208	48.250	56.292	64.333	72.375	80.417	96.500	128.667
387	8.063	12.094	16.125	20.156	24.188	32.250	40.313	48.375	56.438	64.500	72.563	80.625	96.750	129.000
388	8.083	12.125	16.167	20.208	24.250	32.333	40.417	48.500	56.583	64.667	72.750	80.833	97.000	129.333
389	8.104	12.156	16.208	20.260	24.313	32.417	40.521	48.625	56.729	64.833	72.938	81.042	97.250	129.667
390	8.125	12.188	16.250	20.313	24.375	32.500	40.625	48.750	56.875	65.000	73.125	81.250	97.500	130.000
391	8.146	12.219	16.292	20.365	24.438	32.583	40.729	48.875	57.021	65.167	73.313	81.458	97.750	130.333
392	8.167	12.250	16.333	20.417	24.500	32.667	40.833	49.000	57.167	65.333	73.500	81.667	98.000	130.667
393	8.188	12.281	16.375	20.469	24.563	32.750	40.938	49.125	57.313	65.500	73.688	81.875	98.250	131.000
394	8.208	12.313	16.417	20.521	24.625	32.833	41.042	49.250	57.458	65.667	73.875	82.083	98.500	131.333
395	8.229	12.344	16.458	20.573	24.688	32.917	41.146	49.375	57.604	65.833	74.063	82.292	98.750	131.667
396	8.250	12.375	16.500	20.625	24.750	33.000	41.250	49.500	57.750	66.000	74.250	82.500	99.000	132.000
397	8.271	12.406	16.542	20.677	24.813	33.083	41.354	49.625	57.896	66.167	74.438	82.708	99.250	132.333
398	8.292	12.438	16.583	20.729	24.875	33.167	41.458	49.750	58.042	66.333	74.625	82.917	99.500	132.667
399	8.313	12.469	16.625	20.781	24.938	33.250	41.563	49.875	58.188	66.500	74.813	83.125	99.750	133.000
400	8.333	12.500	16.667	20.833	25.000	33.333	41.667	50.000	58.333	66.667	75.000	83.333	100.000	133.333

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
05B	0.315	HI-MAX British Standard	131	24BPCP	1 1/2	Perfect Coat Plus British Standard	57
06B	3/8	British Standard Roller Chain	52	24BSS	1 1/2	Stainless Steel British Standard	60
06B	3/8	HI-MAX British Standard	131	25	1/4	ASME/ANSI Standard Roller Chain	12
06B-2	3/8	British Standard Roller Chain	52	25	1/4	HI-MAX Standard Roller Chain	119
06B-2	3/8	HI-MAX British Standard	131	25-2	1/4	ASME/ANSI Standard Roller Chain	12
06BNP	3/8	Nickel Plate British Standard	55	25-2	1/4	HI-MAX Standard Roller Chain	119
06BPCP	3/8	Perfect Coat Plus British Standard	57	25-3	1/4	ASME/ANSI Standard Roller Chain	12
06BSS	3/8	Stainless Steel British Standard	60	25-3	1/4	HI-MAX Standard Roller Chain	119
08B	1/2	British Standard Roller Chain	52	25H	1/4	HI-MAX Heavy Series	130
08B	1/2	HI-MAX British Standard	131	25NP	1/4	Nickel Plate ASME/ANSI Standard	54
08B-2	1/2	British Standard Roller Chain	52	25SSS	1/4	Stainless Steel ASME/ANSI	60
08B-2	1/2	HI-MAX British Standard	131	28B	1 3/4	British Standard Roller Chain	52
08BNP	1/2	Nickel Plate British Standard	55	28B-2	1 3/4	British Standard Roller Chain	52
08BPCP	1/2	Perfect Coat Plus British Standard	57	32B	2	British Standard Roller Chain	52
08BSS	1/2	Stainless Steel British Standard	60	32B-2	2	British Standard Roller Chain	52
08BSS-MEGA	1/2	Stainless Steel Mega Chain	63	35	1/4	ASME/ANSI Standard Roller Chain	14
10B	5/8	British Standard Roller Chain	52	35	1/4	HI-MAX Standard Roller Chain	120
10B	5/8	HI-MAX British Standard	131	35-2	3/8	ASME/ANSI Standard Roller Chain	14
10B-2	5/8	British Standard Roller Chain	52	35-2	3/8	HI-MAX Standard Roller Chain	120
10B-2	5/8	HI-MAX British Standard	131	35-2NP	3/8	Nickel Plate ASME/ANSI Standard	54
10BNP	5/8	Nickel Plate British Standard	55	35-2PCP	3/8	Perfect Coat Plus ASME/ANSI	57
10BPCP	5/8	Perfect Coat Plus British Standard	57	35-2SS	3/8	Stainless Steel ASME/ANSI	60
10BSS	5/8	Stainless Steel British Standard	60	35-3	3/8	ASME/ANSI Standard Roller Chain	14
12B	3/4	British Standard Roller Chain	52	35-3	3/8	HI-MAX Standard Roller Chain	120
12B	3/4	HI-MAX British Standard	131	35-4	3/8	ASME/ANSI Standard Roller Chain	14
12B-2	3/4	British Standard Roller Chain	52	35-5	3/8	ASME/ANSI Standard Roller Chain	14
12B-2	3/4	HI-MAX British Standard	131	35-6	3/8	ASME/ANSI Standard Roller Chain	14
12BNP	3/4	Nickel Plate British Standard	55	35NP	3/8	Nickel Plate ASME/ANSI Standard	54
12BPCP	3/4	Perfect Coat Plus British Standard	57	35PCP	3/8	Perfect Coat Plus ASME/ANSI	57
12BSS	3/4	Stainless Steel British Standard	60	35SS	3/8	Stainless Steel ASME/ANSI	60
12BSS-MEGA	3/4	Stainless Steel Mega Chain	63	40	1/2	ASME/ANSI Standard Roller Chain	18
16B	1	British Standard Roller Chain	52	40	1/2	HI-MAX Standard Roller Chain	122
16B	1	HI-MAX British Standard	131	40-2	1/2	ASME/ANSI Standard Roller Chain	18
16B-2	1	British Standard Roller Chain	52	40-2	1/2	HI-MAX Standard Roller Chain	122
16B-2	1	HI-MAX British Standard	131	40-2FS-C	1/2	Freedom Series C-Type	72
16BNP	1	Nickel Plate British Standard	55	40-2NP	1/2	Nickel Plate ASME/ANSI Standard	54
16BPCP	1	Perfect Coat Plus British Standard	57	40-2PCP	1/2	Perfect Coat Plus ASME/ANSI	57
16BSS	1	Stainless Steel British Standard	60	40-2SS	1/2	Stainless Steel ASME/ANSI	60
20B	1 1/4	British Standard Roller Chain	52	40-2SS-MEGA	1/2	Stainless Steel Mega Chain	63
20B	1 1/4	HI-MAX British Standard	131	40-3	1/2	ASME/ANSI Standard Roller Chain	18
20B-2	1 1/4	British Standard Roller Chain	52	40-3	1/2	HI-MAX Standard Roller Chain	122
20B-2	1 1/4	HI-MAX British Standard	131	40-4	1/2	ASME/ANSI Standard Roller Chain	18
20BNP	1 1/4	Nickel Plate British Standard	55	40-5	1/2	ASME/ANSI Standard Roller Chain	18
20BPCP	1 1/4	Perfect Coat Plus British Standard	57	40-6	1/2	ASME/ANSI Standard Roller Chain	18
20BSS	1 1/4	Stainless Steel British Standard	60	40 Bindery	1/2	Book Binding Chain	109
24B	1 1/2	British Standard Roller Chain	52	40F	1/2	Straight Side Bar Chain	78
24B	1 1/2	HI-MAX British Standard	131	40FS	1/2	Freedom Series PT-Type	69
24B-2	1 1/2	British Standard Roller Chain	52	40FS-C	1/2	Freedom Series C-Type	72
24B-2	1 1/2	HI-MAX British Standard	131	40HP	1/2	Hollow Pin Chain ASME/ANSI	74
24BNP	1 1/2	Nickel Plate British Standard	55	40HP-SL	1/2	Hollow Pin Chain Self Lube	75

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
40HP-SS	1/2	Hollow Pin Chain Stainless Steel	76	60-2PCP	3/4	Perfect Coat Plus ASME/ANSI	57
40HP-SSS	1/2	Hollow Pin 6000 Stainless Steel	77	60-2SS	3/4	Stainless Steel ASME/ANSI	60
40NP	1/2	Nickel Plate ASME/ANSI Standard	54	60-2SS-MEGA	3/4	Stainless Steel Mega Chain	63
40PCP	1/2	Perfect Coat Plus ASME/ANSI	57	60-3	3/4	ASME/ANSI Standard Roller Chain	22
40SB	1/2	Side Bow Chain ASME/ANSI	79	60-3	3/4	HI-MAX Standard Roller Chain	124
40SL	1/2	Self Lube ASME/ANSI	67	60-4	3/4	ASME/ANSI Standard Roller Chain	22
40SR	1/2	Side Roller Chain ASME/ANSI	112	60-5	3/4	ASME/ANSI Standard Roller Chain	22
40SS	1/2	Stainless Steel ASME/ANSI	60	60-6	3/4	ASME/ANSI Standard Roller Chain	22
40SS-MEGA	1/2	Stainless Steel Mega Chain	63	60DC	3/4	Double Capacity	47
40TR	1/2	Top Roller Chain ASME/ANSI	110	60E	3/4	E Series Thru Hardened Pin	46
41	1/2	ASME/ANSI Standard Roller Chain	16	60E-2	3/4	E Series Thru Hardened Pin	46
41	1/2	HI-MAX Standard Roller Chain	121	60E-3	3/4	E Series Thru Hardened Pin	46
41NP	1/2	Nickel Plate ASME/ANSI Standard	54	60F	3/4	Straight Side Bar Chain	78
41SS	1/2	Stainless Steel ASME/ANSI	60	60FS	3/4	Freedom Series PT-Type	69
50	5/8	ASME/ANSI Standard Roller Chain	20	60FS-C	3/4	Freedom Series C-Type	72
50	5/8	HI-MAX Standard Roller Chain	123	60H	3/4	Heavy Series Roller Chains	44
50-2	5/8	ASME/ANSI Standard Roller Chain	20	60H	3/4	HI-MAX Heavy Series	130
50-2	5/8	HI-MAX Standard Roller Chain	123	60H-2	3/4	Heavy Series Roller Chains	44
50-2FS-C	5/8	Freedom Series C-Type	72	60H-2	3/4	HI-MAX Heavy Series	130
50-2NP	5/8	Nickel Plate ASME/ANSI Standard	54	60H-3	3/4	Heavy Series Roller Chains	44
50-2PCP	5/8	Perfect Coat Plus ASME/ANSI	57	60H-3	3/4	HI-MAX Heavy Series	130
50-2SS	5/8	Stainless Steel ASME/ANSI	60	60HE	3/4	Heavy Series Thru Hardened Pin	45
50-2SS-MEGA	5/8	Stainless Steel Mega Chain	63	60HE-2	3/4	Heavy Series Thru Hardened Pin	45
50-3	5/8	ASME/ANSI Standard Roller Chain	20	60HE-3	3/4	Heavy Series Thru Hardened Pin	45
50-3	5/8	HI-MAX Standard Roller Chain	123	60HP	3/4	Hollow Pin Chain ASME/ANSI	74
50-4	5/8	ASME/ANSI Standard Roller Chain	20	60HP-SL	3/4	Hollow Pin Chain Self Lube	75
50-5	5/8	ASME/ANSI Standard Roller Chain	20	60HP-SS	3/4	Hollow Pin Chain Stainless Steel	76
50-6	5/8	ASME/ANSI Standard Roller Chain	20	60HP-SSS	3/4	Hollow Pin 6000 Stainless Steel	77
50F	5/8	Straight Side Bar Chain	78	60NP	3/4	Nickel Plate ASME/ANSI Standard	54
50FS	5/8	Freedom Series PT-Type	69	60PCP	3/4	Perfect Coat Plus ASME/ANSI	57
50FS-C	5/8	Freedom Series C-Type	72	60SB	3/4	Side Bow Chain ASME/ANSI	79
50H	5/8	HI-MAX Heavy Series	130	60SL	3/4	Self Lube ASME/ANSI	67
50HP	5/8	Hollow Pin Chain ASME/ANSI	74	60SR	3/4	Side Roller Chain ASME/ANSI	112
50HP-SL	5/8	Hollow Pin Chain Self Lube	75	60SS	3/4	Stainless Steel ASME/ANSI	60
50HP-SS	5/8	Hollow Pin Chain Stainless Steel	76	60SS-MEGA	3/4	Stainless Steel Mega Chain	63
50HP-SSS	5/8	Hollow Pin 6000 Stainless Steel	77	60TR	3/4	Top Roller Chain ASME/ANSI	110
50NP	5/8	Nickel Plate ASME/ANSI Standard	54	65	3/4	Rollerless Chain	78
50PCP	5/8	Perfect Coat Plus ASME/ANSI	57	80	1	ASME/ANSI Standard Roller Chain	24
50SB	5/8	Side Bow Chain ASME/ANSI	79	80	1	HI-MAX Standard Roller Chain	125
50SL	5/8	Self Lube ASME/ANSI	67	80-2	1	ASME/ANSI Standard Roller Chain	24
50SR	5/8	Side Roller Chain ASME/ANSI	112	80-2	1	HI-MAX Standard Roller Chain	125
50SS	5/8	Stainless Steel ASME/ANSI	60	80-2FS-C	1	Freedom Series C-Type	72
50SS-MEGA	5/8	Stainless Steel Mega Chain	63	80-2NP	1	Nickel Plate ASME/ANSI Standard	54
50TR	5/8	Top Roller Chain ASME/ANSI	110	80-2PCP	1	Perfect Coat Plus ASME/ANSI	57
60	3/4	ASME/ANSI Standard Roller Chain	22	80-2SS	1	Stainless Steel ASME/ANSI	60
60	3/4	HI-MAX Standard Roller Chain	124	80-2SS-MEGA	1	Stainless Steel Mega Chain	63
60-2	3/4	ASME/ANSI Standard Roller Chain	22	80-3	1	ASME/ANSI Standard Roller Chain	24
60-2	3/4	HI-MAX Standard Roller Chain	124	80-3	1	HI-MAX Standard Roller Chain	125
60-2FS-C	3/4	Freedom Series C-Type	72	80-4	1	ASME/ANSI Standard Roller Chain	24
60-2NP	3/4	Nickel Plate ASME/ANSI Standard	54	80-5	1	ASME/ANSI Standard Roller Chain	24

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
80-6	1	ASME/ANSI Standard Roller Chain	24	100F	1 1/4	Straight Side Bar Chain	78
80DC	1	Double Capacity	47	100FS	1 1/4	Freedom Series PT-Type	69
80E	1	E Series Thru Hardened Pin	46	100FS-C	1 1/4	Freedom Series C-Type	72
80E-2	1	E Series Thru Hardened Pin	46	100H	1 1/4	Heavy Series Roller Chains	44
80E-3	1	E Series Thru Hardened Pin	46	100H	1 1/4	HI-MAX Heavy Series	130
80F	1	Straight Side Bar Chain	78	100H-2	1 1/4	Heavy Series Roller Chains	44
80FS	1	Freedom Series PT-Type	69	100H-2	1 1/4	HI-MAX Heavy Series	130
80FS-C	1	Freedom Series C-Type	72	100H-3	1 1/4	Heavy Series Roller Chains	44
80H	1	Heavy Series Roller Chains	44	100H-3	1 1/4	HI-MAX Heavy Series	130
80H	1	HI-MAX Heavy Series	130	100HE	1 1/4	Heavy Series Thru Hardened Pin	45
80H-2	1	Heavy Series Roller Chains	44	100HE-2	1 1/4	Heavy Series Thru Hardened Pin	45
80H-2	1	HI-MAX Heavy Series	130	100HE-3	1 1/4	Heavy Series Thru Hardened Pin	45
80H-3	1	Heavy Series Roller Chains	44	100HSU	1 1/4	Super Heavy Series	49
80H-3	1	HI-MAX Heavy Series	130	100NP	1 1/4	Nickel Plate ASME/ANSI Standard	54
80HE	1	Heavy Series Thru Hardened Pin	45	100PCP	1 1/4	Perfect Coat Plus ASME/ANSI	57
80HE-2	1	Heavy Series Thru Hardened Pin	45	100SL	1 1/4	Self Lube ASME/ANSI	67
80HE-3	1	Heavy Series Thru Hardened Pin	45	100SR	1 1/4	Side Roller Chain ASME/ANSI	112
80HP	1	Hollow Pin Chain ASME/ANSI	74	100SS	1 1/4	Stainless Steel ASME/ANSI	60
80HP-SL	1	Hollow Pin Chain Self Lube	75	100SU	1 1/4	Super Series	48
80HP-SS	1	Hollow Pin Chain Stainless Steel	76	100SU-2	1 1/4	Super Series	48
80HP-SSS	1	Hollow Pin 6000 Stainless Steel	77	100TR	1 1/4	Top Roller Chain ASME/ANSI	110
80HSU	1	Super Heavy Series	49	AL1022	1 1/4	AL Series Leaf Chain	82
80NP	1	Nickel Plate ASME/ANSI Standard	54	BL1022	1 1/4	BL Series Leaf Chain	83
80PCP	1	Perfect Coat Plus ASME/ANSI	57	LL1022	5/8	LL Series Leaf Chain	84
80SB	1	Side Bow Chain ASME/ANSI	79	BL1023	1 1/4	BL Series Leaf Chain	83
80SL	1	Self Lube ASME/ANSI	67	BL1034	1 1/4	BL Series Leaf Chain	83
80SR	1	Side Roller Chain ASME/ANSI	112	AL1044	1 1/4	AL Series Leaf Chain	82
80SS	1	Stainless Steel ASME/ANSI	60	BL1044	1 1/4	BL Series Leaf Chain	83
80SS-MEGA	1	Stainless Steel Mega Chain	63	LL1044	5/8	LL Series Leaf Chain	84
80SU	1	Super Series	48	BL1046	1 1/4	BL Series Leaf Chain	83
80SU-2	1	Super Series	48	105	1 1/4	Rollerless Chain	78
80TR	1	Top Roller Chain ASME/ANSI	110	AL1066	1 1/4	AL Series Leaf Chain	82
81X	2.609	81X Lumber Mill Chain	114	BL1066	1 1/4	BL Series Leaf Chain	83
81XH	2.609	81X Lumber Mill Chain	114	LL1066	5/8	LL Series Leaf Chain	84
81XHS	2.609	81X Lumber Mill Chain	114	BL1088	1 1/4	BL Series Leaf Chain	83
85	1	Rollerless Chain	78	120	1 1/2	ASME/ANSI Standard Roller Chain	28
100	1 1/4	ASME/ANSI Standard Roller Chain	26	120	1 1/2	HI-MAX Standard Roller Chain	127
100	1 1/4	HI-MAX Standard Roller Chain	126	120-2	1 1/2	ASME/ANSI Standard Roller Chain	28
100-2	1 1/4	ASME/ANSI Standard Roller Chain	26	120-2	1 1/2	HI-MAX Standard Roller Chain	127
100-2	1 1/4	HI-MAX Standard Roller Chain	126	120-3	1 1/2	ASME/ANSI Standard Roller Chain	28
100-3	1 1/4	ASME/ANSI Standard Roller Chain	26	120-3	1 1/2	HI-MAX Standard Roller Chain	127
100-3	1 1/4	HI-MAX Standard Roller Chain	126	120-4	1 1/2	ASME/ANSI Standard Roller Chain	28
100-4	1 1/4	ASME/ANSI Standard Roller Chain	26	120-5	1 1/2	ASME/ANSI Standard Roller Chain	28
100-5	1 1/4	ASME/ANSI Standard Roller Chain	26	120-6	1 1/2	ASME/ANSI Standard Roller Chain	28
100-6	1 1/4	ASME/ANSI Standard Roller Chain	26	120DC	1 1/2	Double Capacity	47
100DC	1 1/4	Double Capacity	47	120E	1 1/2	E Series Thru Hardened Pin	46
100E	1 1/4	E Series Thru Hardened Pin	46	120E-2	1 1/2	E Series Thru Hardened Pin	46
100E-2	1 1/4	E Series Thru Hardened Pin	46	120E-3	1 1/2	E Series Thru Hardened Pin	46
100E-3	1 1/4	E Series Thru Hardened Pin	46	120F	1 1/2	Straight Side Bar Chain	78
120H	1 1/2	Heavy Series Roller Chains	44	BL1423	1 3/4	BL Series Leaf Chain	83

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
120H-2	1 1/2	Heavy Series Roller Chains	44	BL1434	1 3/4	BL Series Leaf Chain	83
120H-3	1 1/2	Heavy Series Roller Chains	44	AL1444	1 3/4	AL Series Leaf Chain	82
120HE	1 1/2	Heavy Series Thru Hardened Pin	45	BL1444	1 3/4	BL Series Leaf Chain	83
120HE-2	1 1/2	Heavy Series Thru Hardened Pin	45	BL1446	1 3/4	BL Series Leaf Chain	83
120HE-3	1 1/2	Heavy Series Thru Hardened Pin	45	AL1466	1 3/4	AL Series Leaf Chain	82
120HSU	1 1/2	Super Heavy Series	49	BL1466	1 3/4	BL Series Leaf Chain	83
120NP	1 1/2	Nickel Plate ASME/ANSI Standard	54	160	2	ASME/ANSI Standard Roller Chain	32
120PCP	1 1/2	Perfect Coat Plus ASME/ANSI	57	160	2	HI-MAX Standard Roller Chain	129
120SL	1 1/2	Self Lube ASME/ANSI	67	160-2	2	ASME/ANSI Standard Roller Chain	32
120SS	1 1/2	Stainless Steel ASME/ANSI	60	160-2	2	HI-MAX Standard Roller Chain	129
120SU	1 1/2	Super Series	48	160-3	2	ASME/ANSI Standard Roller Chain	32
120SU-2	1 1/2	Super Series	48	160-3	2	HI-MAX Standard Roller Chain	129
AL1222	1 1/2	AL Series Leaf Chain	82	160-4	2	ASME/ANSI Standard Roller Chain	32
BL1222	1 1/2	BL Series Leaf Chain	83	160-5	2	ASME/ANSI Standard Roller Chain	32
LL1222	3/4	LL Series Leaf Chain	84	160-6	2	ASME/ANSI Standard Roller Chain	32
BL1223	1 1/2	BL Series Leaf Chain	83	160DC	2	Double Capacity	47
BL1234	1 1/2	BL Series Leaf Chain	83	160E	2	E Series Thru Hardened Pin	46
AL1244	1 1/2	AL Series Leaf Chain	82	160E-2	2	E Series Thru Hardened Pin	46
BL1244	1 1/2	BL Series Leaf Chain	83	160E-3	2	E Series Thru Hardened Pin	46
LL1244	3/4	LL Series Leaf Chain	84	160H	2	Heavy Series Roller Chains	44
BL1246	1 1/2	BL Series Leaf Chain	83	160H-2	2	Heavy Series Roller Chains	44
125	1 1/2	Rollerless Chain	78	160H-3	2	Heavy Series Roller Chains	44
AL1266	1 1/2	AL Series Leaf Chain	82	160HE	2	Heavy Series Thru Hardened Pin	45
BL1266	1 1/2	BL Series Leaf Chain	83	160HE-2	2	Heavy Series Thru Hardened Pin	45
LL1266	3/4	LL Series Leaf Chain	84	160HE-3	2	Heavy Series Thru Hardened Pin	45
BL1288	1 1/2	BL Series Leaf Chain	83	160HSU	2	Super Heavy Series	49
140	1 3/4	ASME/ANSI Standard Roller Chain	30	160SL	2	Self Lube ASME/ANSI	67
140	1 3/4	HI-MAX Standard Roller Chain	128	160SU	2	Super Series	48
140-2	1 3/4	ASME/ANSI Standard Roller Chain	30	160SU-2	2	Super Series	48
140-2	1 3/4	HI-MAX Standard Roller Chain	128	AL1622	2	AL Series Leaf Chain	82
140-3	1 3/4	ASME/ANSI Standard Roller Chain	30	BL1622	2	BL Series Leaf Chain	83
140-3	1 3/4	HI-MAX Standard Roller Chain	128	LL1622	1	LL Series Leaf Chain	84
140-4	1 3/4	ASME/ANSI Standard Roller Chain	30	BL1623	2	BL Series Leaf Chain	83
140-5	1 3/4	ASME/ANSI Standard Roller Chain	30	BL1634	2	BL Series Leaf Chain	83
140-6	1 3/4	ASME/ANSI Standard Roller Chain	30	AL1644	2	AL Series Leaf Chain	82
140DC	1 3/4	Double Capacity	47	BL1644	2	BL Series Leaf Chain	83
140E	1 3/4	E Series Thru Hardened Pin	46	LL1644	1	LL Series Leaf Chain	84
140E-2	1 3/4	E Series Thru Hardened Pin	46	BL1646	2	BL Series Leaf Chain	83
140E-3	1 3/4	E Series Thru Hardened Pin	46	AL1666	2	AL Series Leaf Chain	82
140H	1 3/4	Heavy Series Roller Chains	44	BL1666	2	BL Series Leaf Chain	83
140H-2	1 3/4	Heavy Series Roller Chains	44	LL1666	1	LL Series Leaf Chain	84
140H-3	1 3/4	Heavy Series Roller Chains	44	BL1688	2	BL Series Leaf Chain	83
140HE	1 3/4	Heavy Series Thru Hardened Pin	45	180	2 1/4	ASME/ANSI Standard Roller Chain	34
140HE-2	1 3/4	Heavy Series Thru Hardened Pin	45	180-2	2 1/4	ASME/ANSI Standard Roller Chain	34
140HE-3	1 3/4	Heavy Series Thru Hardened Pin	45	180-3	2 1/4	ASME/ANSI Standard Roller Chain	34
140HSU	1 3/4	Super Heavy Series	49	180-4	2 1/4	ASME/ANSI Standard Roller Chain	34
140SU	1 3/4	Super Series	48	180-5	2 1/4	ASME/ANSI Standard Roller Chain	34
140SU-2	1 3/4	Super Series	48	180-6	2 1/4	ASME/ANSI Standard Roller Chain	34
AL1422	1 3/4	AL Series Leaf Chain	82	180DC	2 1/4	Double Capacity	47
BL1422	1 3/4	BL Series Leaf Chain	83	180E	2 1/4	E Series Thru Hardened Pin	46

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
180E-2	2 1/4	E Series Thru Hardened Pin	46	C2042FS-C	1	Self Lube Double Pitch	73
180E-3	2 1/4	E Series Thru Hardened Pin	46	C2042HP	1	Hollow Pin Chain Double Pitch	74
180H	2 1/4	Heavy Series Roller Chains	44	C2042HP-SL	1	Hollow Pin Chain Self Lube	75
180H-2	2 1/4	Heavy Series Roller Chains	44	C2042HP-SS	1	Hollow Pin Chain Stainless Steel	76
180H-3	2 1/4	Heavy Series Roller Chains	44	C2042HP-SSS	1	Hollow Pin 6000 Stainless Steel	77
180HE	2 1/4	Heavy Series Thru Hardened Pin	45	C2042NP	1	Nickel Plate Double Pitch	55
180HE-2	2 1/4	Heavy Series Thru Hardened Pin	45	C2042PCP	1	Perfect Coat Plus Double Pitch	58
180HE-3	2 1/4	Heavy Series Thru Hardened Pin	45	C2042SB	1	Side Bow Chain Double Pitch	79
180HSU	2 1/4	Super Heavy Series	49	C2042SL	1	Self Lube Double Pitch	68
180SU	2 1/4	Super Series	48	C2042SR	1	Side Roller Chain Double Pitch	112
180SU-2	2 1/4	Super Series	48	C2042SS	1	Stainless Steel Double Pitch	61
200	2 1/2	ASME/ANSI Standard Roller Chain	36	C2042SS-D	1	Stainless Plastic Roller Double Pitch	80
200-2	2 1/2	ASME/ANSI Standard Roller Chain	36	C2042TR	1	Top Roller Chain Double Pitch	111
200-3	2 1/2	ASME/ANSI Standard Roller Chain	36	C2042TS	1	Triple Speed Chain	113
200-4	2 1/2	ASME/ANSI Standard Roller Chain	36	LL2044	1 1/4	LL Series Leaf Chain	84
200-5	2 1/2	ASME/ANSI Standard Roller Chain	36	A2050	1 1/4	Transmission Series Double Pitch	50
200-6	2 1/2	ASME/ANSI Standard Roller Chain	36	A2050	1 1/4	HI-MAX Double Pitch	132
200DC	2 1/2	Double Capacity	47	C2050	1 1/4	Conveyor Series Double Pitch	51
200E	2 1/2	E Series Thru Hardened Pin	46	C2050	1 1/4	HI-MAX Double Pitch	133
200E-2	2 1/2	E Series Thru Hardened Pin	46	C2050FS-C	1 1/4	Self Lube Double Pitch	73
200E-3	2 1/2	E Series Thru Hardened Pin	46	C2050HP	1 1/4	Hollow Pin Chain Double Pitch	74
200H	2 1/2	Heavy Series Roller Chains	44	C2050HP-SL	1 1/4	Hollow Pin Chain Self Lube	75
200H-2	2 1/2	Heavy Series Roller Chains	44	C2050HP-SS	1 1/4	Hollow Pin Chain Stainless Steel	76
200H-3	2 1/2	Heavy Series Roller Chains	44	C2050HP-SSS	1 1/4	Hollow Pin 6000 Stainless Steel	77
200HE	2 1/2	Heavy Series Thru Hardened Pin	45	C2050NP	1 1/4	Nickel Plate Double Pitch	55
200HE-2	2 1/2	Heavy Series Thru Hardened Pin	45	C2050PCP	1 1/4	Perfect Coat Plus Double Pitch	58
200HE-3	2 1/2	Heavy Series Thru Hardened Pin	45	C2050SB	1 1/4	Side Bow Chain Double Pitch	79
200HSU	2 1/2	Super Heavy Series	49	C2050SL	1 1/4	Self Lube Double Pitch	68
200SU	2 1/2	Super Series	48	C2050SR	1 1/4	Side Roller Chain Double Pitch	112
200SU-2	2 1/2	Super Series	48	C2050SS	1 1/4	Stainless Steel Double Pitch	61
LL2022	1 1/4	LL Series Leaf Chain	84	C2050TR	1 1/4	Top Roller Chain Double Pitch	111
A2040	1	Transmission Series Double Pitch	50	C2052	1 1/4	Conveyor Series Double Pitch	51
A2040	1	HI-MAX Double Pitch	132	C2052	1 1/4	HI-MAX Double Pitch	133
C2040	1	Conveyor Series Double Pitch	51	C2052-D	1 1/4	Plastic Roller Double Pitch Chain	80
C2040	1	HI-MAX Double Pitch	133	C2052FS-C	1 1/4	Self Lube Double Pitch	73
C2040FS-C	1	Self Lube Double Pitch	73	C2052HP	1 1/4	Hollow Pin Chain Double Pitch	74
C2040HP	1	Hollow Pin Chain Double Pitch	74	C2052HP-SL	1 1/4	Hollow Pin Chain Self Lube	75
C2040HP-SL	1	Hollow Pin Chain Self Lube	75	C2052HP-SS	1 1/4	Hollow Pin Chain Stainless Steel	76
C2040HP-SS	1	Hollow Pin Chain Stainless Steel	76	C2052HP-SSS	1 1/4	Hollow Pin 6000 Stainless Steel	77
C2040HP-SSS	1	Hollow Pin 6000 Stainless Steel	77	C2052NP	1 1/4	Nickel Plate Double Pitch	55
C2040NP	1	Nickel Plate Double Pitch	55	C2052PCP	1 1/4	Perfect Coat Plus Double Pitch	58
C2040PCP	1	Perfect Coat Plus Double Pitch	58	C2052SB	1 1/4	Side Bow Chain Double Pitch	79
C2040SB	1	Side Bow Chain Double Pitch	79	C2052SL	1 1/4	Self Lube Double Pitch	68
C2040SL	1	Self Lube Double Pitch	68	C2052SR	1 1/4	Side Roller Chain Double Pitch	112
C2040SR	1	Side Roller Chain Double Pitch	112	C2052SS	1 1/4	Stainless Steel Double Pitch	61
C2040SS	1	Stainless Steel Double Pitch	61	C2052SS-D	1 1/4	Stainless Plastic Roller Double Pitch	80
C2040TR	1	Top Roller Chain Double Pitch	111	C2052TR	1 1/4	Top Roller Chain Double Pitch	111
C2042	1	Conveyor Series Double Pitch	51	C2052TS	1 1/4	Triple Speed Chain	113
C2042	1	HI-MAX Double Pitch	133	A2060	1 1/2	Transmission Series Double Pitch	50
C2042-D	1	Plastic Roller Double Pitch Chain	80	C2060H	1 1/2	Conveyor Series Double Pitch	51

Chain Product Index

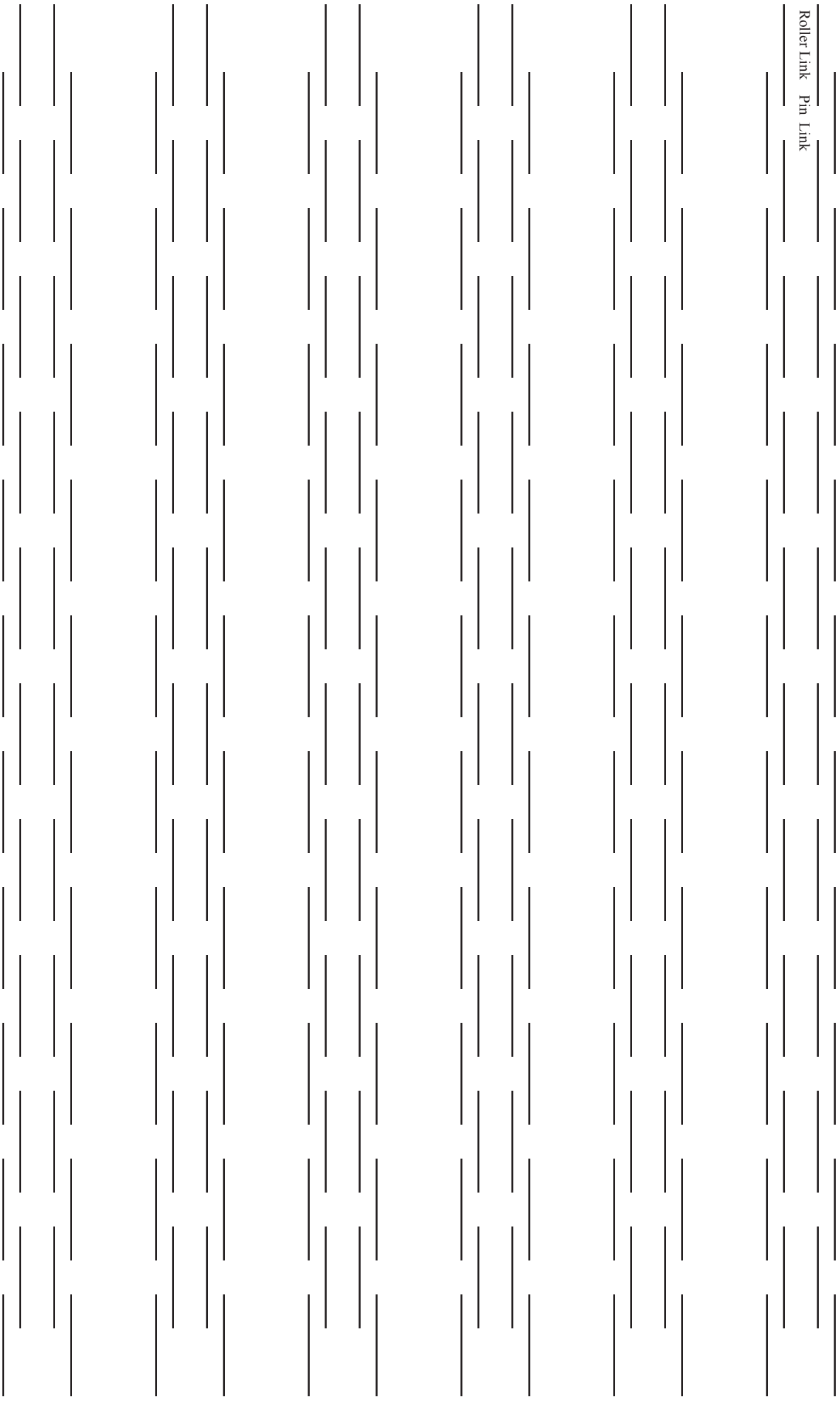
Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
C2060H	1 1/2	HI-MAX Double Pitch	133	C2082H-D	2	Plastic Roller Double Pitch Chain	80
C2060H D-5	1 1/2	Citrus Chain	109	C2082HFS-2	2	Self Lube Double Pitch	73
C2060HFS-C	1 1/2	Self Lube Double Pitch	73	C2082HNP	2	Nickel Plate Double Pitch	55
C2060HNP	1 1/2	Nickel Plate Double Pitch	55	C2082HP	2	Hollow Pin Chain Double Pitch	74
C2060HP	1 1/2	Hollow Pin Chain Double Pitch	74	C2082HP-SL	2	Hollow Pin Chain Self Lube	75
C2060HP-SL	1 1/2	Hollow Pin Chain Self Lube	75	C2082HP-SS	2	Hollow Pin Chain Stainless Steel	76
C2060HP-SS	1 1/2	Hollow Pin Chain Stainless Steel	76	C2082HP-SSS	2	Hollow Pin 6000 Stainless Steel	77
C2060HP-SSS	1 1/2	Hollow Pin 6000 Stainless Steel	77	C2082HPCP	2	Perfect Coat Plus Double Pitch	58
C2060HPCP	1 1/2	Perfect Coat Plus Double Pitch	58	C2082HSL	2	Self Lube Double Pitch	68
C2060HSR	1 1/2	Side Roller Chain Double Pitch	112	C2082HSS	2	Stainless Steel Double Pitch	61
C2060HSS	1 1/2	Stainless Steel Double Pitch	61	C2082HSS-D	2	Stainless Plastic Roller Double Pitch	80
C2060HTR	1 1/2	Top Roller Chain Double Pitch	111	C2082HTR	2	Top Roller Chain Double Pitch	111
C2060SB	1 1/2	Side Bow Chain Double Pitch	79	C2082SB	2	Side Bow Chain Double Pitch	79
C2060SL	1 1/2	Self Lube Double Pitch	68	C2082SL	2	Self Lube Double Pitch	68
C2062H	1 1/2	Conveyor Series Double Pitch	51	C2100H	2 1/2	Conveyor Series Double Pitch	51
C2062H	1 1/2	HI-MAX Double Pitch	133	C2100H	2 1/2	HI-MAX Double Pitch	133
C2062H-D	1 1/2	Plastic Roller Double Pitch Chain	80	C2100HNP	2 1/2	Nickel Plate Double Pitch	55
C2062HFS-2	1 1/2	Self Lube Double Pitch	73	C2100HPCP	2 1/2	Perfect Coat Plus Double Pitch	58
C2062HNP	1 1/2	Nickel Plate Double Pitch	55	C2100HSR	2 1/2	Side Roller Chain Double Pitch	112
C2062HP	1 1/2	Hollow Pin Chain Double Pitch	74	C2100HSS	2 1/2	Stainless Steel Double Pitch	61
C2062HP-SL	1 1/2	Hollow Pin Chain Self Lube	75	C2102H	2 1/2	Conveyor Series Double Pitch	51
C2062HP-SS	1 1/2	Hollow Pin Chain Stainless Steel	76	C2102H	2 1/2	HI-MAX Double Pitch	133
C2062HP-SSS	1 1/2	Hollow Pin 6000 Stainless Steel	77	C2102HNP	2 1/2	Nickel Plate Double Pitch	55
C2062HPCP	1 1/2	Perfect Coat Plus Double Pitch	58	C2102HPCP	2 1/2	Perfect Coat Plus Double Pitch	58
C2062HSR	1 1/2	Side Roller Chain Double Pitch	112	C2102HSS	2 1/2	Stainless Steel Double Pitch	61
C2062HSS	1 1/2	Stainless Steel Double Pitch	61	C2120H	3	Conveyor Series Double Pitch	51
C2062HSS-D	1 1/2	Stainless Plastic Roller Double Pitch	80	C2120H	3	HI-MAX Double Pitch	133
C2062HTR	1 1/2	Top Roller Chain Double Pitch	111	C2120HNP	3	Nickel Plate Double Pitch	55
C2062SB	1 1/2	Side Bow Chain Double Pitch	79	C2120HPCP	3	Perfect Coat Plus Double Pitch	58
C2062SL	1 1/2	Self Lube Double Pitch	68	C2120HSS	3	Stainless Steel Double Pitch	61
C2062TS	1 1/2	Triple Speed Chain	113	C2122H	3	Conveyor Series Double Pitch	51
LL2066	1 1/4	LL Series Leaf Chain	84	C2122H	3	HI-MAX Double Pitch	133
A2080	2	Transmission Series Double Pitch	50	C2122HNP	3	Nickel Plate Double Pitch	55
C2080H	2	Conveyor Series Double Pitch	51	C2122HPCP	3	Perfect Coat Plus Double Pitch	58
C2080H	2	HI-MAX Double Pitch	133	C2122HSS	3	Stainless Steel Double Pitch	61
C2080HFS-C	2	Self Lube Double Pitch	73	C2160H	4	Conveyor Series Double Pitch	51
C2080HNP	2	Nickel Plate Double Pitch	55	C2160HNP	4	Nickel Plate Double Pitch	55
C2080HP	2	Hollow Pin Chain Double Pitch	74	C2160HPCP	4	Perfect Coat Plus Double Pitch	58
C2080HP-SL	2	Hollow Pin Chain Self Lube	75	C2160HSS	4	Stainless Steel Double Pitch	61
C2080HP-SS	2	Hollow Pin Chain Stainless Steel	76	C2162H	4	Conveyor Series Double Pitch	51
C2080HP-SSS	2	Hollow Pin 6000 Stainless Steel	77	C2162HNP	4	Nickel Plate Double Pitch	55
C2080HPCP	2	Perfect Coat Plus Double Pitch	58	C2162HPCP	4	Perfect Coat Plus Double Pitch	58
C2080HSL	2	Self Lube Double Pitch	68	C2162HSS	4	Stainless Steel Double Pitch	61
C2080HSR	2	Side Roller Chain Double Pitch	112	240	3	ASME/ANSI Standard Roller Chain	38
C2080HSS	2	Stainless Steel Double Pitch	61	240-2	3	ASME/ANSI Standard Roller Chain	38
C2080HTR	2	Top Roller Chain Double Pitch	111	240-3	3	ASME/ANSI Standard Roller Chain	38
C2080SB	2	Side Bow Chain Double Pitch	79	240-4	3	ASME/ANSI Standard Roller Chain	38
C2080SL	2	Self Lube Double Pitch	68	240-5	3	ASME/ANSI Standard Roller Chain	38
C2082H	2	Conveyor Series Double Pitch	51	240-6	3	ASME/ANSI Standard Roller Chain	38
C2082H	2	HI-MAX Double Pitch	133	240DC	3	Double Capacity	47

Chain Product Index

Chain	Pitch	Product	Page	Chain	Pitch	Product	Page
240E	3	E Series Thru Hardened Pin	46	BL846	1	BL Series Leaf Chain	83
240E-2	3	E Series Thru Hardened Pin	46	AL866	1	AL Series Leaf Chain	82
240E-3	3	E Series Thru Hardened Pin	46	BL866	1	BL Series Leaf Chain	83
240SU	3	Super Series	48	LL0866	1/2	LL Series Leaf Chain	84
240SU-2	3	Super Series	48	BL888	1	BL Series Leaf Chain	83
LL2422	1 1/2	LL Series Leaf Chain	84				
LL2444	1 1/2	LL Series Leaf Chain	84				
LL2466	1 1/2	LL Series Leaf Chain	84				
LL2822	1 3/4	LL Series Leaf Chain	84				
LL2844	1 3/4	LL Series Leaf Chain	84				
LL2866	1 3/4	LL Series Leaf Chain	84				
3039	8	3039 Lumber Mill Chain	115				
LL3222	2	LL Series Leaf Chain	84				
LL3244	2	LL Series Leaf Chain	84				
LL3266	2	LL Series Leaf Chain	84				
AL422	1/2	AL Series Leaf Chain	82				
BL422	1/2	BL Series Leaf Chain	83				
BL423	1/2	BL Series Leaf Chain	83				
BL434	1/2	BL Series Leaf Chain	83				
AL444	1/2	AL Series Leaf Chain	82				
BL444	1/2	BL Series Leaf Chain	83				
BL446	1/2	BL Series Leaf Chain	83				
AL466	1/2	AL Series Leaf Chain	82				
BL466	1/2	BL Series Leaf Chain	83				
AL522	5/8	AL Series Leaf Chain	82				
BL522	5/8	BL Series Leaf Chain	83				
BL523	5/8	BL Series Leaf Chain	83				
BL534	5/8	BL Series Leaf Chain	83				
AL544	5/8	AL Series Leaf Chain	82				
BL544	5/8	BL Series Leaf Chain	83				
BL546	5/8	BL Series Leaf Chain	83				
AL566	5/8	AL Series Leaf Chain	82				
BL566	5/8	BL Series Leaf Chain	83				
AL622	3/4	AL Series Leaf Chain	82				
BL622	3/4	BL Series Leaf Chain	83				
BL623	3/4	BL Series Leaf Chain	83				
BL634	3/4	BL Series Leaf Chain	83				
AL644	3/4	AL Series Leaf Chain	82				
BL644	3/4	BL Series Leaf Chain	83				
BL646	3/4	BL Series Leaf Chain	83				
AL666	3/4	AL Series Leaf Chain	82				
BL666	3/4	BL Series Leaf Chain	83				
AL822	1	AL Series Leaf Chain	82				
BL822	1	BL Series Leaf Chain	83				
LL0822	1/2	LL Series Leaf Chain	84				
BL823	1	BL Series Leaf Chain	83				
BL834	1	BL Series Leaf Chain	83				
AL844	1	AL Series Leaf Chain	82				
BL844	1	BL Series Leaf Chain	83				
LL0844	1/2	LL Series Leaf Chain	84				

Attachment Spacing Line Drawing

Roller Link Pin Link



TERMS AND CONDITIONS OF SALE

1. Price and Payment Terms:

- (a) All prices set forth herein are FOB Seller's Shipping point and are payable net thirty (30) days after invoice date. A one percent (1%) cash discount from net invoice price (exclusive of all other charges) will apply to payments received within ten (10) days of invoice date. Shipments will be invoiced as of date of shipment. Accounts not paid within thirty (30) days of invoice date will bear interest from the invoice date at the rate of one and one-half percent (1 - 1/2%) per month or the maximum rate allowed by law, whichever is less. In the event of failure of timely payment by Buyer, shall pay to Seller all costs of collection, including fifteen percent (15%) of the amount due hereunder as attorney's fees if collected by or through an attorney-at-law.
- (b) Prices on the goods are exclusive of all city, state, and federal excise taxes, including, without limitation, taxes on manufacture, sales, receipts, gross income, occupation, use and similar taxes. Wherever applicable, any tax or taxes will be added to the invoice as a separate charge to be paid by the Buyer.
- (c) In addition to the purchase price for the goods Buyer shall pay and be liable for all expenses incurred by Seller for insurance, freight, cartage, warehousing, and all other charges in connection with loading and shipping the goods to the Buyer. Seller will exercise reasonable efforts to route shipments to incur the lowest available transportation charges; any premium rate shipping shall be at the request and cost of Buyer.
- (d) The minimum net invoice charge on any order shall be \$100.00.
- (e) Payment for the goods shall, if Seller so requires, be made in full prior to delivery and Seller shall be entitled to withhold delivery until such payment has been made and any check or other negotiable instrument given in payment has cleared. Seller shall have the additional right at any time to limit or cancel any credit extended or to be extended hereunder. Upon failure by Buyer to make payment to Seller within thirty (30) days after notice from Seller limiting or cancelling any credit extended or requiring Buyer to make payment before delivery, Seller shall have the option to cancel this and other contracts between Seller and Buyer.
- (f) Prices are subject to change without notice. The price for an order will be the price in effect at the time of shipment.

2. Title to and Reservation of Security Interest in the Goods:

Until Buyer has completed payment for the goods, title and ownership to said goods shall remain with Seller and its assigns. In the event it is determined that, contrary to the foregoing, title has transferred prior to full payment, Seller hereby reserves and Buyer hereby grants to Seller a purchase money security interest in the goods.

3. Limitation Of Warranty, Remedy and Liability:

- (a) Seller warrants the goods to be free from defects in workmanship and/or materials for a period of ninety (90) days from the date of shipment to Buyer. Seller or its authorized distributor must receive written notice of any warranty claim within two weeks of the date that the defect should have been discovered. To claim under this warranty, goods must be returned to Seller, freight prepaid by Buyer, for determination by Seller that such goods are defective because of poor workmanship or defective materials. Seller shall replace or repair, at its sole option and expense, any defective goods or parts thereof, and return such repaired/replacement material to Buyer, freight prepaid by Seller. THIS REMEDY IS THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO BUYER. If Seller determines in its sole discretion that the defect is attributable to any cause other than poor workmanship or defective materials (including, but not limited to, misuse or abusive operation, faulty installation, unauthorized repair), then Seller shall have no obligation whatsoever with respect to repair or replacement of the defective goods. Seller shall return the goods to Buyer, freight to be paid by Buyer, and the warranty described herein shall be void.
- (b) All specifications, performance figures, drawings, and particulars of weights and dimensions made available by Seller and not included in this warranty are approximate only and the descriptions and illustrations contained in Seller's catalogs, price lists, or sales material are intended only to present a general idea of their subject matter, and none of the items referred to above shall form part of this warranty. Recommendations for the use of the goods are suggestions only and not directions and Seller makes no express or implied warranties with respect thereto.
- (c) EXCEPT AS NOTED IN PARAGRAPH (a), THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY BY SELLER, EITHER EXPRESS OR IMPLIED.
- (d) BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, OR, INCIDENTAL OR CONSEQUENTIAL LOSS) IN CONNECTION WITH THE USE, PURCHASE, NON-USE OR OPERATION OF THE GOODS SHALL BE AVAILABLE TO IT UNDER ANY CIRCUMSTANCES, WHETHER BASED UPON NEGLIGENCE OR OTHERWISE AND IRRESPECTIVE OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF ANY SUCH DAMAGES. IN ANY EVENT, THE LIABILITY OF SELLER TO BUYER FOR ANY REASON AND UPON ANY CAUSE OF ACTION WHATSOEVER SHALL BE LIMITED TO THE AMOUNT THEN PREVIOUSLY PAID TO SELLER BY BUYER.

4. Return of Goods/Cancellation:

Once placed, orders may not be cancelled without the seller's consent. The seller may, at its sole discretion, accept returns of standard materials for credit. In this case the buyer shall obtain a RETURNED GOODS AUTHORIZATION (RGA) from the seller. No returns, of any kind, will be accepted by the seller, without a valid RGA. A copy of the RGA for shall be enclosed by the buyer with the shipment of authorized returned products to the seller. Goods returned for credit must be returned FREIGHT PREPAID to the seller's location. Such goods must also be in a resalable condition and are subject to a 20% restocking fee. Goods returned for warranty claim also require a valid RGA and must follow the shipping procedure detailed above. For additional information on how to file a warranty claim see "Limitation of Warranty, Remedy, and Liability" in our "Terms and Conditions of Sale".

5. Delay or Nonperformance:

Seller shall not be liable for delay in shipment for any cause beyond its reasonable control, nor shall such delay entitle Buyer to cancel any order or refuse to accept delivery. Seller shall not be liable for failure or delay in shipment or other performance hereunder if such failure is due in whole or in part to strikes, fires, accidents, wars; rebellions, civil commotion or public strike, acts of any government, whether legal or otherwise, acts of public enemies, force majeure, inability to secure or obtain or delay in securing or obtain transportation machinery, materials, or sufficient qualified labor, or any other causes beyond Seller's reasonable control. Claims for shortage, damage or nondelivery shall be made directly to carrier, and request for proof of delivery must be made within ninety (90) days of invoice date.

6. Risk of Loss:

Unless otherwise specifically agreed in writing, risk of loss of the goods shall pass from Seller to Buyer when the goods or any portion thereof, property packed and secured in such a manner as to reach their destination in good condition under normal conditions of transport, are placed in the possession of the carrier, FOB Seller's shipping point for shipment to Buyer. The Seller may choose any reasonable carrier for delivery. Tender of delivery shall be deemed made at Seller's shipping point even when freight is prepaid to point of destination or Seller is required to deliver the goods to a particular destination.

7. Modifications:

This document constitutes the entire agreement of the parties with respect to the terms and conditions of sale of the goods. No modification of this document shall be binding upon Seller unless in writing and signed by the party to be bound. Any terms and provisions contained in any document of Buyer which are inconsistent with the terms and provisions hereof shall not be binding on Seller and shall not be considered applicable to the sale or shipment of the goods. No agent, employee, or representative of Seller other than its Officers has any authority to bind Seller to any affirmation, representation or warranty concerning the goods sold under this document and unless an affirmation, representation or warranty made by an Officer of Seller is specifically included in this document, it has not formed a part of the basis of this bargain and shall not in any way be enforceable.

8. Waiver:

A waiver by Seller of a breach by Buyer of any provision of this document shall not be deemed a waiver of future compliance with the provision of the document breached.

9. Controlling Law:

The validity and interpretation of this document shall be governed by the laws of the State of Georgia.

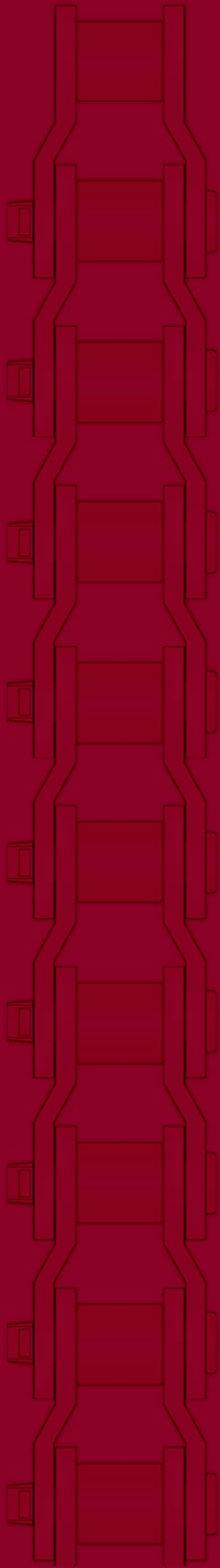
10. Jurisdiction:

Buyer, to the extent it may lawfully do so, hereby submits to the jurisdiction of any state or federal court located in Cobb County, Georgia as well as to the jurisdiction of all courts from which an appeal may be taken from the aforesaid courts for the purpose of any suit, action or other proceeding arising out of any of the Buyer's obligations under or with respect to this document, and the Buyer expressly waives any and all objections that Buyer may have as to jurisdiction and/or venue in any of such courts.

11. Special Order Goods:

On special order goods, Buyer will indemnify and hold Seller harmless from all costs and damages arising out of any intellectual property infringement claim relating to any goods manufactured by Seller pursuant to the designs or specifications furnished by Buyer as well as any claims arising out of or connected with an end product into which goods sold by Seller are incorporated, including but not limited to any claims relating to product liability, breach of warranty, breach of contract or otherwise.

HITACHI
Inspire the Next



**ENGINEERING CLASS
CHAIN PRODUCTS
GENERAL CATALOG**



Engineering Class Chain Products General Catalog



**East Coast Service Center
Atlanta**

 **Hitachi Maxco, Ltd.**
1630 Cobb International Blvd.
Kennesaw, GA 30152
Ph: 800-241-8209
Fx: 770-424-9145



**West Coast Service Center
Portland**

 **Hitachi Maxco, Ltd.**
3529 N.W. Yeon Avenue
Portland, OR 97210
Ph: 800-544-7943
Fx: 503-228-6703



 **Hitachi Maxco, Ltd.**

Visit our website: www.hitmax.com

Engineering Class Chains

Table of Contents










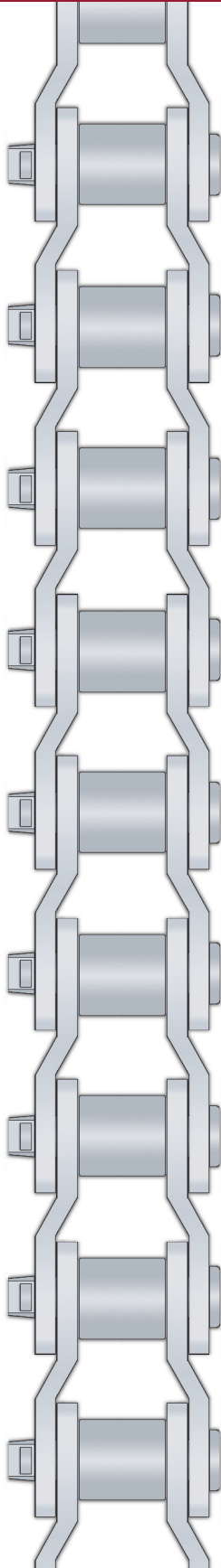
	Engineering Class Drive Chain	
	Introduction	6
	Dimensions and Specifications	7
	Drive Chain Selection	8-9
	Roller Conveyor Chains	
	Introduction	10-11
	Plain Chain Dimensions and Specifications	12-13
	Attachment Chain Dimensions and Specifications	14-21
	Raised Sidebar Chains	
	Introduction	22
	Dimensions and Specifications	23
	Conveyor Chain Selection	24-30
	Steel Bushed Chains	
	Introduction	31
	Plain Chain Dimensions and Specifications	32
	Attachment Chain Dimensions and Specifications	33-37
	Cast Combination Chains	
	Introduction	38
	Plain Chain Dimensions and Specifications	39
	Attachment Chain Dimensions and Specifications	40-42
	Welded Steel Mill Chains	
	Introduction	43
	Plain Chain Dimensions and Specifications	44
	Attachment Chain Dimensions and Specifications	45-51
	Welded Steel Drag Chains	
	Introduction	52
	Plain Chain Dimensions and Specifications	53
	Attachment Chain Dimensions and Specifications	54-55
	Drop Forged Rivetless Chains	
	Introduction	56
	Dimensions and Specifications	57
	"H" Class Mill Chains	
	Introduction	58
	Plain Chain Dimensions and Specifications	59
	Attachment Chain Dimensions and Specifications	60-62

Table of Contents

	400 Class Pintle Chains	
	Introduction	63
	Plain Chain Dimensions and Specifications	64
	Attachment Chain Dimensions and Specifications	65-66
	Sugar Mill Chains	
	Introduction	67
	Plain Chain Dimensions and Specifications	68
	Attachment Chain Dimensions and Specifications	69-70
	Carrier Slats	71
	Draw Bench / Bar and Pin / Double Flex Chains	
	Chain Dimensions and Specifications	72-75
	Meat Packaging Chains	
	Introduction	76
	Chain Dimensions and Specifications	77
	Bakery Oven and Proofer Chains	
	Introduction	78
	Chain Dimensions and Specifications	79-80
	Asphalt Chains	
	Introduction	81
	Chain Dimensions and Specifications	82-85
	Coal Mining Chains	
	Introduction	86
	Chain Dimensions and Specifications	87-89
	Detachable Chains	
	Introduction	90
	Chain Dimensions and Specifications	91-93
	Apron Conveyors	
	Introduction	94-95
	Chain Dimensions and Specifications	96-97
	Environmental Chains	
	Introduction	98
	Dimensions and Specifications	99-102
	Product Index Section	103 - 122

Drive Chains



Superior Strength and Toughness for Demanding Applications

Hitachi Heavy Duty Engineering Class Drive Chains are designed and built to withstand the rugged requirements of high load power transmission applications. In order to offer the best combination of chain strength, wear performance and shock load resistance, these premier chains possess the following key features:

- Offset sidebar construction (most sizes).
- High quality heat treated carbon and alloy steels.
- Induction hardened pins (select chains).
- Heavy interference fits.
- Full round pin and bushing design.

Hitachi Heavy Duty Drive Chains meet or exceed OEM and ASME/ANSI specifications.



Product	Page
Heavy Duty Drive Chain	7
Heavy Duty Drive Chain Design	8-9

Engineering Class Drive Chain

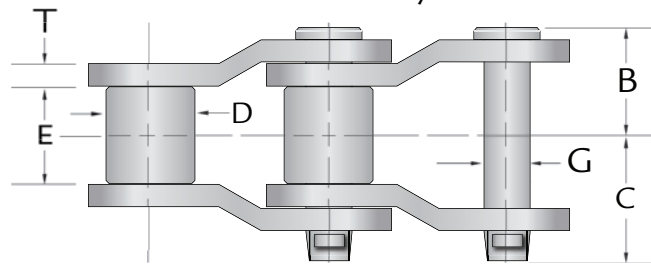
Drive Chain Specifications

Chain Dimensions Are Given In Inches

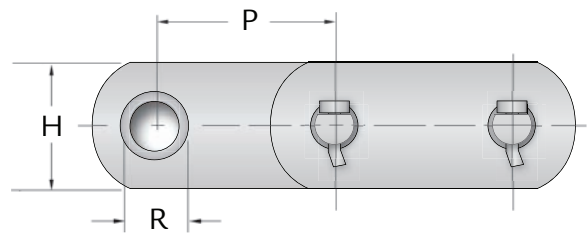
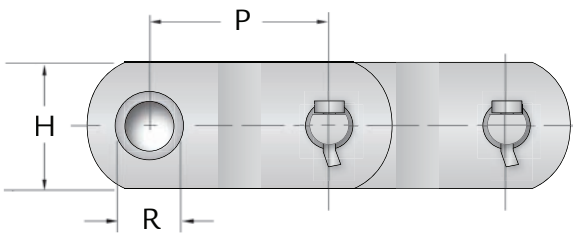
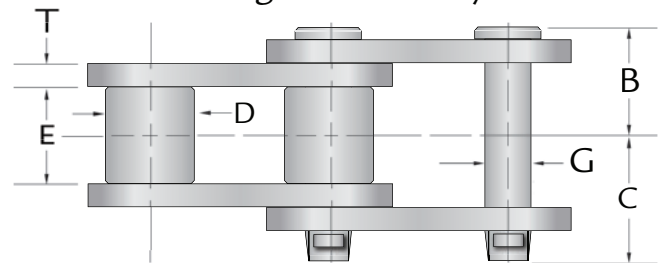
Hitachi Chain Number	Chain Pitch P	Inside Width E	Roller		Pin				Side Bar			Bushing		Rated Working Load lbs	Average Ultimate Strength lbs	Avg. Chain Wght lbs/ft
			D	Mat.	G	Mat.	B	C	T	H	Mat.	R	Mat.			
Offset Sidebar Style																
H25H	2.500	1.500	1.250	A-HT	0.648	A-HT	1.70	2.00	0.375	1.625	A-HT	0.910	A-CH	4,900	87,000	9.2
HR588	2.609	1.125	0.875	C-HT	0.438	C-HT	1.25	1.45	0.250	1.125	C-HT	0.640	C-CH	2,500	26,000	3.6
H3011	3.067	1.563	1.625	A-HT	0.750	A-HT	1.75	2.20	0.375	2.250	A-HT	1.125	A-CH	6,100	110,000	12.0
H1031	3.075	1.500	1.250	A-HT	0.625	A-HT	1.60	1.90	0.313	1.500	A-HT	0.910	A-CH	4,650	48,000	7.0
HP3H	3.075	1.500	1.250	A-HT	0.648	A-HT	1.70	2.00	0.375	1.750	A-HT	0.910	A-CH	5,100	75,000	9.6
H238	3.500	1.500	1.750	A-HT	0.875	A-HTIH	2.00	2.40	0.500	2.250	A-HT	1.250	A-CH	7,700	140,000	16.1
H1242	4.063	1.938	1.750	A-HT	0.875	A-HT	2.20	2.60	0.500	2.250	A-HT	1.250	A-CH	9,000	140,000	16.1
H1245	4.073	1.938	1.780	A-HT	0.938	A-HT	2.40	2.75	0.562	2.380	A-HT	1.313	A-CH	10,100	170,000	18.0
H635	4.500	2.063	2.250	A-HT	1.093	A-HTIH	2.50	2.90	0.563	3.000	A-HT	1.625	A-CH	12,300	220,000	25.4
H1602A	5.000	2.750	2.500	A-HT	1.250	A-HTIH	3.10	3.40	0.625	3.500	A-HT	1.750	A-CH	17,500	310,000	34.0
H5035	5.000	2.563	2.500	A-HT	1.375	A-HTIH	3.10	3.50	0.750	3.500	A-HT	1.875	A-CH	19,600	350,000	38.1
H5542	5.500	3.000	3.000	A-HT	1.500	A-HTIH	3.40	3.90	0.750	4.000	A-HT	2.000	A-CH	23,600	420,000	49.1
H6042	6.000	3.000	3.000	A-HT	1.500	A-HTIH	3.40	3.90	0.750	4.000	A-HT	2.000	A-CH	23,600	420,000	45.0
H6066	6.000	3.000	*	*	1.750	A-HTIH	3.40	3.90	0.750	4.750	A-HT	3.000	A-CH	27,600	600,000	51.7
Straight Sidebar Style																
H344SXX	3.000	1.938	1.780	A-HT	0.938	A-HTIH	2.40	2.80	0.563	2.375	A-HT	1.313	A-CH	10,050	170,000	22.0
H4031	4.000	2.750	2.500	A-HT	1.250	A-HTIH	2.90	3.40	0.625	3.500	A-HT	1.750	A-CH	17,500	310,000	40.0
H5042	5.000	3.000	3.000	A-HT	1.500	A-HTIH	3.40	3.90	0.750	4.000	A-HT	2.000	A-CH	23,600	420,000	53.0
H6566	6.500	3.250	3.500	A-HT	1.750	A-HTIH	4.00	4.40	0.875	6.000	A-HT	2.438	A-CH	30,600	600,000	71.1
H7080	7.000	3.250	4.500	A-HT	2.125	A-HTIH	3.80	4.20	0.875	6.000	A-HT	3.125	A-CH	37,150	800,000	89.6

Dimensions subject to change

Offset Sidebar Style



Straight Sidebar Style



- C-HT Medium Carbon Steel - Through Hardened
- A-HT Medium Carbon Alloy Steel - Through Hardened
- A-HTIH Medium Carbon Alloy Steel - Through Hardened and Induction Hardened
- C-CH Low Carbon Steel - Case Hardened
- A-CH Low Carbon Alloy Steel - Case Hardened

* Not Applicable

Engineering Class Chains

Drive Chain Selection

Introduction

Engineering Class Drive Chains are one of the most efficient and cost effective ways to transmit mechanical power between shafts. They handle large working loads in the slow to moderate speed range, have very small energy losses, and are generally inexpensive compared with other methods of transmitting power between rotating shafts. Successful selection involves following several simple steps involving algebraic calculation and the use of Horsepower, Service Factor tables and/or working load calculation.

For any given set of drive conditions, a number of possible chain and sprocket combinations are possible. The designer therefore, should be aware of several selection principles which, when applied correctly, help to balance overall drive performance and cost. The purpose of this section is to help designers make selections that meet the requirements of the drive, and are cost efficient.

General Drive Chain Selection Principles

- The recommended number of teeth for the small sprocket is 12. The minimum which should be used is 9. Smoother operation is achieved with more teeth.
- Speed ratios should be 7:1 or less (optimum) and never more than 10:1.
- The minimum wrap of the small sprocket is 120 degrees.

General Drive Chain Operating Principles

- Lubrication:** A separating wedge of high quality oil formed between the operating joints protects chains from rapid wear out due to metal to metal contact and if supplied in sufficient volume also provides effective cooling and impact load damping. Effective lubrication is the single most effective way to improve chain performance and prolong life. The chain should be protected against moisture and kept free of contamination. High quality non-detergent petroleum based oil is recommended. Heavy grease is generally too stiff to penetrate chain joints effectively. The following indicates the recommended viscosity for a given temperature:

SAE20: 20°F - 40°F SAE40: 100°F - 120°F
SAE30: 40°F - 100°F SAE50: 120°F - 140°F

- Alignment:** Accurate alignment of shafts and sprockets helps provide uniform distribution of loads across the entire width of the chain and contributes to optimum drive performance.
- Direction of Travel:** For offset bar chains used in power transmission service (i.e. drives), the narrow end should face the smaller sprocket on the tight side. Note that this is not always the best running direction for offset side bar chains used on conveyors.
- Sprockets:** Hardened tooth sprockets are recommended.

Required Information for Drive Chain Selection

- Type of input power (electric motor, internal combustion engine with mechanical or hydraulic drive), and type of equipment to be driven.
- Amount of horsepower required to provide sufficient power to the driven shaft. Full load speed of the fastest running shaft (rpm).

- Desired speed of the slow running shaft (i.e. the speed ratio). NOTE: If speeds are variable determine the horsepower to be transmitted at each speed.
- Diameters of the driver and driven shafts.
- Center distance of the shafts. NOTE: If this distance is adjustable determine the amount of adjustment.
- Note the position of the drive and any space limitations that might exist. These space limitations usually limit the diameter of the large sprocket and may require the speed reduction (or speed increase) be accomplished in more than one (1) drive ratio.
- Conditions of the drive. It is advisable to consult with Hitachi engineering personnel when unusual conditions such as widely fluctuating loads, temperatures, or severely abrasive or corrosive environments exist.

Abbreviations Used in Equations

- N: Number of teeth on the large sprocket.
n: Number of teeth on the small sprocket.
R: Speed in revolutions per minute (rpm) of large sprocket.
r: Speed in revolutions per minute (rpm) of small sprocket.
S: Linear Chain Speed in feet per minute (fpm).
C: Shaft center distance in chain pitches.
HP: Horsepower of the drive motor or engine.
SF: Service Factor
DHP: Design Horsepower
P: Speed Factor
T: Calculated chain tension.

Chain Selection by Calculating Chain Tension

The method for selecting Engineering Class Drive Chains in this catalog will involve:

- Calculating the “design horsepower” (DHP) based on the motor or engine capacity and the drive conditions.
- Determining the “calculated chain tension” from the design horsepower and chain speed.
- Comparing the calculated chain tension (T) to the “rated working load” of the selected chain and in some situations to a value equal to 15% of the selected chains average ultimate strength.

Most Engineering Class Drive Chains operate at relatively slow speeds. The rated working load values found in the dimensional tables in this catalog are based on maintaining a maximum bearing pressure between the pin and bushing of 3,500 pounds per square inch (psi). This means that if the calculated chain tension in the drive is equal to or less than the selected chain’s rated working load we will be operating at or below the optimum pin/bushing bearing pressure of 3,500 psi and we can expect successful chain performance.

We note however that often chains can be operated successfully in excess of the “rated working load” limit. The applications that lend themselves to successful performance in this situation are slow speed (less than 50 ft/min), well lubricated chain drives. In this case we may operate the chain at a calculated chain tension (T) up to 15% of its average tensile strength. When selecting chains by this criterion confirm the selection with Hitachi engineering personnel.

Drive Chain Selection

Step 1: Determine the Design Horsepower (DHP)

$$DHP = \text{Motor HP} \times SF$$

SF (Service Factor) is based on the type of input power and classification of the expected shock loading in the application. Use the table below to determine an appropriate SF.

Class of Driven Load	Type of Input Power		
	Internal Combustion Engine with Hydraulic Drive	Electric Motor or Turbine	Internal Combustion Engine with Mechanical Drive
Uniform	1.0	1.0	1.2
Moderate	1.2	1.3	1.4
Heavy	1.4	1.5	1.7

Example: A 25HP electric motor which will operate with moderate shock loading has a DHP = 25 x 1.3 = 32.5 thus DHP = 32.5

Step 2: Calculate Expected Chain Linear Speed

Begin by assuming the recommended 12 tooth small sprocket and make a preliminary selection of chain pitch from the Drive Chain dimensional data shown in the preceding pages. It is not important that the selection be correct at this point. Use the following formula to determine linear chain speed (S):

$$S = (P \times r \times n) / 12$$

Example: Choose a 12 tooth sprocket (n) with an input speed of 15 rpm (r) and estimate a chain pitch of 3.5" (P) we get:

$$S = (3.5 \times 15 \times 12) / 12 = 52.5 \text{ fpm}$$

Step 3: Determine the Calculated Chain Tension (T)

$$T = [DHP \times 33,000] / S \times F$$

F (Speed Factor) can be determined from the table below:

Linear Chain Speed (fpm)	Factor
0 - 50	1.0
51 - 100	1.2
101 - 160	1.4

Example: From the example we have been using since the linear chain speed is 52.5 fpm we would specify a speed factor of 1.2. Calculated Chain tension (T) = [(32.5 x 33,000) / 52.5] x 1.2 = 24,514 lbs.

Step 4: Determine the Required Chain Tensile Strength

For chain speeds less than 100 fpm, after applying the appropriate speed and service factors as shown above, we may operate a chain with the calculated chain tension (T) at 15% of the Average Tensile Strength.

$$\text{Required Average Tensile Strength} = T / 0.15$$

Example: In the example we have been using the required average tensile strength would be 24,514 / .15 = 163,426 lbs.

Step 5: Confirm and/or Reselect Chain Size

Now we must verify our preliminary selection is correct. If it was not sufficient we need to modify our chain selection so that the combination of Chain Pitch and Average Tensile Strength (ATS) meet the requirements of the equation as shown in Step 4.

Example: Returning to our example we note that our 3.5" pitch chain is H238 which has an average tensile strength of 140,000 lbs. Since this strength is less than required ATS of 163,426 lbs. we must make another selection.

We note that increasing pitch will increase linear speed and therefore reduce calculated chain tension, however, we might be limited by the diameter of the sprocket. We therefore will consider two larger pitch chains, H1242 and H1245.

First, we check H1243 (P = 4.063" ...ATS = 140,000 lbs.)

$$S = (4.063 \times 15 \times 12) / 12 = 60.9 \text{ fpm}$$

$$T = [(32.5 \times 33,000) / 60.9] \times 1.2 = 21,133 \text{ lbs.}$$

Required ATS = 21,133 / .15 = 140,866 lbs.

H1242 is close, but does not satisfy the requirement.

Next, we try H1245 (P = 4.073" . . . ATS = 170,000 lbs.)

We don't need to calculate this based on a 12 tooth sprocket since it will obviously be satisfactory, however, can we use a smaller sprocket?

Let's try 9 teeth:

$$S = (4.073 \times 15 \times 9) / 12 = 45.8 \text{ fpm}$$

$$T = [(32.5 \times 33,000) / 45.8] \times 1.0 = 23,417 \text{ lbs. (note the speed factor changes).}$$

Required ATS = 23,417 / .15 = 156,113

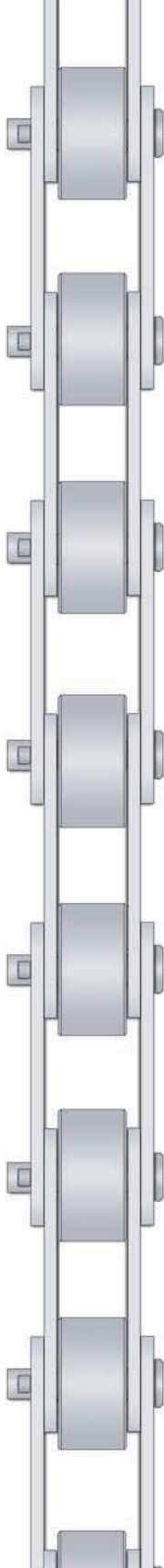
H1245 with a 9 tooth sprocket does satisfy the requirements of Step 4 and may be selected. We would recommend that the largest number of teeth up to 12, which can be accommodated by available space, be specified.

Note that it was possible to make H1242 or perhaps H238 work as well by increasing the number of teeth on the small sprocket. Sometimes much trial and error is required to get the best possible combination of chain pitch and number of teeth in the small sprocket to satisfy space limitations.

Final Notes:

The above method selects a chain based on chain strength. If the user desires less replacement over a more economical selection rather than comparing the calculated chain tension (T) to the ATS, the user may compare the calculated chain tension (T) to the rated working load given in the dimensional tables. This will select a chain with a larger pin diameter and will require less frequent replacement due to wear out (i.e. elongation).

Roller Conveyor Chains



Quality Performance Through Precision Manufacturing

Hitachi Engineering Class Roller Conveyor Chains are available with a wide variety of attachments for general and heavy duty conveying service. Chains are produced with high quality steels and precise manufacturing controls. These chains are available with special materials, plating or coatings to operate successfully in a wide variety of challenging environmental conditions including high or low temperatures, corrosive applications or abrasive conditions. Hitachi's experienced application engineering department can assist with the correct selection or application of these products.

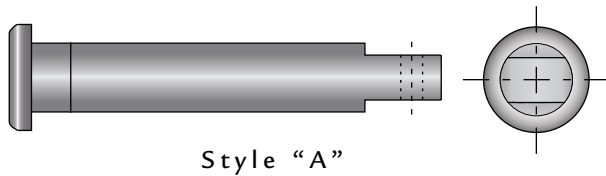


Product	Page
Roller Conveyor Plain Chain	12-13
A-1 / K-1 Attachments	14
A-11 Attachments	15
A-2 / K-2 Attachments	16-17
A-22 / A-42 Attachments	18
G-6 Attachments	19
G-19 / G-29 Attachments	20-21

Roller Conveyor Chain Components

Pins

Hitachi Roller Conveyor Chain pins are made from high quality carbon or alloy steels. The parts are heat treated to provide excellent strength and wear resistance. Standard materials and heat treatments can be found in the tables on pages 12-13, however, specialty materials, heat treatments, plating or coatings are available to suit the conditions of more difficult or challenging applications.

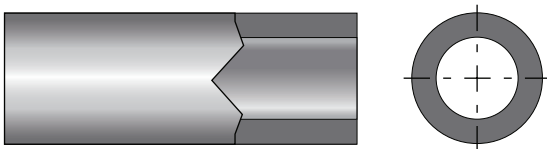


Style "A"

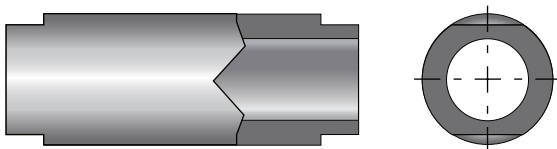
Standard pins are cottered although rivet type pins can be furnished upon request. The three diameter construction allows for easy assembly in the field and the double flatted ends (Style A) provide a mechanical lock to prevent pin rotation which can occur over time.

Bushings

Hitachi Roller Conveyor Chain bushings are made from high quality carbon or alloy steels and generally carburized for superior wear resistance. Standard materials and heat treatments can be found in the tables on pages 12-13, however, specialty materials, heat treatments, platings or coatings are available to suit the conditions of more difficult or challenging applications. Roller Conveyor Chain bushings may be full round (Style "R") or double flatted (Style "F") depending on chain size.



Style "R"



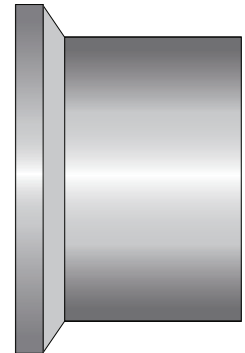
Style "F"

Rollers

Hitachi Roller Conveyor Chain rollers are made from high quality carbon or alloy steels. These parts are heat treated to provide excellent strength and wear resistance. Standard materials and heat treatments can be found in the tables on pages 12-13, however, specialty materials, heat treatments, platings or coatings are available to suit conditions of more difficult or challenging applications. Flanged rollers (Style "U") are specified on some chain sizes and act as tracking devices for long conveyors. Rollers of chains greater than 3" pitch are carrier rollers (i.e. the roller diameter is larger than the side bar height) which allows chains to roll reducing friction and power requirements.



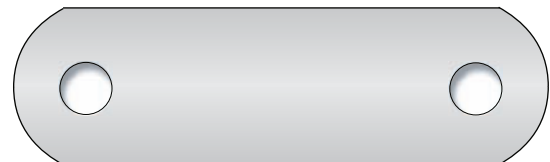
Style "T"



Style "U"

Sidebars

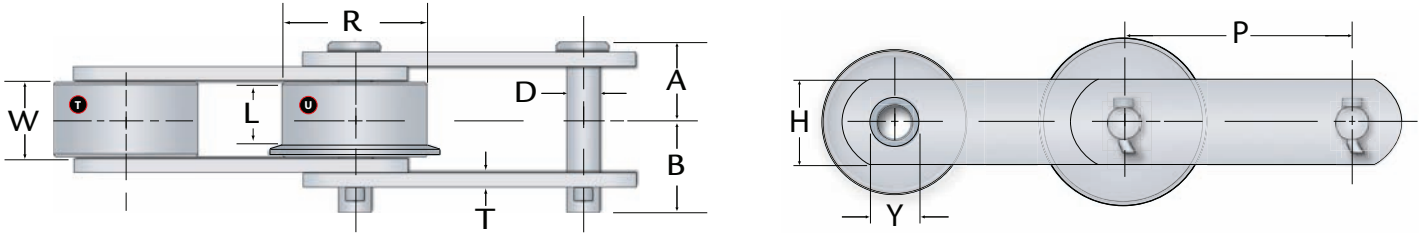
Hitachi Roller Conveyor Chain sidebars are made from high quality carbon or alloy steels. The parts are generally not heat treated however there are exceptions. Standard materials and heat treatments (if any) can be found in the tables on pages 12-13, however, specialty materials, heat treatments, platings or coatings are available to suit the conditions of more difficult or challenging applications. Hitachi uses precision tooling for accurate pitch control and smooth holes to assure appropriate fits for all of the components.



Engineering Class Chains

Roller Conveyor Chains

Roller Conveyor Plain Chain



Roller Conveyor Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Num.	Chain Pitch P	Inside Width W	Roller				Pin				Sidebar			Bushing			Rated Work Load lbs	AUS* lbs	Avg Wgt lbs/Ft
			R	Sty	L	Mat	D	Mat	A	B	T	H	Mat	Y	Mat	Sty			
1.654" & 2.609" Pitch																			
378R	1.654	1.000	0.895	T	-	Z	0.438	W	1.03	1.25	0.188	1.125	C	0.640	Z	R	2,100	13,000	3.7
378RX	1.654	1.000	0.895	T	-	Z	0.438	W	1.03	1.25	0.188	1.125	C	0.640	Z	R	2,100	20,000	3.7
278R	2.609	1.125	0.875	T	-	X	0.438	W	1.13	1.31	0.188	1.125	C	0.640	Z	R	2,300	13,000	3.0
3.000" & 3.075" Pitch																			
53R	3.000	1.000	1.500	T	-	X	0.438	Y	1.03	1.25	0.188	1.125	C	0.640	Z	R	2,100	13,000	3.9
93R	3.000	1.250	1.500	T	-	X	0.500	Y	1.30	1.50	0.250	1.250	C	0.750	Z	R	3,000	20,000	4.8
119R	3.075	1.500	1.250	T	-	Y	0.625	Y	1.60	1.85	0.313	1.500	C	0.875	Z	R	4,600	28,000	6.8
119RX	3.075	1.500	1.250	T	-	Y	0.625	Y	1.60	1.85	0.313	1.500	Z	0.875	Z	R	4,600	48,000	6.8
4.000" Pitch																			
1188R	4.000	1.125	1.750	T	-	Z	0.438	Y	1.12	1.28	0.188	1.125	C	0.640	Z	R	2,100	13,000	3.3
95R	4.000	1.000	1.500	T	-	X	0.438	Y	1.03	1.25	0.188	1.125	C	0.640	Z	R	2,100	13,000	3.4
90R	4.000	1.188	2.000	T	-	X	0.438	Y	1.03	1.16	0.188	1.250	C	0.640	Z	R	2,400	16,500	5.3
94R	4.000	0.875	1.500	T	-	X	0.500	Y	1.16	1.28	0.250	1.250	C	0.750	Z	R	2,400	19,000	4.1
97R	4.000	0.875	1.750	T	-	X	0.500	Y	1.12	1.31	0.250	1.250	C	0.750	Z	R	2,400	19,000	4.5
83R	4.000	1.313	2.000	T	-	X	0.625	Z	1.40	1.65	0.250	1.500	C	0.875	Z	R	3,650	22,000	6.6
91R	4.000	1.313	1.750	T	-	Z	0.625	Z	1.50	1.75	0.313	1.500	C	0.890	Z	R	4,100	28,000	7.0
89R	4.000	1.313	2.250	T	-	X	0.625	Z	1.60	1.90	0.375	1.500	C	0.890	Z	R	4,500	28,000	10.6
84R	4.000	2.313	2.250	T	-	X	0.625	Z	2.10	2.45	0.375	1.500	C	0.890	Z	R	4,700	28,000	13.5
4.040" Pitch																			
1113R	4.040	1.313	2.000	T	-	X	0.625	Z	1.50	1.75	0.313	1.500	C	0.890	Z	R	4,250	26,000	7.4
6.000" Pitch																			
196R	6.000	1.125	2.000	T	-	X	0.438	Y	1.18	1.41	0.250	1.250	C	0.640	Z	R	2,500	18,000	5.0
603R	6.000	1.313	2.500	U	0.875	Y	0.563	Z	1.34	1.59	0.250	1.500	C	0.813	Z	R	3,500	21,000	5.5
604R	6.000	1.313	2.000	T	-	X	0.563	Z	1.34	1.59	0.250	1.500	C	0.813	Z	R	3,500	21,000	5.4
607R	6.000	1.313	2.500	T	-	X	0.563	Z	1.34	1.59	0.250	1.500	C	0.813	Z	R	3,500	21,000	6.5
86R	6.000	1.313	2.000	T	-	X	0.625	Z	1.37	1.62	0.250	1.500	C	0.875	Z	R	3,600	22,000	5.4
627R	6.000	1.313	2.000	T	-	X	0.625	Z	1.50	1.75	0.313	1.500	C	0.890	Z	R	4,000	26,000	6.6
625R	6.000	1.688	3.000	U	1.125	Y	0.625	Z	1.56	1.81	0.250	2.000	C	0.890	Z	R	4,150	25,000	9.8
629R	6.000	1.500	3.000	T	-	X	0.625	Z	1.59	1.84	0.313	1.500	C	0.890	Z	R	4,400	26,000	9.7
626R	6.000	1.313	3.000	T	-	X	0.625	Z	1.66	1.93	0.375	2.000	C	0.875	Z	R	4,500	28,000	10.7
628R	6.000	1.313	2.250	T	-	X	0.625	Z	1.66	1.93	0.375	1.750	C	0.890	Z	R	4,500	28,000	8.7
614R	6.000	1.375	2.500	T	-	X	0.750	Z	1.78	2.03	0.375	2.000	C	1.125	Z	F	5,600	38,000	11.0
631R	6.000	1.375	3.000	T	-	X	0.750	Z	1.78	2.03	0.375	2.000	C	1.125	Z	F	5,600	38,000	12.2
1131R	6.000	1.500	3.000	T	-	X	0.750	Z	1.84	2.09	0.375	2.000	C	1.125	Z	F	5,900	47,000	12.5
96R	6.000	1.500	2.750	T	-	X	0.750	Z	1.84	2.09	0.375	2.000	C	1.125	Z	F	5,900	47,000	11.8
96RX	6.000	1.500	2.750	T	-	X	0.750	Z	1.84	2.09	0.375	2.000	Z	1.125	Z	F	5,900	70,000	11.8
2178RX	6.000	1.500	2.750	T	-	X	0.875	Y	1.84	2.09	0.375	2.250	Z	1.250	Z	F	6,900	85,000	13.1
663R	6.000	2.000	3.000	U	1.500	Y	0.750	Z	2.12	2.37	0.375	2.000	C	1.125	Z	F	7,200	41,000	14.0
610R	6.000	1.688	2.750	T	-	X	0.875	Y	1.93	2.18	0.375	2.250	C	1.375	Z	F	7,450	45,000	13.5
2198RX	6.000	1.500	2.750	T	-	X	0.875	Y	1.91	2.16	0.500	2.250	Z	1.250	Z	F	7,700	100,000	15.3

Z=Medium Carbon Steel Through Hardened

X=Low Carbon Steel Case Hardened

* Average Ultimate Strength

Y=Medium Carbon Alloy Steel Through Hardened

W=Low Carbon Alloy Steel Case Hardened

C=Carbon Steel

Roller Conveyor Chains

Roller Conveyor Chain Specifications - Continued

Chain Dimensions Are Given In Inches

Hitachi Chain Num.	Chain Pitch P	Inside Width W	Roller				Pin				Sidebar			Bushing			Rated Work Load lbs	AUS* lbs	Avg Wgt lbs/ft
			R	Sty	L	Mat	D	Mat	A	B	T	H	Mat	Y	Mat	Sty			
6.000" Pitch Offset Sidebar Type																			
1604R	6.000	1.063	3.000	T	-	X	0.500	Y	1.28	1.62	0.250	1.250	Z	0.750	Z	R	2,750	24,000	5.4
1126R	6.000	1.313	2.250	T	-	Z	0.625	Z	1.66	1.91	0.375	1.500	C	0.875	Z	R	4,500	28,000	8.0
1126RS	6.000	1.313	3.000	T	-	Z	0.625	Z	1.66	1.91	0.375	1.500	C	0.875	Z	R	4,500	28,000	10.0
2130R	6.000	1.313	2.500	T	-	X	0.750	Z	1.72	2.00	0.375	2.000	C	1.125	Z	F	5,250	38,000	11.0
1630R	6.000	1.375	2.500	T	-	X	0.875	Z	1.72	2.03	0.375	2.000	C	1.250	Z	F	6,500	43,000	11.0
2184R	6.000	1.375	3.000	T	-	X	0.875	Y	1.66	2.03	0.375	2.000	C	1.250	Z	F	6,500	43,000	12.3
2184RX	6.000	1.375	3.000	T	-	X	0.875	Y	1.66	2.03	0.375	2.000	Z	1.250	Z	F	6,500	75,000	12.3
8.000" Pitch																			
896R	8.000	1.500	3.500	T	-	X	0.750	Y	1.78	2.09	0.375	2.000	C	1.125	Z	F	5,900	47,000	14.3
806R	8.000	1.813	3.000	T	-	X	1.000	Y	2.31	2.62	0.500	2.500	Z	1.500	Z	F	9,800	95,000	22.5
A2800	8.000	1.813	3.500	T	-	X	1.000	W	2.31	2.62	0.500	2.750	Z	1.500	Z	F	9,800	110,000	26.2
800RX	8.000	1.813	3.500	T	-	X	1.000	W	2.31	2.62	0.500	3.000	Z	1.500	Z	F	9,800	125,000	22.5
9.000" Pitch																			
925R	9.000	1.688	3.000	U	1.125	Y	0.625	Z	1.56	1.84	0.250	2.000	C	0.890	Z	R	4,150	25,000	8.2
912R	9.000	1.500	3.000	T	-	X	0.625	Y	1.59	1.88	0.313	2.000	C	0.890	Z	R	4,650	47,000	8.6
B963R	9.000	2.000	3.500	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	13.0
D963R	9.000	2.000	3.500	T	-	X	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	13.0
F963R	9.000	2.000	4.000	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	14.0
961R	9.000	1.906	1.750	T	-	Z	0.875	Z	2.25	2.69	0.500	2.250	C	1.250	Z	F	9,000	60,000	10.0
964R	9.000	2.250	4.000	U	1.500	Y	0.875	Z	2.18	2.47	0.375	2.500	C	1.250	Z	F	9,200	56,000	17.0
965R	9.000	2.250	3.000	T	-	Z	0.875	Y	2.16	2.47	0.375	2.500	C	1.250	Z	F	9,200	70,000	16.5
967R	9.000	2.625	3.000	T	-	Z	1.000	Z	2.62	3.03	0.500	2.500	C	1.500	Z	F	12,700	75,000	18.0
973R	9.000	2.625	5.000	U	1.750	Y	1.000	Z	2.66	3.06	0.500	2.500	C	1.500	Z	F	12,700	75,000	23.6
12.000" Pitch																			
1212R	12.000	1.500	3.000	T	-	X	0.625	Z	1.59	1.88	0.313	2.000	C	0.890	Z	R	4,650	29,000	7.5
1266R	12.000	1.625	3.250	T	-	X	0.750	Z	1.88	2.16	0.375	2.000	C	1.125	Z	F	6,300	41,000	9.5
1276R	12.000	2.000	4.000	U	1.250	Y	0.750	Z	1.94	2.22	0.313	2.500	C	1.125	Z	F	7,200	41,000	12.0
B1263R	12.000	2.000	3.500	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	11.0
D1263R	12.000	2.000	3.500	T	-	X	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	11.0
E1263R	12.000	2.000	4.000	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	12.0
1272R	12.000	2.500	4.000	T	-	Z	0.875	Z	2.31	2.59	0.375	2.500	C	1.250	Z	F	9,200	56,000	15.0
1264R	12.000	2.250	4.000	U	1.500	Y	0.875	Z	2.18	2.47	0.375	2.500	C	1.250	Z	F	9,200	56,000	15.0
1265R	12.000	2.250	3.000	T	-	X	0.875	Y	2.16	2.47	0.375	2.500	C	1.250	Z	F	10,500	70,000	12.7
1273R	12.000	2.625	5.000	U	1.750	Y	1.000	Z	2.66	3.06	0.500	2.500	C	1.500	Z	F	12,700	75,000	21.5
1271R	12.000	2.750	5.000	U	1.750	Y	1.250	Y	2.75	3.06	0.500	3.000	C	1.750	Z	F	16,400	100,000	27.0
12.000" Pitch Offset Sidebar Type																			
R1251	12.000	1.938	1.750	T	-	Y	0.875	Y	2.31	2.63	0.500	2.000	Z	1.250	Z	F	9,000	64,500	9.8
R2397	12.000	2.250	1.750	T	-	Y	0.875	Y	2.22	2.50	0.375	2.500	Z	1.250	Z	F	9,200	69,000	9.5
R1706	12.000	3.000	2.250	T	-	Y	1.000	Y	2.90	3.19	0.500	2.500	Z	1.500	Z	F	14,000	91,000	13.9
R2614	12.000	2.750	2.500	T	-	Y	1.250	Y	2.94	3.25	0.625	3.500	Z	1.750	Z	F	17,500	155,000	24.0
18.000" Pitch																			
B1863R	18.000	2.000	3.500	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	9.5
D1863R	18.000	2.000	3.500	T	-	X	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	9.0
F1863R	18.000	2.000	4.000	U	1.250	Y	0.750	Z	2.06	2.34	0.375	2.000	C	1.125	Z	F	7,200	41,000	10.0
B1864R	18.000	2.250	4.000	U	1.500	Y	0.875	Z	2.18	2.47	0.375	2.500	C	1.250	Z	F	9,200	56,000	12.0
G1864R	18.000	2.250	4.000	T	-	X	0.875	Z	2.18	2.47	0.375	2.500	C	1.250	Z	F	9,200	56,000	11.0
1873R	18.000	2.625	5.000	U	1.750	Y	1.000	Z	2.66	3.06	0.500	2.500	C	1.500	Z	F	12,700	75,000	17.0
1871R	18.000	2.750	5.000	U	1.750	Y	1.250	Y	2.78	3.22	0.500	3.000	C	1.750	Z	F	16,400	100,000	21.0
1866R	18.000	2.750	6.000	U	1.875	Y	1.250	Y	3.03	3.47	0.625	3.000	C	1.750	Z	F	17,500	115,000	26.5
1867R	18.000	3.000	6.000	U	1.875	Y	1.500	Y	3.28	3.59	0.625	3.500	C	2.000	Z	F	22,300	150,000	31.5
24.000" Pitch																			
2473R	24.000	2.625	5.000	U	1.750	Y	1.000	Z	2.66	3.06	0.500	2.500	C	1.500	Z	F	12,700	75,000	15.0
2471R	24.000	2.750	5.000	U	1.750	Y	1.250	Y	2.78	3.22	0.500	3.000	C	1.750	Z	F	16,400	100,000	18.5
2466R	24.000	2.750	6.000	U	1.875	Y	1.250	Y	3.03	3.47	0.625	3.000	C	1.750	Z	F	17,500	115,000	23.0
2467R	24.000	3.000	6.000	U	1.875	Y	1.500	Y	3.28	3.59	0.625	3.500	C	2.000	Z	F	22,300	150,000	27.0

Z=Medium Carbon Steel Through Hardened

X=Low Carbon Steel Case Hardened

* Average Ultimate Strength

Y=Medium Carbon Alloy Steel Through Hardened

W=Low Carbon Alloy Steel Case Hardened

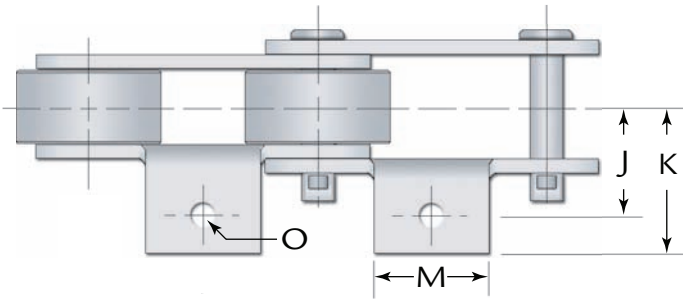
C=Carbon Steel

Dimensions subject to change

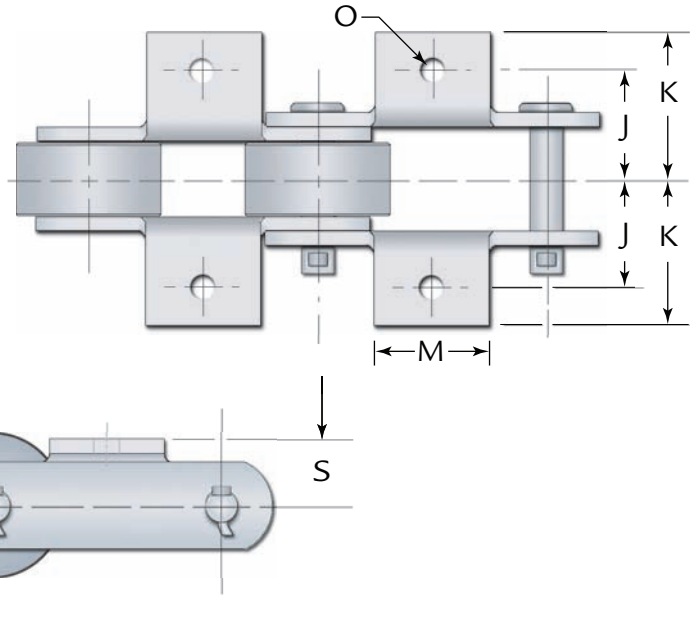
Engineering Class Chains

Roller Conveyor Chain A-1 / K-1 Attachments

A-1 Attachment



K-1 Attachment



A-1 & K-1 Attachment Specifications

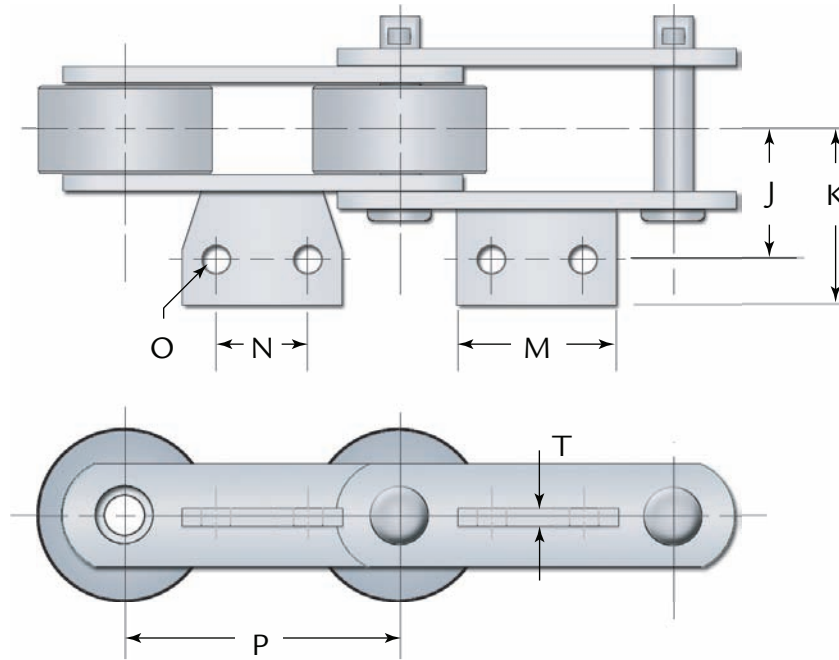
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Attach Hole Diameter	Attach Plate Height	C/L Chain Att. Hole	Across Attach Holes	C/L Chain Att. Edge	Attach Width	Additional Weight Per Attachment (lbs / pc)	
	P	M	O	S	J	2J	K	2K	A-1	K-1
378R	1.654	0.875	0.343	0.875	1.500	3.000	2.38	4.75	0.10	0.19
278R	2.609	2.125	0.406	0.813	1.906	3.813	2.50	5.00	0.12	0.24
53R	3.000	2.000	0.343	0.813	1.469	2.938	2.09	4.19	0.13	0.25
93R	3.000	1.688	0.531	1.000	1.875	3.750	2.50	5.00	0.18	0.30
119R	3.075	2.875	0.531	1.062	2.094	4.188	2.59	5.19	0.28	0.56
1188R	4.000	3.375	0.406	1.000	1.719	3.438	2.38	4.75	0.43	0.87
83R	4.000	1.750	0.406	1.000	2.000	4.000	2.75	5.50	0.47	0.93
84R	4.000	2.000	0.656	1.250	2.656	5.313	3.22	6.44	1.20	2.40
89R	4.000	1.750	0.406	1.250	2.000	4.000	2.81	5.63	0.40	0.80
90R	4.000	3.250	0.406	1.125	2.000	4.000	2.63	5.25	0.33	0.67
91R	4.000	2.500	0.531	1.000	1.813	3.625	2.69	5.38	0.30	0.60
94R	4.000	2.500	0.406	0.875	1.375	2.750	1.84	3.69	0.20	0.40
95R	4.000	2.375	0.406	0.813	1.375	2.750	2.13	4.25	0.17	0.33
196R	6.000	3.500	0.406	1.250	2.000	4.000	2.47	4.94	0.63	1.25
603R	6.000	3.500	0.406	1.125	2.000	4.000	2.72	5.44	1.05	2.10
604R	6.000	3.500	0.406	1.125	2.000	4.000	2.72	5.44	0.45	0.90
607R	6.000	3.500	0.406	1.125	2.000	4.000	2.72	5.44	0.45	0.90
610R	6.000	4.000	0.656	1.500	2.563	5.125	2.94	5.88	0.95	1.90
614R	6.000	2.500	0.531	1.625	2.125	4.250	2.75	5.50	1.00	2.00
96R	6.000	5.500	0.656	1.625	2.188	4.375	3.00	6.00	1.00	2.00

Dimensions subject to change

Roller Conveyor Chain A-11 Attachment

A-11 Attachment Link



A-11 Attachment Specifications

Chain Dimensions Are Given In Inches

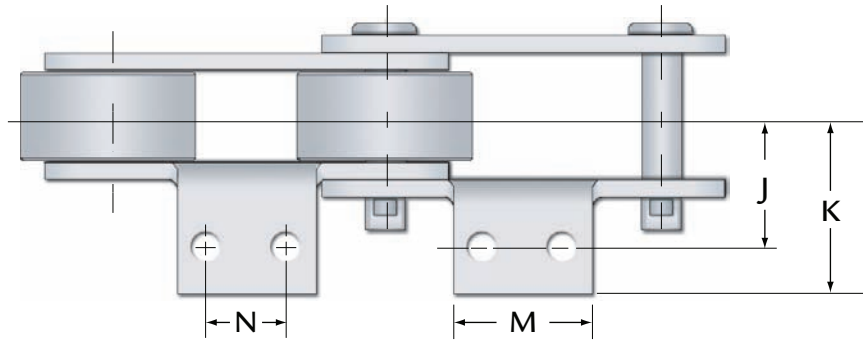
Hitachi Chain Number	Chain Pitch	Attachment Hole		Attach. Plate Thick. (R/L)	Tab Width	C/L Chain Att. Hole	C/L Chain Att. Edge	Additional Weight Attachment lbs/pc
	P	N	O	T	M	J	K	
53R	3.000	1.063	0.281	0.188	2.000	1.578	1.94	0.13
119R	3.075	1.875	0.281	0.313	3.000	1.969	2.69	0.33
1188R	4.000	2.250	0.406	0.250	3.250	2.188	2.88	2.90
94R	4.000	1.375	0.531	0.250	2.500	1.750	2.50	0.37
603R	6.000	2.250	0.406	0.250	3.250	2.563	3.06	1.05
604R	6.000	2.250	0.406	0.250	3.250	2.563	3.06	1.10
607R	6.000	2.250	0.406	0.250	3.250	2.563	3.06	0.55
614R	6.000	2.875	0.531	0.375	4.500	2.750	3.06	0.75

Dimensions subject to change

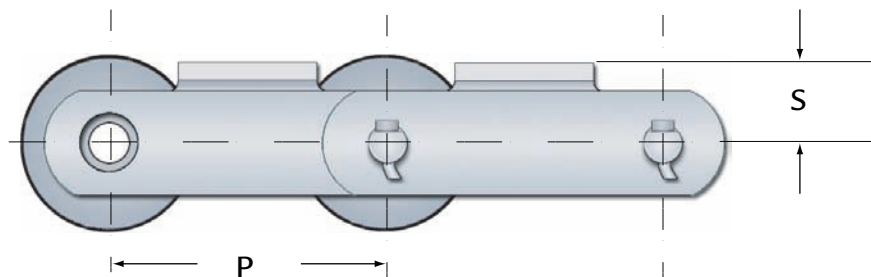
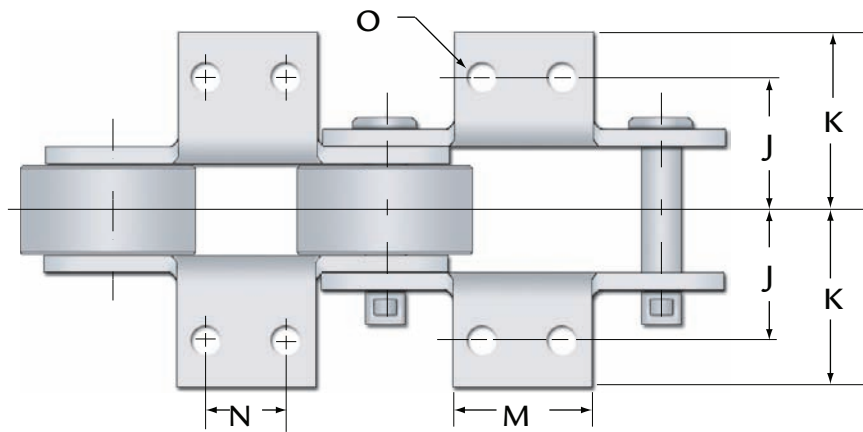
Engineering Class Chains

Roller Conveyor Chain A-2 / K-2 Attachments

A-2 Attachment



K-2 Attachment



Roller Conveyor Chain Attachments - Specifications

A-2 / K-2 Attachments

Chain Dimensions Are Given In Inches

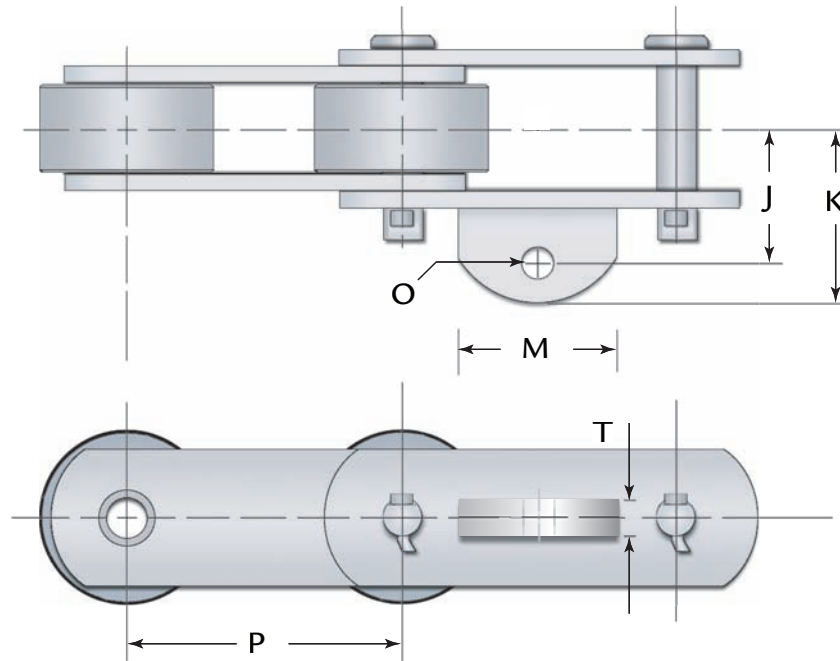
Dimensions subject to change

Hitachi Chain Number	Chain Pitch	Tab Width	Attach Hole Pitch	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	Additional Weight Attachment lbs/pc	
	Pitch	M	N	O	S	J	2J	K	2K	A-2	K-2
278R	2.609	2.125	1.250	0.344	0.813	2.094	4.188	2.56	5.13	0.12	0.24
53R	3.000	2.000	1.063	0.281	0.813	1.469	2.938	2.09	4.19	0.13	0.25
93R	3.000	2.000	1.250	0.406	1.000	1.875	3.750	2.50	5.00	0.15	0.30
119R	3.075	2.875	1.875	0.344	1.250	2.000	4.000	2.56	5.13	0.28	0.56
1188R	4.000	3.375	2.000	0.406	1.000	2.000	4.000	2.63	5.25	0.43	0.87
83R	4.000	2.750	1.750	0.406	1.000	2.000	4.000	2.75	5.50	0.47	0.93
84R	4.000	2.875	1.750	0.406	1.250	2.656	5.313	3.22	6.44	1.20	2.40
90R	4.000	3.250	2.000	0.406	1.125	2.000	4.000	2.75	5.50	0.33	0.67
91R	4.000	2.875	1.750	0.531	1.000	1.813	3.626	2.69	5.38	0.30	0.60
94R	4.000	2.500	1.500	0.406	0.875	1.375	2.750	1.84	3.69	0.20	0.40
95R	4.000	2.625	1.188	0.344	0.813	1.375	2.750	2.25	4.50	0.17	0.33
1113R	4.040	2.875	1.500	0.406	1.250	2.063	4.126	2.69	5.38	0.61	1.21
1131R	6.000	5.500	2.625	0.531	1.625	3.000	6.000	3.69	7.38	1.48	2.95
196R	6.000	3.500	2.000	0.406	1.250	2.000	4.000	2.47	4.94	0.63	1.25
2178RX	6.000	4.375	3.000	0.531	1.625	2.188	4.376	3.00	6.00	0.55	1.10
2198RX	6.000	4.500	3.000	0.531	1.625	2.188	4.376	3.03	6.06	0.73	1.45
603R	6.000	3.500	2.000	0.406	1.125	2.000	4.000	2.56	5.13	0.90	1.80
604R	6.000	3.500	2.000	0.406	1.125	2.000	4.000	2.66	5.31	0.40	0.80
607R	6.000	3.500	2.000	0.406	1.125	2.000	4.000	2.63	5.25	0.23	0.45
614R	6.000	5.500	2.625	0.531	1.625	2.125	4.250	2.75	5.50	1.00	2.00
626R	6.000	3.500	2.000	0.406	1.625	2.188	4.376	3.00	6.00	1.00	2.00
627R	6.000	3.375	2.000	0.406	1.125	2.000	4.000	2.75	5.50	1.03	2.05
628R	6.000	3.250	2.000	0.531	1.625	2.375	4.750	3.25	6.50	0.75	1.50
629R	6.000	3.500	2.500	0.406	2.000	2.000	4.000	3.00	6.00	1.00	2.00
631R	6.000	5.500	2.625	0.531	1.625	2.125	4.250	2.78	5.56	1.05	2.10
96R	6.000	5.500	3.000	0.531	1.625	2.188	4.376	3.00	6.00	1.00	2.00
96RX	6.000	5.500	3.000	0.531	1.625	2.188	4.376	3.00	6.00	1.00	2.00
800RX	8.000	7.000	4.500	0.656	2.188	2.594	5.188	3.63	7.25	1.20	2.40
806R	8.000	6.875	3.500	0.656	2.188	2.594	5.188	3.34	6.69	0.00	0.00
912R	9.000	5.500	3.500	0.531	1.750	2.563	5.126	3.56	7.13	1.69	3.38
925R	9.000	5.500	3.500	0.531	1.750	2.500	5.000	3.38	6.75	1.88	3.75
964R	9.000	5.500	3.500	0.531	2.875	3.000	6.000	4.00	8.00	1.99	3.98
973R	9.000	5.500	3.500	0.531	3.625	3.750	7.500	4.84	9.69	2.40	4.80
B963R	9.000	5.500	3.500	0.531	2.500	2.875	5.750	3.88	7.75	1.35	2.70
D963R	9.000	5.500	3.500	0.531	2.500	2.875	5.750	3.88	7.75	1.13	2.25
F963R	9.000	5.500	3.500	0.531	2.500	2.875	5.750	3.88	7.75	1.58	3.15
1212R	12.000	8.000	6.000	0.531	1.750	2.563	5.126	3.56	7.13	2.10	4.20
1264R	12.000	8.000	6.000	0.531	2.875	3.000	6.000	4.00	8.00	2.65	5.30
1266R	12.000	8.000	6.000	0.531	1.875	2.344	4.688	3.69	7.38	2.25	4.50
1272R	12.000	8.000	6.000	0.531	2.250	3.000	6.000	4.00	8.00	2.50	5.00
1273R	12.000	8.000	6.000	0.531	3.625	3.750	7.500	4.84	9.69	4.45	8.90
1276R	12.000	8.000	6.000	0.531	2.750	3.031	6.062	4.16	8.31	3.60	7.20
B1263R	12.000	8.000	6.000	0.531	2.500	2.875	5.750	3.88	7.75	2.10	4.20
D1263R	12.000	8.000	6.000	0.531	2.500	2.875	5.750	3.88	7.75	2.20	4.40
E1263R	12.000	8.000	6.000	0.531	2.500	2.875	5.750	3.88	7.75	0.80	1.60

Engineering Class Chains

Roller Conveyor Chain A-22 & A-42 Attachments

A-22 / A-42 Attachment



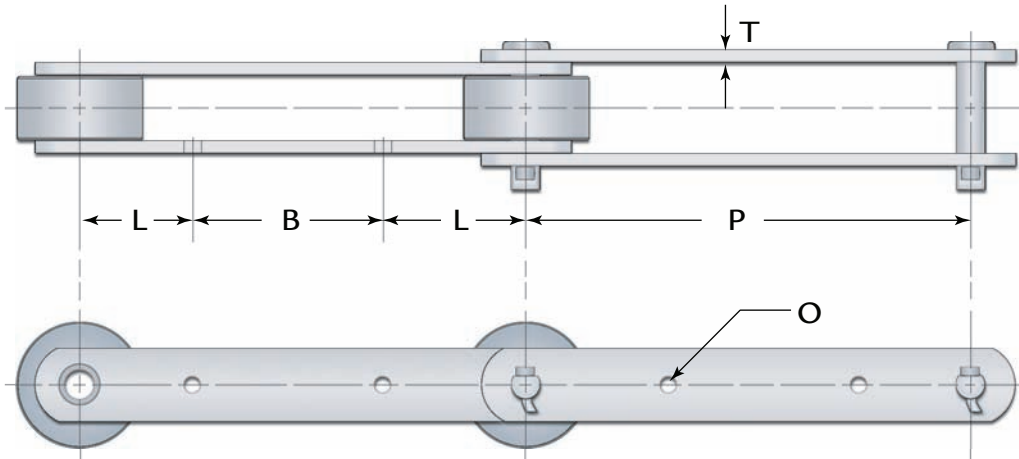
A-22 & A-42 Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Att. Hole Diameter	Attach. Plate Thickness	C/L Chain Att. Hole	C/L Chain Att. Edge	Add. Weight (Attachment) (lbs/pc)
	P	M	O	T	J	K	
A-22							
94R	4.000	1.250	0.406	0.375	1.844	2.44	0.13
614R	6.000	2.000	0.656	0.500	2.656	3.44	0.45
A-42							
53R	3.000	1.000	0.406	0.250	1.563	2.00	0.08
119R	3.075	1.375	0.656	0.500	2.000	2.69	0.18
95R	4.000	1.250	0.406	0.375	1.625	2.13	0.07
1131R	6.000	2.000	0.656	0.500	2.844	3.84	0.65
604R	6.000	2.000	0.656	0.500	2.344	3.16	0.40
614R	6.000	2.000	0.719	0.500	2.750	3.75	0.65
631R	6.000	2.000	0.719	0.500	2.563	3.56	0.65
86R	6.000	2.000	0.531	0.375	2.344	3.16	0.55

Dimensions subject to change

Roller Conveyor Chain - G-6 Attachment



Roller Conveyor Chain - G-6 Attachment Links

Chain Dimensions Are Given In Inches

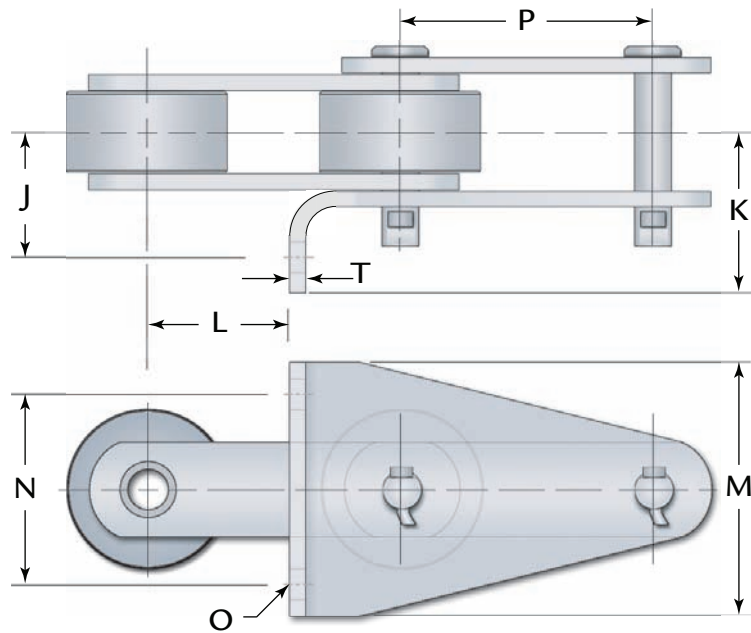
Hitachi Chain Number	Chain Pitch	Attachment Hole Location		Plate Thickness	Attach. Hole Diameter	Add. Weight Attachment lbs/pc
	P	L	B	T	O	
912R	9.000	3.125	2.750	0.313	0.531	1.05
925R	9.000	3.125	2.750	0.250	0.531	0.23
B963R	9.000	3.000	3.000	0.375	0.531	0.68
D963R	9.000	3.000	3.000	0.375	0.531	0.15
E963R	9.000	3.000	3.000	0.375	0.531	1.35
F963R	9.000	3.000	2.500	0.375	0.531	1.13
964R	9.000	3.250	3.500	0.375	0.531	0.83
973R	9.000	2.750	3.750	0.500	0.656	1.43
1212R	12.000	4.125	3.750	0.313	0.531	0.70
B1263R	12.000	4.125	3.750	0.375	0.531	0.60
D1263R	12.000	4.125	3.750	0.375	0.531	0.00
E1263R	12.000	4.125	3.750	0.375	0.531	0.00
1264R	12.000	4.125	3.750	0.375	0.531	0.40
1266R	12.000	4.125	3.750	0.375	0.531	0.60
1272R	12.000	4.125	3.750	0.375	0.531	0.10
1273R	12.000	4.125	3.750	0.500	0.656	1.70
1276R	12.000	3.250	5.500	0.313	0.531	8.60
B1863R	18.000	6.000	6.000	0.375	0.531	0.60
D1863R	18.000	6.000	6.000	0.375	0.531	2.10
F1863R	18.000	6.000	6.000	0.375	0.531	1.20
B1864R	18.000	6.000	6.000	0.375	0.656	1.20
G1864R	18.000	6.000	6.000	0.375	0.656	2.40
1867R	18.000	6.000	6.000	0.625	0.656	5.10
1871R	18.000	6.000	6.000	0.500	0.656	3.45
1873R	18.000	6.000	6.000	0.500	0.656	2.70
2466R	24.000	8.000	8.000	0.625	0.656	5.20
2467R	24.000	8.000	8.000	0.625	0.656	7.40
2471R	24.000	7.500	9.000	0.500	0.656	4.20
2473R	24.000	9.000	6.000	0.500	0.656	2.80

Dimensions subject to change

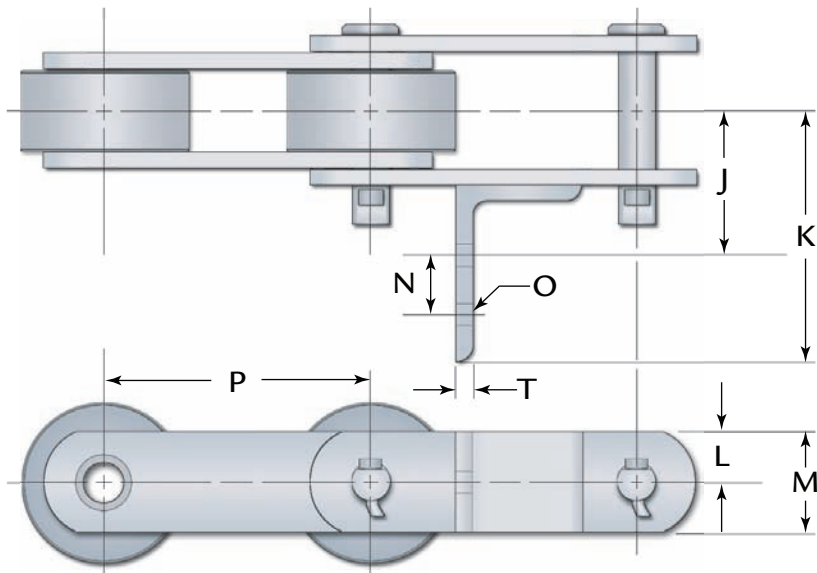
Engineering Class Chains

Roller Conveyor Chain G-19 / G-29 Attachments

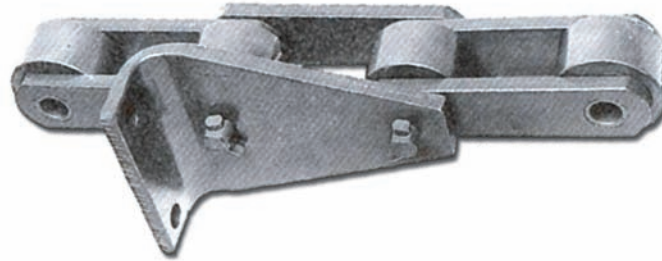
G-19 Attachment



G-29 Attachment



Roller Conveyor Chain Attachments - Specifications



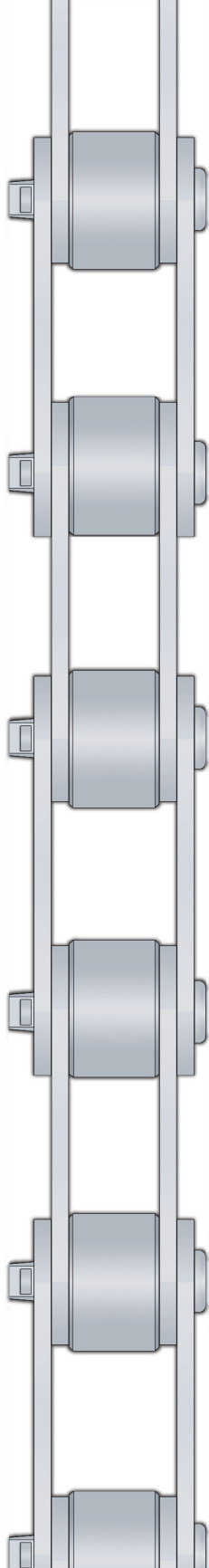
G-19 & G-29 Attachments

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Attachment Width	Attachment Hole Location		Attachment Location	Attach. Angle Thickness	C/L Chain Attach. Hole	C/L Chain Attach. Edge	Additional Weight Attachment lbs/pc
	P	M	N	O	L	T	J	K	
G-19									
B925	9.000	5.500	3.500	0.531	2.625	0.250	2.563	3.31	1.20
B1263R	9.000	5.500	3.500	0.531	2.625	0.250	2.781	3.78	2.18
D1263R	12.000	5.500	3.500	0.531	2.625	0.250	2.781	3.78	1.60
E1263R	12.000	5.500	3.500	0.531	2.625	0.250	2.781	3.78	2.30
1264R	12.000	5.500	3.500	0.531	2.625	0.313	2.906	3.91	3.20
1266R	12.000	5.500	3.500	0.531	2.625	0.250	2.594	3.59	2.50
1272R	12.000	5.500	3.500	0.531	2.625	0.313	2.906	3.91	2.90
1273R	12.000	7.500	5.000	0.531	2.625	0.375	3.344	4.34	6.10
B1863R	18.000	5.500	3.500	0.531	5.625	0.250	2.781	3.78	3.00
D1863R	18.000	5.500	3.500	0.531	5.625	0.250	2.781	3.78	4.35
B1864R	18.000	5.500	3.500	0.531	5.625	0.313	2.906	3.91	3.30
G1864R	18.000	5.500	3.500	0.531	5.625	0.375	2.906	3.91	4.50
1866R	18.000	5.500	3.500	0.531	5.625	0.375	3.656	4.66	5.70
1867R	18.000	5.500	3.500	0.531	5.625	0.375	3.781	4.78	6.60
1871R	18.000	5.500	3.500	0.531	5.625	0.375	3.406	4.41	5.55
1873R	18.000	7.500	5.000	0.531	5.625	0.375	3.344	4.34	6.30
2466R	24.000	5.500	3.500	0.531	8.625	0.375	3.656	4.66	5.80
2467R	24.000	5.500	3.500	0.531	8.625	0.375	3.781	4.78	7.60
2471R	24.000	5.500	3.500	0.531	8.625	0.375	3.406	4.41	5.20
2473R	24.000	7.500	5.000	0.531	8.625	0.375	3.344	4.34	6.40
G-29									
94R	4.000	1.250	1.125	0.406	0.625	0.250	1.844	3.47	0.40
1131R	6.000	2.000	1.500	0.469	1.000	0.375	2.781	5.03	1.35

Dimensions subject to change

Raised Sidebar Chains



Conveyor Chain for Unit Handling
and/or
Accumulating Conveyor Systems

Designed as an economical choice for unit conveying applications these chains are often found in the automotive and steel industries. Optional top rollers with or without installed bearings are available for accumulator conveyor applications on assembly lines.



Product

Page

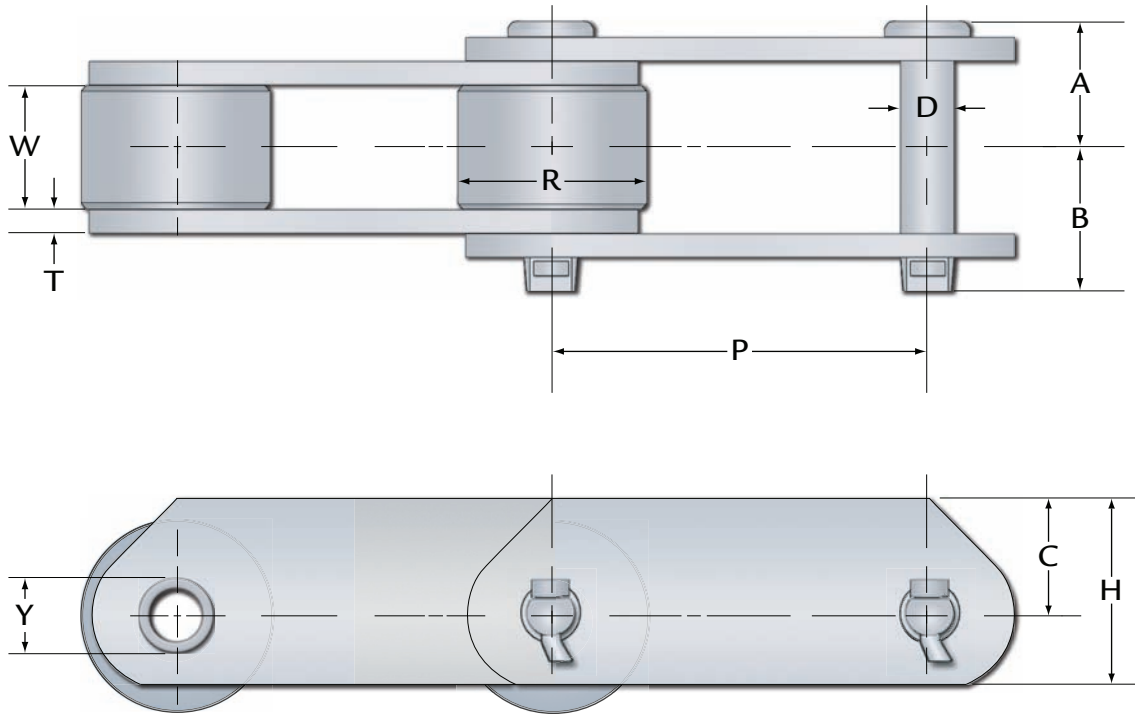
Raised Sidebar Chain

23

Engineering Class Chains

Raised Sidebar Chain

Raised Sidebar Chain



Raised Sidebar Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch P	Inside Width W	Roller Dia. R	Pin			Sidebar			Bushing Dia. Y	Rated Working Load (lbs)	Avg Ultimate Strength (lbs)	Avg Chain Weight lbs/ft
				Dia. D	Length A	Length B	Thick. T	Height H	C/L to Top C				
53R	3.000	1.000	1.500	0.438	1.03	1.25	0.188	1.500	0.938	0.640	2,100	13,000	5.0
95R	4.000	1.000	1.500	0.438	1.03	1.25	0.188	1.500	0.938	0.640	2,100	13,000	4.1
94R	4.000	0.875	1.500	0.500	1.16	1.28	0.250	1.500	0.875	0.750	2,400	19,000	4.8
89R	4.000	1.313	2.250	0.625	1.60	1.90	0.375	2.000	1.250	0.890	4,500	28,000	12.0
84R	4.000	2.313	2.250	0.625	2.10	2.45	0.375	2.250	1.500	0.890	4,700	28,000	16.5
627R	6.000	1.313	2.000	0.625	1.50	1.75	0.313	2.000	1.250	0.890	4,250	26,000	6.6
614R	6.000	1.375	2.500	0.750	1.78	2.03	0.375	3.000	2.000	1.125	5,600	38,000	15.0
CC5A	6.000	1.375	2.500	0.687	1.50	1.66	0.312	2.500	1.500	1.000	4,800	50,000	11.2

Dimensions subject to change

Engineering Class Chains

Conveyor Chain Selection

Introduction

A variety of Engineering Class Chains are available for conveyor or elevating service. An accurate assessment of the basic operating conditions and an understanding of the type of materials to be conveyed will determine the selection of an appropriate conveyor type. After the above is determined we can then get down to the business of selecting an appropriate chain size.

In general we classify the materials to be conveyed and their described capacities in two ways:

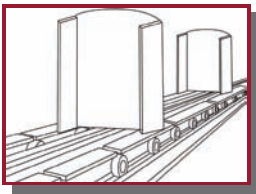
1. **Unit Materials:** Capacity described in Pieces Per Hour.
2. **Bulk Materials:** Capacity described in Tons Per Hour.

Unit materials are therefore objects like boxes, cars, TV sets, etc., while bulk materials would be products of sand, gravel, powdered sugar and the like.

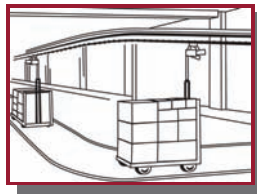
Conveyor Types

There Are Eight General Types Of Chain Conveyors

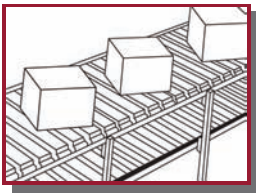
1. Carrier Conveyor



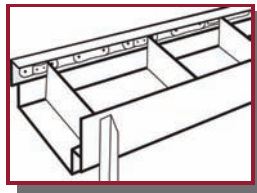
5. Trolley or Tow Conveyor



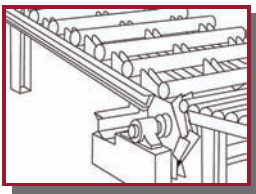
2. Slat Conveyor



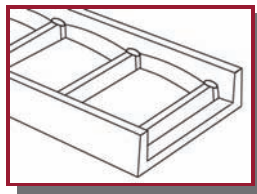
6. Scraper Flight Conveyor



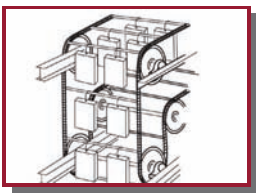
3. Pusher Conveyor



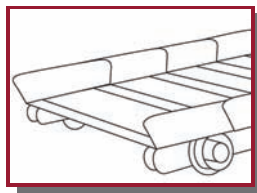
7. Drag Conveyors



4. Cross Bar Conveyor



8. Apron Conveyor



Unit Material Handling

1. Carrier Conveyor: Plain or attachment Roller Conveyor, Steel Bushed, Welded Steel or Cast Combination Chains are used to convey material directly on the plain chain or an attachment that forms a carrying surface. Material load is directly carried on the chain.

2. Slat Conveyor: Two or more strands of Roller Conveyor Chains are used to support slats mounted to chain attachments. Materials are carried on slats. Material load is carried directly on the chain.

3. Pusher Conveyor: Typically two or more strands of Roller Conveyor, Steel Bushed, Welded Steel or Cast Combination Chains are used with “pusher” type attachments. Materials roll or slide on support rails and is not directly carried on the chain.

4. Cross Bar Conveyor: Two strands of Roller Conveyor Chain connected by cross bars that can be arranged in a variety of chain paths are used for this type conveyor. Product typically hands from the cross cars and load is carried directly on the chain. Sometimes hollow pin chains are used for this purpose as well.

5. Trolley and Tow Conveyor: Drop Forged Rivetless or Bar Loop Chains are used in overhead trolley type conveyors and special bar pin chains are used for in-floor tow-veyors. Material load is carried by rails or tracks in the floor rather than the chain itself.

Bulk Material Handling

6. Scraper Flight Conveyor: Typically two strands of Roller Conveyor, Steel Bushed, Welded Steel, Cast Combination, Drop Forged Rivetless, or Bar Pin Chains are used with scraper flights that convey bulk materials in a trough. The chains are located outside the trough. Material load is carried in the trough rather than directly on the chain.

7. Drag Conveyor: One or more strands of Steel Bushed, Welded Steel, Welded Steel Drag Chains, Cast Combination, Drop Forged Rivetless, or Bar Pin Chains operate as plain chain in the case of Welded Steel Drag Chains or with drag flights mounted to the chain. Drag Conveyors are distinguished from scraper conveyors by the fact that they operate in the trough with the bulk material rather than on the outside. Chains with rollers are not recommended for drag conveyor service.

8. Apron Conveyor: Two or more strands of Roller Conveyor Chains with Apron pans mounted to attachments are used to convey bulk materials. Sometimes outboard rollers with or without bearings are specified to reduce friction and therefore chain tension. If the conveyors are wide, through rods are specified to provide additional support.

Selection Considerations

The first step in Conveyor Chain selection is to assess the operating conditions and the material to be conveyed in order to determine the type of conveyor to be used. Roller Conveyor Chains are best used in relatively clean environments with the chain carrying the load directly so that friction reducing rollers can lower chain tension and power consumption. Rollerless chains such as steel bushed, welded steel or others are better when the loads are supported by rails or troughs in “dirty” operating conditions where such debris can cause rollers to seize and not function correctly.

Conveyor Chain Selection

Operating Speeds, Service Factors and Friction Coefficients
The tables shown below provide information regarding allowable chain speeds, service factors, friction coefficients and other information that will be necessary for proper chain selection.

Table 1: General Engineering Characteristics

Chain Type	Engineering Characteristics			
	Operat. Speeds (ft/min)	Pitch Range (inches)	Weight Excluding Attach. (lbs)	Allowable Tension (lbs)
Roller Conv.	10-200	1.654-24.000	3.0-31.5	2,100-21,300
Steel Bushed	10-150	2.609-7.000	3.8-31.0	2,750-21,800
Combination	10-75	2.609-6.050	2.2-13.4	1,400-11,250
Welded Steel	10-100	2.609-6.050	4.0-20.0	3,000-20,000
Welded Drag	10-100	5.000-8.000	8.6-19.8	8,500-15,000
Drop Forged	10-75	3.015-6.031	2.2-6.7	2,600-7,100
Bar-Pin	10-50	4.000-12.000	5.1-33.0	Consult Hitachi

Table 2: Sliding Friction Coefficient (fs) of Various Materials

Material Type	Coefficient of Friction	
	Dry	Lubricated
Steel on Steel	0.33	0.20
Cast Iron on Steel	0.50	0.30
Cast Iron on Cast Iron	0.50	0.40
Cast Steel on Cast Steel	0.50	0.40
Steel on Bronze	-	0.15
Steel on Hardwood	0.35	0.25
Steel on UHMW Plastic	0.25	0.15

Table 3: Rolling Friction Coefficient (fr) by Various Diameters

Roller Diameter	Coefficient of Friction	
	Dry	Lubricated
1-1/2	0.22	0.16
1	0.20	0.15
2-1/2	0.16	0.12
3	0.14	0.09
4	0.12	0.08
5	0.11	0.07
6	0.10	0.06
Roller Bearing	0.05	0.02
Ball Bearing	0.03	0.01

When both the roller OD and ID are known we may use the following equation to determine it:

$$fr = (ID / OD) \times fs$$

Where: ID = Roller Inside Diameter

OD = Roller Diameter

fs = Sliding Friction Coefficient between materials of chain roller ID and chain bushing OD (see Table 2)

Table 4: Sliding Coefficient (fs) of Various Materials in a Steel Trough

Aluminum	0.40	Cottonseed	0.35
Ashes Dry	0.50	Grains	0.40
Ashes Wet	0.60	Gravel Dry	0.45
Bagasse	0.40	Gravel Screened	0.45
Beans	0.30	Gravel Run of Bank	0.60
Cement Portland	0.65	Ice Crushed	0.20
Cement Clinker	0.70	Ice Cakes	0.10
Coal Anthracite	0.30	Lime Ground	0.40
Coal Run of Mine	0.40	Lime Pebble	0.50
Coal Pea	0.45	Sand Dry	0.60
Coal Buckwheat	0.55	Sand Shakeout	0.70
Coal Bituminous	0.55	Sand Tempered	0.85
Coal Sized	0.55	Sawdust	0.40
Coal Run of Mine	0.60	Stonedust	0.50
Coal Slack Dry	0.50	Stone Screened	0.60
Coal Slack Wet	0.70	Stone Lumps	0.65
Coke Sized	0.40	Stone Fines	0.65
Coke Mixed	0.60	Wood Chips	0.40
Coke Breeze	0.65		

Table 5: Recommended Maximum Chain Speeds - Feet Per Minute (FPM)

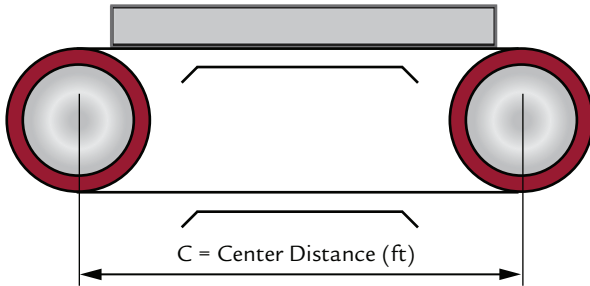
Number of Sprocket Teeth	Chain Pitch				
	4	6	9	12	18
6	180	145	120	105	85
7	210	170	140	120	100
8	240	195	160	140	115
9	270	220	180	155	125
10	300	245	200	175	140
11	330	270	220	190	155
12	360	295	240	205	170
13	390	320	260	225	185
14	420	345	280	240	200
15	450	365	300	260	210

Engineering Class Chains

Conveyor Chain Selection

Conveyor Pull Formulas

Horizontal Conveyor



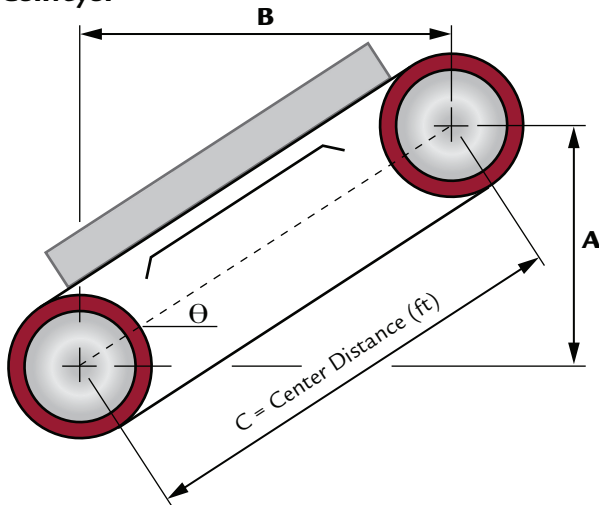
Conveyor Chain Pull Formula

$$P = (2.1Wf + Mf) \times C + J$$

* Material Sliding on Deck

Note: W=Weight in lbs/ft of chain, attachments, flights, etc. Take care to assign the correct friction coefficient with the proper term. The coefficient associated with chain weight "W" is found in Tables 2 or 3 and the coefficient associated with the conveyed material weight "M" is the same as that for the chain if the chain carries the material, or is found in Table 4 if the material slides on a conveyor deck or trough.

Incline Conveyor



Conveyor Chain Pull Formula

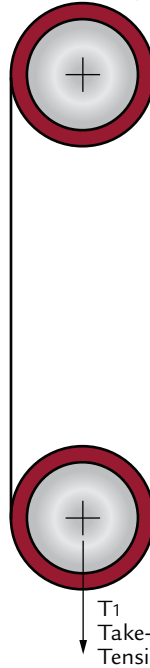
$$P = [(Mf) \cos \theta + (Wf) \cos \theta + M \sin \theta + W \sin \theta] + [(Wf) \cos \theta - W \sin \theta] C + J$$

NOTE: $\cos \theta = B/C$
 $\sin \theta = A/C$

W=Weight in lbs/ft of chain, attachments, flights, etc. Take care to assign the correct friction coefficient with the proper term. The coefficient associated with chain weight "W" is found in Tables 2 or 3 and the coefficient associated with the conveyed material weight "M" is the same as that for the chain if the chain carries the material, or is found in Table 4 if the material slides on a conveyor deck or trough.

*See table 7 for "J" term when material slides against sideboards.

Vertical Conveyor or Elevator



Conveyor Chain Pull Formula

$$P = (W + M) \times C + (T1/2) + D$$

Note: W= Weight of Chains and attachments (lbs/ft)

M= Weight of Material (lbs/ft)

*Additional pull due to bucket digging material out of the Boot (D) is given by:

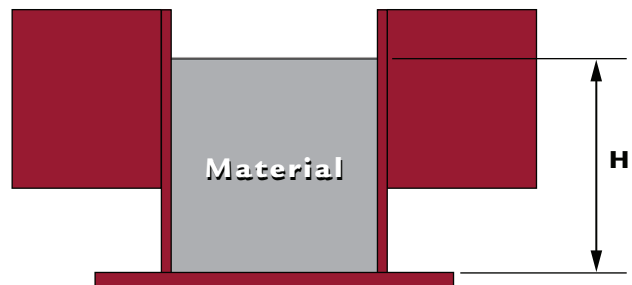
$$D = W \times F$$

W= Weight in lbs/ft of chain, attachments, buckets, etc.

Table 6: Bucket Digging Factor (F)

Elevator Type	Duty	F
Centrifugal	Light	15
	Average	25
Continuous	Light	5
	Average	8

Conveyor Pull due to Sideboard Traction (J)



Additional pull due to material sliding against sideboards (J) is given by: (W)

$$J = (C \times H^2) / R$$

NOTE: H = Height of Material
C = Center Distance of Conveyor (ft)
R = Factor Based on Material

Table 7: Factor "R" for Sideboard Friction

Material	NS
Coal	14.0
Coke	35.0
Limestone	7.5
Gravel	7.0
Sand	5.5
Ashes	14.0

Table 8: Number of Chain Strands Factor

Strands	NS
1	1.0
2	1.2
3	1.3
4	1.4
5	1.5
6	1.6

Conveyor Chain Selection

Table 9: Speed Correction Factor (SC)

Number Sprocket Teeth	Chain Speed (ft / min)														
	10	25	50	75	100	125	150	175	200	225	250	275	300	400	500
6	.92	1.09	1.37	1.68	2.00	2.40	2.91	3.57	4.41	5.65	7.35	-	-	-	-
7	.86	.97	1.13	1.27	1.44	1.61	1.81	2.04	2.29	2.60	2.96	3.42	3.95	8.62	-
8	.81	.91	1.04	1.16	1.26	1.37	1.49	1.63	1.76	1.93	2.10	2.29	2.48	3.62	6.20
9	.79	.87	.98	1.07	1.17	1.26	1.36	1.45	1.55	1.65	1.76	1.88	2.00	2.56	2.94
10	.78	.84	.94	1.02	1.09	1.16	1.24	1.31	1.37	1.45	1.53	1.61	1.68	2.03	2.21
11	.76	.82	.90	.97	1.03	1.09	1.15	1.22	1.28	1.34	1.40	1.46	1.52	1.78	2.05
12	.74	.79	.86	.93	.99	1.05	1.10	1.16	1.21	1.26	1.32	1.37	1.42	1.63	1.84
15	.73	.77	.83	.89	.94	.98	1.02	1.07	1.11	1.25	1.19	1.24	1.28	1.47	1.61
16	.73	.76	.81	.86	.89	.94	.97	1.01	1.05	1.08	1.12	1.16	1.19	1.34	1.48
18	.72	.75	.80	.83	.88	.91	.94	.98	1.01	1.04	1.08	1.11	1.14	1.27	1.40
20	.72	.75	.79	.83	.86	.89	.92	.95	.98	1.01	1.04	1.07	1.10	1.22	1.34
24	.71	.74	.77	.80	.82	.85	.88	.90	.94	.96	1.01	1.04	1.07	1.15	1.26

Table 11: Roller/Bushing Bearing Pressure

Bushing - Roller Material Combination		Allowable Bearing Pressure
Carburized Steel	Carburized Steel	750 psi
Carburized Steel	Thru Hardened Steel	700 psi
Carburized Steel	Plastic	250 psi
Thru Hardened Steel	Thru Hardened Steel	700 psi
Thru Hardened Steel	Plastic	250 psi

Table 10: Service Factors

Frequency Shock Loading SF ₁	Type Conveyor Loading SF ₂	Operating Conditions SF ₃	Duty Cycle SF ₄
Infrequent 1.0	Uniform 1.0	Clean Environment 1.0	8-10 Hours per Day 1.0
Frequent 1.2	Moderate Shock Load 1.2	Moderate Environment 1.2	11-16 Hours per Day 1.1
	Heavy Shock Loading 1.5	Severe Environment 1.4	16-24 Hours per Day 1.2

Selection Procedure

Step 1: Determine Basic Requirements

Before attempting to select a specific Conveyor Chain determine the following as accurately as possible:

- Type of Conveyor:** Note whether the material to be conveyed is unit or bulk and whether the chain will carry the material weight directly or will it be supported by a deck or in a trough.
- Class of Chain:** Select a class of chain (Roller Conveyor, Steel Bushed, Welded Steel, etc.)
- Estimate W:** This includes the total weight per foot of all chain, attachments, slats, etc. on the conveyor and is given in lbs/ft.
- Determine Dimensions:** This includes the center distance in feet, and for inclined conveyors, the angle of incline (θ) or height (A) and width (B).
- Conveyor Speed (S):** This should be determined in ft/min.
- Weight of Material Conveyed (M):** This value should be determined in lbs/ft on the conveyor. Note that often the designer specifies a through put or capacity for the conveyor. In such cases the value M needs to be calculated as follows:
Bulk Materials with capacity given in Tons/hour (Q):

$$M = (33.3 \times Q) / S$$

Unit Materials with capacity given in units per hour (R) determine the weight per unit (m) and use:

$$(M = (R \times m) / (60 \times S))$$

- Determine Friction Coefficients (f):** From Tables 2-4 (page 25) determine the appropriate friction coefficients. Also consult the formulas on page 26 for additional assistance in determining the friction coefficients.

- Determine Service Factors (SF):** (see Table 10). Service Factor is given by:

$$SF = SF_1 \times SF_2 \times SF_3 \times SF_4$$

- Determine Number of Teeth for Sprockets:** Use Table 9 and select number of teeth by reading down the chain speed column and finding the value nearest to 1.00
- Determine Speed Correction Factor (SC):** (See Table 9).
- Determine # of Chain Strands Factor (NS):** (See Table 8).

Step 2: Calculate Conveyor Pull

Use the appropriate formula on the page 26 to calculate total conveyor pull (P).

Step 3: Calculate Design Conveyor Pull

The Design Conveyor Pull (DP) is given by:

$$DP = P \times SF \times SC \times NS$$

Step 4: Calculate Chain Tension

The calculated Chain Tension (T) is given by:

$$T = DP / \text{Total Number of Chain Strands}$$

Step 5: Select Chain and Recalculate Chain Tension (T)

Select a chain that has a higher rated working load (found in the dimension tables) than the calculated chain tension. Recalculate Chain Tension (T) using the correct values for chain and attachment weights (W) to verify the selection.

Step 6: Verify Roller/Bushing Bearing Pressure for Roller Conveyor Chains Only.

Determine the bearing pressure (BP) between the Roller ID and the Bushing OD by:

$$BP = \text{Load Per Roller} / \text{Bearing Area}$$

$$\text{Load Per Roller} = (M + W) / [(12 / \text{Pitch}) \times \text{Number of Strands}]$$

$$\text{Bearing Area} = \text{Bushing OD} \times (\text{Inside Width} - .063)$$

BP should be less than found in Table 11 for material combo.

Engineering Class Chains

Conveyor Chain Selection

Selection Examples

Example #1: Horizontal Unit Conveyor

Supplied Information:

Slat Conveyor to move finished TV sets from packaging line to the shipping floor

TV set is packaged in an 18" x 18" x 24" high box

Box Weight: 400 lbs each

Operating Speed: 125 ft/min

Sprocket Centers: 75 ft

Infrequent Moderate Shock Loading

16 Hour Operation in Clean Conditions

Slats: 1/4" x 24" Long

12 Tooth Sprockets are Specified

Step 1: Determine Basic Requirements

A unit conveyor in clean operating conditions suggests the use of 2 strands of Roller Conveyor Chain with K-2 attachments to bolt the slats on.

Slat weight will be approximately:

$$\text{Slat Weight} = 1/4\text{in} \times 24\text{in} \times 12\text{in/ft} \times .2833 \text{ lbs/cubic inch}$$

$$\text{Slat Weight} = 20.4 \text{ lbs/ft of conveyor}$$

Material Weight is estimated by:

$$\text{Number of boxes on Conveyor} = 75\text{ft} \times 12\text{in/ft} / 18\text{in box} = 50$$

$$\text{Weight of 50 boxes} = 50 \times 400 = 20,000 \text{ lbs}$$

$$\text{Weight per foot of conveyor (M)} = 20,000 \text{ lbs} / 75 \text{ ft}$$

$$\text{M} = 266.6 \text{ lbs/ft of conveyor.}$$

To estimate the required chain weight we note the following:

Slat weight + Material Weight on 75 ft of conveyor is:

$$(20.4 + 266.6) \times 75 = 23,055 \text{ lbs.}$$

Estimate rolling friction coefficient of .16 from Table 3 we get:

$$23,055 \times .16 / 2 \text{ strands} = 1,844 \text{ lbs of tension per strand.}$$

Since 1,844 lbs. is a relatively low tension we estimate the weight on the lower side of what is shown in Table 1. . . We'll estimate 5 lbs/ft.

We can now estimate Weight of Chain and Slats per foot of conveyor "W" by the following:

$$W = (5 \text{ lbs/ft} \times 2 \text{ strands}) + 20.4 = 10 + 20.4$$

$$\text{W} = 30.4 \text{ lbs/ft of conveyor}$$

We estimate rolling friction coefficient to be .16 based on a lubricated roller. Thus **f = .16**

From Table 10 we find the service factor SF by:

$$\text{SF} = 1.0 \times 1.2 \times 1.0 \times 1.1$$

$$\text{SF} = 1.32$$

Based on chain speed of 125 ft/min if we use a 12 tooth sprocket we note the speed correction factor:

$$\text{SC} = 1.05$$

From Table 8 since we are using 2 strands of chain we determine the number of strands factor as:

$$\text{NS} = 1.2$$

Step 2: Calculate Conveyor Pull

We now use the Conveyor Pull formula for the horizontal conveyor on the preceding pages as follows:

$$P = (2.1Wf + Mf) \times C + J^* \text{ Note } J=0 \text{ in this case}$$

$$P = [(2.1 \times 30.4 \times .16) + (266.6 \times .16)] \times 75$$

$$P = (10.2 + 42.7) \times 75 = (52.9 \times 75)$$

$$P = 3,968 \text{ lbs.}$$

Step 3: Calculate Design Conveyor Pull

The Design Conveyor Pull (DP) is given by:

$$\text{DP} = P \times \text{SF} \times \text{SC} \times \text{NS}$$

$$\text{DP} = 3,968 \times 1.32 \times 1.05 \times 1.02$$

$$\text{DP} = 6,600 \text{ lbs.}$$

Step 4: Calculate Chain Tension

The calculated Chain Tension (T) is given by:

$$T = \text{DP} / \text{Total Number of Chain Strands}$$

$$T = 6,600 / 2$$

$$T = 3,300 \text{ lbs.}$$

Step 5: Select Chain and Recalculate Chain Tension (T)

From the dimensional tables on page 12, 83R has a rated working load of 3,650 lbs, a 2.0" dia. roller and weighs 9.4 lbs/ft with a K-2 every pitch. Recalculate "W", "P", "DP" and "T" as follows:

$$W = (9.6 \times 2) + 20.4 = 39.6$$

$$P = [(2.1 \times 39.6 \times .15) + (266.6 \times .15)] \times 75$$

$$P = (12.5 + 40.0) \times 75$$

$$P = 3,938 \text{ lbs.}$$

$$\text{DP} = 3,938 \times 1.32 \times 1.05 \times 1.2$$

$$\text{DP} = 6,550 \text{ lbs.}$$

$$T = 6,550 / 2$$

$$T = 3,275 \text{ lbs.}$$

Since the calculated chain tension of 3,275 lbs is less than the rated working load for 83R we can accept this selection.

Step 6: Verify Roller/Bushing Bearing Pressure if Chain is Rolling

Since we have selected a Roller Conveyor Chain we need to check the roller/bushing bearing pressure as follows:

$$\text{Load Per Roller} = (M+W) / [(1/2 / \text{Pitch}) \times \text{Num. of Strands}]$$

$$\text{Load Per Roller} = (266.6 + 39.6) / [(12/4) \times 2]$$

$$\text{Load Per Roller} = 306.2 / 6 = 51 \text{ lbs.}$$

$$\text{Bearing Area} = \text{Bushing OD} \times (\text{Inside Width} - .063)$$

$$\text{Bearing Area} = (.875) \times (1.313 - .063) = 1.09 \text{ Square inches}$$

$$\text{Bearing Pressure} = \text{Load Per Roller} / \text{Bearing Area}$$

$$\text{Bearing Pressure} = 51 / 1.09 = 46.8 \text{ psi}$$

We refer to the dimensional tables and note that the bushing and roller are both carburized steel. From Table 11 (page 27) allowable bearing pressure is 750 psi. As the calculated bearing pressure of 46.8 is less than 750 psi the selection of 83 is verified.

Conveyor Chain Selection

Example #2: Inclined Scraper Flight Conveyor

Supplied Information:

- Bulk Material Bituminous Coal - slack dry.
- Conveyor Capacity: 150 Tons/hr
- Operating Speed: 100 ft/min
- Total Lift: 30 ft
- Sprocket Centers: 50 ft
- Infrequent Moderate Shock Loading.
- 24 Hour Operation in Dirty Conditions
- Steel Trough Width: 24 inches
- Average depth of Coal: 6 inches
- Scraper Flights: 5/16" x 12" x 23" long, 22.8 lbs. ea

Step 1: Determine Basic Requirements

An appropriate chain type for a scrapper flight incline conveyor when the chain does not run in the material might be 2 strands of a Roller Conveyor Chain with G-19 or G-29 scraper flight attachments. Since we are traveling up an incline the roller type chain will help reduce the power required. Dirty conditions may prevent the use of effective lubrication so we will base our selection assuming no lubrication for the chain. Finally, we note that in this bulk material conveyor the chain does not directly carry the conveyed load, therefore, there will be no need to check the allowable roller/bushing bearing pressure.

G-19 attachments are available in 9"-24" pitch chains. G-29 attachments are available in 4" or 6" pitch chains. If we tentatively select a 9" pitch 925R chain we can calculate the estimated weight of the chain attachments and flights as follows:

Chain and attachments = 9.8 lbs/ft. x 2 strands = 19.6 lbs/ft.
Scraper flights weigh 22.8 x (12/9) = 30.4

$$W = 19.6 + 30.4 = 50.4 \text{ lbs/ft}$$

Material weight (M) is determined by:

$$M = [33.3 \times \text{Capacity (tons/hr)}] / \text{conveyor speed (ft/min)}$$

$$M = (33.3 \times 150) / 100$$

$$M = 50 \text{ lbs/ft}$$

We estimate the rolling friction coefficient to be **fr = .14** since 925R has a 3 inch diameter roller which will not be lubricated (see Table 3 - page 25). The sliding friction coefficient for bituminous coal in a steel trough from Table 4 (page 25) is **fs=.50**

From Table 10 (page 27) we find the Service factor by:

$$SF = 1.0 \times 1.2 \times 1.4 \times 1.2$$

$$SF = 2.02$$

From Table 9 (page 27) if we specify a 12 tooth sprocket we determine the speed correction factor as:

$$SC = .99$$

From Table 8 (page 26) since we are using 2 strands of chain we determine the number of strands factor as:

$$NS = 1.2$$

Since the conveyor is inclined it will be useful to determine the sine and cosine of the incline angle:

$$\sin\theta = 30 / 50 \quad \cos\theta = 40 / 50$$

$$\sin\theta = .6 \quad \cos\theta = .8$$

Step 2: Calculate Conveyor Pull

We now use the Conveyor Pull formula for the incline conveyor on the preceding pages as follows:

$$P = [(Mf)\cos\theta + (Wf)\cos\theta + Msin\theta + Wsin\theta]C + [(Wf)\cos\theta - Wsin\theta]C + J = (C \times H) / R$$

From Table 7 we note that R = 14 for coal and thus:

$$J = (50 \times 6 \times 6) / 14$$

$$J = 129 \text{ lbs.}$$

Now we determine P

$$P = [(50)(.5)(.8) + (50)(.14)(.8) + (50)(.6) + (50)(.6)] (50) + [(50)(.14)(.8) - (50)(.6)] (50) + 129$$

$$P = [20 + 5.6 + 30 + 30] (50) + [5.6 - 30] (50) + 129$$

$$P = 4,280 - 1,220 + 129$$

$$P = 3,189$$

Step 3: Calculate Design Conveyor Pull

The Design Conveyor Pull (DP) is given by:

$$DP = P \times SF \times SC \times NS$$

$$DP = 3,189 \times 2.02 \times .99 \times 1.2$$

$$DP = 7,653 \text{ lbs.}$$

Step 4: Calculate Chain Tension

The calculated Chain Tension (T) is given by:

$$T = DP / \text{Total Number of Chain Strands}$$

$$T = 7,653 / 2$$

$$T = 3,827 \text{ lbs}$$

Step 5: Select Chain, Recalculate Chain Tension (T)

From the dimensional tables we note that our tentative selection of 925R has rated working load of 4,150 lbs. which is greater than the calculated value of 3,827 lbs. so that 925 is a satisfactory selection.

If we determined that the sprocket is too large for this application and that a 6 inch pitch chain with an 11 Tooth sprocket was required we can check the suitability of 1131R with G-29 attachments every 6 inches as follows:

$$W = ((12.5 + 2.7) \times 2) + (22.8 \times (12 / 6))$$

$$W = 30.4 + 45.6$$

$$W = 76 \text{ lbs / ft}$$

$$M = 50 \text{ lbs/ft}; SF=2.02; SC=1.03(\text{see Table 10}) \text{ and } NS=1.2$$

$$P = [(50)(.5)(.8) + (76)(1.4)(.8) + (50)(.6) + (76)(.6)] (50) + [(76)(.14)(.8) - (76)(.6)] (50) + 129$$

$$P = [20 + 8.5 + 30 + 45.6] (50) + [8.5 - 45.6] (50) + 129$$

$$P = [5,205 - 1,855 + 129]$$

$$P = 3,221 \text{ lbs.}$$

$$DP = 3,221 \times 2.02 \times 1.03 \times 1.2 = 8,042 \text{ lbs}$$

$$T = 8,042 / 2 = 4,021 \text{ lbs.}$$

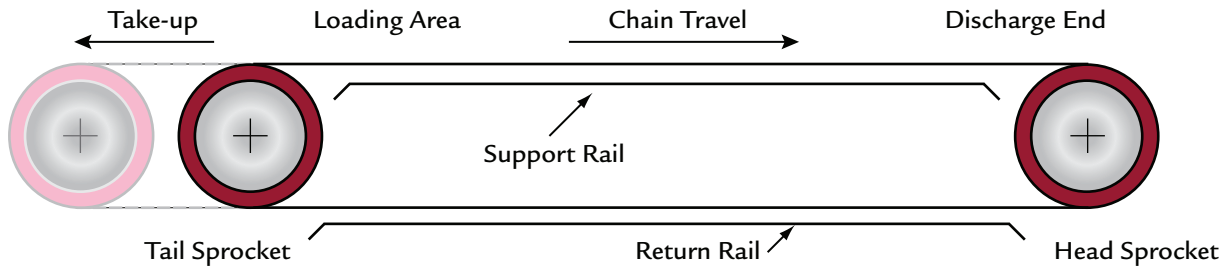
Since the calculated chain tension (4,021 lbs) is less than the rated working load (5,900 lbs) for 1131R, this chain is suitable. We note that we could select a lighter 6 inch pitch chain such as 625R without additional calculation since it's rated working load is 4,150 lbs. The scrapper flight attachment is not standard, but can be designed.

Engineering Class Chains

Conveyor Chain Selection

Conveyor Chain Useful Information

Basic Conveyor Layout



Arrangement

Power should be supplied to the head sprocket (discharge end) whenever possible to avoid high loading on both the carrying and return side. This will reduce the rate of chain elongation.

Sprockets

We recommend using the largest sprocket diameter that space will permit to minimize speed variations and pulsation caused by chordal action. Speed variations on sprockets with few teeth result from the difference in the chain's radial position from the shaft center-line when a tooth or a tooth pocket is top dead center. Since the shaft turns at a constant speed a larger radial distance will speed up the chain and a lesser radial distance will slow down the chain. The fewer the number of teeth the greater the speed variation. This effect becomes negligible at approximately 18 teeth.

For large pitch conveyors a compensating Drive Chain arrangement can be designed to vary the head shaft's rotational speed to compensate for the effect of chordal action.

Hardened Teeth for sprockets are recommended particularly if there are fewer than 15 teeth.

Match Sprockets

When a double strand chain conveyor has slats, flights, apron pans, or other parts that connect the two chains rigidly together, both head shaft sprockets should be matched. This can be done by specifying that the sprockets be keyed on the center-line of the tooth. We also recommend that on the tail shaft one sprocket be keyed and one sprocket be allowed to turn freely between set collars for automatic repositioning of the teeth if uneven chain wear occurs.

Conveyor Length

Unusually long conveyor lengths can result in pulsation due to the chain's elastic properties. If this occurs, it may be necessary to use two conveyors with a transfer point or additional drives.

Take Up Tension

The correct amount of take up tension that should be applied is the minimum amount that allows for smooth action over the tail sprocket. As a guide this usually amounts to approximately .5% - 2% of the chain's Average Ultimate Strength.

Matched Chain Strands

Multiple strand conveyors often require matched and tagged chains. In this case each strand will be measured and matched so that adjacent strands are all within 0.031" of each other in length.

Right and Left Hand Strands

On dual strand chain conveyors when the attachments are not symmetrical it is often necessary to order right and left hand chains. In many applications the cotter pins must face inside to avoid interference with rails on angle tracks. This can create an asymmetric situation even though the attachments are symmetrical.

Chain Supports

Conveyors over 15 feet in length need to be supported on the return side to avoid pulsations, chain whip, or elongation causing excessive sag to strike adjacent conveyor components. A return rail or idler sprocket is used for this purpose.

Lubrication

Effective lubrication is the single most important maintenance practice that can be done to extend chain life, reduce power consumption, and assist in smooth running trouble-free service life. High quality non-detergent oils should be used. In some cases chain can be lubricated with grease through a fitting mounted on the chain pin (diameter should be at least 0.750" in this case) or less frequently through a bushing lubrication hole (Rollerless Steel Bushed or Welded Steel Chains). For Roller Conveyor Chains carrying large loads it may be best to fit the roller with a sealed roller or ball bearing to minimize friction and extend chain life. Hitachi engineering personnel are available to assist with lubrication guidance for specific applications.

Calculating Horsepower

$$HP = (T \times S) / 33,000$$

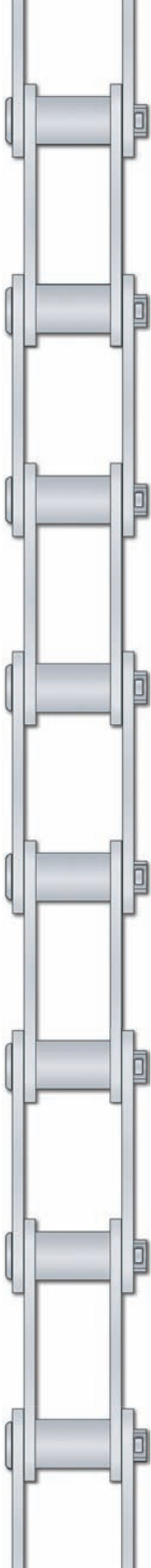
T = Maximum Chain Tension (lbs)

S = Linear Chain Speed

$$HP = (\text{Torque} \times \text{rpm}) / 63,000$$

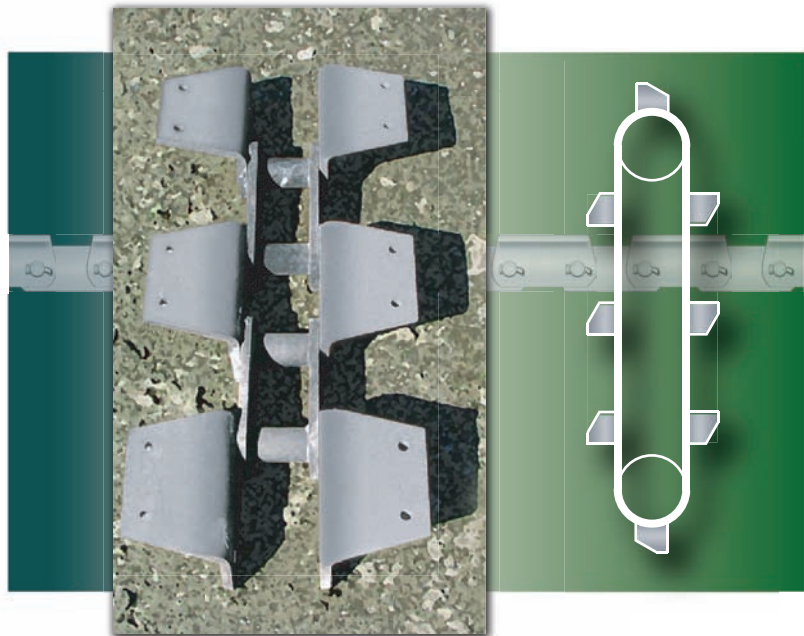
Torque is in inch-pounds

Steel Bushed Chains



Premier Chain for Severe Duty Applications

Steel Bushed Chains are heavy duty Rollerless Engineering Class Chain products designed to operate in challenging environments. These chains are often specified for bucket elevators or drag conveyors moving bulk products in dirty, abrasive or otherwise harsh and difficult conditions. High quality heat treated carbon and alloy steels provide long lasting reliability. Steel Bushed Chains are often specified to replace Cast Combination Chains in order to achieve greater service life.

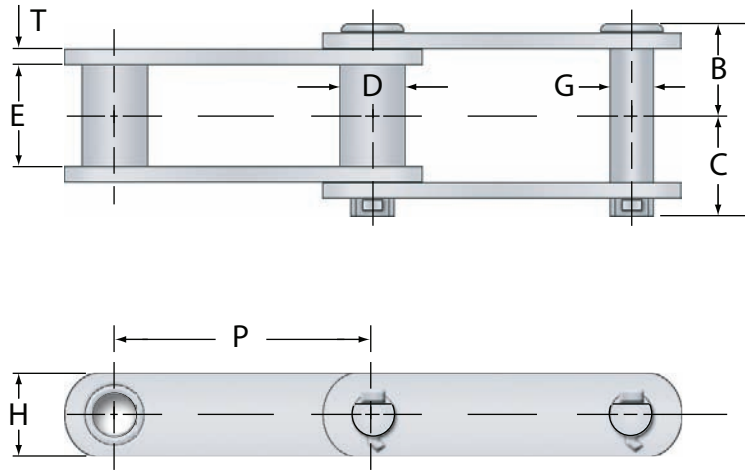


Product	Page
Steel Bushed Plain Chain	32
A-1 / K-1 Attachments	33
A-42 Attachment	33
A-2 / K-2 Attachments	34
K-22 Attachment	34
K-3 Attachment	35
K-24 Attachment	36
K-44 Attachment	37

Engineering Class Chains

Steel Bushed Chain

Steel Bushed Chain - Plain



Steel Bushed Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch P	Inside Width E	Bushing			Pin					Sidebar			Rated Working Load lbs	Average Ultimate Strength lbs	Avg Chain Wght lbs/ft
			Dia D	Sty	Mat	Dia G	Mater	Sty	Lgth B	Lgth C	Thick. T	Height H	Mat			
188	2.609	1.063	0.875	F	C-CH	0.500	A-CH	A	1.25	1.44	0.250	1.125	C-HT	2,750	25,000	3.8
131	3.075	1.313	1.250	F	C-CH	0.625	A-CH	A	1.66	1.88	0.375	1.500	C-HT	4,500	40,000	7.4
102B	4.000	2.125	1.000	F	C-CH	0.625	A-CH	A	2.03	2.28	0.375	1.500	C-HT	6,300	40,000	6.9
102 1/2	4.040	2.250	1.375	F	C-CH	0.750	C-CH	A	2.25	2.50	0.375	1.750	C-HT	8,850	50,000	9.4
111	4.760	2.625	1.438	F	C-CH	0.750	C-CH	A	2.38	2.69	0.375	2.000	C-HT	8,850	50,000	10.2
110	6.000	2.125	1.250	F	C-CH	0.625	C-CH	A	2.03	2.28	0.375	1.500	C-HT	6,300	40,000	6.3
856	6.000	3.000	1.750	R	A-CH	1.000	A-HTIH	B	2.88	3.25	0.500	2.500	A-HT	14,000	145,000	16.5
857	6.000	3.000	1.750	R	A-CH	1.000	A-HTIH	B	2.88	3.25	0.500	3.250*	A-HT	14,000	175,000	21.0
859	6.000	3.750	2.375	R	A-CH	1.250	A-HTIH	B	3.56	3.81	0.625	4.000**	A-HT	21,800	275,000	34.0
150X	6.050	3.313	1.750	F	A-CH	1.000	A-CH	A	3.03	3.38	0.500	2.500	C-HT	15,100	100,000	16.6
864	7.000	3.750	2.375	R	A-CH	1.250	A-HTIH	B	3.56	3.75	0.625	4.000**	A-HT	21,800	275,000	31.0

C-HT Medium Carbon Steel Through Hardened

A-HT Medium Carbon Alloy Steel Through Hardened

A-HTIH Medium Carbon Alloy Steel Through Hardened and Induction Hardened

C-CH Low Carbon Steel Case Hardened

A-CH Low Carbon Alloy Steel Case Hardened

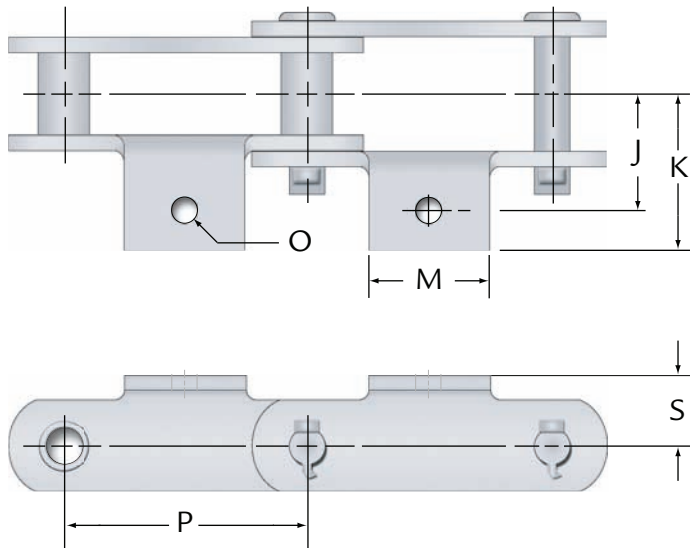
* Outer Plain Side Bars are 2.500" High

** Outer Plain Side Bars are 3.000" High

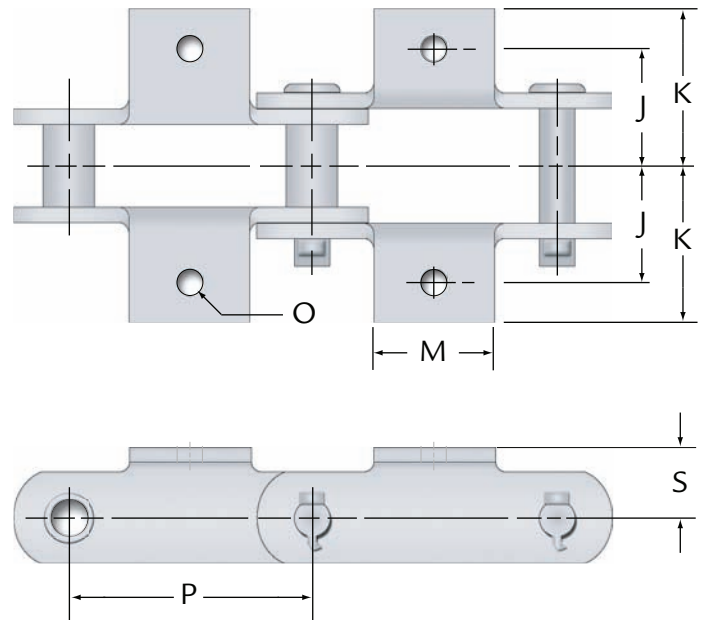
Dimensions subject to change

Steel Bushed Chain A-1 / K-1 / A-42 Attachments

A-1 Attachment



K-1 Attachment

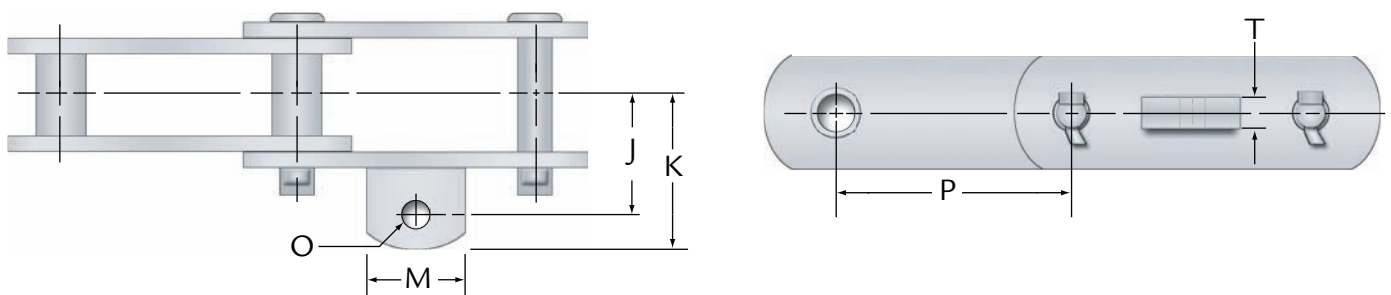


A-1 & K-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	A-1 Additional Weight/Att. lbs/pc	K-1 Additional Weight/Att. lbs/pc
	P	M	O	S	J	2J	K	2K		
188	2.609	2.125	0.406	0.813	1.875	3.750	2.28	4.56	0.13	0.26
131	3.075	1.938	0.531	1.000	2.063	4.126	3.06	6.13	0.38	0.77
102B	4.000	2.813	0.406	1.000	2.375	4.750	3.25	6.50	0.67	1.33
111	4.760	3.625	0.531	1.500	3.125	6.250	3.75	7.50	0.99	1.98
110	6.000	2.813	0.406	1.000	2.969	5.938	3.53	7.06	1.15	2.30

A-42 Attachment



A-42 Attachment Link Specifications

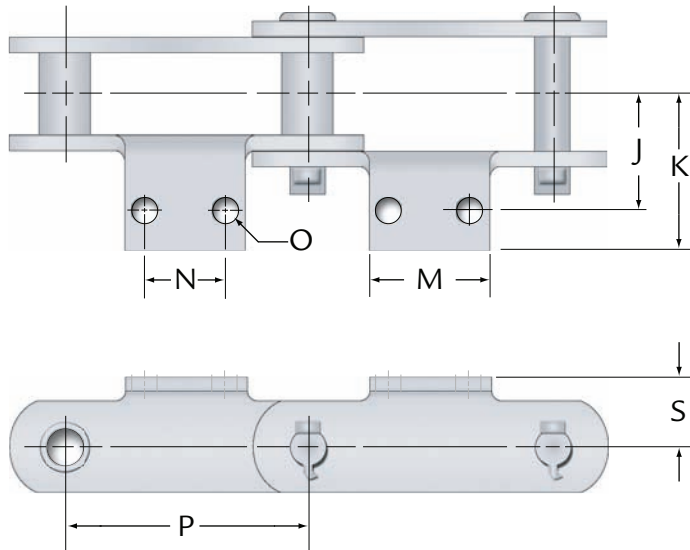
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Attachment Hole Diameter	Attachment Plate Thickness	C/L Chain Attachment Hole	C/L Chain Attachment Edge	A-42 Additional Weight/Att. lbs/pc
	P	M	O	T	J	K	
188	2.609	1.250	0.406	0.375	1.781	2.38	0.22
131	3.075	1.250	0.406	0.313	2.625	3.50	0.26
102B	4.000	1.250	0.406	0.313	3.125	3.88	0.30
111	4.760	1.250	0.531	0.375	3.375	4.13	0.24
110	6.000	2.000	0.531	0.375	3.125	4.13	0.40

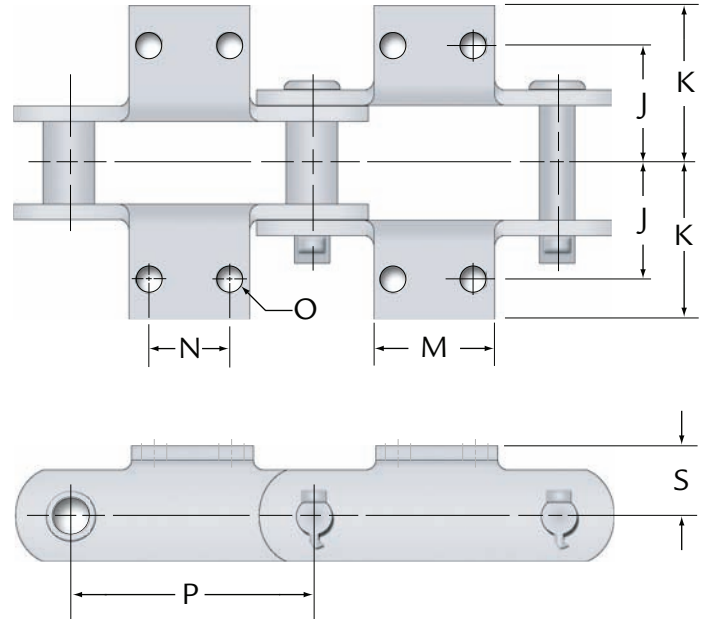
Engineering Class Chains

Steel Bushed Chain Attachment Links

A-2 Attachment



K-2 / K-22 Attachment



A-2 & K-2 Attachment Link Specification

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Att Hole Pitch	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	A-2 Additional Weight/Att. lbs/pc	K-1 Additional Weight/Att. lbs/pc
	P	M	N	O	S	J	2J	K	2K		
188	2.609	2.125	1.250	0.344	0.813	2.094	4.188	2.56	5.13	0.22	0.43
131	3.075	2.875	1.500	0.531	1.000	2.063	4.126	2.94	5.88	0.36	0.72
102B	4.000	2.813	1.750	0.406	1.000	2.656	5.313	3.25	6.50	0.35	0.70
111	4.760	3.625	2.313	0.531	1.500	3.125	6.250	4.13	8.25	0.99	1.98
110	6.000	2.875	1.750	0.406	1.000	2.656	5.313	3.28	6.56	0.58	1.15
856	6.000	4.250	2.250	0.531	1.875	3.156	6.313	4.25	8.50	1.63	3.25
150X	6.050	4.250	2.750	0.531	1.875	3.750	7.500	4.78	9.56	1.61	3.23

Dimensions subject to change

K-22 Attachment Link Specification

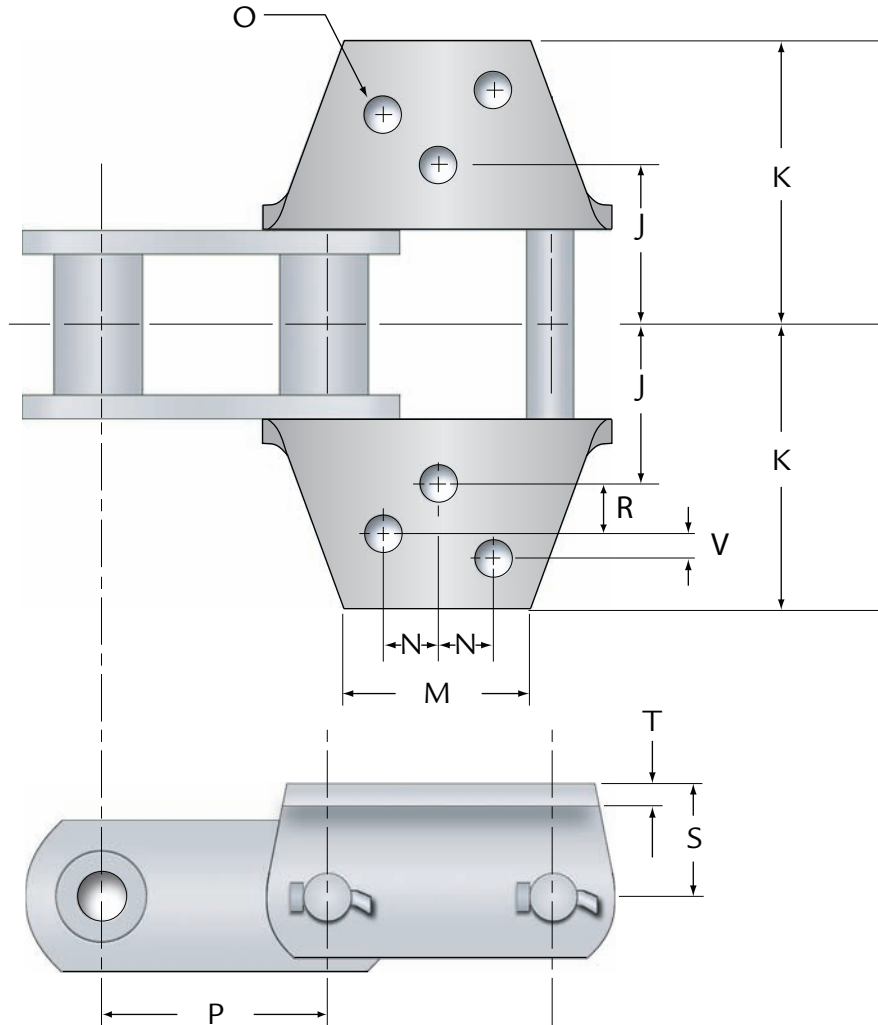
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Att Hole Pitch	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	K-22 Additional Weight/Att. lbs/pc
	P	M	N	O	S	J	2J	K	2K	
1021/2	4.040	3.125	1.750	0.406	1.125	2.656	5.313	3.28	6.56	1.55
111	4.760	2.313	2.310	0.406	1.500	3.130	6.260	4.13	8.26	2.32
856	6.000	4.250	2.250	0.500	1.875	3.156	6.313	4.25	8.50	3.25

Dimensions subject to change

Steel Bushed Attachment Links - Specifications

K-3 Attachment



K-3 Attachment Link Specification

Chain Dimensions Are Given In Inches

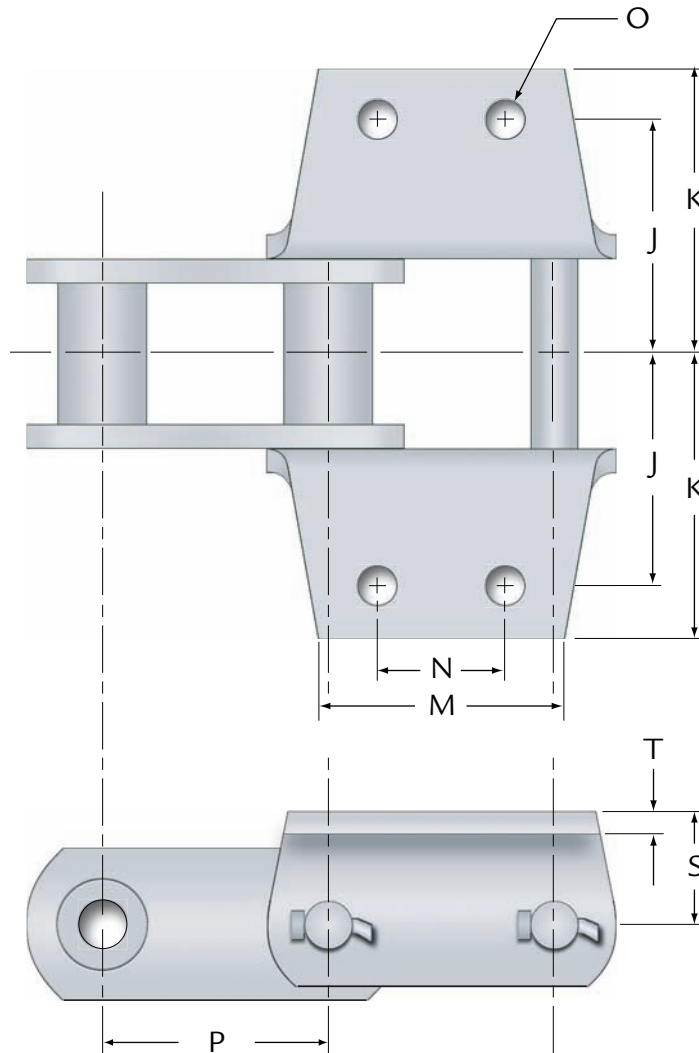
Hitachi Chain Number	Chain Pitch	Tab Width	Att. Hole Pitch	Offset Hole Dim.	Offset Hole Dim.	Hole Diameter	Height	C/L Chain Attach Hole	Across Holes	C/L Chain Attach Edge	Overall Width	K-3 Add. Wgt/Att. lbs/pc
	P	M	N	V	R	O	S	J	2J	K	2K	
856	6.000	4.250	1.375	0.563	2.188	0.531	1.875	3.281	6.563	6.75	13.50	5.25
150X	6.050	4.250	1.375	-	-	0.531	1.875	3.750	7.500	6.28	12.56	5.19

Dimensions subject to change

Engineering Class Chains

Steel Bushed Chain Attachment Links

K-24 Attachment



K-24 Attachment Link Specification

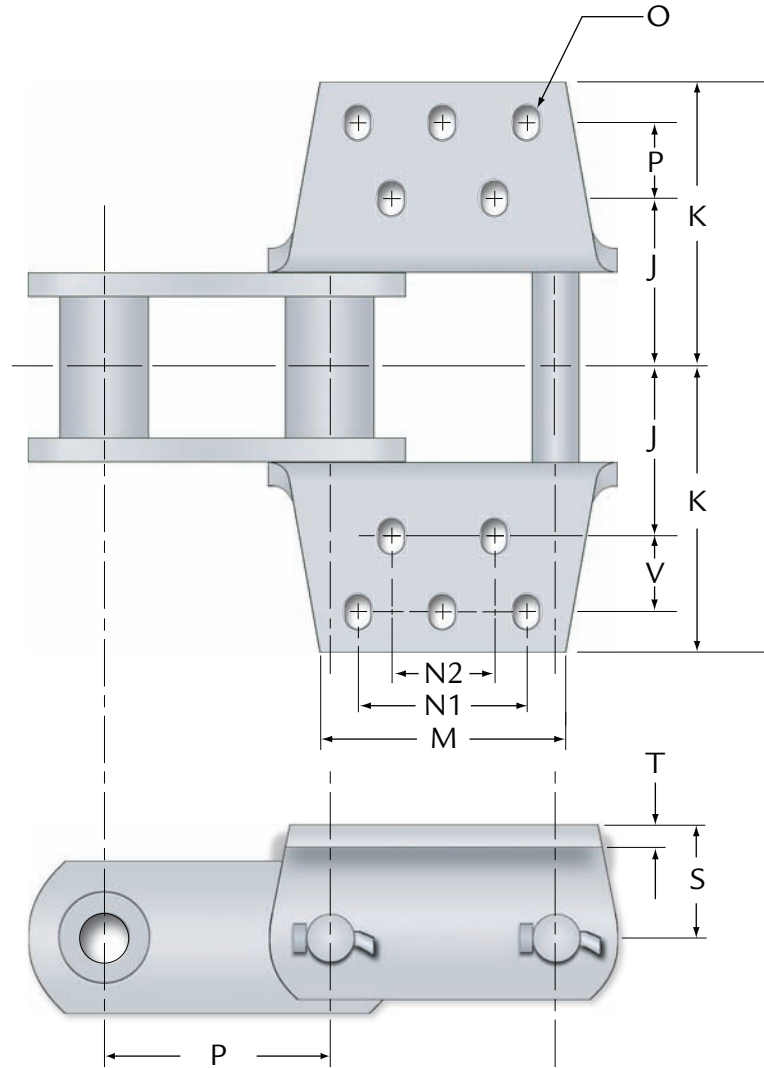
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Att Hole Pitch	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	K-24 Additional Weight/Att. lbs/pc
	P	M	N	O	S	J	2J	K	2K	
856	6.000	7.250	2.500	0.656	1.875	3.625	7.250	4.75	9.50	3.50

Dimensions subject to change

Steel Bushed Attachment Links - Specifications

K-44 Attachment

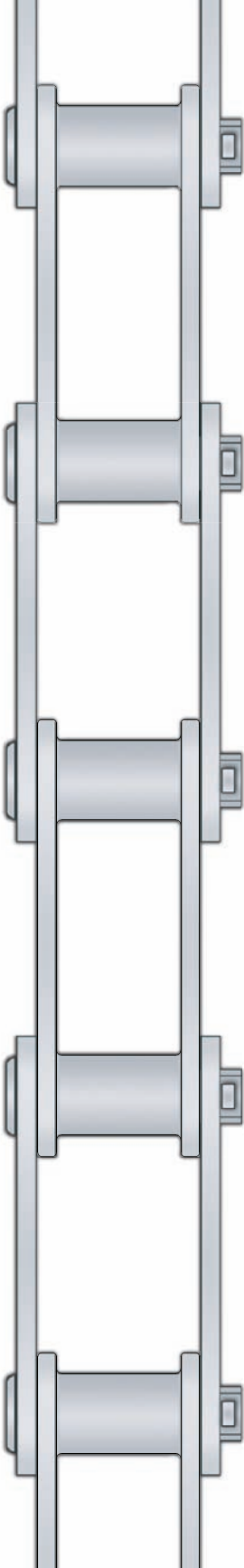


K-44 Attachment Link Specification

Chain Dimensions Are Given In Inches

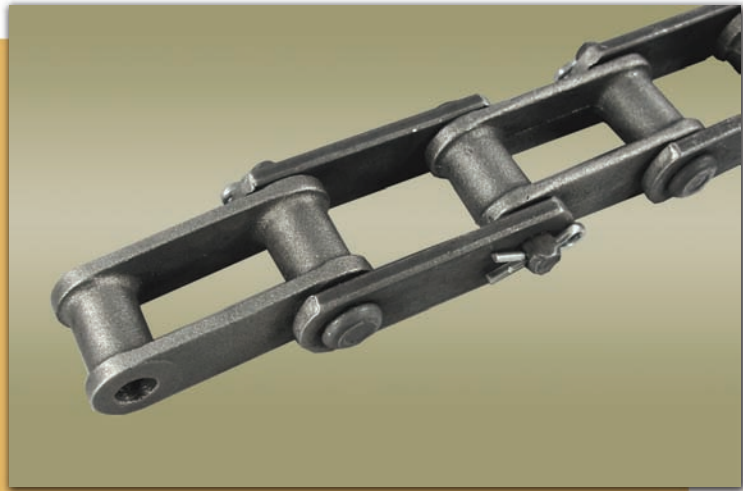
Hitachi Chain Number	Chain Pitch	Tab Width	Pitch		Offset Hole Dim.	Diameter	Height	C/L Chain Attach Hole	Across Holes	C/L Chain Attach. Edge	Overall Width	K-44 Additional Wgt/Att lbs/pc
	P	M	N1	N2	V	O	S	J	2J	K	2K	
857	6.000	6.500	3.500	3.500	2.500	0.531	2.500	3.500	7.000	7.25	14.50	10.50
859	6.000	6.500	4.500	2.750	2.000	0.656	3.000	4.500	9.000	7.56	15.13	11.50
864	7.000	8.562	5.500	3.750	2.000	0.656	3.000	4.500	9.000	7.56	15.13	12.83

Cast Combination Chains



High Strength and Durability to Match

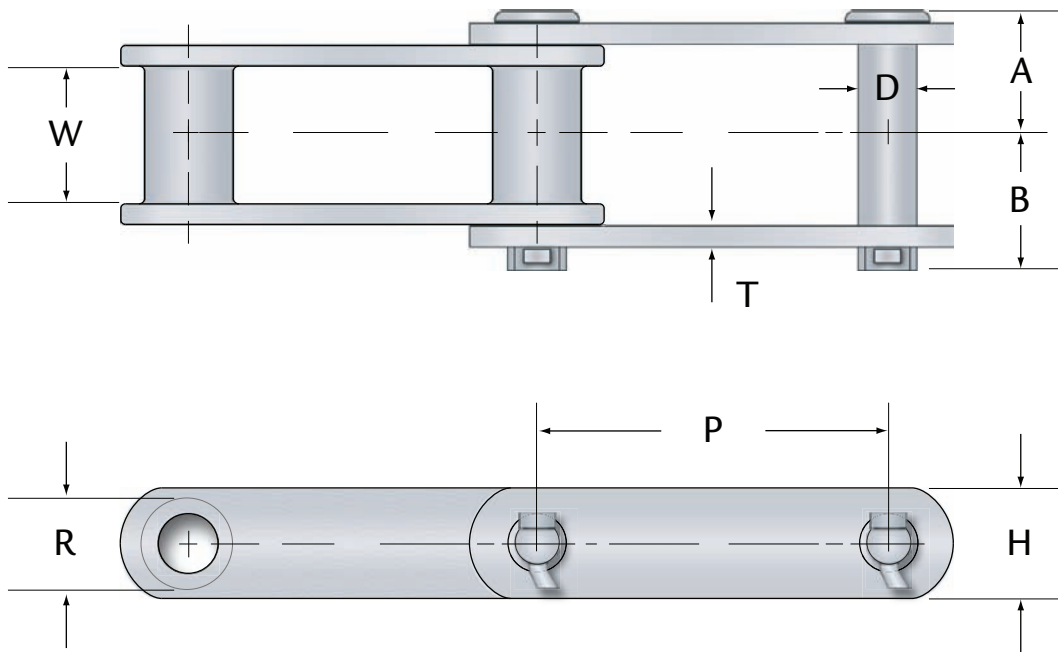
Hitachi Cast Combination Chains are perfect for applications where long life and demanding performance are required. Cast Combination Chains feature block links of pearlitic malleable iron, up to 35% stronger than standard cast or malleable products. Matched with carbon steel sidebars and pins, Cast Combination Chains offer better performance and longer life than all cast chain products. Abrasive resistant, durable in a wide range of service applications, Hitachi Cast Combination Chains are an excellent choice for heavy duty conveyor applications.



Product	Page
Cast Combination Plain Chain	39
K-1 - K-2 Attachments	40
G-19 Attachment	41
S-1 Attachment	41
A-22 Attachment	42
F-2 Attachment	42

Cast Combination Chain - Specifications

Cast Combination Plain Chain



Cast Combination Chain Specifications

Chain Dimensions Are Given In Inches

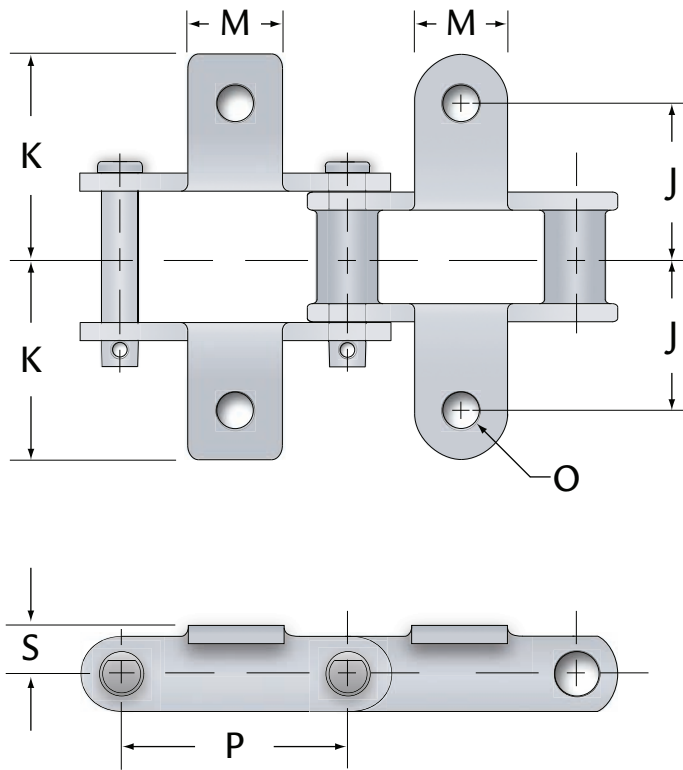
Dimensions subject to change

Hitachi Chain Number	Pitch	Width	Diameter	Thickness	Height	Pin			Rated Working Load lbs	Average Ultimate Strength lbs	Average Chain Weight lbs/ft
	P	W	R	T	H	D	A	B			
C55	1.631	0.688	0.719	0.187	0.750	0.375	0.91	1.06	1,400	12,150	2.2
C60	2.308	0.875	0.750	0.250	1.000	0.500	1.31	1.44	2,620	25,300	3.0
C77	2.308	0.688	0.719	0.187	0.875	0.437	1.08	1.03	1,640	14,850	2.3
C188	2.609	0.937	0.875	0.250	1.125	0.500	1.28	1.41	2,350	18,900	3.5
C131	3.075	1.125	1.250	0.375	1.500	0.625	1.72	1.91	3,880	32,400	6.8
C102B	4.000	2.000	1.000	0.375	1.500	0.625	2.22	2.25	5,400	32,400	6.8
C102 1/2	4.040	2.000	1.375	0.375	1.750	0.750	2.28	2.50	6,530	48,600	9.5
C111	4.760	2.375	1.437	0.375	1.750	0.750	2.47	2.66	7,590	48,600	9.4
C110	6.000	1.937	1.250	0.375	1.500	0.625	2.16	3.14	5,380	32,400	6.3
C132	6.050	3.125	1.750	0.500	2.000	1.000	3.13	3.38	11,250	67,500	13.4

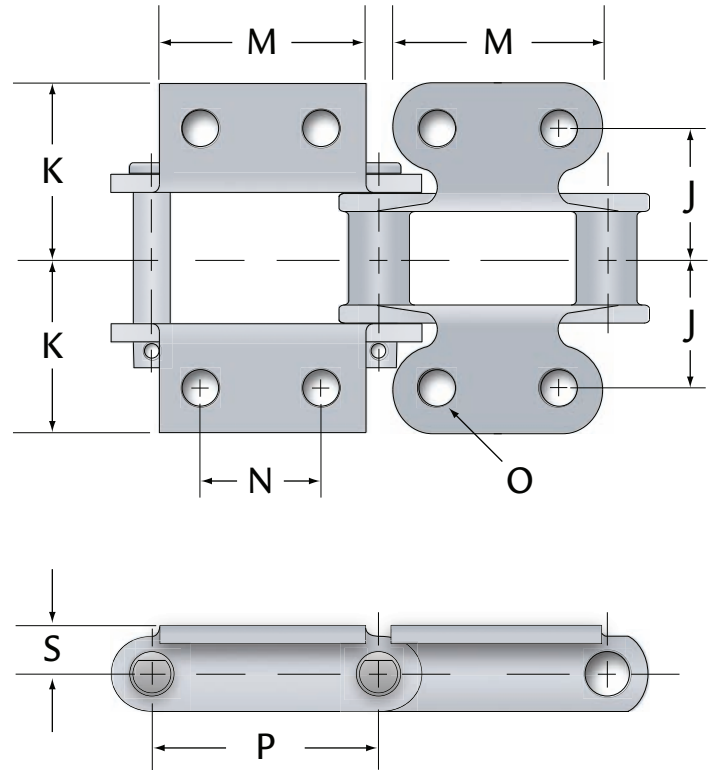
Engineering Class Chains

Cast Combination Chain K-1 & K-2 Attachment Links

K-1 Attachment



K-2 Attachment



K-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Dimensions subject to change

Hitachi Chain Number	Chain Pitch	Tab Width	Hole Diameter	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	K-1 Additional Weight/Att. lbs/pc
	P	M	O	S	J	2J	K	2K	
C55	1.631	0.340	1.938	0.250	0.875	1.750	1.28	2.56	1.2
C77	2.308	0.340	2.188	0.313	1.000	2.000	1.38	2.75	2.0
C188	2.609	0.440	2.750	0.313	2.340	4.680	3.06	6.13	4.6

K-2 Attachment Link Specifications

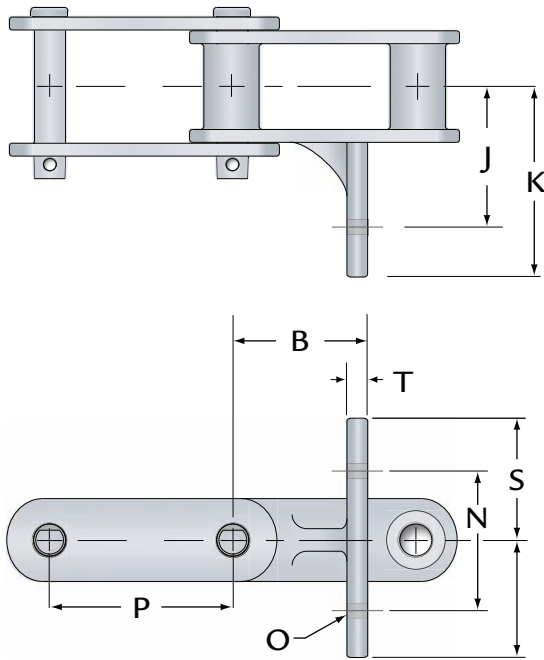
Chain Dimensions Are Given In Inches

Dimensions subject to change

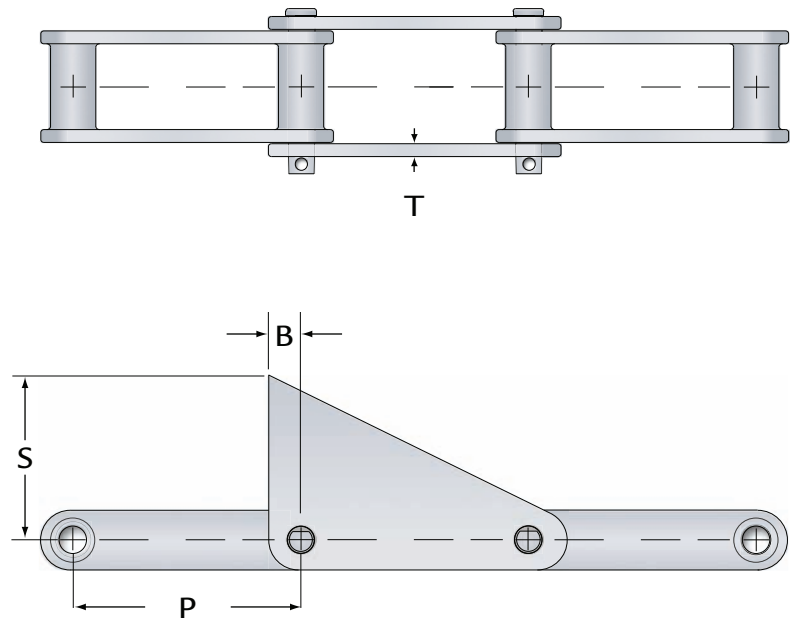
Hitachi Chain Number	Chain Pitch	Tab Width	Att. Hole Pitch	Hole Diameter	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	K-2 Additional Weight/Att. lbs/pc
	P	M	N	O	S	J	2J	K	2K	
C188	2.609	2.125	1.250	0.340	0.813	2.094	4.188	2.53	5.06	0.37
C131	3.075	2.625	1.500	0.560	1.063	2.063	4.125	2.63	5.25	0.33
C102B	4.000	2.813	1.750	0.410	1.063	2.657	5.313	3.16	6.31	0.40
C102 1/2	4.040	2.813	1.750	0.410	1.063	2.657	5.313	3.25	6.50	0.64
C111	4.760	3.500	2.313	0.560	1.125	3.125	6.250	3.75	7.50	1.15
C110	6.000	2.876	1.750	0.410	1.063	2.657	5.313	3.34	6.69	0.80
C132	6.050	4.000	2.750	0.560	1.250	3.750	7.500	4.50	9.00	1.71

Combination Chain Attachment Links - Specifications

G-19 Attachment



S-1 Attachment



G-19 Attachment Link Specification

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Att Hole Pitch	Hole Dia.	Height	Thickness	Attachment Location	C/L Chain Att. Hole	C/L Chain Att. Edge	G-19 Additional Weight/Att. lbs/pc
	P	N	O	S	T	B	J	K	
C55	1.631	0.438	0.340	0.875	0.250	1.030	1.688	2.25	0.14
C188	2.609	0.750	0.340	1.310	0.280	1.875	1.938	2.44	0.30

Dimensions subject to change

S-1 Attachment Link Specification

Chain Dimensions Are Given In Inches

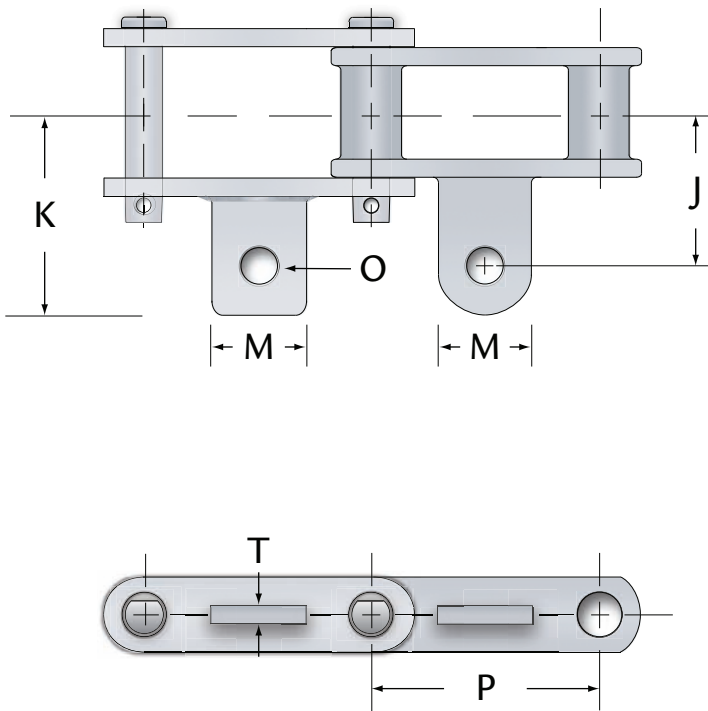
Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	S-1 Additional Weight/Att. lbs/pc
	P	S	B	T	
C188	2.609	2.625	0.625	0.250	0.52
C102 1/2	4.040	3.750	1.000	0.375	1.82
C111	4.760	4.375	1.000	0.375	2.46
C132	6.050	5.000	1.280	0.500	5.45

Dimensions subject to change

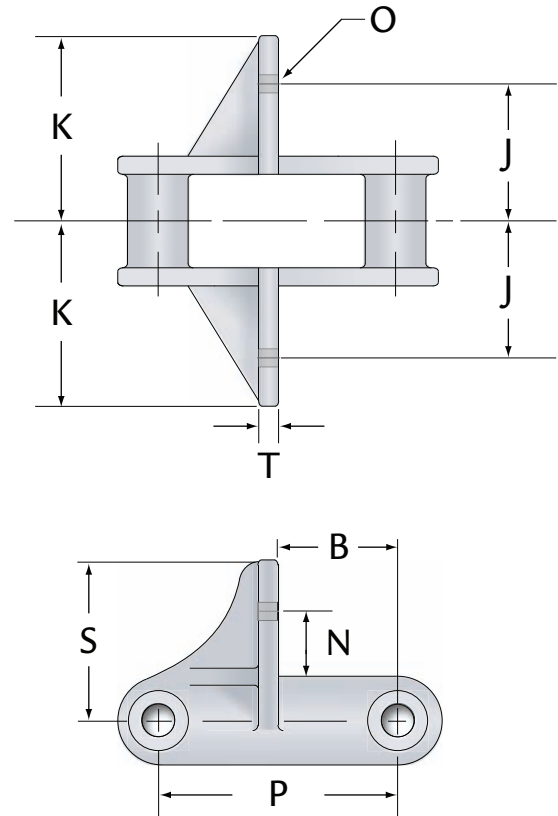
Engineering Class Chains

Combination Chain A-22 & F-2 Attachment Links

A-22 Attachment



F-2 Attachment



A-22 Attachment Link Specification

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Hole Dia.	Thickness	C/L Chain Att. Hole	C/L Chain Att. Edge	A-22 Additional Weight/Att. lbs/pc
	P	M	O	T	J	K	
C55 *	1.631	0.750	0.340	0.250	1.500	1.94	0.19
C188	2.609	0.875	0.410	0.375	1.438	1.88	0.17

* C55 Attachments are available on Pin Link only

Dimensions subject to change

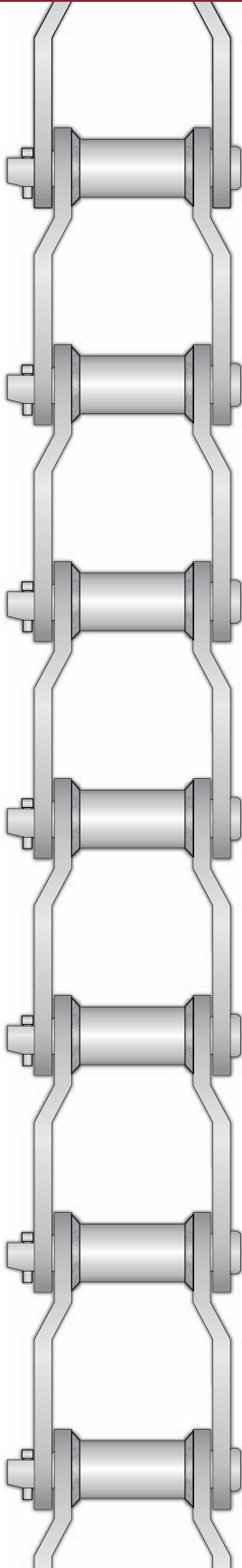
F-2 Attachment Link Specification

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Att. Hole Pitch	Hole Dia.	Height	Thickness	Att. Location	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	F-2 Additional Weight/Att. lbs/pc
	P	N	O	S	T	B	J	2J	K	2K	
C77	2.308	1.375	0.340	1.938	0.250	1.313	0.875	1.750	1.28	2.56	1.2
C188	2.609	1.500	0.340	2.188	0.313	1.250	1.000	2.000	1.38	2.75	2.0
C131	3.075	1.688	0.440	2.750	0.313	0.938	2.340	4.680	3.06	6.13	4.6

Dimensions subject to change

Welded Steel Chain



Economical High Strength Welded Chains

Welded Steel Chains are designed for a wide range of conveyor applications. Made from high quality steel and precision welds, these chains are manufactured to the highest standards and subjected to a wide range of quality assurance procedures to assure a superior quality product.

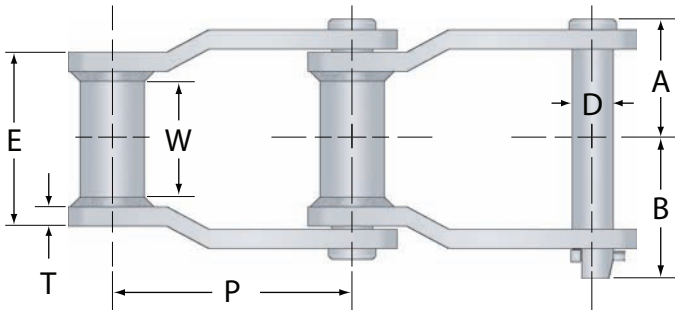


Product	Page
Welded Steel Mill Chain	44
A-1 / K-1 Attachments	45
A-2 / K-2 Attachments	46
F-2 / F-4 Attachments	47
Wing Attachment	48
S-1 Attachment	48
RR / R1 / R 1-1/2 Attachment	49
H-1 / H-2 Attachment	50
RF-2 Attachment	51

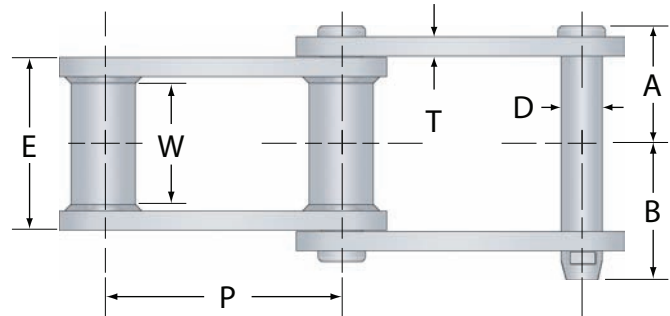
Engineering Class Chains

Welded Steel Chain

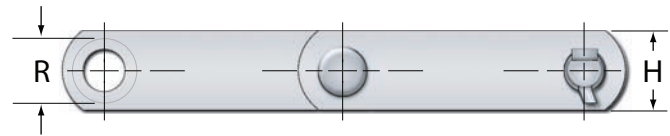
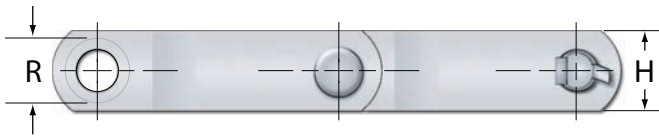
Welded Steel Mill Chain



Offset Sidebar Style



Straight Sidebar Style



Welded Steel Mill Chain Specifications

Chain Dimensions Are Given In Inches

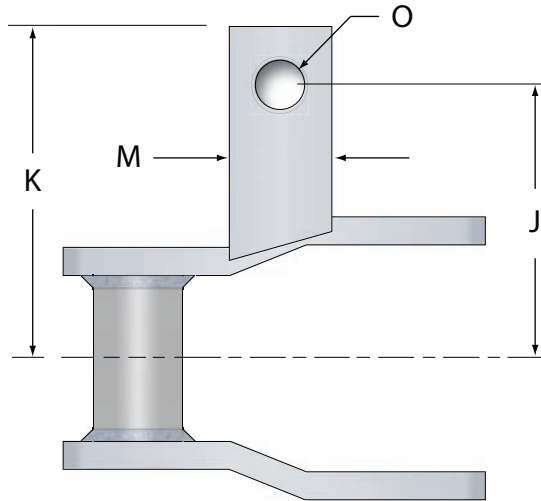
Hitachi Chain Number	Pitch	Inside	Outside	Barrel	Pin			Sidebar		Working Load		Avg Ult Strength		Avg Wgt lbs/ft
	P	W	E	R	D	A	B	T	H	HT Pin lbs	HT All lbs	HT Pin lbs	HT All lbs	
Offset Sidebar Style														
WR78	2.609	1.250	2.000	0.875	0.500	1.56	1.78	0.250	1.125	3,000	3,500	25,000	33,000	4.0
WR82	3.075	1.375	2.250	1.188	0.563	1.64	1.90	0.250	1.250	3,750	4,400	28,000	36,000	5.5
WR82H	3.075	1.375	2.500	1.125	0.625	1.81	2.09	0.375	1.250	4,200	4,900	38,000	50,000	6.7
WR124	4.000	1.625	2.750	1.438	0.750	2.22	2.44	0.375	1.500	6,300	7,350	46,000	60,000	8.5
WR124H	4.063	1.500	3.000	1.625	0.875	2.46	2.78	0.500	2.000	7,850	9,150	94,000	100,000	14.0
WR111	4.760	2.250	3.375	1.438	0.750	2.50	2.75	0.375	1.500	7,550	8,850	46,000	60,000	9.0
WR110	6.000	1.875	3.000	1.250	0.750	2.16	2.50	0.375	1.500	6,750	7,850	46,000	60,000	7.0
WR132	6.050	2.875	4.375	1.750	1.000	3.12	3.47	0.500	2.000	13,100	15,300	84,000	100,000	13.6
WR155	6.050	2.875	4.625	1.750	1.125	3.25	3.66	0.625	2.500	17,240	20,000	144,000	184,000	20.0
Straight Sidebar Style														
WC132	6.050	2.875	4.375	1.750	1.000	3.00	3.09	0.500	2.000	13,100	15,300	84,000	100,000	13.6

HT Pin - Heat treated pins only
HT All - All parts heat treated

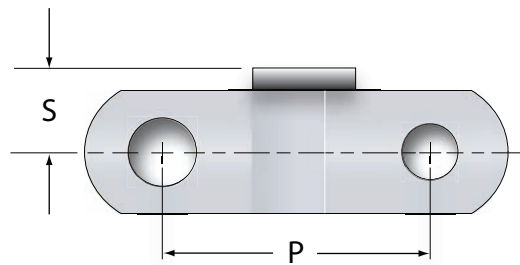
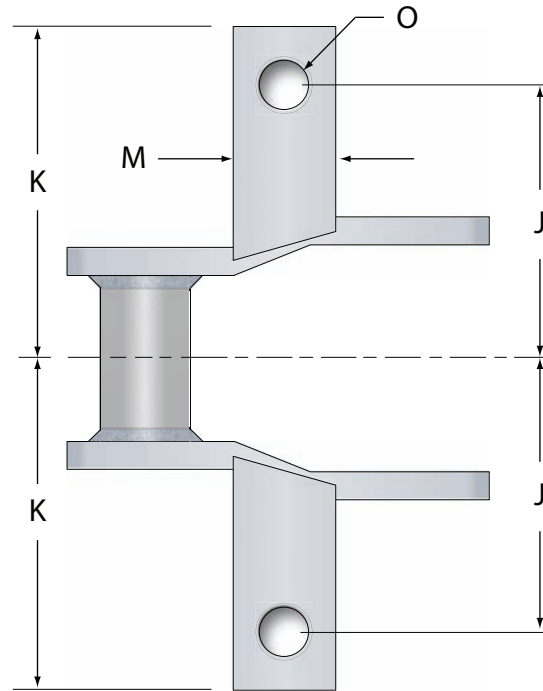
Dimensions subject to change

Welded Steel Attachment Links - Specifications

A-1 Attachment



K-1 Attachment



A-1 / K-1 Attachment Specifications

Chain Dimensions Are Given In Inches

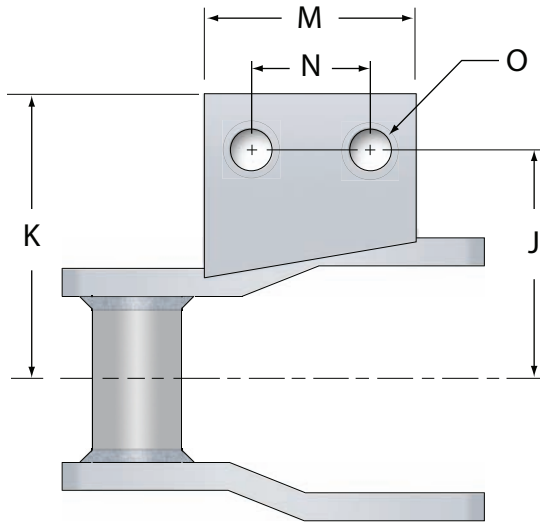
Hitachi Chain Number	Chain Pitch	Tab Width	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	A-1 Add. Wgt Attach lbs/pc	K-1 Add. Wgt Attach lbs/pc
	P	M	O	S	J	2J	K	2K		
WR78	2.609	1.250	0.406	0.813	2.000	4.000	2.50	5.00	0.17	0.34
WR82	3.075	1.750	0.406	0.875	2.125	4.250	2.75	5.50	0.22	0.34

Dimensions subject to change

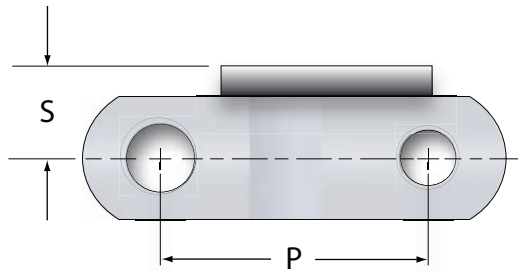
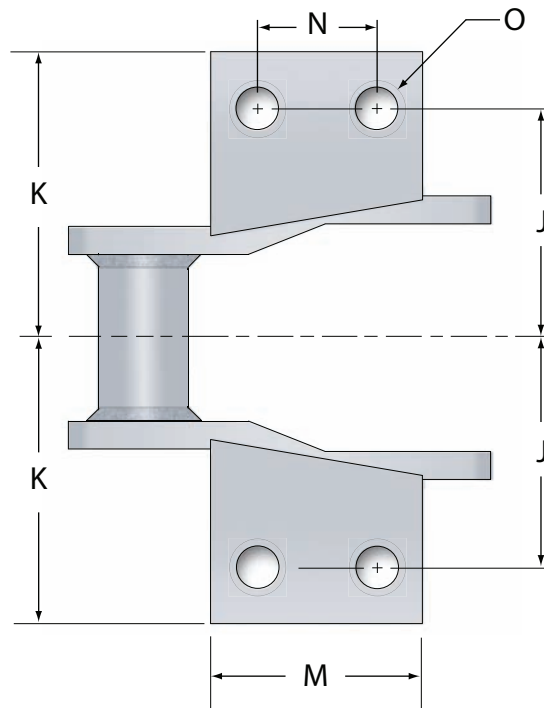
Engineering Class Chains

Welded Steel A2 & K2 Attachment Links

A-2 Attachment



K-2 Attachment



A-2 / K-2 Attachment Specifications

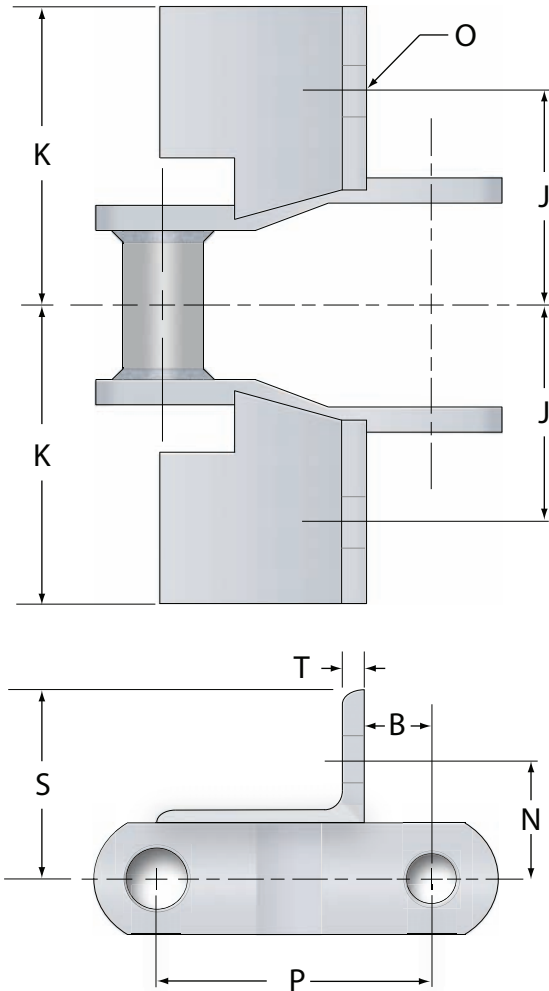
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Pitch	Hole Dia.	Height	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	A-2 Add. Wgt Attach lbs/pc	K-2 Add. Wgt Attach lbs/pc
	P	M	N	O	S	J	2J	K	2K		
WR78	2.609	2.000	1.125	0.406	0.813	2.000	4.000	2.50	5.00	0.25	0.50
WR82	3.075	2.250	1.313	0.406	0.875	2.125	4.250	2.75	5.50	0.27	0.54
WR124	4.000	3.000	1.938	0.406	1.125	2.625	5.250	3.50	7.00	0.53	1.07
WR124H	4.063	3.000	1.938	0.531	1.500	2.625	5.250	3.50	7.00	0.74	1.49
WC132	6.050	4.000	2.750	0.531	1.375	3.750	7.500	4.38	8.75	1.11	2.22

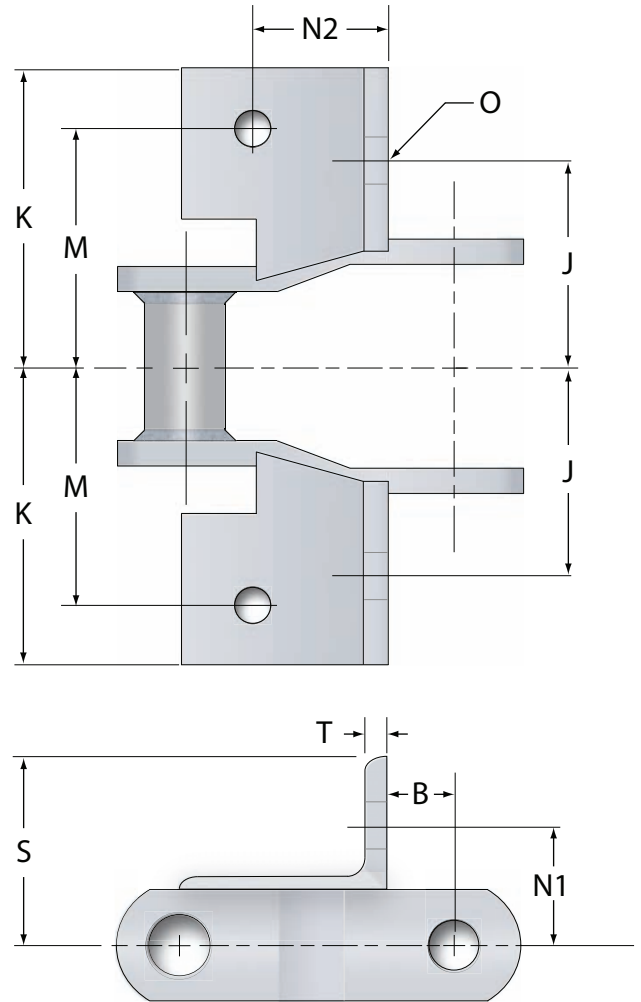
Dimensions subject to change

Welded Steel Attachment Links - Specifications

F-2 Attachment



F-4 Attachment



F-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Hole Dia.	Height	Thickness	Att. Location	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width	F-2 Add. Wgt Attach lbs/pc
	P	N	O	S	T	B	J	2J	K	2K	
WR78	2.609	1.438	0.406	2.063	0.250	0.688	1.875	3.750	2.69	5.38	0.43

Dimensions subject to change

F-4 Attachment Link Specifications

Chain Dimensions Are Given In Inches

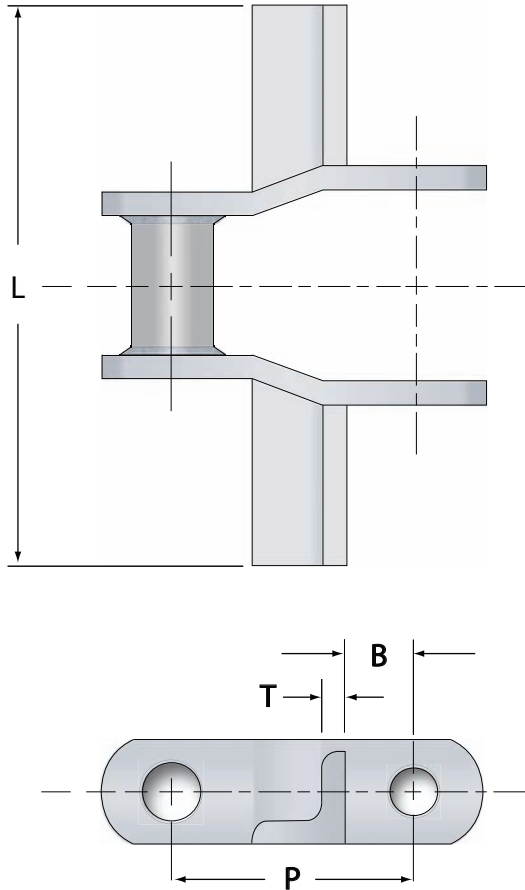
Hitachi Chain Number	Chain Pitch	Location	Location	Hole Dia.	Height	Thickness	Att. Location	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Hole	Across Holes	C/L Chain Att. Edge	Overall Width
	P	N1	N2	O	S	T	B	J	2J	M	2M	K	2K
WR78	2.609	1.438	1.250	0.406	2.250	0.250	0.688	1.875	3.750	2.250	4.500	2.25	4.50
WR82	3.075	1.500	1.125	0.406	2.625	0.250	0.750	2.063	4.126	2.500	5.000	2.97	5.94
WR124	4.000	2.063	1.438	0.406	2.750	0.375	0.875	2.188	4.376	2.625	5.250	3.09	6.19

Dimensions subject to change

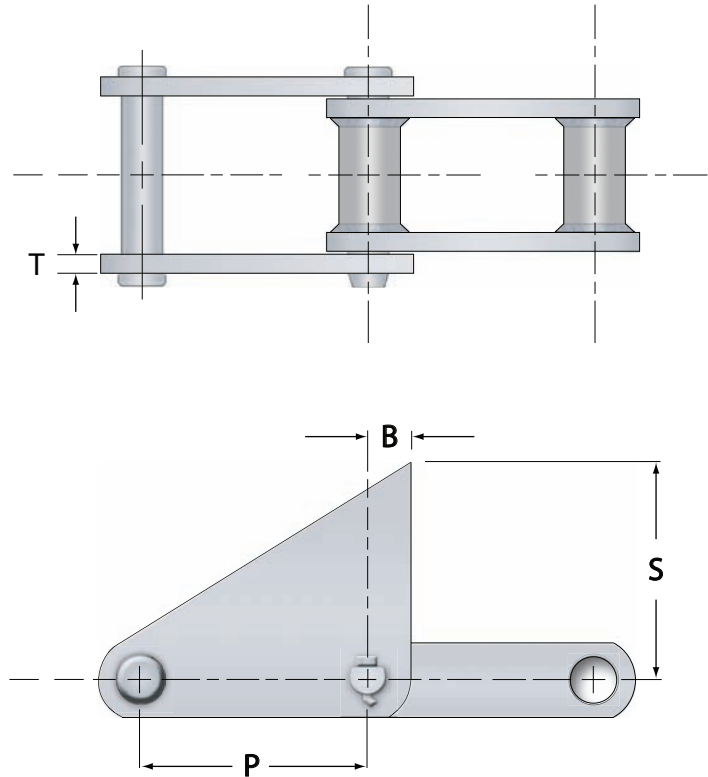
Engineering Class Chains

Welded Steel Wing & S-1 Attachment Links

Wing Attachment



S-1 Attachment



Wing Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Att Angle H x W	Attachment Location	Thickness	Overall Width	Add Weight Attachment lbs/pc
	P		B	T	L	
WR78	2.609	1-1/8" x 3/4"	0.750	0.250	6.000	0.72
WR82	3.075	1-1/4" x 3/4"	0.813	0.250	6.500	0.79
WR124	4.000	1-1/2" x 1"	1.188	0.250	8.500	1.90
WR124H	4.063	2" x 1-1/4"	1.375	0.375	12.375	1.73
WC132	6.050	2" x 1-1/4"	1.438	0.500	8.500	3.73

Dimensions subject to change

S-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

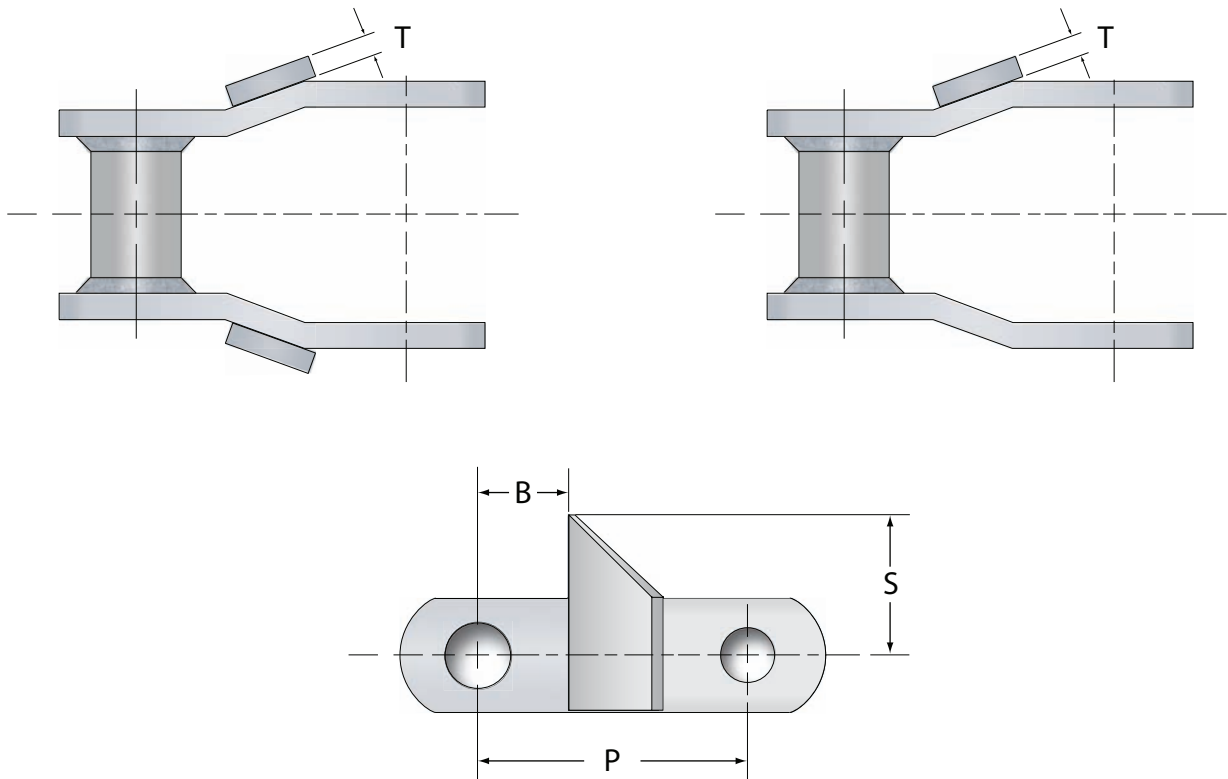
Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	Add Weight Attachment lbs/pc
	P	S	B	T	
WR132	6.050	5.000	1.281	0.500	2.25

Dimensions subject to change

Welded Steel Attachment Links - Specifications

RR Attachment

R1 & R 1-1/2 Attachment



R1 & R 1-1/2 & RR Attachment Link Specifications

Chain Dimensions Are Given In Inches

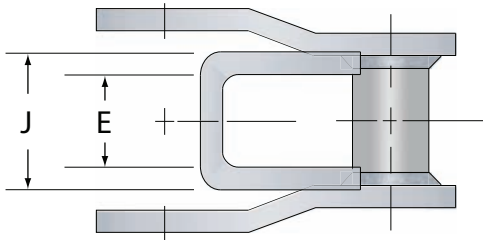
Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	Add. Weight Attachment lbs/pc
	P	S	B	T	
R-1 Attachment Link					
WR78	2.609	1.563	0.750	0.250	0.150
WR82	3.075	1.875	0.875	0.250	0.160
R 1-1/2 Attachment Link					
WR78	2.609	2.063	0.750	0.250	0.20
RR Attachment Link					
WR78	2.609	1.563	0.750	0.250	0.26
WR82	3.075	1.875	0.875	0.250	0.31
WR124	4.000	1.875	1.250	0.250	0.63
WR124H	4.050	2.125	1.250	0.250	1.21

Dimensions subject to change

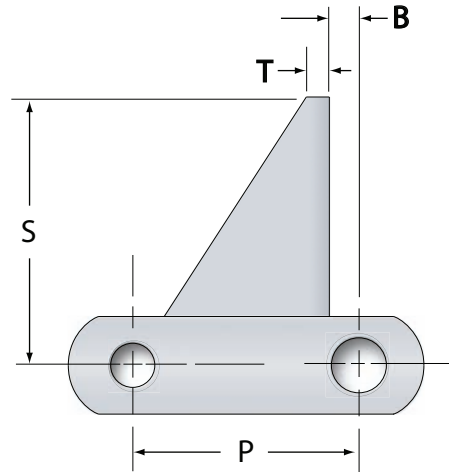
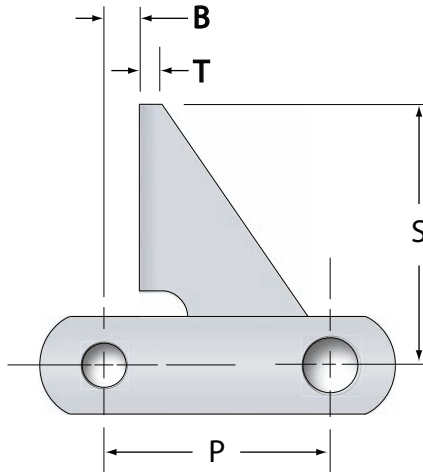
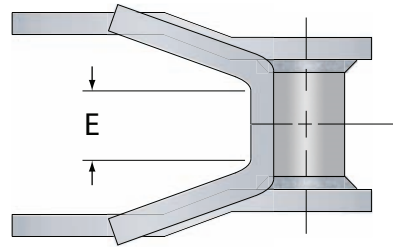
Engineering Class Chains

Welded Steel H-1 & H-2 Attachment Links

H-1 Attachment



H-2 Attachment



H-1 & H-2 Attachment Link Specifications

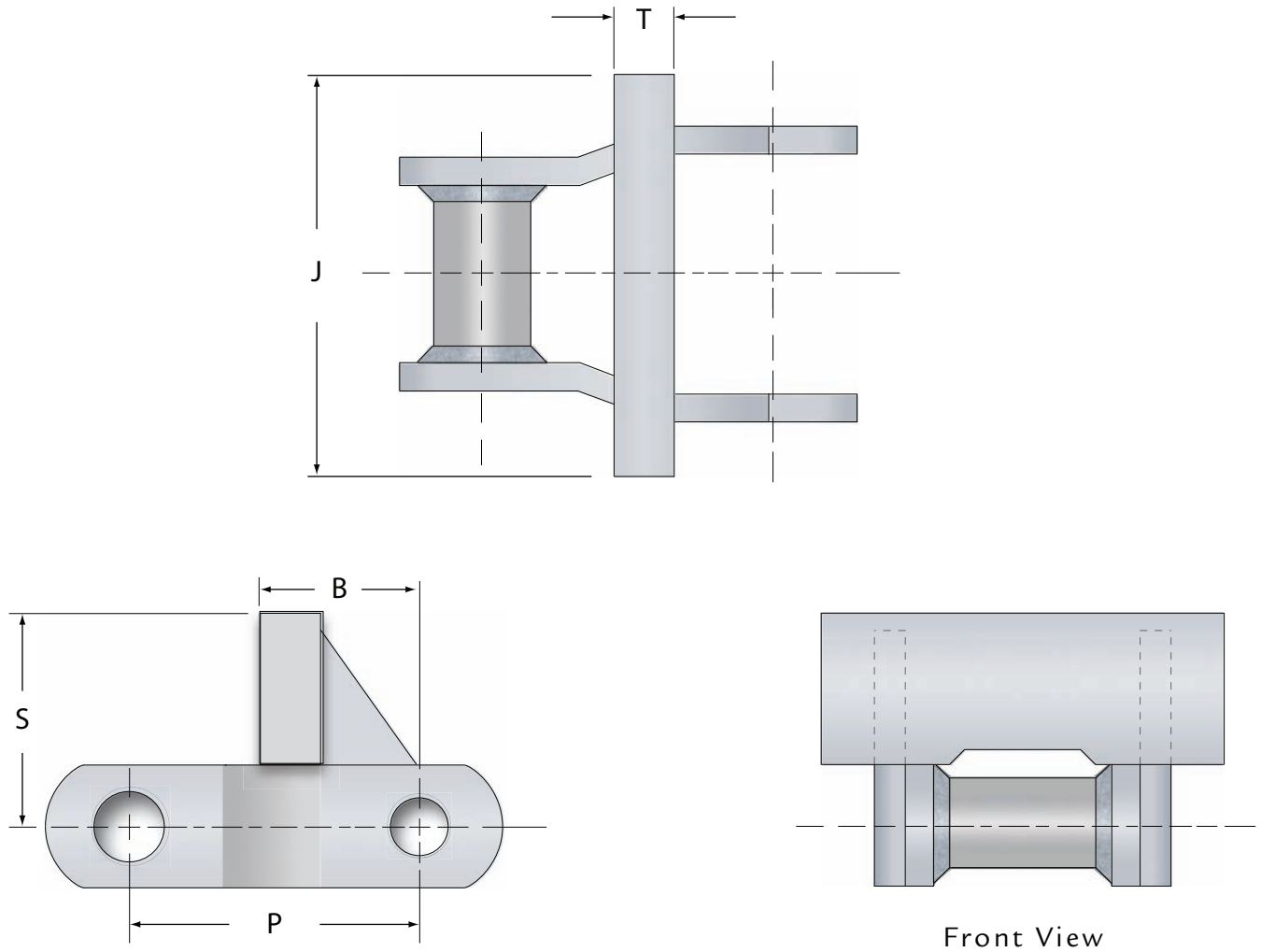
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	Inside Face Width	Face Width	Add. Weight Attachment lbs/pc
	P	S	B	T	E	J	
H-1 Attachment Link							
WR78	2.609	3.563	0.500	0.250	0.875	1.725	0.93
WR82	3.075	3.625	0.625	0.250	1.125	2.000	1.13
H-2 Attachment Link							
WR78	2.609	3.563	0.312	0.250	0.813	-	0.76
WR82	3.075	3.625	0.375	0.250	1.031	-	0.85

Dimensions subject to change

Welded Steel Attachment Links - Specifications

RF-2 Attachment



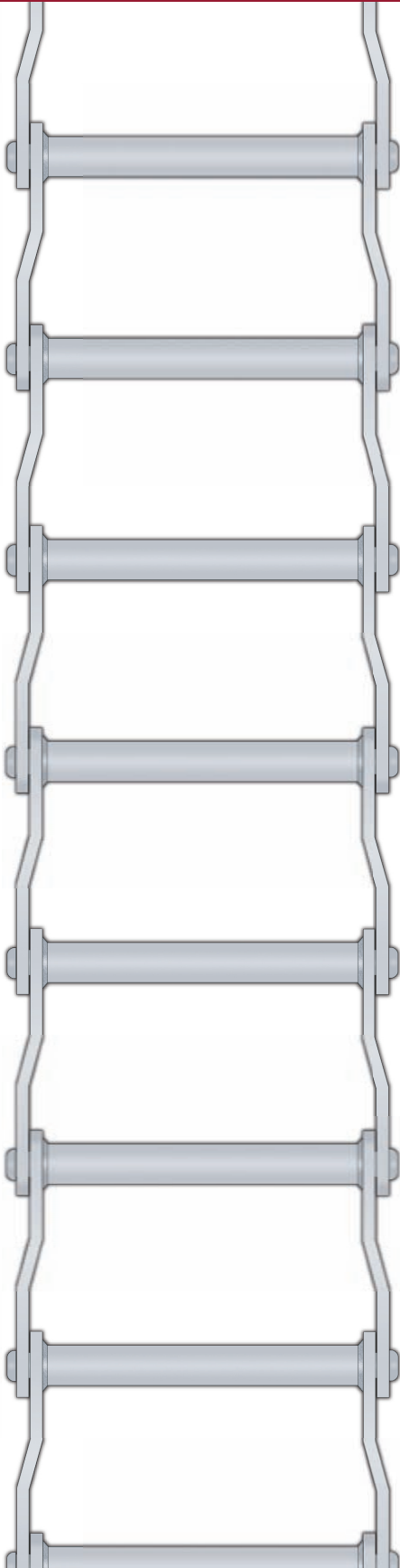
RF-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	Face Width	Add. Weight Attachment lbs/pc
	P	S	B	T	J	
WR78	2.609	2.688	1.500	0.375	3.000	0.83
WR124	4.000	3.250	2.000	0.375	4.250	1.50

Dimensions subject to change

Welded Steel Drag Chains



Durability and Strength

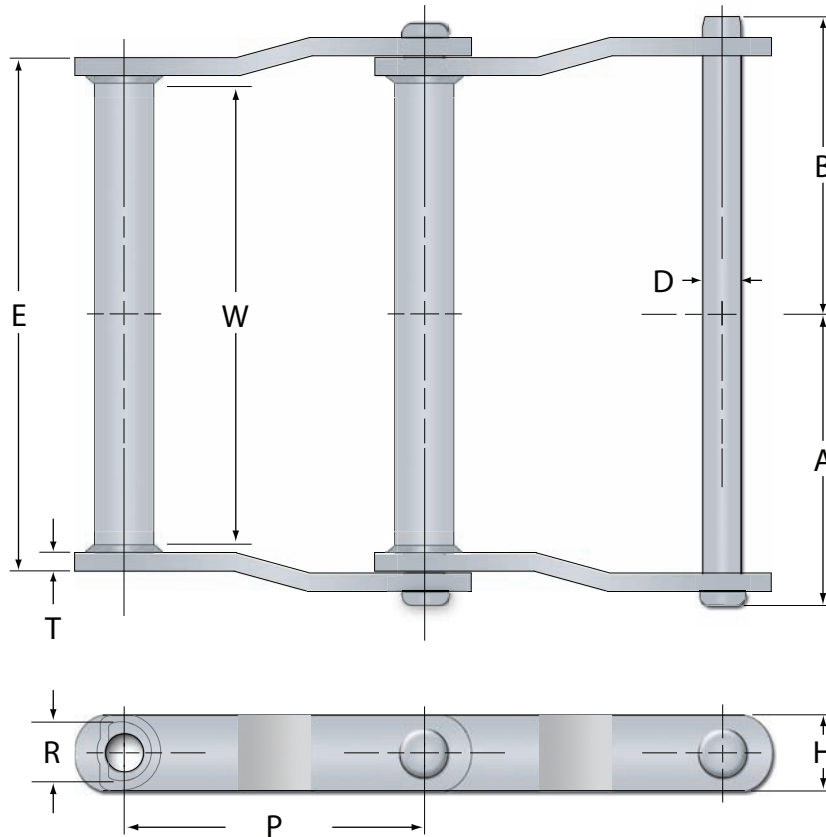
Hitachi Welded Steel Drag Chain is a proven Conveyor Chain for demanding applications where strength and durability are key considerations. Economical in cost and capable in service, Welded Steel Drag Chain is found in applications ranging from lumber, agriculture and conveyor line usage. Your Hitachi sales representative will assist you in selecting the proper chain for your application requirement.



Product	Page
Welded Steel Drag Chain	53
C-1, C-3, C-4 Attachments	54
RR Attachments	55
Wing Attachments	55

Welded Steel Drag Chain

Welded Steel Drag Chain



Welded Steel Drag Chain Specifications

Chain Dimensions Are Given In Inches

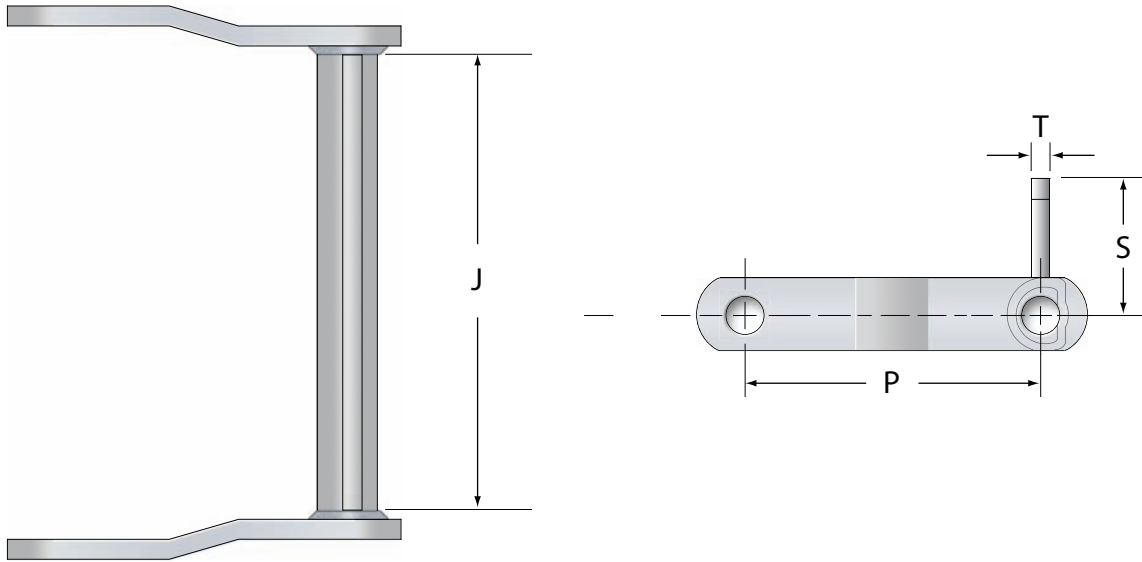
Hitachi Chain Number	Chain Pitch	Inside Width	Outside Width	Barrel Dia.	Pin			Side Bar		Rtd Work. Load		Avg. Ult. Strength		Avg Wgt lbs/ft
	P	W	E	R	D	A	B	T	H	HT Pin lbs	HT All lbs	HT Pin lbs	HT All lbs	
WD102	5.000	6.375	7.750	1.500	0.750	4.53	4.72	0.375	1.500	8,500	10,000	51,000	60,000	12.0
WD104	6.000	4.125	5.375	1.500	0.750	3.37	3.50	0.375	1.500	8,500	10,000	51,000	60,000	8.6
WD110	6.000	9.000	10.375	1.500	0.750	5.88	6.00	0.375	1.500	8,500	10,000	51,000	60,000	13.5
WD113	6.000	9.000	10.625	1.500	0.875	6.13	6.37	0.500	1.500	9,300	11,700	57,000	70,000	15.1
WD112	8.000	9.000	10.375	1.500	0.750	5.88	6.13	0.375	1.500	8,500	10,000	51,000	60,000	11.2
WD116	8.000	12.750	14.125	1.625	0.750	7.75	7.91	0.375	1.750	10,700	11,500	51,000	69,000	16.0
WD122	8.000	8.500	10.125	2.000	0.875	5.88	6.12	0.500	2.000	12,300	15,000	94,000	100,000	17.5
WD480	8.000	11.000	12.750	2.000	0.875	7.19	7.44	0.500	2.000	12,300	15,000	94,000	100,000	19.8

Dimensions subject to change

Engineering Class Chains

Welded Steel C-1, C-3, C-4 Attachments

C-1, C-3, C-4 Attachments



C-1, C-3, C-4 Attachment Specifications

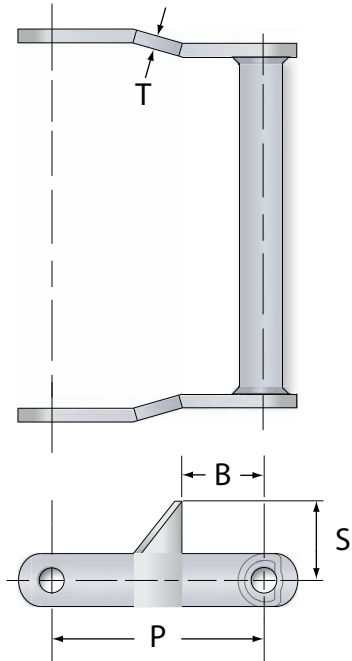
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Height	Thickness	Inside Width	Additional Weight/Att. lbs/pc
	P	S	T	J	
C-1 Attachment Link					
WD102	5.000	2.375	0.375	7.00	1.00
WD104	6.000	2.375	0.375	5.00	0.75
WD110	6.000	2.375	0.375	10.00	1.00
WD112	8.000	2.375	0.375	10.00	0.93
WD116	8.000	2.563	0.375	13.00	1.60
C-3 Attachment Link					
WD113	6.000	2.250	0.500	10.00	1.10
WD480	8.000	3.000	0.500	12.00	4.00
C-4 Attachment Link					
WD102	5.000	3.750	0.375	7.00	2.13
WD104	6.000	3.750	0.375	5.00	1.55
WD110	6.000	3.750	0.375	10.00	2.60
WD113	6.000	4.750	0.500	10.00	2.90
WD112	8.000	3.750	0.375	10.00	2.60
WD116	8.000	4.813	0.375	13.00	5.00
WD480	8.000	5.000	0.500	12.00	8.40

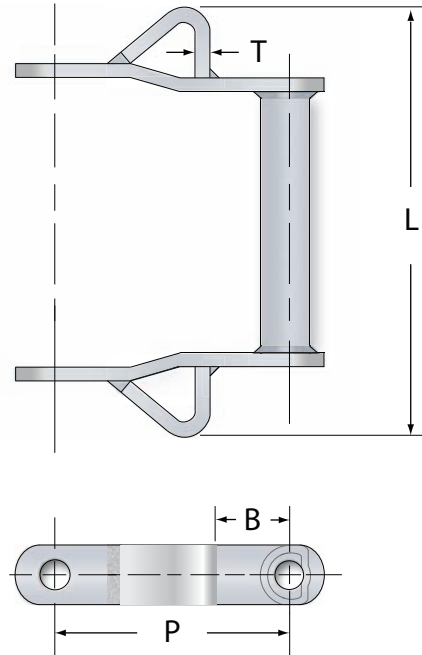
Dimensions subject to change

Welded Steel Drag Chain Attachments

RR Attachment Link



Wing Attachment Link



RR Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Height	Attachment Location	Thickness	RR Additional Weight/Att. lbs/pc
	P	S	B	T	
WD102	5.000	2.500	1.750	0.375	0.17
WD104	6.000	2.500	3.000	0.375	0.15
WD113	6.000	2.500	2.250	0.500	0.45
WD112	8.000	2.500	3.000	0.375	0.27
WD116	8.000	3.000	3.250	0.375	0.33
WD480	8.000	3.250	3.000	0.500	0.80

Dimensions subject to change

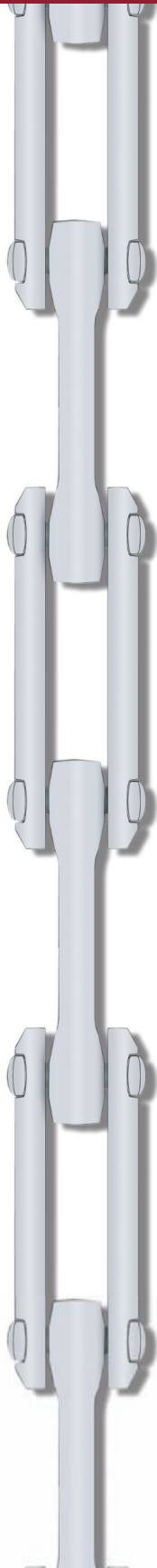
Wing Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Attachment Location	Thickness	Overall Width	Wing Attachment Additional Weight/Att. lbs/pc
	P	B	T	L	
WD102	5.000	1.750	0.250	14.25	2.13
WD104	6.000	2.250	0.250	11.50	1.95
WD110	6.000	2.250	0.250	17.00	2.15
WD112	8.000	2.250	0.250	17.00	2.27
WD113	6.000	2.250	0.250	17.00	3.35
WD116	8.000	3.125	0.250	22.00	3.47
WD480	8.000	3.000	0.375	22.00	6.13

Dimensions subject to change

Drop Forged Rivetless Chain



High Strength, Durable and Flexible Design Conveyor Chain

Drop Forged Rivetless Chains are typically used as overhead conveyors on automotive assembly lines, paint lines, appliance assembly lines and in the meat/poultry packaging industry. By virtue of its design, Drop Forged Rivetless Chain is ideal for overhead trolley conveyor applications. These chains are made from heat treated carbon or alloy steels.



Product

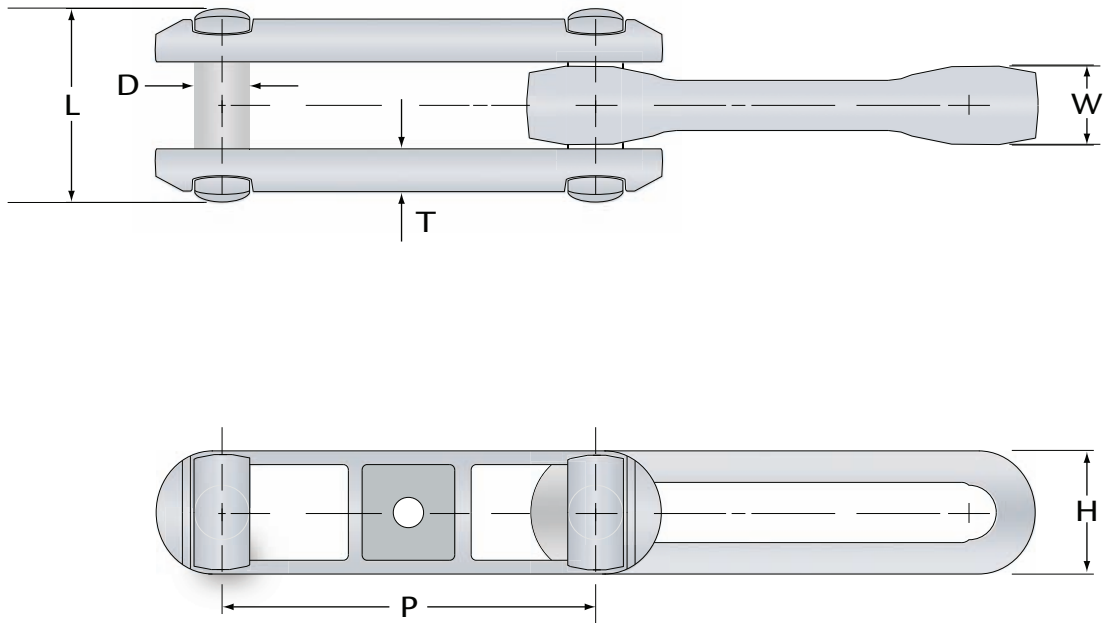
Page

Drop Forged Rivetless Chain

57

Drop Forged Rivetless Chains

X-Style Drop Forged Rivetless Chain



X-Style Drop Forged Rivetless Chain Specifications

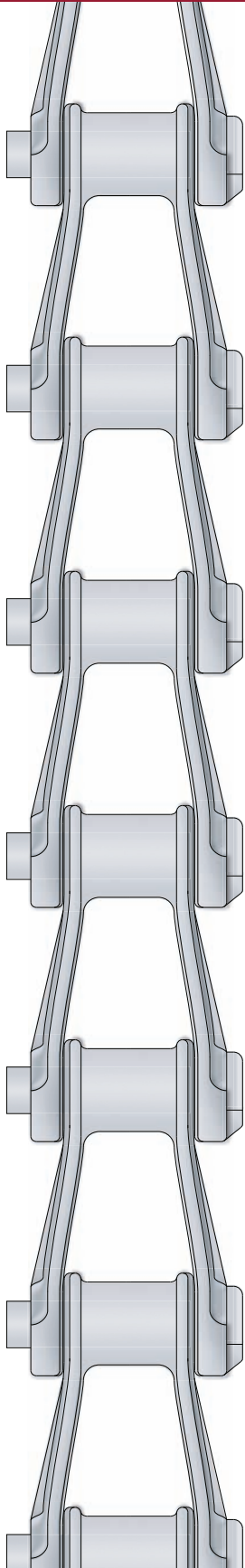
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Block Width	Pin Diameter	Overall Length	Thickness	Height	Working Load lbs	Average Ult. Strength lbs	Average Weight lbs/ft
	P	W	D	L	T	H			
X348	3.015	0.750	0.500	1.73	0.410	1.10	2,600	24,000	2.2
X458	4.031	1.000	0.625	2.19	0.470	1.41	4,000	48,000	3.2
X678	6.031	1.270	0.875	3.03	0.720	2.00	7,100	85,000	6.7

Dimensions subject to change

Note: "X" indicates the chain is designed to flex laterally on a shortened radius. Common usage is for overhead trolley or conveyors and specialty applications.

H-Class Mill Duty Chains



Pearlitic Malleable Iron Chain for Demanding Applications

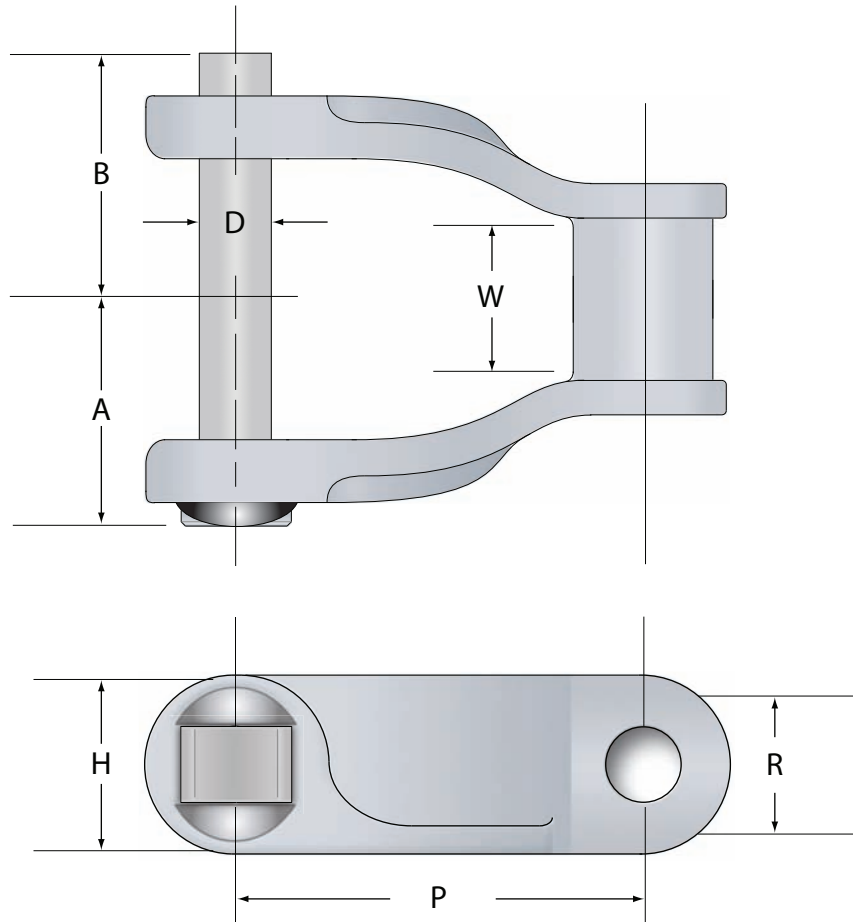
Hitachi Mill Duty Chains of Pearlitic Malleable Iron are designed for demanding applications such as heavy drives and transfer conveyors in the pulp and paper industry and similar heavy industrial applications. The sidebars of the “H” class links feature a strengthened cross-section providing an added benefit of a wear surface to prolong chain service life when operated in troughs or over floors and slider beds.



Product	Page
H-Class Mill Chain	59
H-1 / H-2 Attachment	60
F-4 Attachment	61
K-1 Attachment	61
Transfer Chain	62

H-Class Mill Duty Chains

H-Class Mill Duty Plain Chain



H-Class Mill Chain Specifications

Chain Dimensions Are Given In Inches

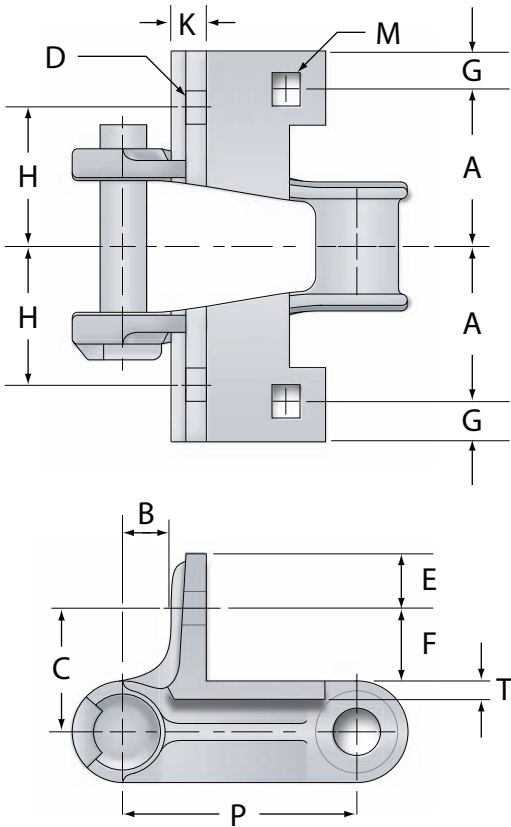
Hitachi Chain Number	Chain Pitch	Width	Diameter	Height	Pin			Working Load lbs	Average Ultimate Strength lbs	Average Weight lbs/ft
	P	W	R	H	D	A	B			
H60	2.308	0.750	0.750	0.750	0.312	1.37	1.53	1,170	7,000	2.1
H74	2.609	1.000	0.875	1.000	0.375	1.53	1.65	1,580	10,000	3.0
H78	2.609	1.125	0.875	1.125	0.500	1.71	1.97	2,380	16,000	4.2
H82	3.075	1.250	1.219	1.250	0.562	2.00	2.16	3,080	20,000	5.5
H124	4.000	1.625	1.438	1.562	0.750	2.50	2.69	5,000	30,000	8.8

Dimensions subject to change

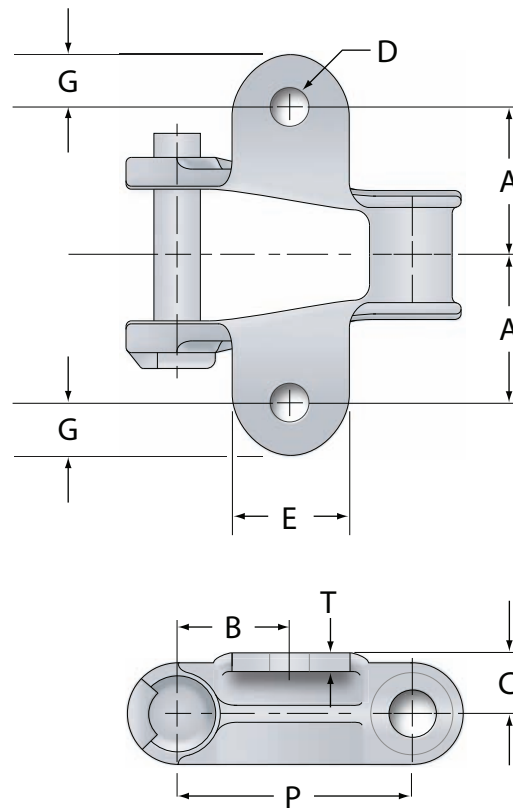
Engineering Class Chains

H-Class Mill Duty F-4 & K-1 Attachment Links

F-4 Attachment



K-1 Attachment



F-4 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	C/L Chain Att. Hole	Att. Location	Height	Hole Dia.	Overall Width	Att Hole Height	C/L Hole Att. Edge	C/L Chain Att. Hole	Thickness	Thickness	Hole Dia.
	A	B	C	D	E	F	G	H	K	T	M
H60	1.969	0.875	1.250	0.344	0.875	0.875	0.375	1.531	0.281	0.250	0.344
H74	2.063	1.187	1.375	0.344	0.875	0.875	0.375	1.625	0.375	0.250	0.344
H78	2.250	1.000	1.437	0.406	0.875	0.875	0.437	1.875	0.375	0.250	0.406
H82	2.500	1.250	1.500	0.406	0.875	0.875	0.437	2.062	0.375	0.313	0.406

Dimensions subject to change

K-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

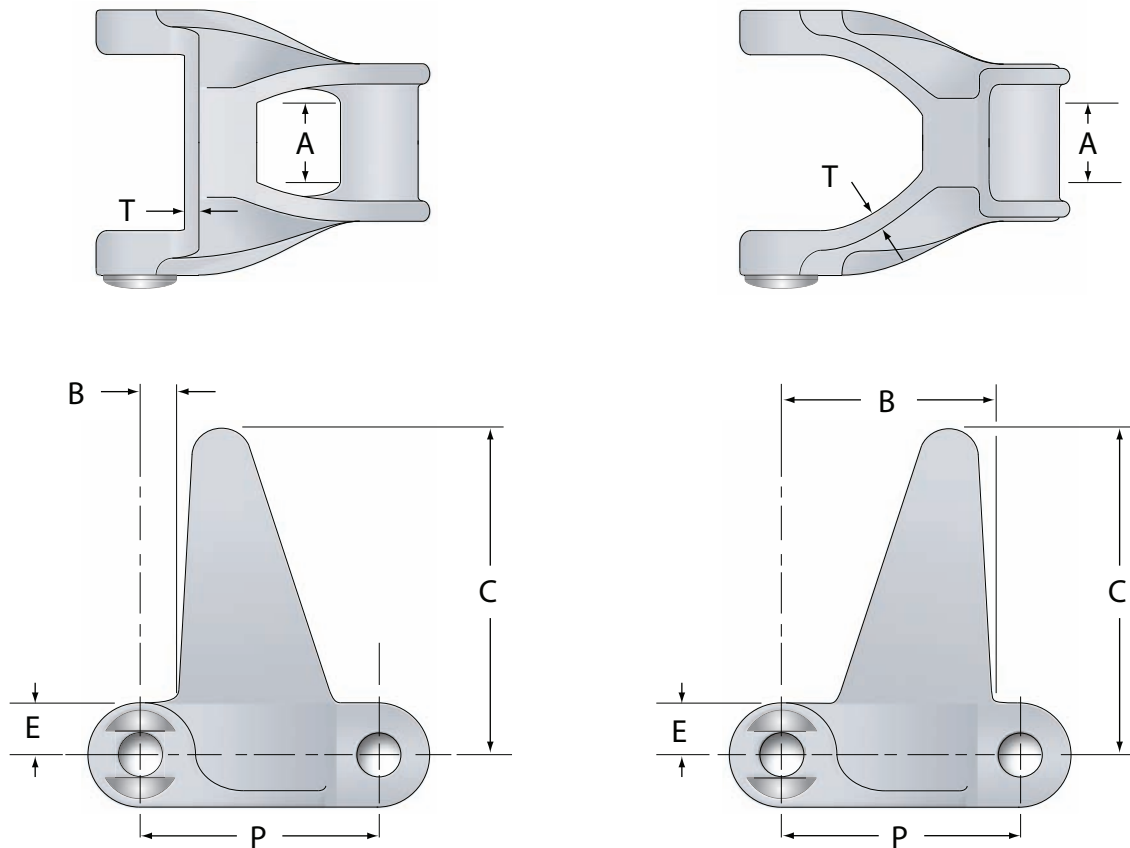
Hitachi Chain Number	C/L Chain Att. Hole	Att. Location	Height	Hole Dia.	Overall Width	C/L Hole Att. Edge	Thickness
	A	B	C	D	E	G	T
H60	1.500	1.063	0.750	0.313	1.125	0.500	0.188
H74	1.438	1.250	0.688	0.313	1.125	0.500	0.219
H78	2.000	1.250	0.813	0.375	1.375	0.500	0.219

Dimensions subject to change

H-Class Mill Duty Attachments - Specifications

H-1 Attachment

H-2 Attachment



H-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Pusher Width	Att. Location	C/L Chain Top of Attachment	C/L Chain Top of Link	Thickness
	P	A	B	C	E	T
H74	2.609	1.063	0.688	3.000	0.500	0.125
H78	2.609	1.125	0.500	3.625	0.563	0.125

Dimensions subject to change

H-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

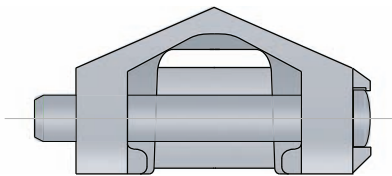
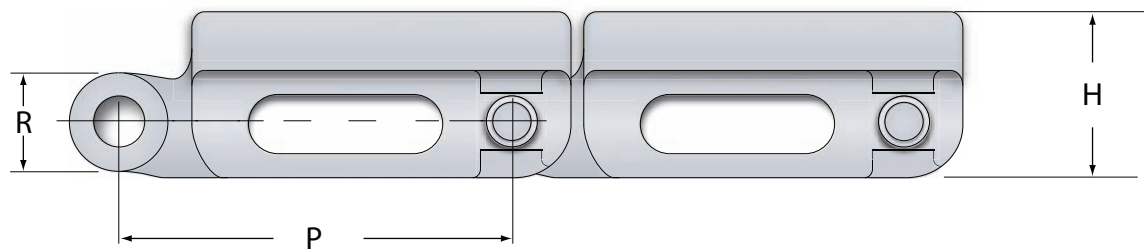
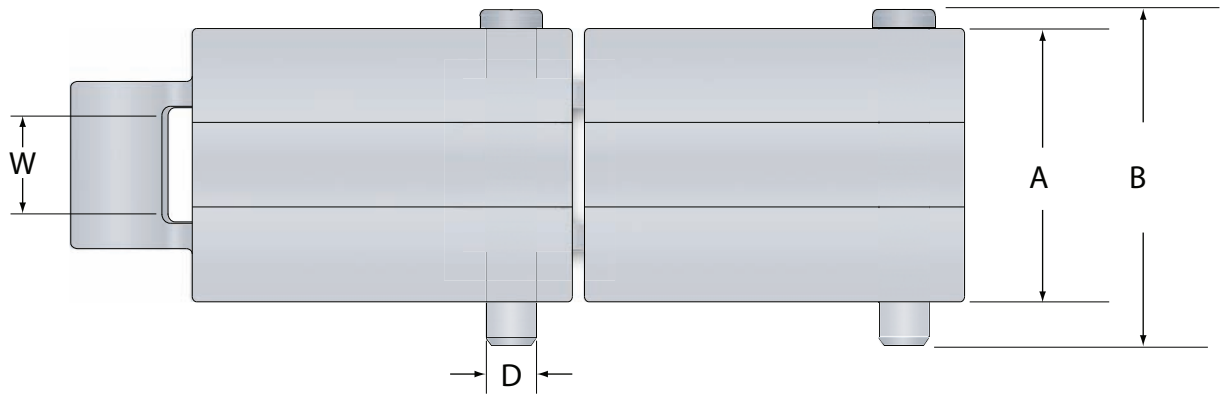
Hitachi Chain Number	Chain Pitch	Pusher Width	Att. Location	C/L Chain Top of Attachment	C/L Chain Top of Link	Thickness
	P	A	B	C	E	T
H60	2.308	0.938	2.063	2.438	0.375	0.091
H74	2.609	1.063	2.719	3.157	0.500	0.094
H78	2.609	1.125	2.297	3.500	0.563	0.157

Dimensions subject to change

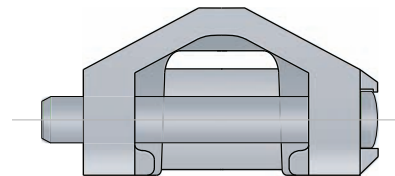
Engineering Class Chains

H-Class Mill Duty Chains - Attachments

Transfer Chain



"A" Style



"B" Style

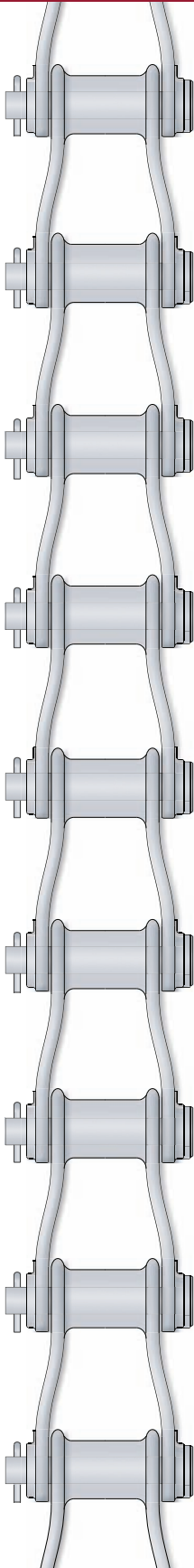
Transfer Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Type	Chain Pitch	Width	Diameter	Pin Diameter	Height	Width	Overall Width	Working Load lbs
		P	W	R	D	H	A	B	
H78A	A	2.609	1.125	0.875	0.500	1.000	2.75	3.13	2,380
H78B	B	2.609	1.125	0.875	0.500	1.000	2.75	3.13	2,380
C55A	A	1.631	0.688	0.719	0.375	0.750	1.19	2.00	1,110
C55B	B	1.631	0.688	0.719	0.375	0.750	1.19	2.00	1,110
C55D	D	1.631	0.688	0.719	0.375	0.750	1.19	2.00	1,110
H130A	A	4.000	1.000	1.000	0.500	1.125	2.81	3.25	2,110
H138B	B	4.000	1.000	1.000	0.500	1.125	2.81	3.25	2,110

Dimensions subject to change

400 Class Pintle Chain



A Highly Versatile Chain for Conveying or Drive Applications

Hitachi Pintle Chain is ideal for conveying and power transmission applications where strength and trouble-free service are required while offering great economy. Designed to operate on the same style sprockets as Detachable Chain, highly wear resistant 400 Class Pintle Chain is often applied as a replacement where greater strength and speed are desired over Detachable Chain or other lighter duty products. Proven as a tough, dependable chain for a wide range of demanding applications 400 Class Pintle Chain is manufactured of pearlitic malleable iron and is available in both cottered or riveted construction.

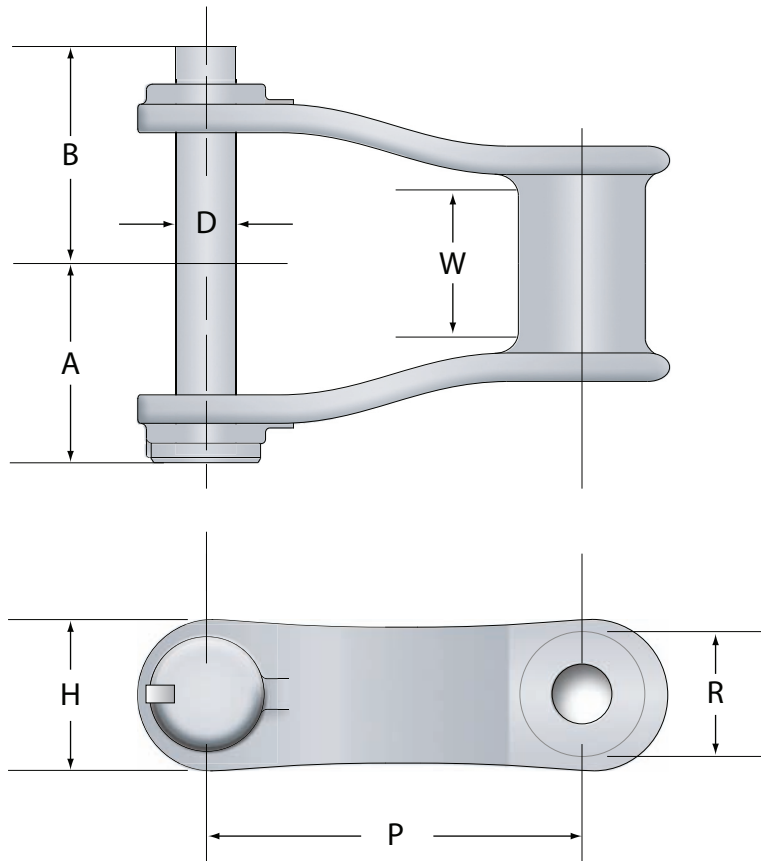


Product	Page
400 Class Plain Chain	64
K-1 / K-2 Attachments	65
F-2 Attachment	66
A-22 Attachment	66

Engineering Class Chains

400 Class Pintle Chain

400 Class Pintle Plain Chain



400 Class Pintle Chain Specifications

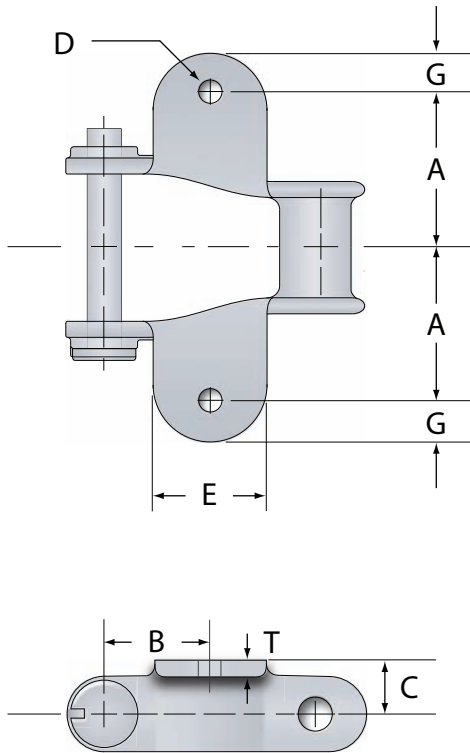
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Diameter	Pin			Height	Working Load lbs	Average Ultimate Strength lbs/ft
	P	W	R	D	A	B	H		
442	1.375	0.625	0.563	0.313	.97	1.06	0.750	830	6,000
445	1.630	0.688	0.625	0.313	.97	1.06	0.750	830	6,000
452	1.506	0.625	0.688	0.375	1.03	1.19	0.844	970	7,000
455	1.630	0.688	0.625	0.375	1.03	1.19	0.844	1,060	7,300
462	1.634	0.813	0.719	0.438	1.25	1.31	0.938	1,500	9,000
477	2.308	0.688	0.813	0.438	1.16	1.22	1.000	1,400	9,600
488	2.609	0.938	0.875	0.438	1.44	1.50	0.938	1,800	11,000
4103	3.075	1.125	1.219	0.750	1.75	1.81	1.500	3,500	22,000

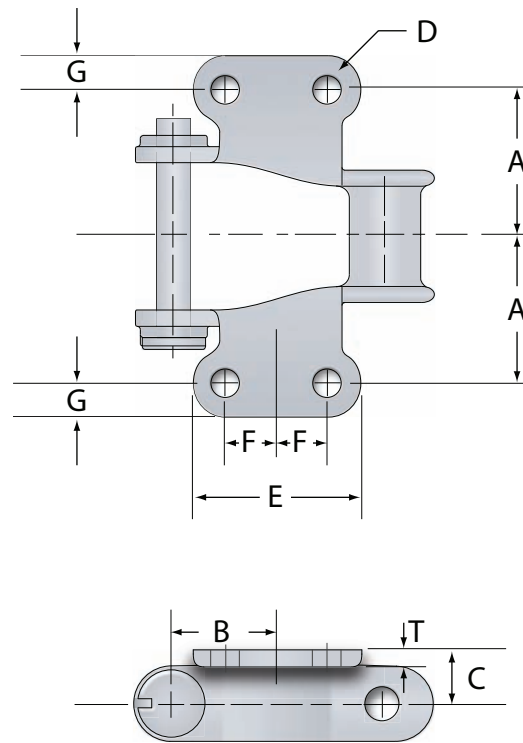
Dimensions subject to change

400 Class Pintle Chain Attachments

K-1 Attachment



K-2 Attachment



K-1 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	C/L Chain Att. Hole	Across Holes	Attachment Location	Attach Angle Location	Hole Diameter	Tab Width	C/L Hole to Tab End	Thickness
	A	2A	B	C	D	E	G	T
445	1.031	2.062	0.719	0.438	0.313	0.938	0.375	0.125
452	1.031	2.062	0.750	0.438	0.313	0.719	0.344	0.156
455	1.000	2.000	0.813	0.438	0.250	0.812	0.438	0.156
462	1.312	2.624	0.813	0.500	0.250	0.938	0.438	0.156
477	1.500	3.000	1.156	0.656	0.250	1.375	0.469	0.156
488	1.906	3.812	1.313	0.656	0.313	1.375	0.469	0.188

Dimensions subject to change

K-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

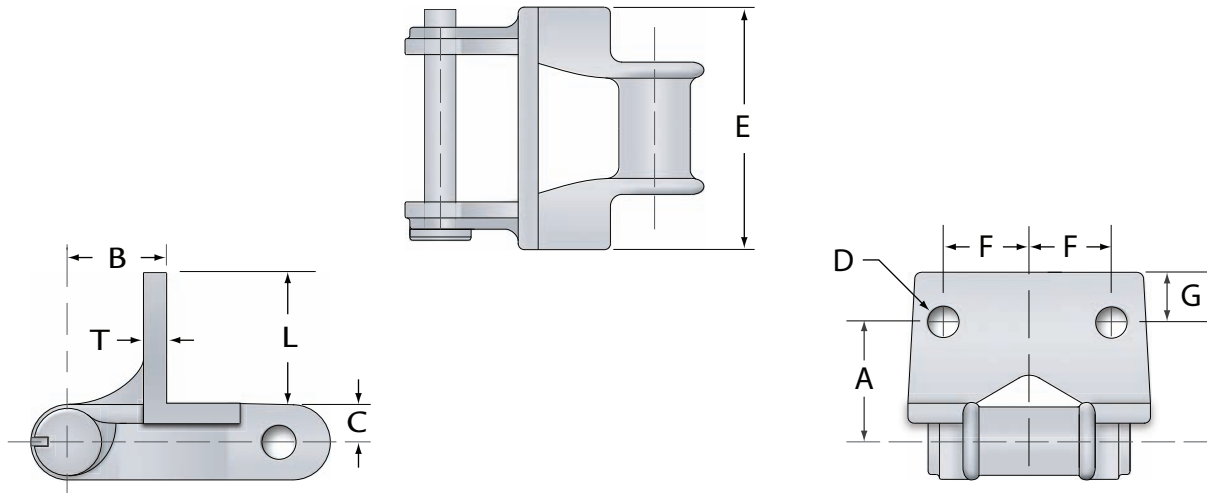
Hitachi Chain Number	C/L Chain Att. Hole	Attachment Location	Attach Angle Location	Hole Diameter	Tab Width	Pitch	C/L Hole to Tab End	Thickness
	A	B	C	D	E	F	G	T
488	1.813	1.281	0.656	0.312	2.125	0.625	0.438	0.188

Dimensions subject to change

Engineering Class Chains

400 Class Pintle Chain F-2 & A-22 Attachments

F-2 Attachment



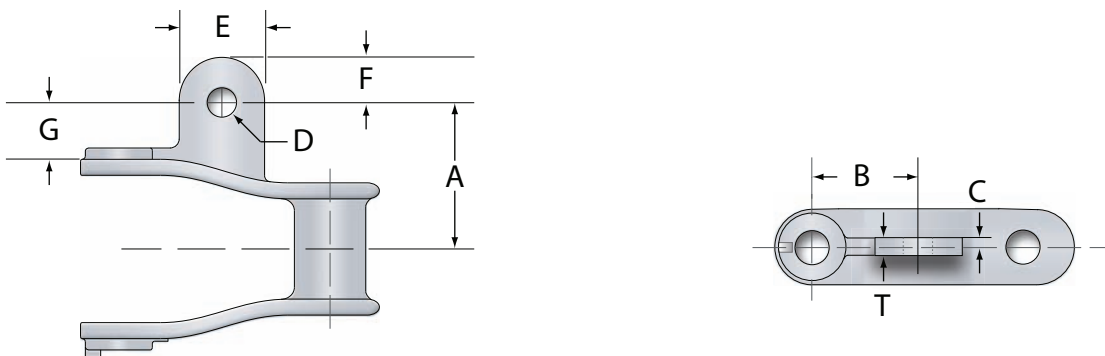
F-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	C/L Chain Att. Hole	Attachment Location	Attach Angle Location	Hole Diameter	Tab Width	Pitch	C/L Hole to Top Att	Height	Thickness
	A	B	C	D	E	F	G	L	T
455	0.938	0.625	0.422	0.188	1.813	0.531	0.313	0.813	0.156
477	1.438	0.750	0.500	0.313	2.625	0.875	0.563	1.500	0.250
488	1.375	1.188	0.469	0.313	2.875	1.016	0.594	1.500	0.281

Dimensions subject to change

A-22 Attachment



A-22 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	C/L Chain Att. Hole	Attachment Location	Attach Angle Location	Hole Diameter	Tab Width	C/L Hole Att. Ege	C/L Hole Sidebar	Thickness
	A	B	C	D	E	F	G	T
477	1.500	1.125	0.125	0.313	0.875	0.375	1.219	0.250

Dimensions subject to change

Sugar Mill Chains

Chains for the Sugar Mill Industry

Hitachi Engineering Class Roller Conveyor Chains for Bagasse and Carrier Chain service along with Hitachi's Drop Forged Rivetless, and Cast Combination Chains cover a wide range of service requirements. Chains are produced with high quality steels and precise manufacturing controls. Sugar Mills require highly durable chains for the demands of processing. Hitachi meets these demands with quality product and service.

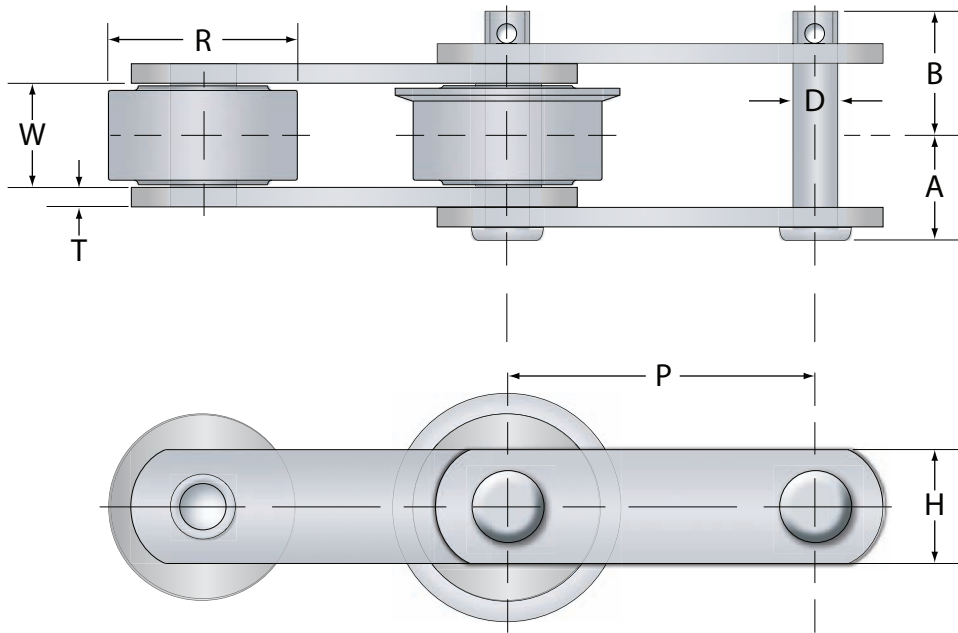


Product	Page
Bagasse Carrier Chain	68
Bagasse Carrier Attachment	69
Main Carrier Chain	70
Carrier Slats	71

Engineering Class Chains

Sugar Mill Chains

Bagasse Carrier Chain



Bagasse Carrier Chain Specifications

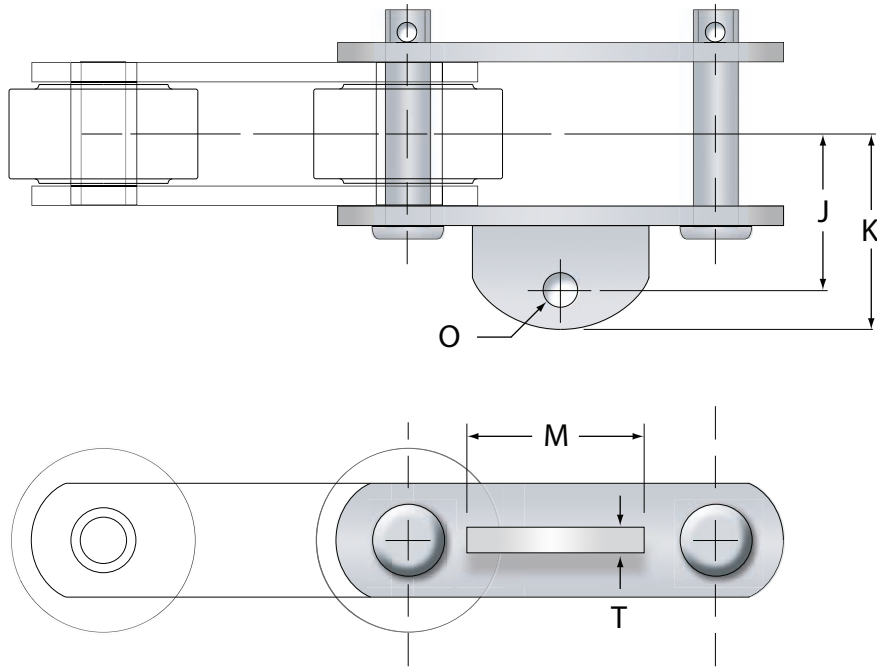
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Diameter	Pin			Side Bar		Working Load lbs	Avg Ult Strength lbs	Average Chain Wgt lbs
	P	W	R	D	A	B	T	H			
Straight Sidebar											
53R	3.000	1.000	1.500	0.438	1.03	1.25	0.188	1.125	2,100	13,000	3.9
95R	4.000	1.000	1.500	0.438	1.03	1.25	0.188	1.125	2,100	13,000	3.4
604R	6.000	1.313	2.000	0.563	1.34	1.59	0.250	1.500	3,500	21,000	5.4
86R	6.000	1.313	2.000	0.625	1.37	1.62	0.250	1.500	3,600	22,000	5.4
614R	6.000	1.375	2.500	0.750	1.78	2.03	0.375	2.000	5,600	38,000	11.0
631R	6.000	1.375	3.000	0.750	1.78	2.03	0.375	2.000	5,600	38,000	12.2
1131R	6.000	1.500	3.000	0.750	1.84	2.09	0.375	2.000	5,900	47,000	12.5
Offset Sidebar											
1604R	6.000	1.093	3.000	0.500	1.28	1.62	0.250	1.250	2,750	24,000	5.4
2184RX	6.000	1.375	3.000	0.875	1.66	2.03	0.375	2.000	6,500	75,000	12.3

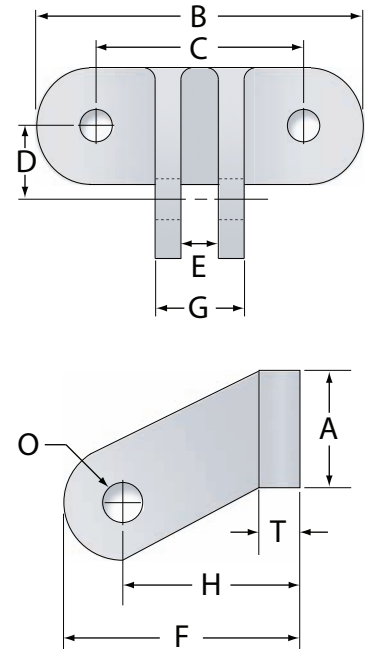
Dimensions subject to change

Bagasse Carrier Attachment

A-42 Attachment Link



Wing Attachment



A-42 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Tab Width	Diameter	Thickness	C/L Chain Att. Hole	C/L Chain Att. Edge	A-42 Additional Weight lbs/pc
	P	M	O	T	J	K	
Straight Sidebar							
53R	3.000	1.000	0.406	0.250	1.563	2.00	0.08
95R	4.000	1.250	0.406	0.375	1.625	2.13	0.07
1131R	6.000	2.000	0.656	0.500	2.844	3.84	0.65
604R	6.000	2.000	0.656	0.500	2.344	3.16	0.40
614R	6.000	2.000	0.656	0.500	2.750	3.75	0.65
631R	6.000	2.000	0.719	0.500	2.563	3.56	0.65
86R	6.000	2.000	0.531	0.375	2.344	3.16	0.55
Offset Sidebar							
1604R	6.000	2.000	0.656	0.500	2.31	3.06	1.30
2184RX	6.000	2.000	0.656	0.500	2.63	3.63	1.30

Dimensions subject to change

Wing Attachment Specifications

Chain Dimensions Are Given In Inches

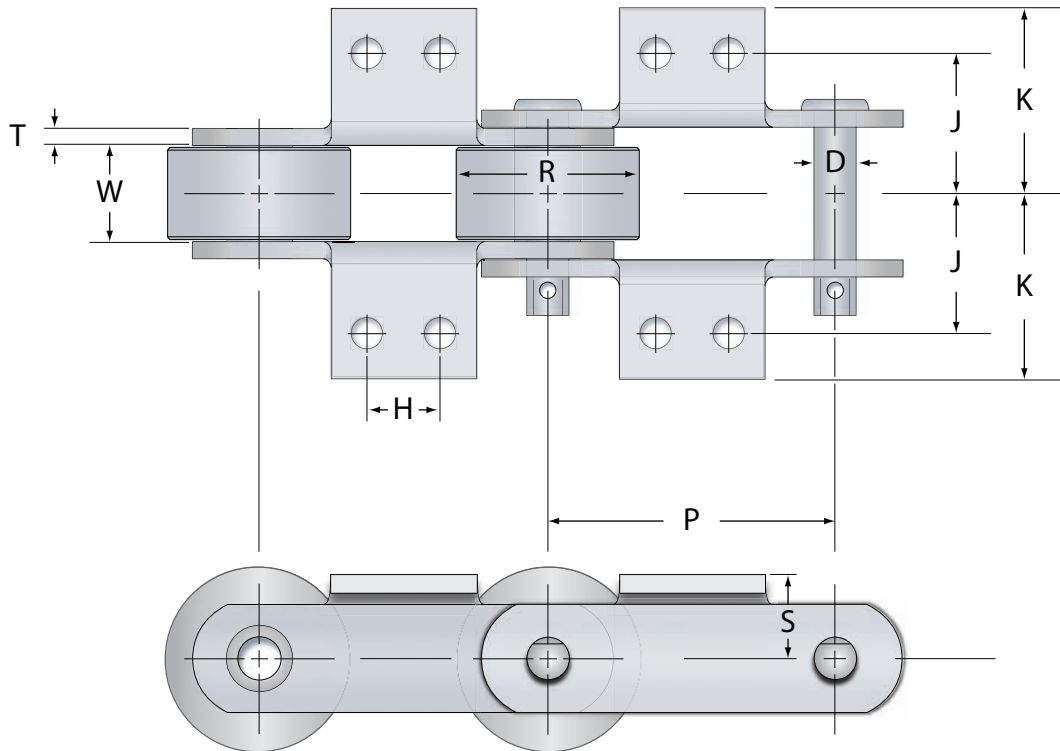
Hitachi Wing Style	A	B	C	D	E	F	G	H	K	O	T	lbs/pc
2C	2.000	5.00	3.50	1.000	0.625	4.000	1.50	3.000	0.500	0.656	0.688	2.80
15C	1.750	3.50	2.50	0.813	0.438	1.813	1.00	1.125	0.313	0.406	0.281	0.70

Dimensions subject to change

Engineering Class Chains

Sugar Mill Chains

Main Carrier Base Chain K-2 Attachments



K-2 Attachment Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Inside Width	Roller Dia.	Pin Dia.	Side Bar		Attach. Hole		Height	Across Att Holes	Tab Width	Working Load lbs	Avg Ultimate Strength lbs	Avg Chain Weight lbs/ft
	P	W	R	D	T	N	H	O	S	2J	2K			
96R	6.000	1.500	2.750	0.750	0.375	2.000	3.000	0.531	1.625	4.375	6.000	5,900	47,000	16.0
96RX	6.000	1.500	2.750	0.750	0.375	2.000	3.000	0.531	1.625	4.375	6.000	5,900	70,000	16.0
2178RX	6.000	1.500	2.750	0.875	0.375	2.250	3.000	0.531	1.625	4.375	5.750	6,900	85,000	15.3
2198RX	6.000	1.500	2.750	0.875	0.500	2.250	3.000	0.531	1.625	4.375	6.625	7,700	100,000	18.5
896R	8.000	1.500	2.750	0.750	0.375	2.000	3.500	0.531	1.625	4.375	6.281	5,900	47,000	17.0
806R	8.000	1.813	3.000	1.000	0.500	2.500	3.500	0.656	2.188	5.188	7.593	9,800	95,000	22.5
800RX	8.000	1.813	3.500	1.000	0.500	3.000	4.000	0.656	2.188	5.188	7.093	9,800	125,000	26.0

Dimensions subject to change

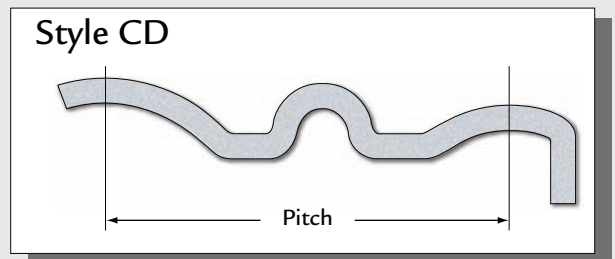
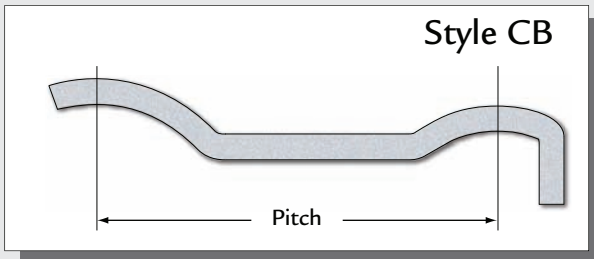
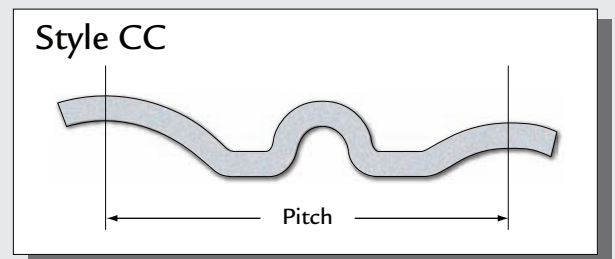
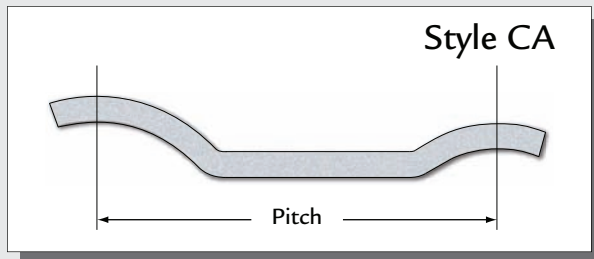


Cane Carrier Slats

Heavy duty metallic slats are designed to work seamlessly with Hitachi Cane Carrier Chain. Better fit means increased service life and superior service.

Slats are available in the four common profiles and in both 3/16" and 1/4" thickness.

Specification weights are based on per lineal foot of slat length.



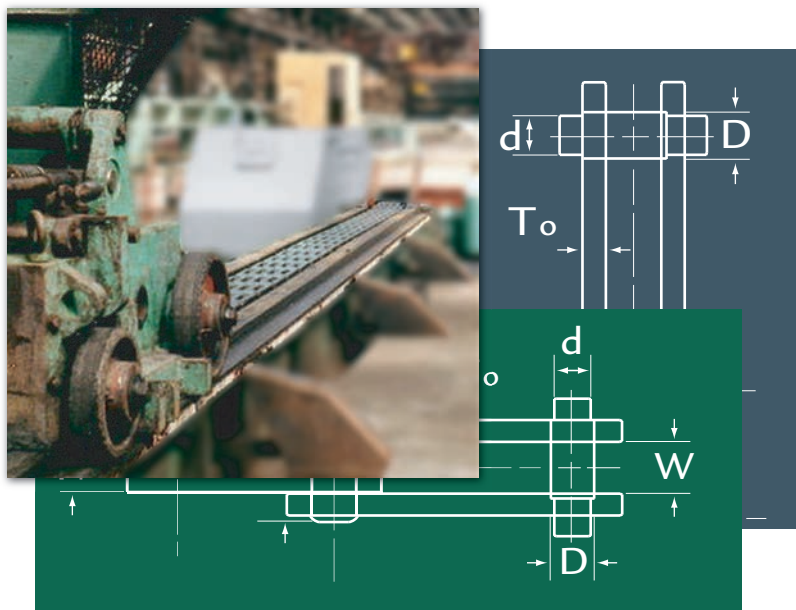
Cane Carrier Slats Specifications

Hitachi Part Number	Slat Thickness (inches)	Slat Weight 12" Wide (Lbs/ft)	Slat Thickness (inches)	Slat Weight 12" Wide (Lbs/ft)
CA	0.188	4.67	0.250	6.20
CB	0.188	5.27	0.250	7.03
CC	0.188	4.93	0.250	6.60
CD	0.188	5.60	0.250	7.43

Subject to change

Bar and Pin / Draw Bench Chains

Specialized High Strength Chains for
Low Speed / High Capacity Applications



Bar and Pin Chains are ideal for conveyors or high tension loading where speed is slow. Bar and Pin Chains do not utilize rollers or bushings, it is designed for strength.

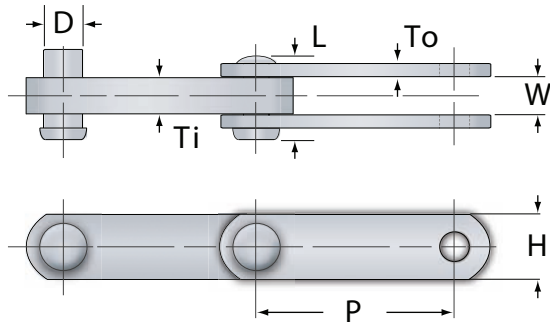
Draw Bench Chains are featured where metals are drawn through a die to be formed either in tube or extruded shape. Heat and high loads are well within the design capability of this product.

Product	Page
Bar and Pin Chain	73
Draw Bench Chain	74
Double Flex Chain	75

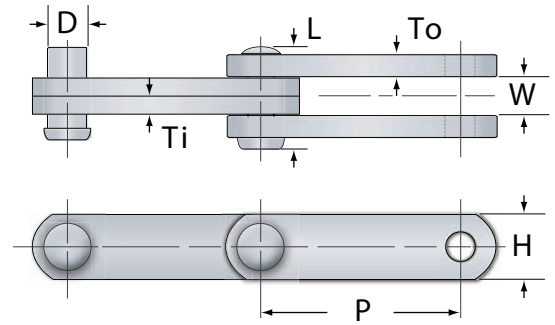
Engineering Class Chains

Bar and Pin Chain

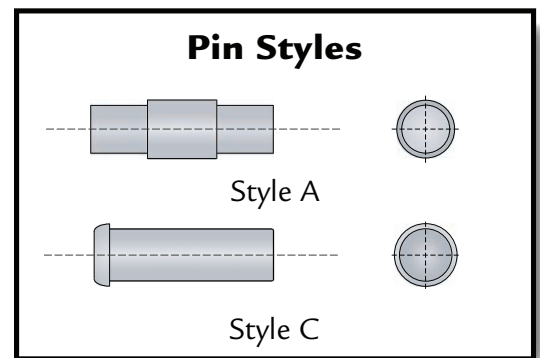
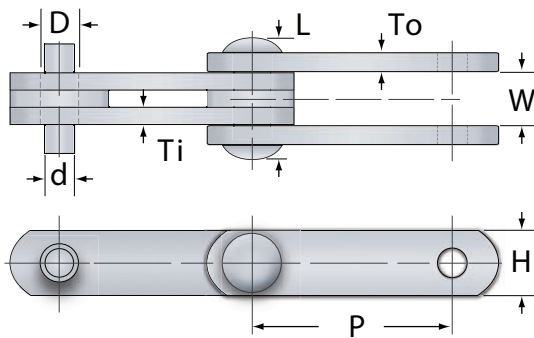
Style 1



Style 3



Style 2



Bar and Pin Chain Specifications

Chain Dimensions Are Given In Inches

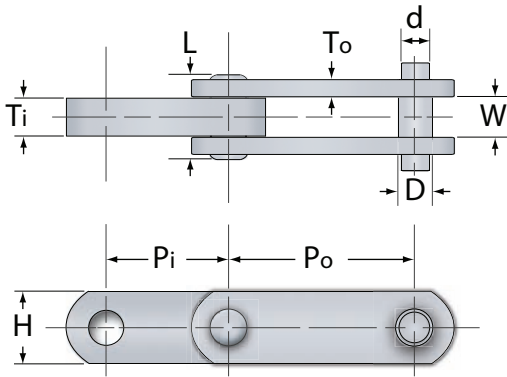
Hitachi Chain Number	Chain Pitch	Chain Style	Inside Width	Pin Diameter	Pin Diameter	O/L Pin Length	Pin Style	Sidebar			Avg Ultimate Strength lbs	Avg Chain Weight lbs/ft
	P		W	D	d	L		To	Ti	H		
10475	4.00	1	1.063	1.125	-	2.63	C	0.500	1.000	2.00	75,000	11.0
10630	6.00	1	0.938	0.625	-	2.31	C	0.438	0.875	1.50	30,700	5.1
10660	6.00	1	1.031	1.000	-	2.75	A	0.500	1.000	2.00	60,000	10.7
108170	8.00	1	1.563	1.375	-	3.75	C	0.750	1.500	2.50	170,000	17.4
108400	8.00	1	2.625	1.500	-	6.06	C	1.250	2.500	3.50	400,000	33.0
109100	9.00	1	1.563	1.500	-	4.13	C	0.750	1.500	3.00	100,000	21.0
110140	10.00	1	1.563	1.500	1.375	3.06	C	0.750	1.500	3.00	140,000	19.8
112250	12.00	1	2.063	1.500	-	5.00	C	1.000	2.000	3.00	250,000	28.4
20460	4.00	2	1.063	1.000	-	2.75	C	0.500	0.500	2.00	60,000	10.4
20675	6.00	2	1.563	1.000	0.875	3.75	C	0.750	0.750	2.00	75,000	13.0
20860	8.00	2	1.563	0.875	-	3.69	C	0.750	0.750	2.00	60,000	12.7
21296	12.00	2	1.531	1.125	-	3.38	A	0.500	0.750	2.50	96,000	13.8
30630	6.00	3	1.156	0.625	-	2.50	C	0.375	0.375	1.50	30,700	5.2
30646	6.00	3	0.875	0.625	-	2.25	C	0.375	0.375	1.50	46,000	5.1
30660	6.00	3	1.063	0.875	-	2.69	C	0.500	0.500	2.00	60,000	9.1

Dimensions subject to change

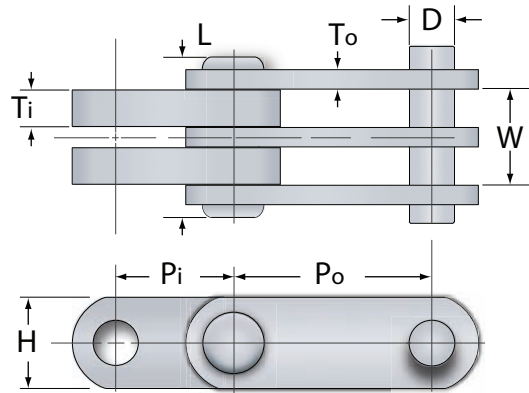
Engineering Class Chains

Draw Bench Chain

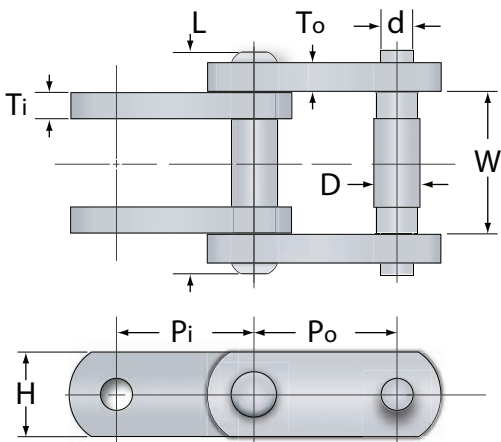
Style 1



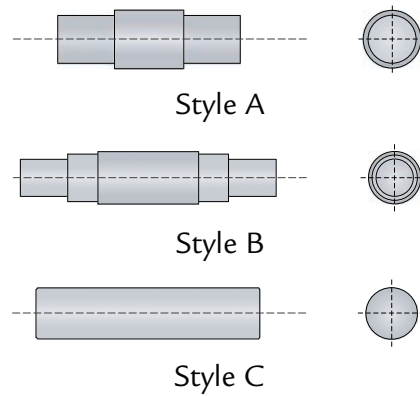
Style 3



Style 2



Pin Styles



Draw Bench Chain Specifications

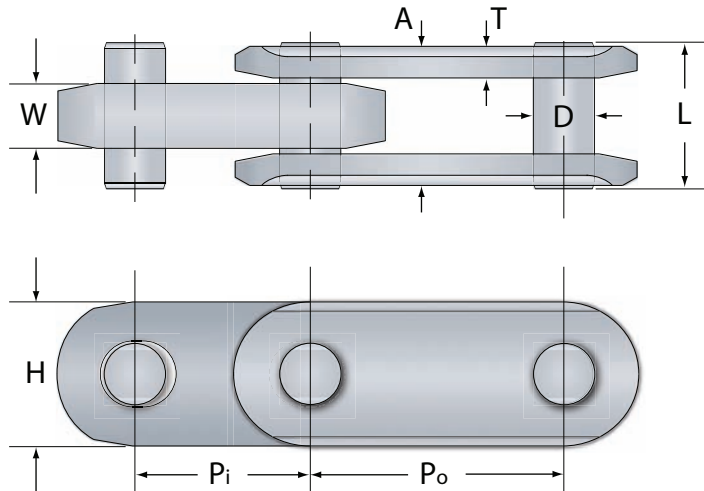
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch		Style	Inside Width	Diameter	Diameter	O/L Pin Length	Pin Style	Sidebar			Avg Ultimate Strength lbs	Avg Chain Weight lbs/ft
	Block Link	Outside Link							To	Ti	H		
	Pi	Po											
103100	3.00	4.50	1	1.063	0.875	0.625	3.19	A	0.500	1.000	2.000	100,000	9.9
103110	3.00	3.00	1	0.781	1.000	0.750	1.84	A	0.375	0.750	1.750	110,000	13.5
103200	3.00	5.00	1	1.313	1.250	1.125	2.69	A	0.625	1.250	2.500	200,000	12.4
103150	3.25	6.00	1	1.313	1.250	1.125	2.78	A	0.625	1.250	2.500	150,000	15.3
104400	4.00	8.00	1	1.875	1.750	1.625	4.13	A	1.000	1.750	3.500	400,000	33.0
104220	4.25	8.50	1	1.562	2.000	1.875	3.44	A	0.750	1.500	4.000	220,000	32.6
104500	4.25	8.50	1	2.063	2.000	1.875	4.31	A	1.000	2.000	4.000	500,000	39.0
203100	3.00	3.00	2	1.250	0.875	0.625	3.00	B	0.375	0.375	1.750	100,000	7.5
205380	5.00	5.00	2	3.000	1.875	1.625	7.44	B	1.000	1.000	3.000	380,000	39.8
304800	4.25	8.50	3	4.094	2.000	-	6.38	C	1.000	1.500	4.000	800,000	61.2
305650	5.00	9.75	3	4.375	2.188	-	6.38	C	1.000	1.625	4.500	650,000	60.0

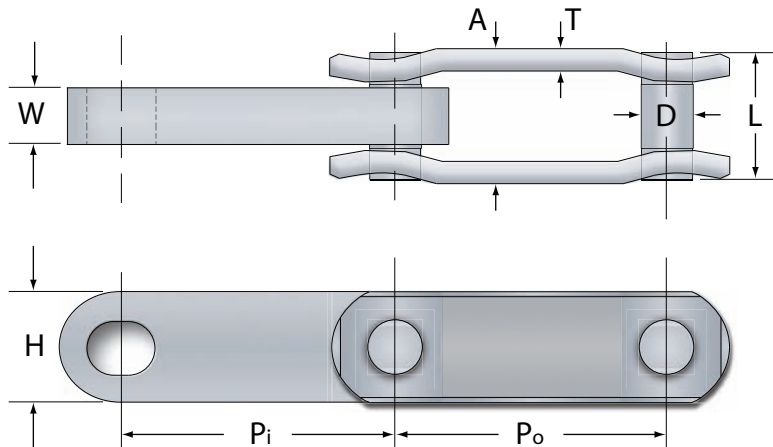
Engineering Class Chains

Double Flex Chain

DF3498



DF3500 - DF3910



Double Flex Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch		Width	Pin		Width	Sidebar		Minimum Flex Radius	Working Load lbs	Avg Ultimate Strength lbs	Avg Chain Weight lbs/ft
	Block Link	Outside Link		D	L		T	H				
	Pi	Po	W	D	L	A	T	H				
DF3498	1.750	2.500	0.640	0.625	1.50	1.45	0.313	1.400	20	4,000	50,000	3.9
DF3500	2.500	3.000	0.625	0.562	1.46	1.50	0.250	1.250	20	4,000	48,000	3.3
DF3910	3.000	3.000	0.625	0.562	1.46	1.50	0.250	1.250	20	4,000	48,000	3.0

Dimensions subject to change

Meat Processing Chains

Delivering Uncompromising Quality

Providing an essential service, Meat Packing requires equipment with proven durability and made to the highest quality standards to insure dependable service with minimal downtime. Hitachi meets this challenge drawing on years of chain design and manufacturing expertise to supply top quality products at an economical price. Depend on Hitachi for your next requirement . . . experienced, dedicated customer service representatives along with knowledgeable and professional field sales engineers are ready to assist you.



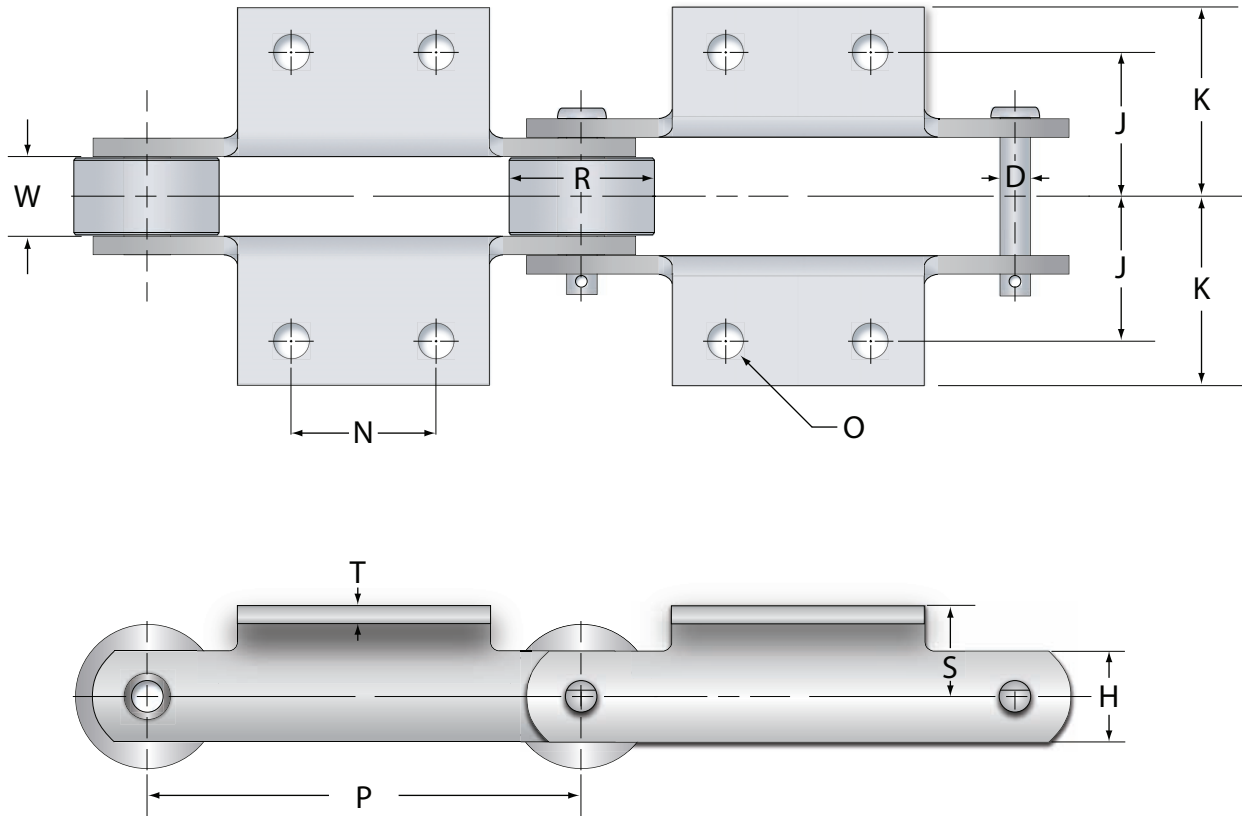
Product
Meat Processing Chains

Page
77

Engineering Class Chains

Meat Processing Chain

Meat Processing Chains



Meat Processing Chains

Chain Dimensions Are Given In Inches

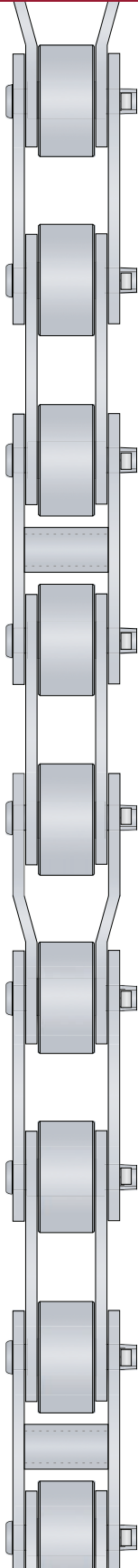
Hitachi Chain Number	Chain Pitch P	Inside Width W	Roller Dia R	Pin Dia D	Sidebar		Attach. Hole		Att Plate Height S	Across Att Holes 2J	Att Width 2K	Rated Work Load lbs	AUS** lbs	Avg Chain Wgt lbs/ft
					Thick T	Hgt H	Pitch N	Dia O						
DS1113	4.040	1.313	2.000	0.625	0.313	1.500	1.500	0.406*	1.250	4.125	5.500	3,150	26,000	11.4
DS196R	6.000	1.125	2.000	0.438	0.250	1.250	2.000	0.406	1.250	4.000	5.250	1,950	18,000	7.5
DS6272	6.000	1.313	2.250	0.625	0.313	1.500	2.000	0.406*	1.375	4.000	5.250	3,150	26,000	9.2

DS Series chains are made with Delrin inserts in the rollers.
 Bushings are stainless steel (heat treated).
 Pins, rollers and side bars are zinc plated.

Dimensions subject to change

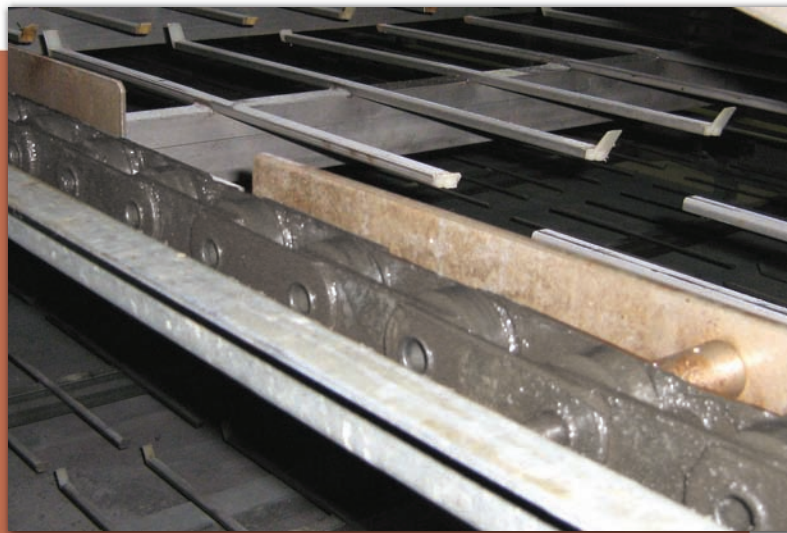
* Countersunk Attachment Holes
 ** Average Ultimate Strength

Oven Chain for Bakeries



Challenging Application Requires Dependable Chain

Hitachi Engineering Class Oven Chain for Bakeries features the highest quality material and construction to insure a strong product resistant to the fatigue of high temperature oven applications. Hitachi's demonstrated ability insures consistent quality to meet these demanding requirements. Hitachi representatives will help engineer your next oven chain requirement and provide the correct selection. Specialty Chains and additional Bakery Chains are also available from © Hitachi Maxco Ltd.

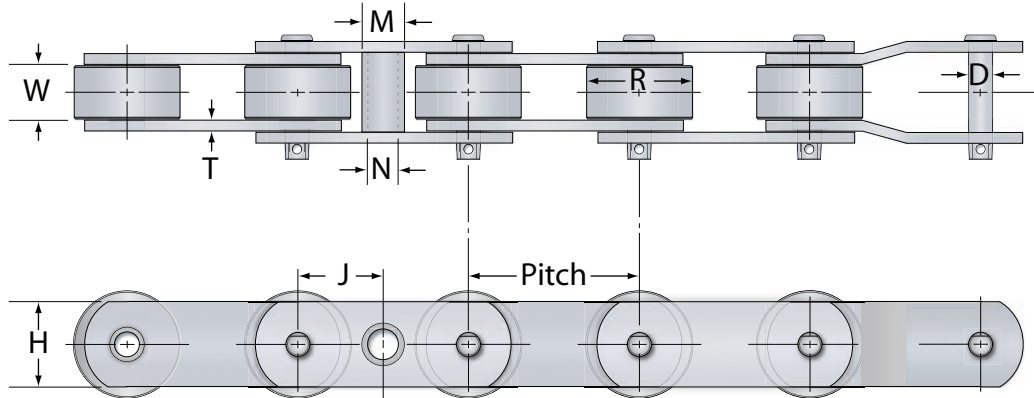


Product	Page
4034 - OC	79
4041 - OC	79
6086 - OC	80
160F - SF	80

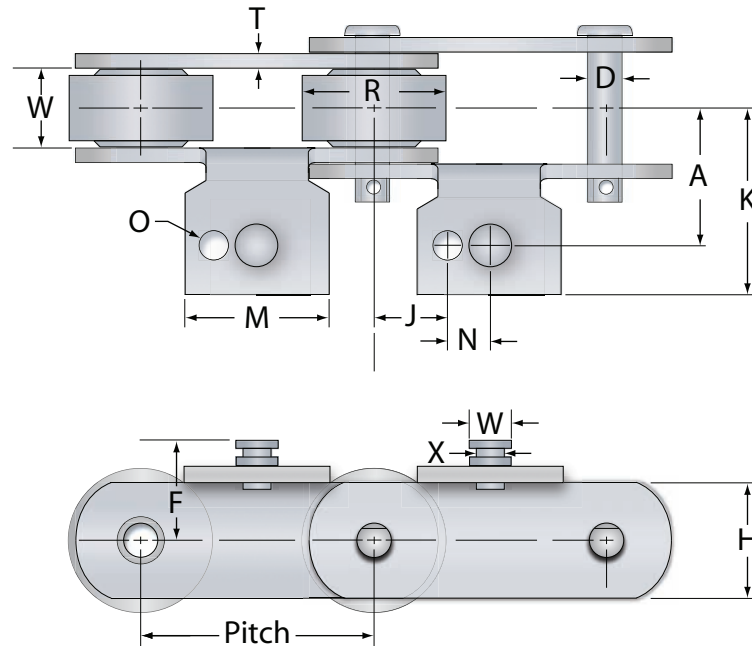
Engineering Class Chains

Oven Chains for Bakeries

4034-OC



4041-OC



Chain Specifications

Chain Dimensions Are Given In Inches

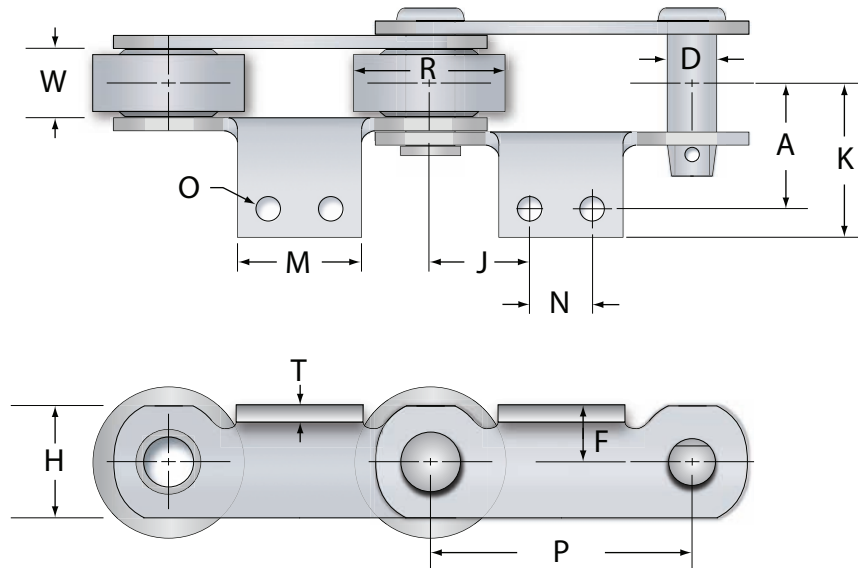
Hitachi Chain Number	Chain Pitch	Inside Width	Dia.	Dia.	Sidebar		Attachment Dimensions									Work. Load lbs	Avg Ultimate Strength lbs	Avg Chain Wgt lbs/ft
					T	H	M	N	J	A	K	F	E	X	O			
4034-OC	4.000	1.063	2.500	0.625	0.250	2.000	1.313	1.150	2.000	-	-	-	-	-	-	3,400	31,000	9.6
4041-OC	4.000	1.375	2.500	0.625	0.250	2.000	2.500	0.750	1.250	2.375	3.270	1.563	0.740	0.500	0.469	4,100	31,000	11.5

Dimensions subject to change

Engineering Class Chains

Oven Chains for Bakeries

6086-OC



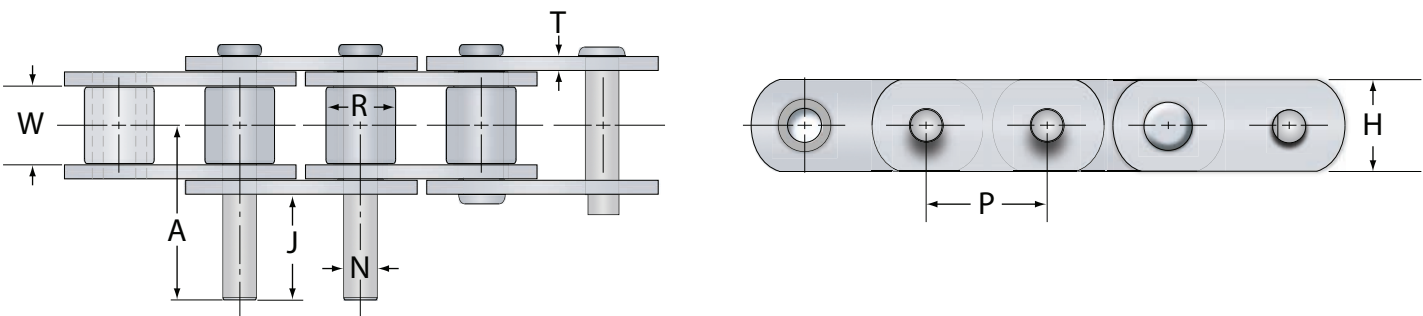
6086-OC Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Inside Width	Dia	Dia	Sidebar		Attachment Dimensions							Work. Load lbs	Avg Ult. Strgth lbs	Avg Chain Wgt lbs/ft
	P	W	R	D	T	H	M	N	J	A	K	F	O			
6086-OC	6.000	1.563	3.500	1.125	0.313	2.500	2.875	1.500	2.250	2.875	3.700	1.188	0.531	8,600	60,000	16.8

Dimensions subject to change

160F-SF



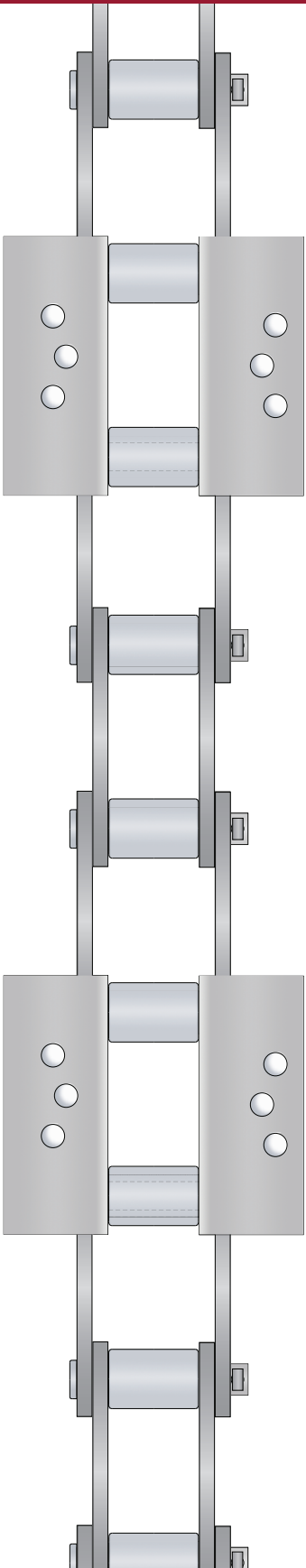
160F-SF Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Inside Width	Dia	Dia	Sidebar		Attachment Dimensions			Working Load lbs	Avg Ultimate Strength lbs	Avg Chain Weight lbs/ft
	P	W	R	D	T	H	N	J	A			
160F-SF	2.000	1.250	1.125	0.563	0.250	1.500	0.563	1.750	2.910	3,500	21,000	6.2

Dimensions subject to change

Asphalt Chains



Asphalt Batch Plant Chains

Asphalt Production Plants create some of the harshest conditions for operating chains in conveyor and drive applications. Hitachi's line of Asphalt Chains are designed to meet the demand head on with quality economical products that perform exceptionally.

For your next requirement contact your nearest Hitachi representative for a competitive quote.

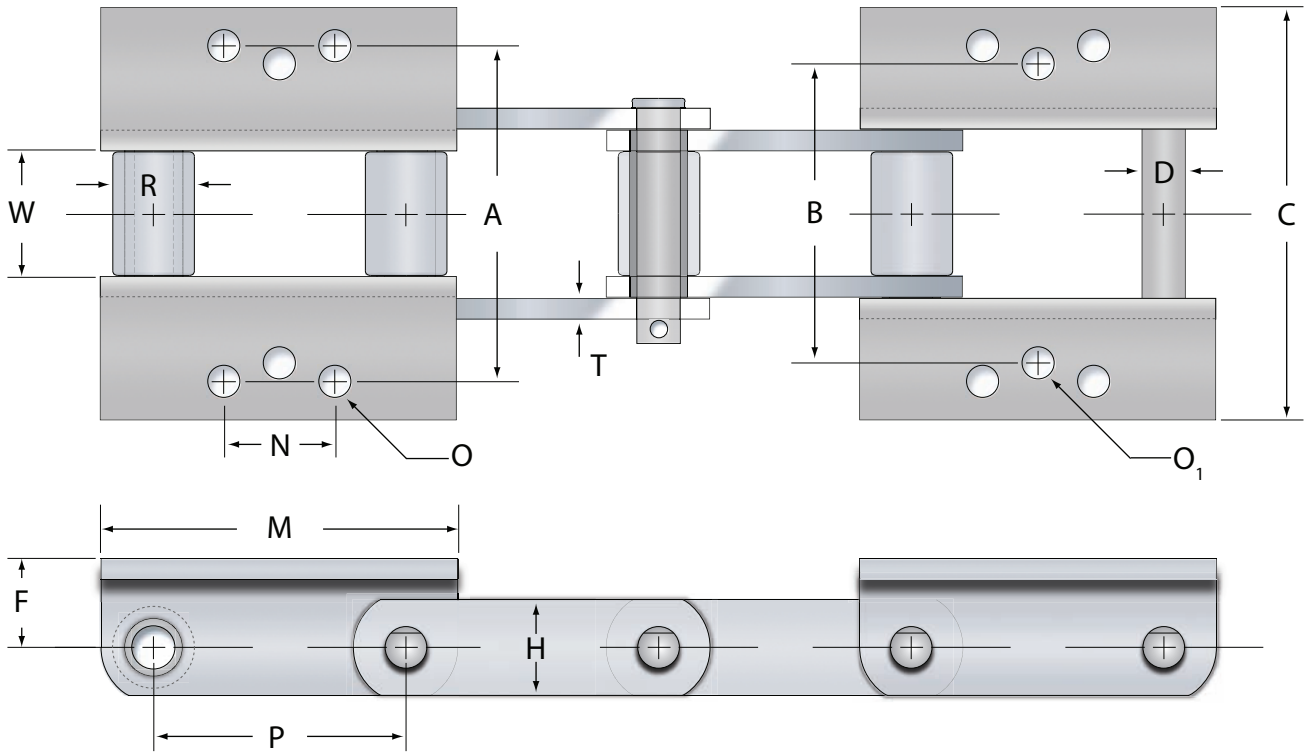


Product	Page
K-3 Attachment	82
K-2 Attachments	83
K-33 Attachments	83
K-24 Attachment	84
MM-1 Attachment	85

Engineering Class Chains

Asphalt Chain & Attachments

K-3 Attachment



Asphalt Chain Specifications

Chain Dimensions Are Given In Inches

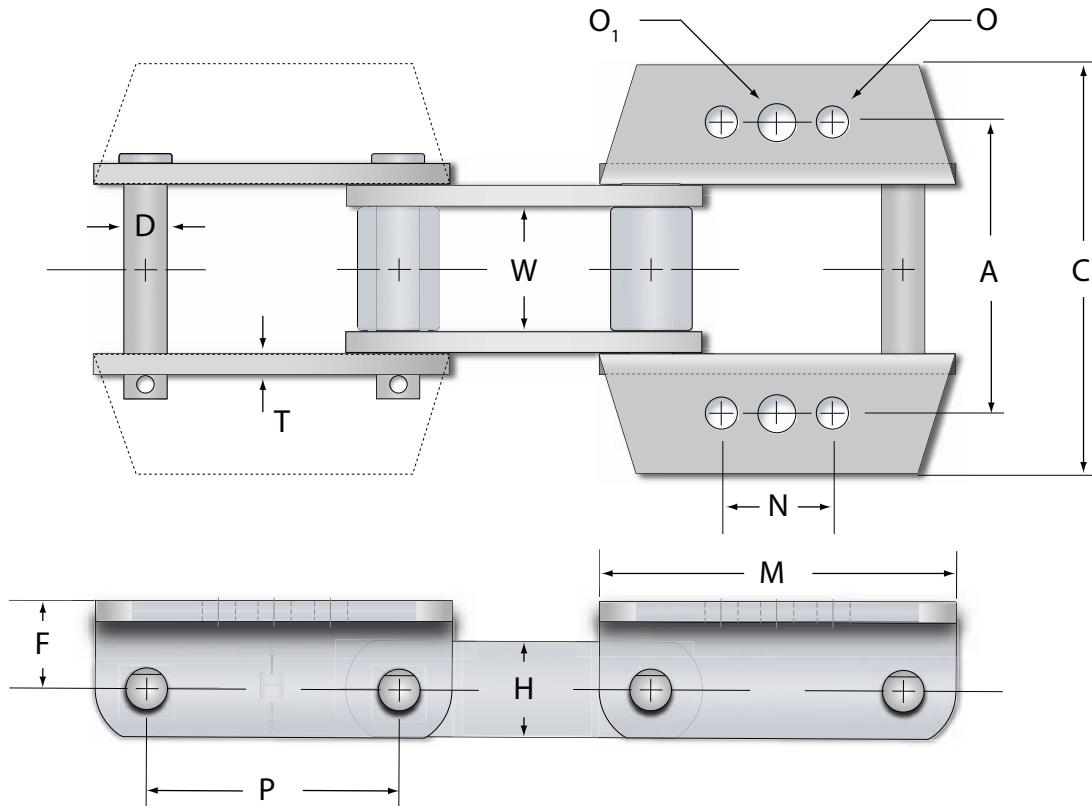
Hitachi Chain Number	Chain Pitch	Inside Width	Roller Dia	Pin Dia	Sidebar		Work. Load lbs	Avg Ult Strg lbs	Std Att Type	Std Att Space	K-2, K-3, K-33, K-24, MM-1 Attachments							
					P	W					R	D	T	H	A	B	C	F
3945	4.000	2.000	1.250	0.625	0.313	1.500	5,700	45,000	K3	Ev 3rd	5.313	4.750	6.500	1.380	5.625	1.750	0.469	0.469
3952	4.000	2.000	1.438	0.750	0.375	1.750	8,200	62,000	K-2 ¹	Ev 3rd	5.500	-	6.750	1.630	6.000	1.750	0.531	-
3957	4.000	1.500	1.375	0.625	0.313	1.625	4,600	45,000	K-2	Ev 3rd	5.313	-	6.000	1.375	5.625	2.500	0.563	-
2102	4.000	2.219	1.500	0.625	0.375	1.500	6,500	56,500	K-2	Ev 3rd	5.313	-	6.750	1.125	5.625	1.750	0.563	-
3433	4.000	2.078	1.375	0.625	0.375	1.500	6,200	56,500	K-33	Ev 2nd	5.312	5.312	6.875	1.000	4.250	2.250	0.531	0.812
3950	4.038	2.000	1.375	0.625	0.313	1.500	5,700	45,000	K-3	Ev 3rd	5.313	4.750	6.500	1.375	5.680	1.750	0.469	0.469
2268	4.083	2.000	1.625	0.750	0.375	2.250	7,200	100,000	K-2	Ev 3rd	5.250	-	6.750	2.000	6.250	1.750	0.531	-
4604	4.604	2.000	1.375	0.625	0.313	1.500	5,700	45,000	K-3	Ev 3rd	5.313	4.750	6.500	1.375	6.250	1.750	0.390	0.390
3935	5.187	2.281	2.000	0.875	0.375	2.500	9,300	102,000	K-2 ²	Ev 3rd	6.313	-	7.750	2.000	7.750	2.313	0.531	-
3940	6.000	2.000	1.625	0.750	0.375	2.250	7,200	90,000	K-2	Ev 2nd	6.250	-	7.500	2.000	8.250	2.313	0.531	-
9856	6.000	3.000	2.750	1.000	0.500	2.500	14,000	140,000	MM-1	Ev 2nd	2.750	-	-	1.840	3.063	0.813	-	-
9856	6.000	3.000	2.750	1.000	0.500	2.500	14,000	140,000	K-24	Ev 2nd	7.250	-	9.500	1.880	7.250	2.500	0.750	-

¹ K-2 with Square Holes
² K-2 and Offset Link

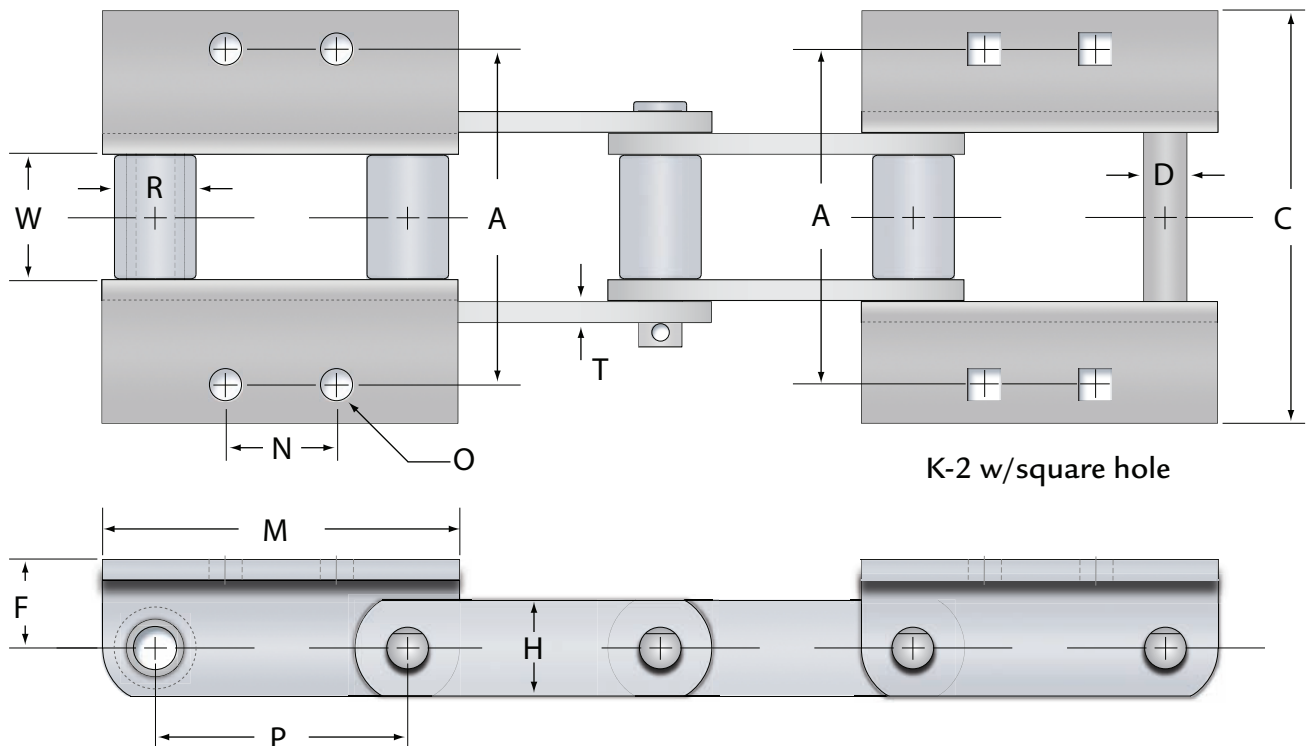
Dimensions subject to change

Asphalt Chain K-2 & K-33 Attachments

K-33 Attachment



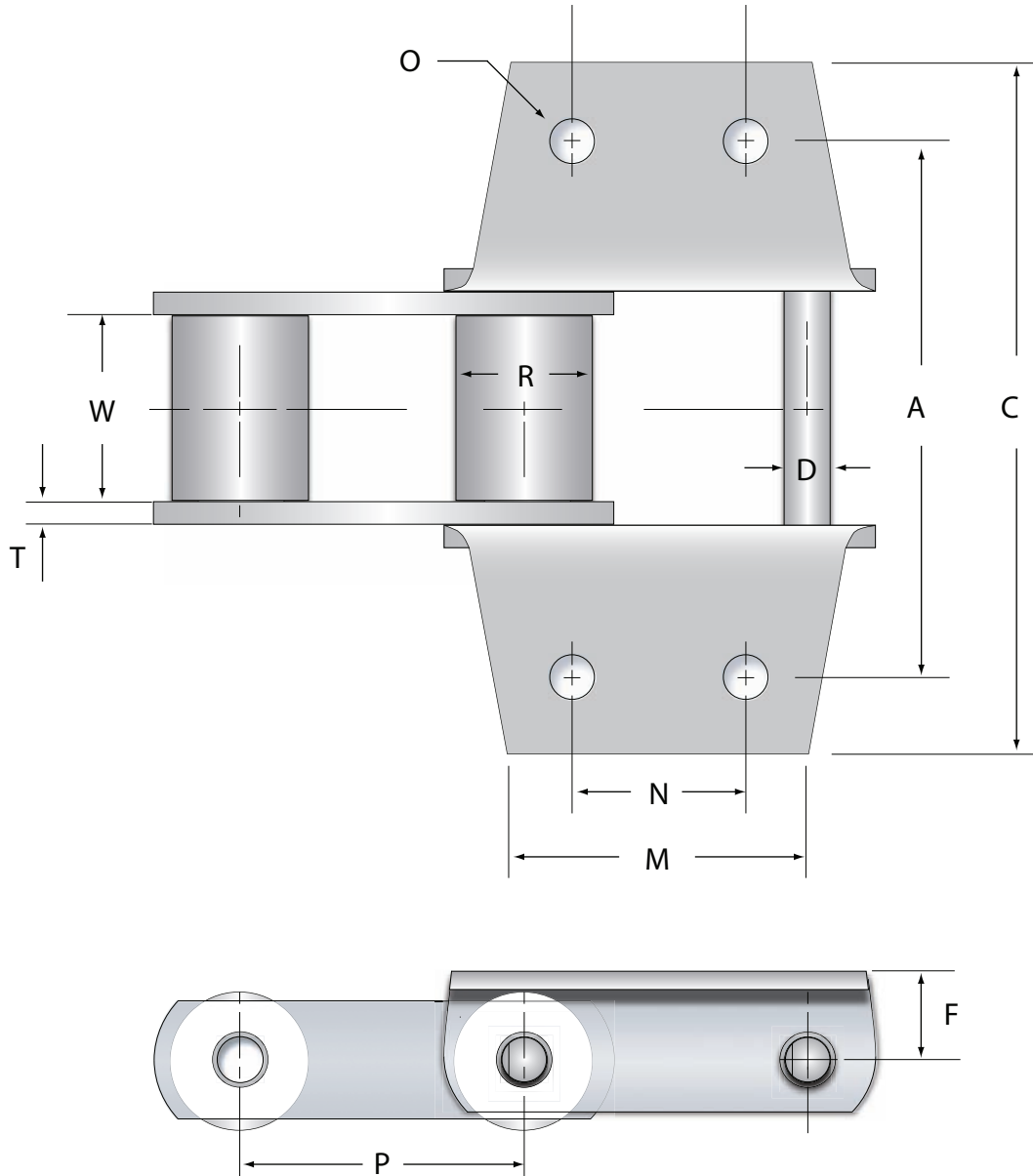
K-2 Attachment



Engineering Class Chains

Asphalt Chain and Attachments

K-24 Attachment



9856 Asphalt Chain w/K-24 Attachment Specifications

Chain Dimensions Are Given In Inches

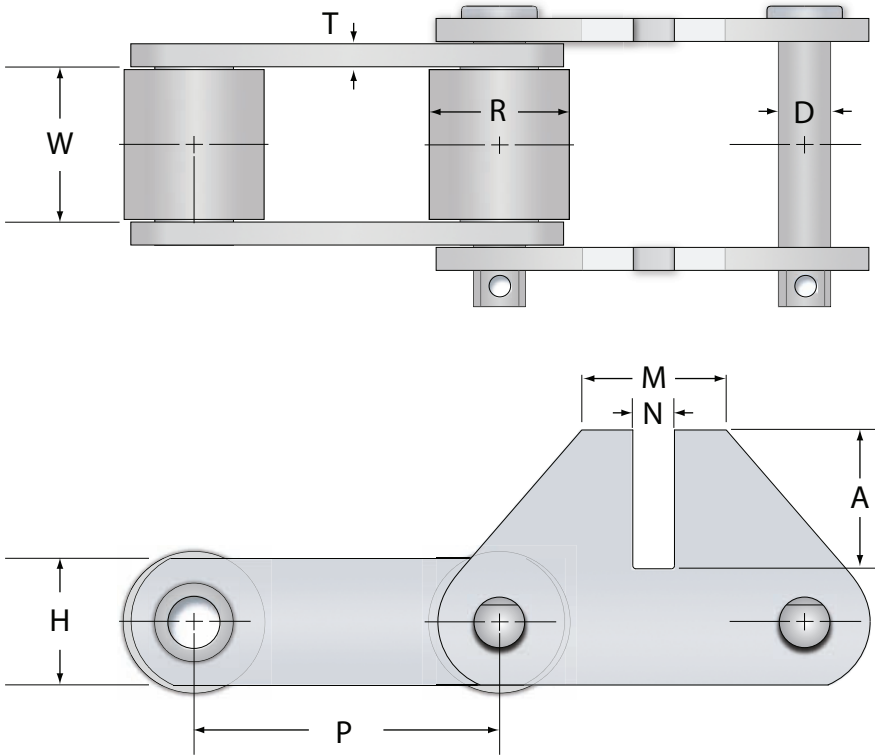
Hitachi Chain Number	Chain Pitch	Inside Width	Thick.	Roller Dia	Pin Dia	Attachment Hole		Attach Plate Height	C/L Chain Attach Hole	Tab Width	O/A Attach Width	K-24 Add Wgt/Att lbs/pc
	P	W	T	R	D	N	O	F	A	M	C	
9856	6.000	3.000	0.500	2.750	1.000	2.500	0.750	1.880	7.250	7.250	9.500	3.50

Dimensions subject to change

Asphalt Chain MM - 1 Attachment



MM-1 Attachment Link



MM-1 Attachment Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Roller Diameter	Pin Diameter	Sidebar		Working Load lbs	Average Ultimate Strength lbs	Standard Attach Spacing	MM-1 Attachment		
	P	W	R	D	T	H				A	M	N
9856	6.000	3.000	2.750	1.000	0.500	2.500	14,000	140,000	Ev 2nd	2.750	3.063	0.813

Dimensions subject to change

Mining Chains

Demanding Requirements - Superior Products

With worldwide design expertise and manufacturing experience, Hitachi Mining Chains are the latest example of our complete commitment to the manufacture of the most dependable and durable chains for typical Mining applications. Designed to withstand the harsh rigors and environment, Hitachi Mining Chains possess a very strong performance history with a very economical cost of ownership. Depend on Hitachi to provide the perfect chain for your next Mining Chain requirement.

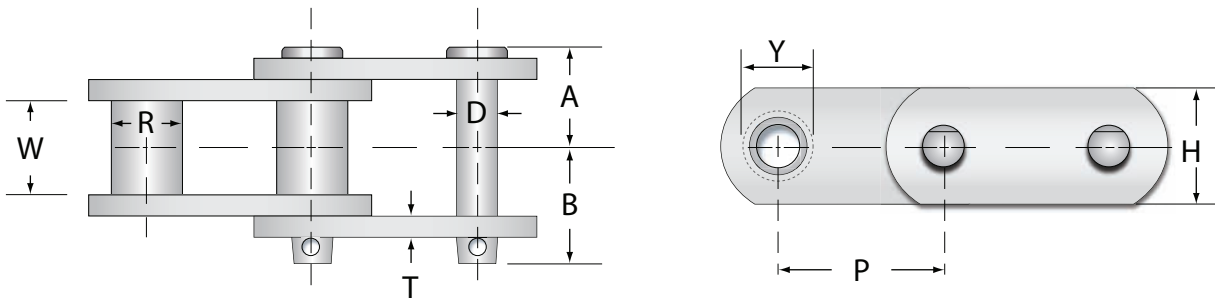


Product	Page
Tram Drive Chain	87
Shuttle Car Chain	88
Super Shuttle Car Chain	88
Wash Box Chain	89
Feeder Breaker Chain	89

Engineering Class Chains

Mining Chains

Drive Chains



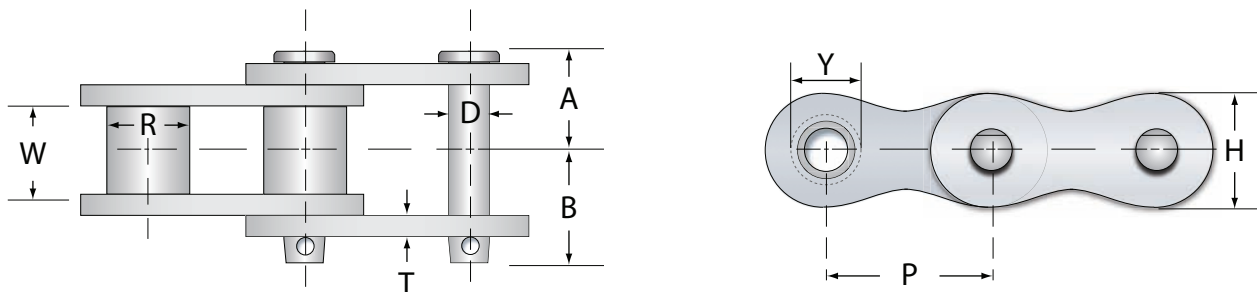
Tram Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Roller		Pin				Sidebar			Bushing		Avg Chain Weight Lbs/Ft
	P	W	R	Mat.	D	Mat.	A	B	T	H	Mat.	Y	Mat.	
64S	2.500	1.500	1.250	A-HT	0.875	A-HT	1.690	2.000	0.375	2.125	A-HT	1.125	A-CH	13.5
64SM	2.500	1.500	1.250	A-HT	0.875	A-HT	1.910	2.220	0.438* x 0.500	2.125	A-HT	1.125	A-CH	14.5

* inside link sidebar thickness 0.500, outside link sidebar thickness 0.438

Dimensions subject to change



Tram Chain Specifications

Chain Dimensions Are Given In Inches

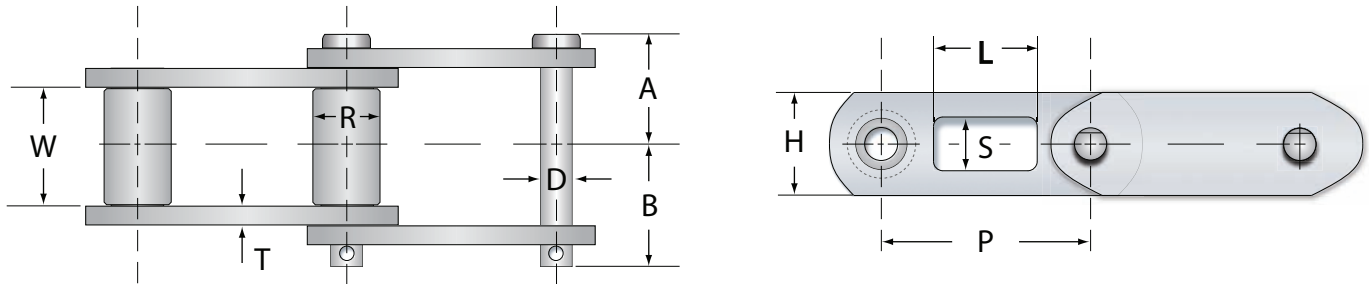
Hitachi Chain Number	Chain Pitch	Width	Roller		Pin				Sidebar			Bushing		Avg Chain Weight lbs/ft
	P	W	R	Mat.	D	Mat.	A	B	T	H	Mat.	Y	Mat.	
JB2	2.000	1.250	-	-	0.718	A-HT	1.440	1.720	0.313	1.875	A-HT	1.125	A-CH	8.3

Dimensions subject to change

Engineering Class Chains

Mining Chains

Shuttle Car Chain



Shuttle Car Chain Specifications

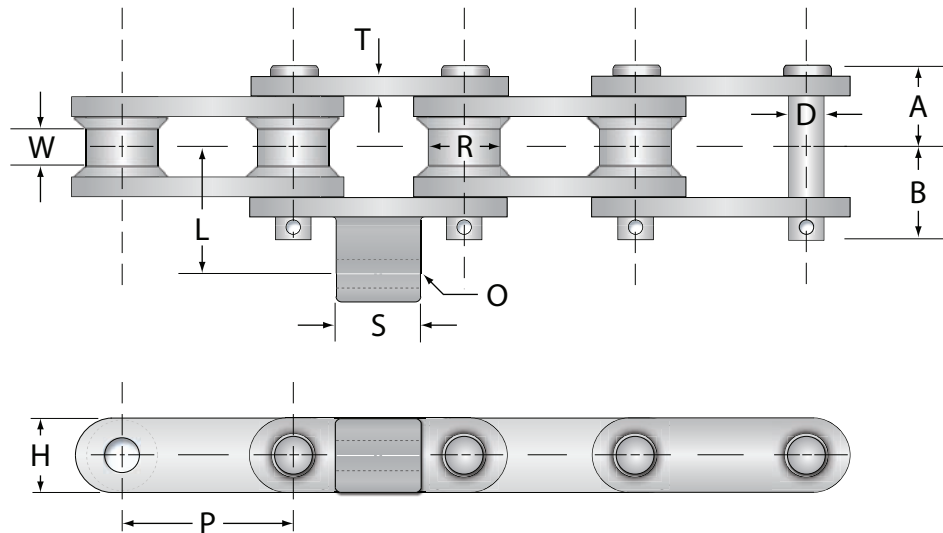
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Roller		Pin				Sidebar			Attachment - Slot			
	P	W	R	Mat.	D	Mat.	A	B	T	H	Mat.	Slot Location	Standard Spacing	L	S
2609SC	2.609	1.125	1.125	A-CH	0.563	A-HT	1.360	1.550	0.313	1.625	A-HT	One Side	Ev 6th or 8th	1.281	0.656
3075SC	3.075	1.500	1.250	A-CH	0.625	A-HT	1.890	1.670	0.375	1.750	C-HT	Both Sides	Ev 6th	1.281	0.656

A-HT: Medium Carbon Alloy Steel Through Hardened
 C-HT: Medium Carbon Steel Through Hardened
 A-CH: Low Carbon Alloy Steel Case Hardened

Dimensions subject to change

Super Shuttle Chain



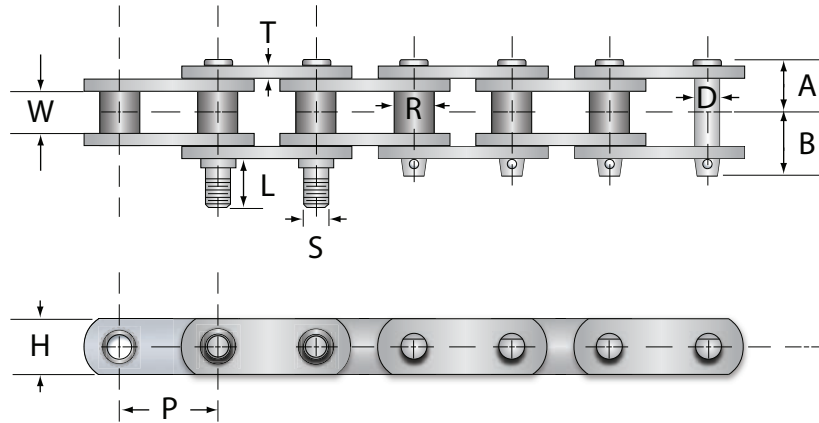
Super Shuttle Car 4 Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Width	Roller		Pin				Sidebar			Attachment				
	P	W	R	Mat.	D	Mat.	A	B	T	H	Mat.	Att. Type	Std Space	L	S	O
4100SUSC	4.100	0.875	1.750	A-HT	0.938	A-HT	1.970	2.340	0.500	1.750	C-HT	Welded Lug	Ev 6th	3.000	2.000	0.672

Dimensions subject to change

Wash Box Chain



Wash Box Chain Specifications

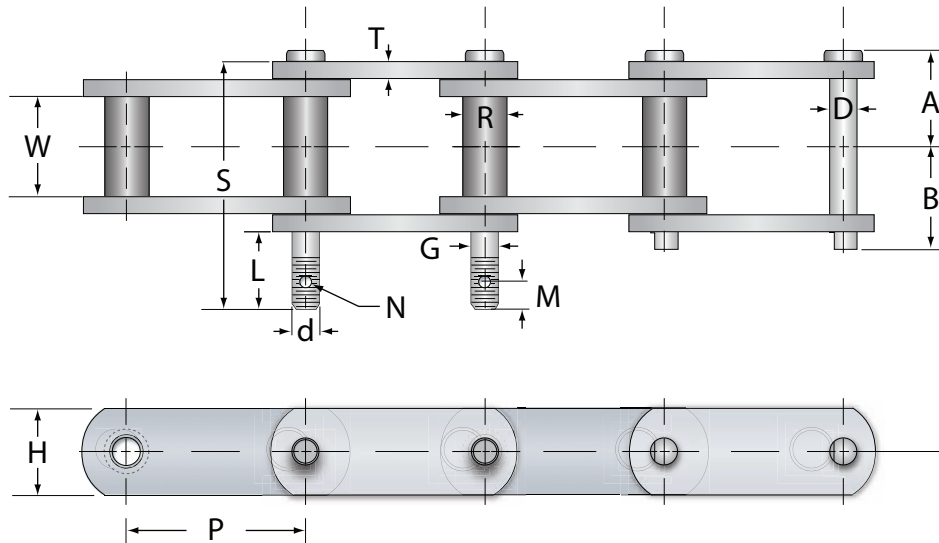
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch P	Width W	Roller		Pin				Side Bar			Attachment			
			R	Mat.	D	Mat.	A	B	T	H	Mat.	Att. Type	Standard Spacing	L	S
3075WB	3.075	1.313	1.250	A-CH	0.750	A-CH*	2.000	2.250	0.375	1.750	A-HT	Thread. Ext Pins	Ev 4th or 6th	1.250	0.750

*Pins are Chrome Plated

Dimensions subject to change

Feeder Breaker Chain



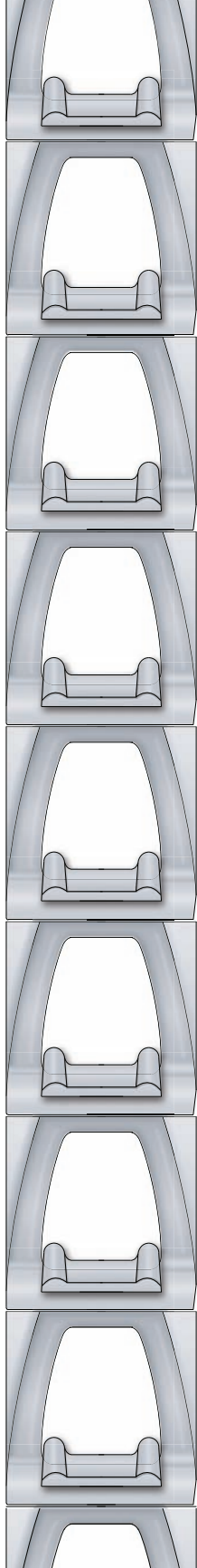
Feeder Breaker Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch P	Width W	Roller		Pin				Side Bar			Attachment							
			R	Mat.	D	Mat.	A	B	T	H	Mat.	Att. Type	Std. Spac.	L	S	G	d	M	N
3075FB	3.075	1.313	1.250	A-CH	0.688	A-HT	1.630	1.810	0.375	1.500	A-HT	Thread. Ext. Pins	Ev 4th	2.063	4.938	0.672	0.625	0.500	0.250

Dimensions subject to change

Detachable Chains



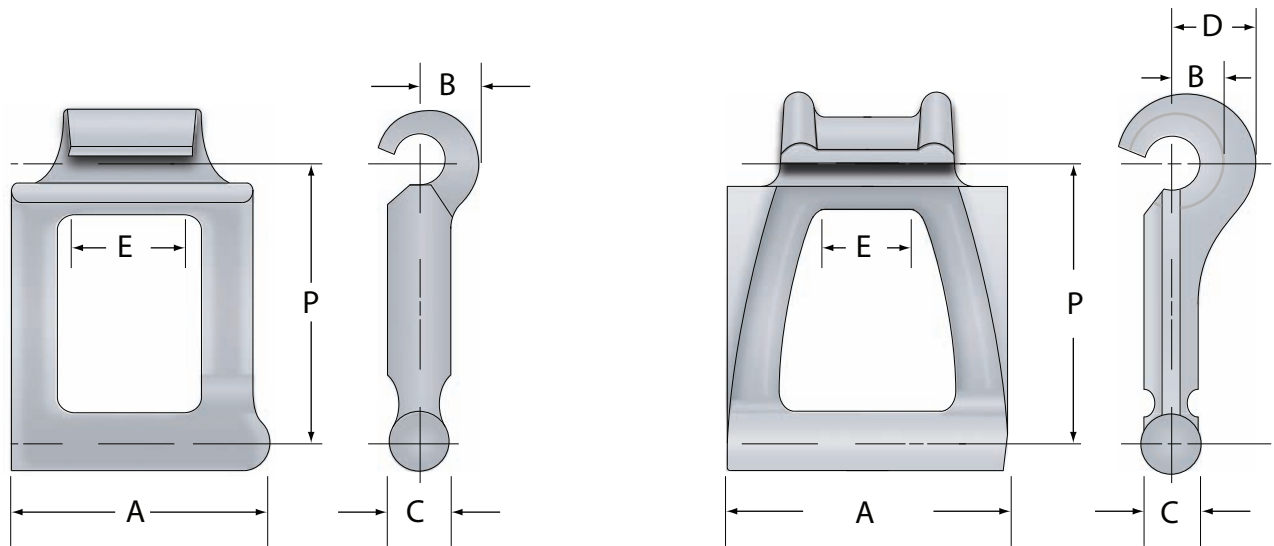
Medium Duty Service, Flexible Application Capability

Hitachi Detachable Chain was the first Malleable Iron Chain to be used extensively for industrial applications. As a light-weight, low-cost chain available in a wide range of sizes, its unique design allows for applications ranging from power transmission to conveying. Where light and medium loads are carried Detachable Chain is a proven capable product and at a most economical price. Detachable Chains are used extensively in farm equipment, textile machinery, wood products and other light to medium duty requirements.



Product	Page
Detachable Plain Chain	91
A-1 Attachment	92
F-2 Attachment	93
K-1 Attachment	93

Detachable Plain Chain



Style "A"

Style "B"

Detachable Chain Specifications

Chain Dimensions Are Given In Inches

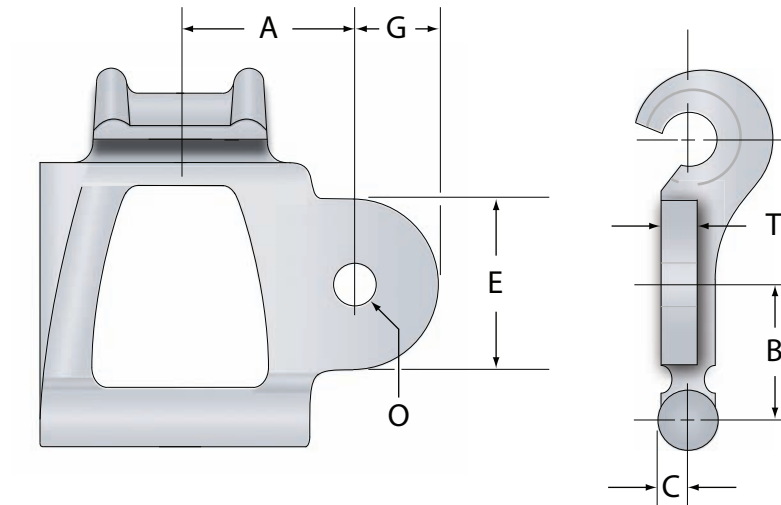
Hitachi Chain Number	Chain Style	Chain Pitch	Overall Width	B	Thickness	D	Inside Width	Rated Working Load lbs	Avg Ultimate Strength lbs
		P	A		C		E		
25	A	0.902	0.750	0.203	0.141	-	0.375	120	700
32	A	1.154	1.000	0.250	0.172	-	0.500	185	1,100
42	A	1.375	1.266	0.281	0.219	-	0.625	270	1,600
45	A	1.630	1.312	0.953	0.219	-	0.688	285	1,700
51	A	1.155	1.250	0.359	0.266	-	0.563	320	1,900
52	A	1.506	1.531	0.344	0.266	-	0.625	385	2,300
55	A	1.631	1.375	0.359	0.266	-	0.688	385	2,300
57	A	2.308	1.688	0.406	0.266	-	0.813	485	2,900
62	A	1.654	1.656	0.406	0.312	-	0.813	535	3,200
67	A	2.308	1.750	0.406	0.266	-	0.688	485	2,900
75	B	2.609	2.078	0.437	0.391	0.531	0.938	690	4,100
77	B	2.297	2.187	0.359	0.391	0.609	0.688	600	3,600
78	B	2.609	2.625	0.437	0.422	0.656	0.938	920	5,500
88	B	2.609	2.625	0.437	0.422	0.828	0.938	920	5,500
103	B	3.075	3.281	0.609	0.578	1.000	1.125	1,670	10,000

Dimensions subject to change

Engineering Class Chains

Detachable Chain A-1 Attachments

A-1 Attachment



Detachable Chain A-1 Attachment Specifications

Chain Dimensions Are Given In Inches

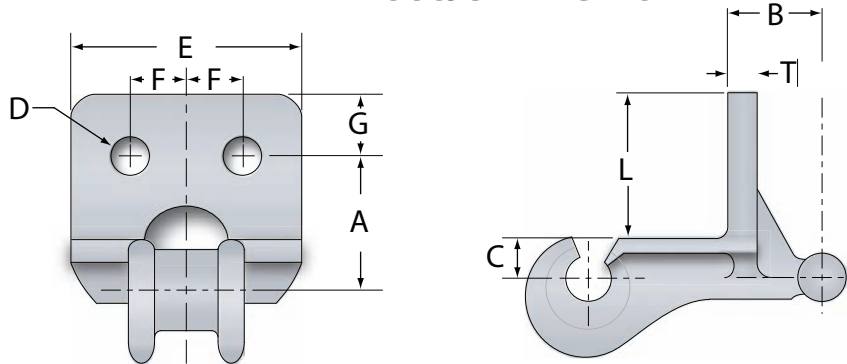
Hitachi Chain Number	C/L Chain Att Hole	Att Hole Location	Att Height	Bolt Diameter	Tab Width	C/L Att Hole Edge of Tab	Attach Thickness
	A	B	C	O	E	G	T
25	0.875	0.438	0.094	0.187	0.719	0.344	0.094
32	0.875	0.625	0.094	0.187	0.719	0.344	0.125
42	1.094	0.656	0.094	0.250	1.031	0.469	0.125
45	1.125	0.875	0.125	0.250	1.125	0.531	0.156
51	0.906	0.594	0.125	0.187	0.719	0.375	0.125
52	1.188	0.781	0.125	0.250	1.062	0.437	0.125
55	1.125	0.875	0.125	0.250	1.156	0.562	0.156
62	1.438	0.844	0.156	0.250*	1.250	0.594	0.187
77	1.563	1.250	0.187	0.250*	1.594	0.875	0.219
78	1.750	1.344	0.219	0.312	1.875	0.469	0.281

* Circular Countersunk Hole

Dimensions subject to change

Detachable Chain F-2 & K-1 Attachments

F-2 Attachment



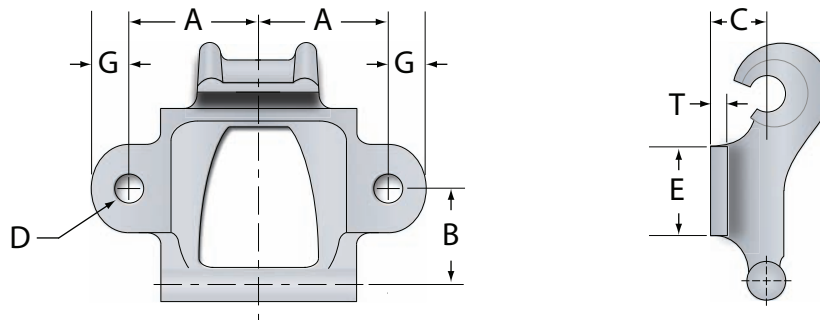
F-2 Attachment Link Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Hole Location	Angle Location	Location	Bolt Dia.	Width	Hole Location	Hole Location	Height	Thickness
	A	B	C	D	E	F	G	L	T
55	0.906	0.688	0.281	0.187	1.563	0.531	0.406	1.031	0.156
77	1.375	1.187	0.438	0.312	2.531	0.875	0.563	1.500	0.250
78	1.406	1.125	0.406	0.312	2.531	0.875	0.531	1.531	0.281
88	1.375	1.250	0.500	0.312	2.719	1.000	0.656	1.500	0.250
103	1.813	1.312	0.563	0.375	3.000	1.063	0.656	1.906	0.281

Dimensions subject to change

K-1 Attachment



K-1 Attachment Link Specifications

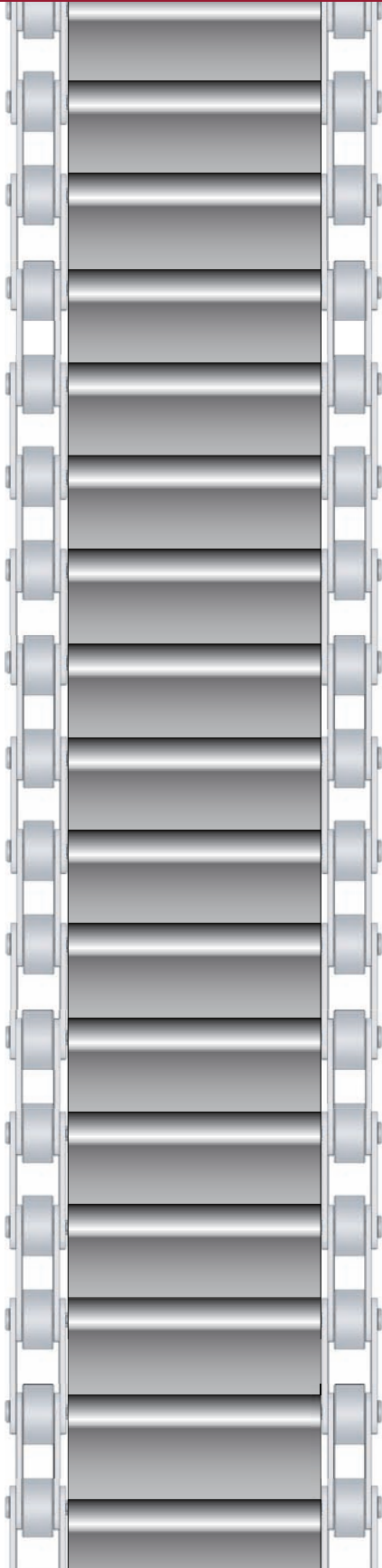
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Hole Location	Hole Location	Location	Bolt Dia.	Width	Hole Location	Thickness
	A	B	C	D	E	G	T
25	0.625	0.500	0.344	0.125	0.438	0.219	0.094
32	0.875	0.594	0.375	0.188	0.594	0.281	0.094
42	1.000	0.688	0.375	0.188	0.750	0.344	0.125
45	1.000	0.781	0.406	0.188	0.844	0.344	0.125
51	0.875	0.625	0.438	0.188	0.625	0.312	0.125
52	1.188	0.719	0.438	0.188	0.875	0.438	0.125
55	1.000	0.781	0.406	0.250	0.875	0.344	0.125
62	1.188	0.844	0.469	0.250	0.938	0.469	0.156
67	1.500	1.063	0.688	0.250*	1.031	0.500	0.156
77	1.500	1.125	0.656	0.250*	1.281	0.437	0.156
78	1.688	1.250	0.625	0.250*	1.375	0.469	0.156
88	1.906	1.250	0.750	0.312*	1.375	0.438	0.188
103	2.094	1.500	0.875	0.375*	1.719	0.500	0.250

* Countersunk Square Hole

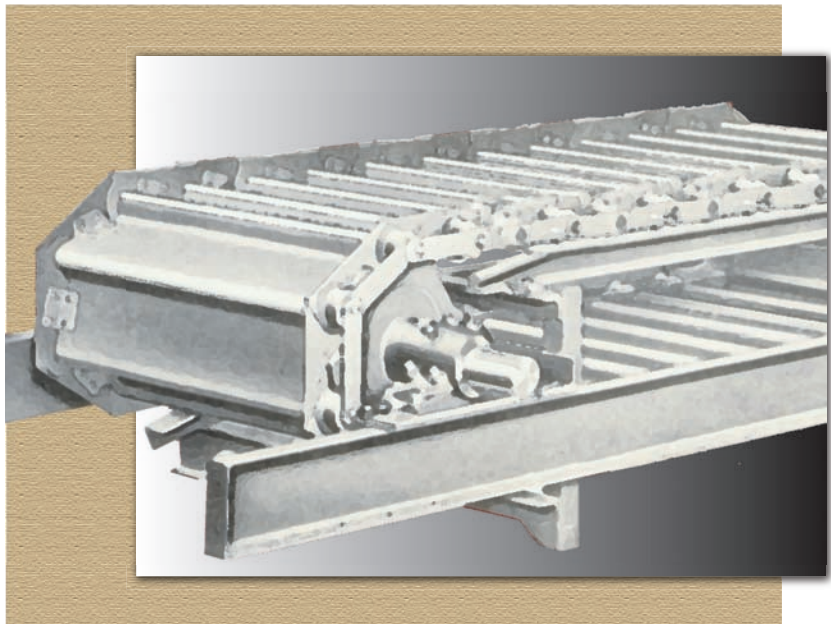
Dimensions subject to change

Apron Conveyor Chains



Conveyor Chain for Heavy Duty, High Load Requirements

Hitachi Apron Conveyor Chains are available in three different configurations for conveying granular and/or other bulk sized items. Chains are used in flat and incline applications. Apron Conveyor Chains may be designed for high load and high impact requirements, plus positive discharge applications. Contact your Hitachi field representative for further details and assistance on application requirements.



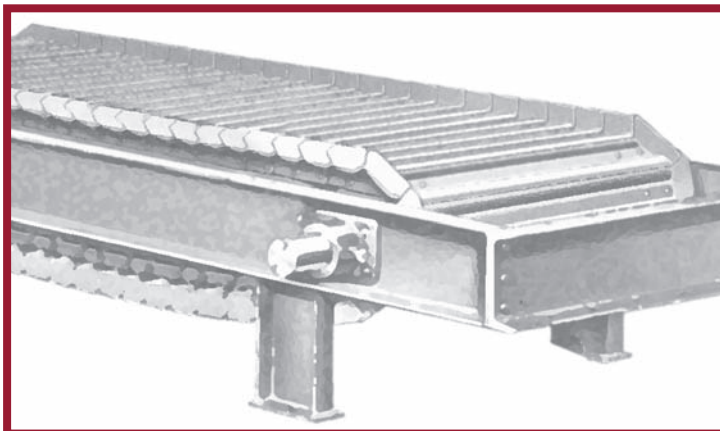
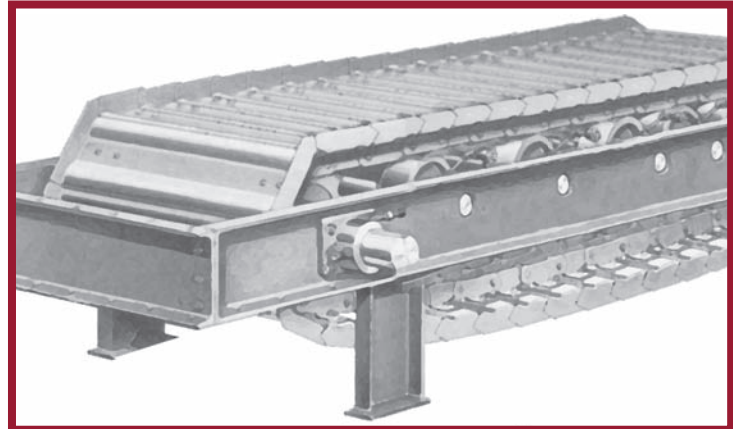
Product	Page
Apron Selection	95
Apron - Style A	96
Apron - Style B	96
Apron - Style D	96

Engineering Class Chains

Apron Conveyor Chain

Type A

Most commonly specified Apron Conveyor Chain, used in both horizontal and inclined applications. Close tolerance between pans prevents leakage.



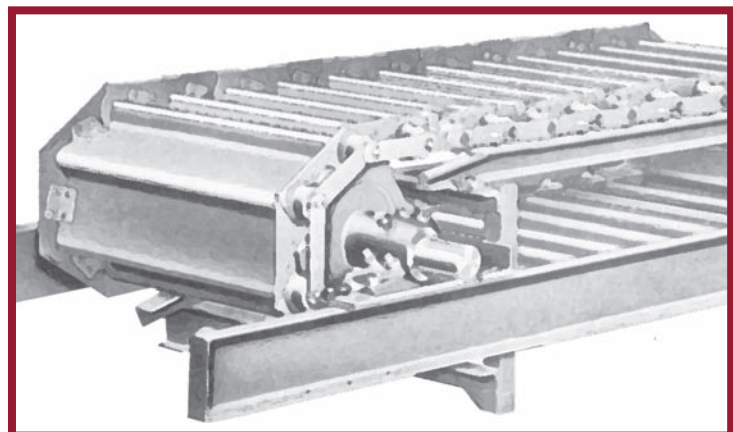
Type B

Primarily used for heavy duty or high impact load requirements. Deeper wells add to structural integrity of the pans especially in wider widths.



Type D

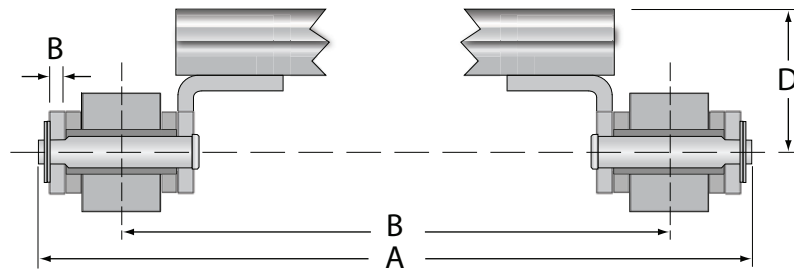
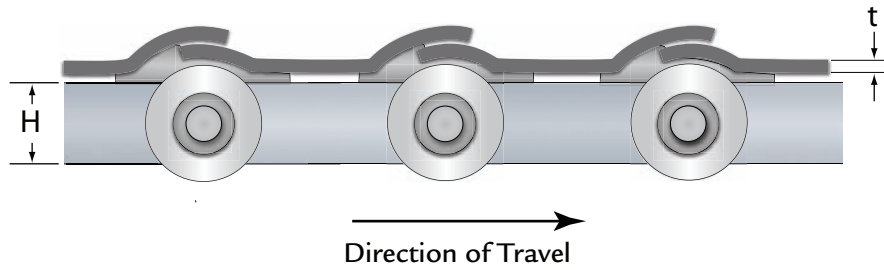
For positive discharge Apron applications, this chain is capable of operating at up to a 35 degree incline yet is ideal for flat or horizontal conveyors requiring positive discharge.



Engineering Class Chains

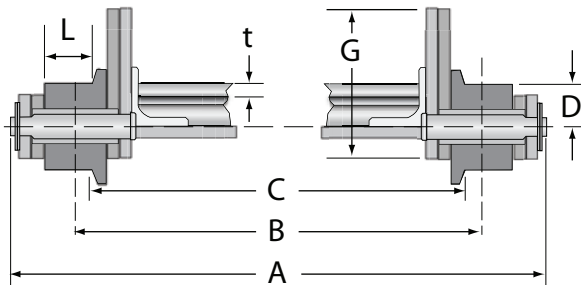
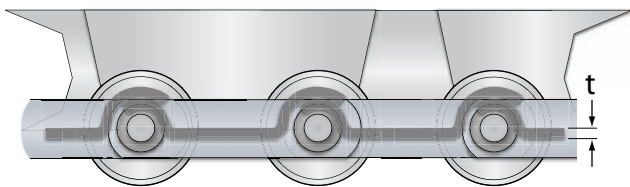
Apron Conveyor Chain

Style A



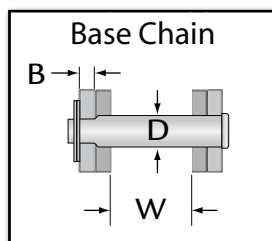
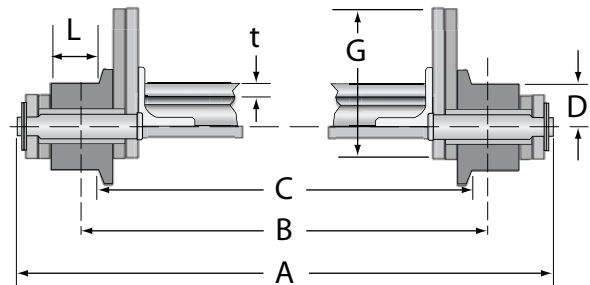
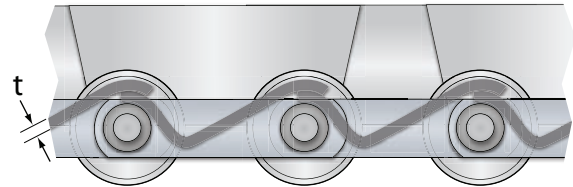
Style B

Direction of Travel



Style D

Direction of Travel



Apron Conveyor Chain

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Pitch P	Pan Sty	Pan Thk t	C/L Spkts B*	Track Gauge C	O/A Width A*	C/L Pan D	Pan End Hgt G	Base Chain Dimensions						Conv Work Load lbs	Avg Conv Wgt lbs/ft	Add Wgt ¹ lbs/ft	
									Roller			Pin		Side Bar				
									W	R	Sty	L	d	T				H
4.000" Pitch																		
95R	4.000	A	0.188	13.38	-	15.88	2.000	-	1.000	1.500	T	-	0.438	0.2	1.100	4,200	20.40	0.63
90R	4.000	A	0.188	13.56	-	15.44	2.000	-	1.188	2.000	T	-	0.438	0.2	1.300	4,800	24.20	0.63
90R	4.000	A	0.250	13.56	-	15.44	2.063	-	1.188	2.000	T	-	0.438	0.2	1.300	4,800	28.60	0.85
89R	4.000	A	0.250	14.06	-	17.94	2.063	-	1.313	2.250	T	-	0.625	0.4	1.500	9,000	39.20	0.85
89R	4.000	A	0.313	14.06	-	17.94	2.313	-	1.313	2.250	T	-	0.625	0.4	1.500	9,000	43.60	1.07
89R	4.000	A	0.375	14.06	-	17.94	2.375	-	1.313	2.250	T	-	0.625	0.4	1.500	9,000	48.00	1.28
6.000" Pitch																		
604R	6.000	A	0.188	13.81	-	17.00	2.188	-	1.313	2.000	T	-	0.563	0.250	1.500	7,000	21.60	0.90
631R	6.000	A	0.250	14.13	-	18.19	2.250	-	1.375	3.000	T	-	0.750	0.375	2.000	11,200	35.80	1.20
631R	6.000	A	0.313	14.13	-	18.19	2.313	-	1.375	3.000	T	-	0.750	0.375	2.000	11,200	39.60	1.50
610R	6.000	A	0.375	14.44	-	18.18	2.875	-	1.688	2.750	T	-	0.875	0.375	2.250	14,900	45.00	1.50
610R	6.000	A	0.500	14.44	-	18.18	2.813	-	1.688	2.750	T	-	0.875	0.375	2.250	14,900	48.80	1.80
603R	6.000	B	0.188	14.75	14.125	17.69	1.063	3.5	1.313	2.500	U	0.875	0.563	0.3	1.500	7,000	35.10	0.90
625R	6.000	B	0.188	15.16	14.313	18.63	1.063	3.5	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	38.00	0.90
625R	6.000	B	0.250	15.16	14.313	18.63	1.125	3.5	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	41.60	1.20
625R	6.000	B	0.313	15.16	14.313	18.63	1.188	4.0	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	46.60	1.50
625R	6.000	D	0.188	15.16	14.313	18.63	1.063	3.5	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	38.00	0.90
625R	6.000	D	0.250	15.16	14.313	18.63	1.125	3.5	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	41.60	1.20
625R	6.000	D	0.313	15.16	14.313	18.63	1.188	4.0	1.688	3.000	U	1.125	0.625	0.3	2.000	4,300	46.60	1.50
663R	6.000	B	0.250	16.13	15.125	20.38	1.125	3.5	2.000	3.000	U	1.500	0.750	0.4	2.000	14,400	48.80	1.20
663R	6.000	B	0.313	16.13	15.125	20.38	1.188	4.0	2.000	3.000	U	1.500	0.750	0.4	2.000	14,400	54.20	1.50
9.000" Pitch																		
B963R	9.000	B	0.250	16.13	15.125	20.38	1.375	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	49.60	1.18
B963R	9.000	B	0.313	16.13	15.125	20.38	1.438	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	51.80	1.37
B963R	9.000	B	0.375	16.13	15.125	20.38	1.750	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	56.70	1.77
B963R	9.000	D	0.250	16.13	15.125	20.38	1.375	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	49.60	1.18
B963R	9.000	D	0.313	16.13	15.125	20.38	1.438	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	51.80	1.37
B963R	9.000	D	0.375	16.13	15.125	20.38	1.750	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	56.70	1.77
964R	9.000	B	0.313	16.44	15.188	20.88	1.438	4.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	58.50	1.37
964R	9.000	B	0.375	16.44	15.188	20.88	1.750	5.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	67.50	1.77
964R	9.000	D	0.313	16.44	15.188	20.88	1.438	4.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	58.50	1.37
964R	9.000	D	0.375	16.44	15.188	20.88	1.750	5.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	67.50	1.77
12.000" Pitch																		
B1263R	12.000	B	0.250	16.13	15.125	20.38	1.375	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	46.10	1.17
B1263R	12.000	B	0.313	16.13	15.125	20.38	1.438	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	49.50	1.47
B1263R	12.000	B	0.375	16.13	15.125	20.38	1.750	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	53.10	1.75
B1263R	12.000	D	0.250	16.13	15.125	20.38	1.375	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	46.10	1.17
B1263R	12.000	D	0.313	16.13	15.125	20.38	1.438	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	49.50	1.47
B1263R	12.000	D	0.375	16.13	15.125	20.38	1.750	4.0	2.000	3.500	U	1.250	0.750	0.4	2.000	14,400	53.10	1.75
1264R	12.000	B	0.313	16.44	15.188	20.88	1.438	4.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	52.70	1.47
1264R	12.000	B	0.375	16.44	15.188	20.88	1.750	5.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	60.10	1.75
1264R	12.000	D	0.313	16.44	15.188	20.88	1.438	4.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	52.70	1.47
1264R	12.000	D	0.375	16.44	15.188	20.88	1.750	5.0	2.250	4.000	U	1.500	0.875	0.4	2.500	18,400	60.10	1.75

* All Width Dimensions and Weights based on 12" wide Pans

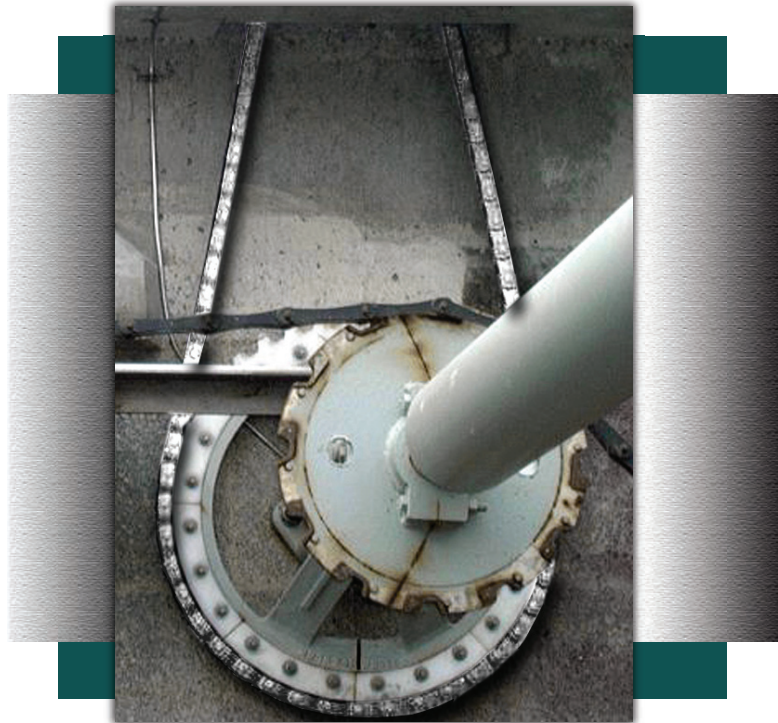
Dimensions subject to change

¹Add-on weight for each inch of additional pan width

Environmental Chains

Stainless and Non-Metallic Chains for Water and Wastewater Requirements

Hitachi Environmental Products provide a wide range of options for water and waste treatment applications. Hitachi's SAV 715 Stainless Chain is ideal for high wear / load installations while the Non-Metallic NM720S serves as an economical alternative where service needs are not as severe. Contact Hitachi for your next requirement and compare the advantages of Hitachi Stainless and Non-Metallic Chains and components.

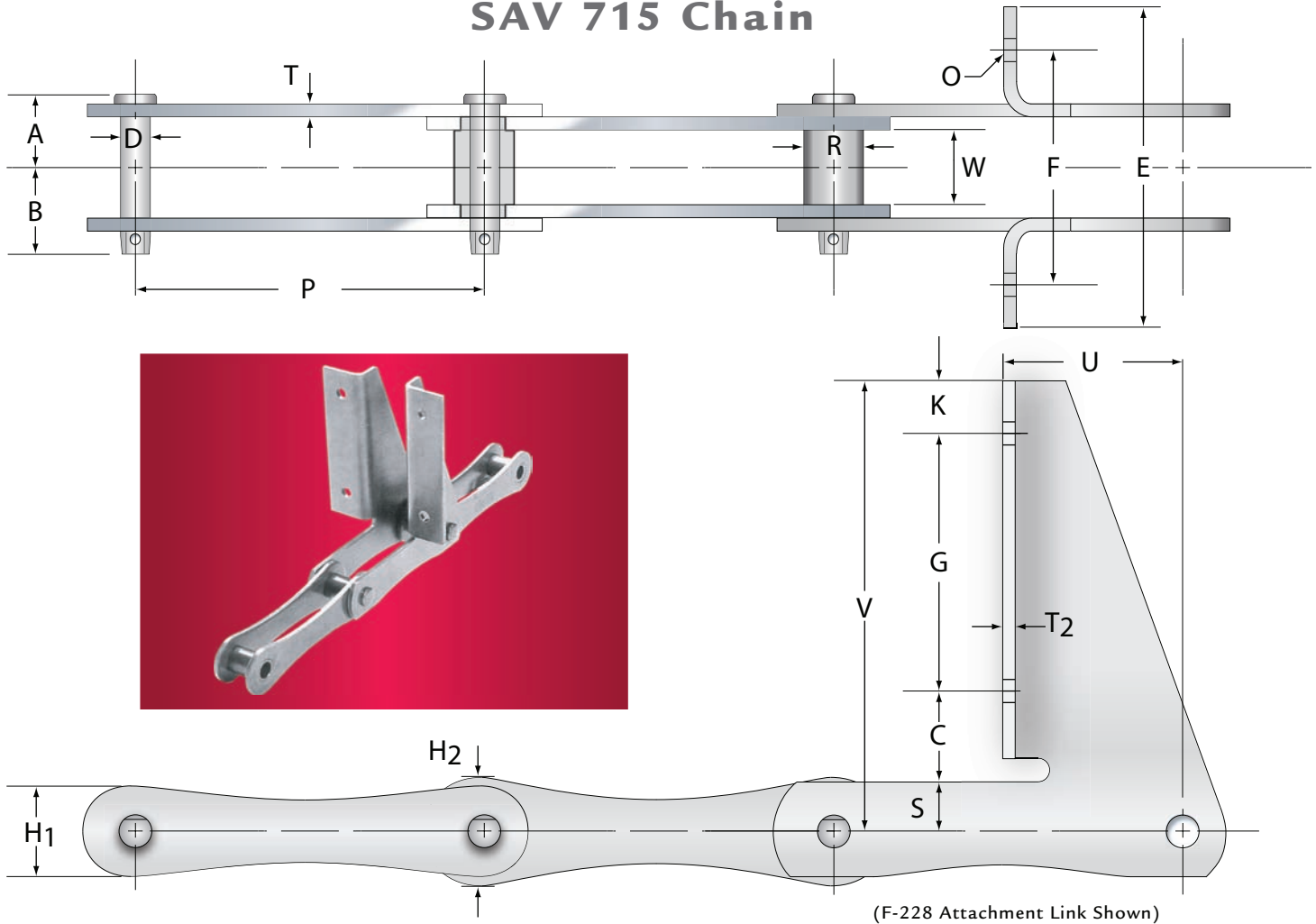


Product	Page
SAV 715 Stainless Collector Chain	99
NM720S Non-Metallic Collector Chain	100
NM720S F-226 & F-228 Attachments	101
HB 78 Stainless Drive Chain	102
NH78 Non-Metallic Drive Chain	102

Engineering Class Chains

Environmental Chains

SAV 715 Chain



SAV 715 Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch P	Inside Width W	Barrel		Pin				Side Bar			Min. Ult Stgth lbs	Min. Chain Wgt lbs/ft	
			R	Mater.	D	Mater.	A	B	Thick. T	Pin Link H ₁	Bush. Link H ₂			Mater.
SAV 715	6.000	1.188	1.015	403SS	0.569	403SS	1.281	1.563	0.224	1.540	1.850	403SS	28,000	3.7*

*Reference only

Dimensions subject to change

SAV 715 Flight Attachment Specifications

Chain Dimensions Are Given In Inches

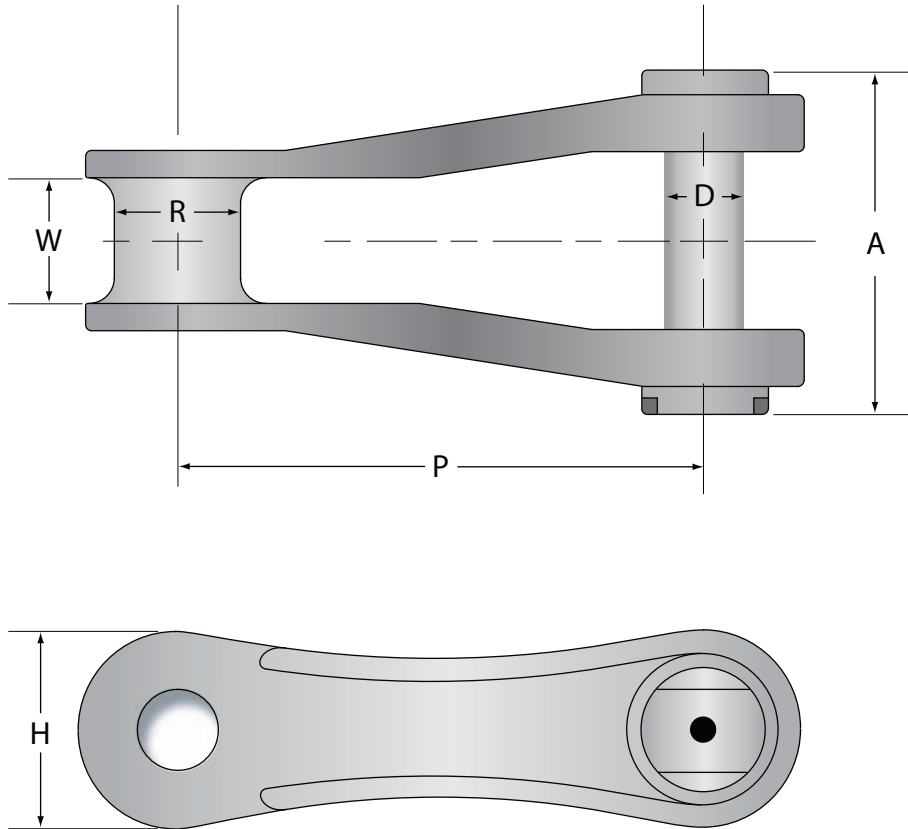
Attachment Part No.	Dimensions										Att. Wgt lbs/ea
	U	V	C	E	F	G	K	S	T ₂	O	
SAV 715 F-226	3	6.109	1.500	5.500	3.750	2.625	1.093	0.890	0.234	0.438	4.5
SAV 715 F-228	3	7.875	1.484	5.500	3.750	4.500	1.000	0.890	0.234	0.438	5.4

Dimensions subject to change

Engineering Class Chains

NM720S Non-Metallic Chain

NM720S Non-Metallic Collector Chain



NM720S Plain Chain Specifications

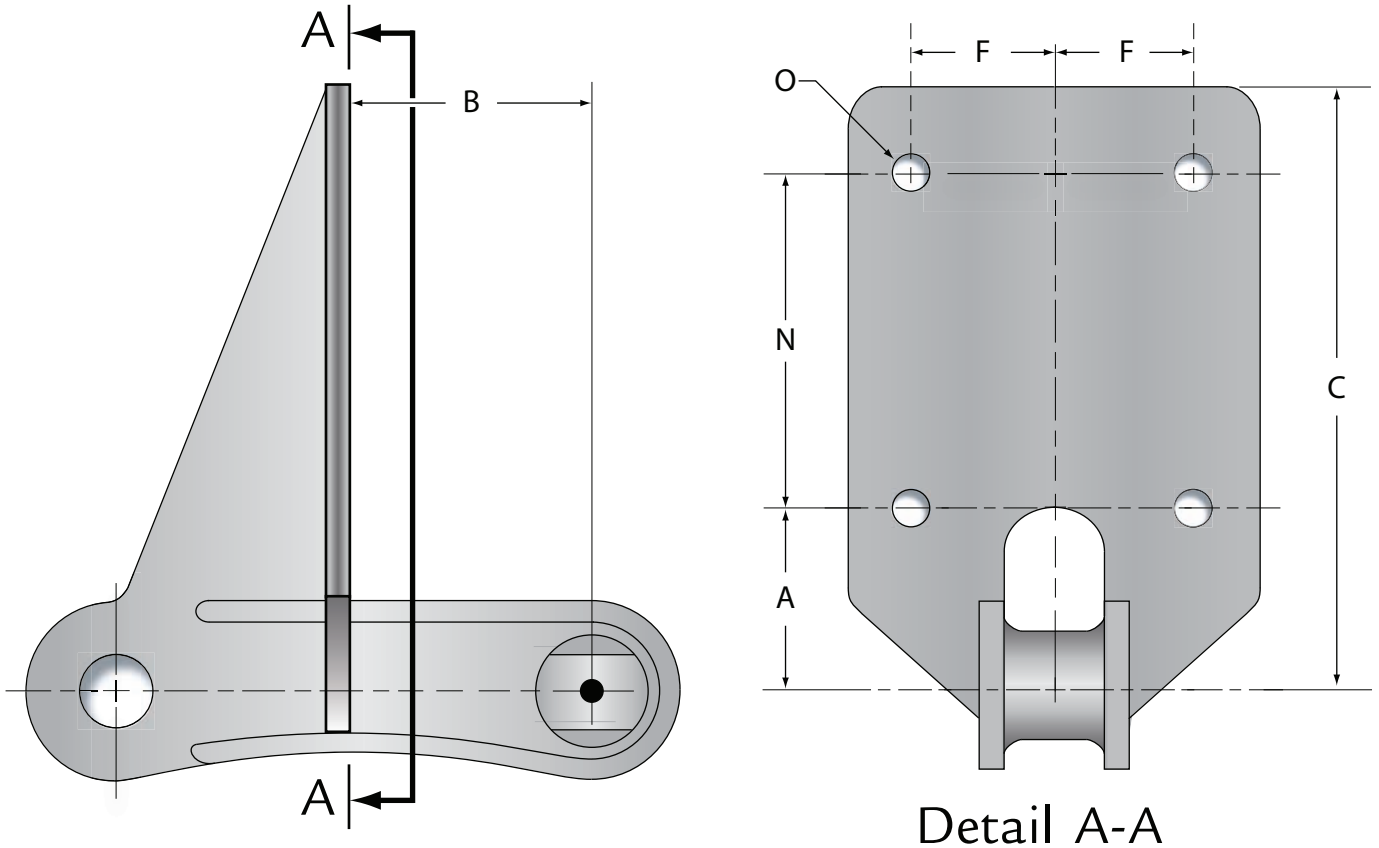
Chain Dimensions Are Given In Inches

Hitachi Chain Number	Chain Pitch	Working Load lbs	Avg Ultimate Strength lbs	Weight lbs/ft	Barrel		Pin			Link	
	P				Dia.	Width	Dia.	Material	Width	Material	Height
					R	W	D		A		H
NM720S	6.000	3,100	6,500	1.6	1.438	1.375	.932	Glass Filled Nylon	3.892	Unfilled Acetal	2.250

Dimensions subject to change

NM720S Flight Attachments

F-226 & F-228 Attachments



F-226 & F-228 Attachment Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Height	Attach. Hole Pitch	Hole Location	Attach. Location	Hole Dia.	Hole Pitch	Material
	C	N	A	B	O	F	
F-228	8.000	4.500	2.375	3.000	0.438	1.875	Unfilled Acetal
F-226	6.125	2.625	2.375	3.000	0.438	1.875	Unfilled Acetal

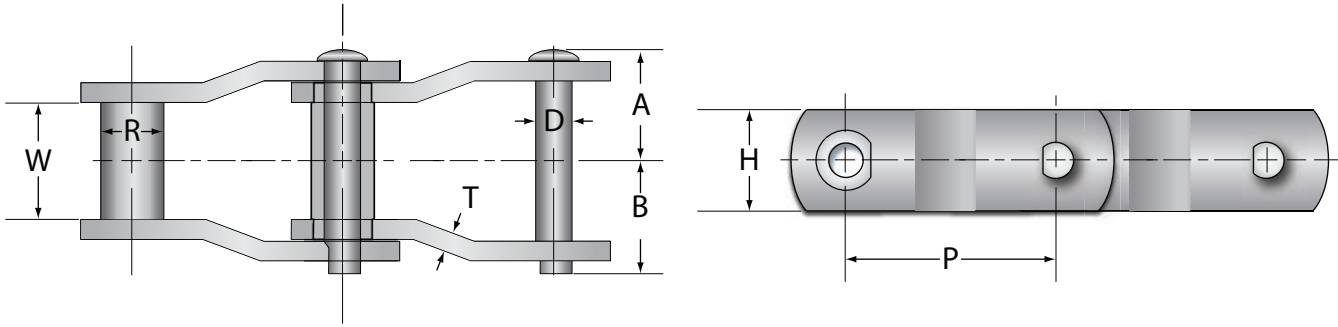
Dimensions subject to change

Note: Hitachi NM720S Non-metallic Chain is not interlaceable with other similar Non-Metallic Collector Chains due to variances between pin sizing and connection methods. NM720S Chain is interchangeable in that it will run with competitive sprockets, flights, shoes, etc.

Engineering Class Chains

HB 78 & NH 78 Chains

HB 78 Chain



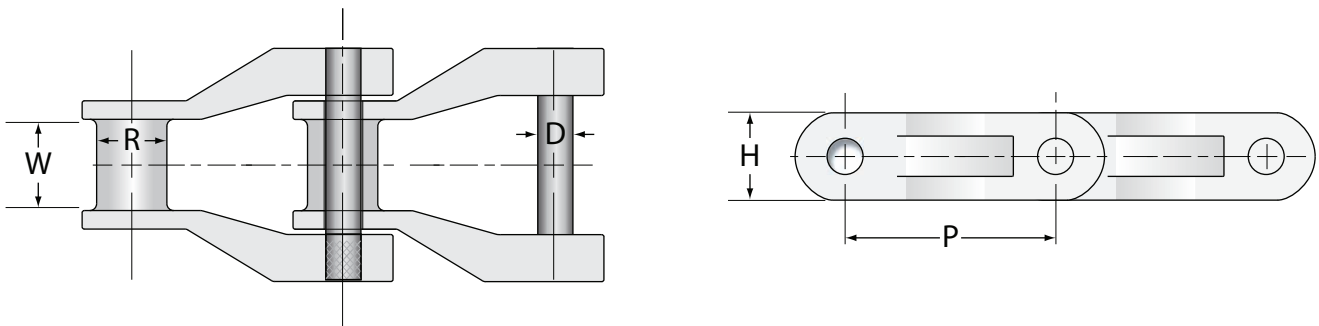
HB 78 Stainless Steel Chain Specifications

Chain Dimensions Are Given In Inches

Hitachi Chain Number	Pitch	Working Load lbs	Material	Barrel		Pin			Sidebar		Min. UTS lbs	Weight lbs/ft
	P			R	W	D	A	B	H	T		
HB78	2.609	3,300	403SS	0.875	1.125	0.438	1.188	1.438	1.23	.224	21,000	3.8

Dimensions subject to change

NH 78 Chain



NH 78 Non-Metallic Chain Specifications

Chain Dimensions Are Given In Inches

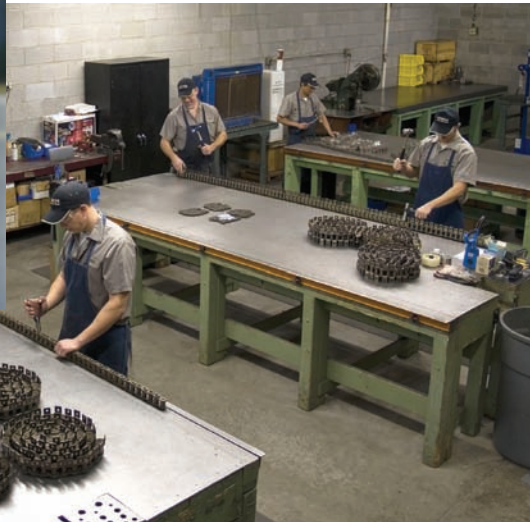
Hitachi Chain Number	Pitch	Working Load lbs	Link			Pin			Average Ultimate Strength lbs	Wgt lbs/ft
	P		Material	H	R	W	D	Material		
NH78	2.609	1,750	Unfilled Acetal	1.125	0.875	1.063	0.438	18-8 CrNi Steel	4,000	1.41

Dimensions subject to change

Engineering Class Chain Product Index Section



Chain Pitch Conversions. 104 - 113
Properties of Steel 114
Weight of Steel. 115
Torque Values. 116 - 117
Chain Index 118 - 120
Conversions (measure). 120
Terms and Conditions 121
Attachment Spacing Template. 122



Engineering Class Chains

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
1	0.136	0.138	0.167	0.208	0.217	0.250	0.256	0.256	0.292	0.333	0.337	0.339	0.339
2	0.272	0.276	0.333	0.417	0.435	0.500	0.511	0.513	0.583	0.667	0.673	0.677	0.679
3	0.408	0.414	0.500	0.625	0.652	0.750	0.767	0.769	0.875	1.000	1.010	1.016	1.018
4	0.543	0.551	0.667	0.833	0.870	1.000	1.022	1.025	1.167	1.333	1.347	1.354	1.358
5	0.679	0.689	0.833	1.042	1.087	1.250	1.278	1.281	1.458	1.667	1.683	1.693	1.697
6	0.815	0.827	1.000	1.250	1.305	1.500	1.534	1.538	1.750	2.000	2.020	2.032	2.037
7	0.951	0.965	1.167	1.458	1.522	1.750	1.789	1.794	2.042	2.333	2.357	2.370	2.376
8	1.087	1.103	1.333	1.667	1.739	2.000	2.045	2.050	2.333	2.667	2.693	2.709	2.715
9	1.223	1.241	1.500	1.875	1.957	2.250	2.300	2.306	2.625	3.000	3.030	3.047	3.055
10	1.358	1.378	1.667	2.083	2.174	2.500	2.556	2.563	2.917	3.333	3.367	3.386	3.394
11	1.494	1.516	1.833	2.292	2.392	2.750	2.811	2.819	3.208	3.667	3.703	3.724	3.734
12	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
13	1.766	1.792	2.167	2.708	2.826	3.250	3.323	3.331	3.792	4.333	4.377	4.402	4.412
14	1.902	1.930	2.333	2.917	3.044	3.500	3.578	3.588	4.083	4.667	4.713	4.740	4.752
15	2.038	2.068	2.500	3.125	3.261	3.750	3.834	3.844	4.375	5.000	5.050	5.079	5.091
16	2.173	2.205	2.667	3.333	3.479	4.000	4.089	4.100	4.667	5.333	5.387	5.417	5.431
17	2.309	2.343	2.833	3.542	3.696	4.250	4.345	4.356	4.958	5.667	5.723	5.756	5.770
18	2.445	2.481	3.000	3.750	3.914	4.500	4.601	4.613	5.250	6.000	6.060	6.095	6.110
19	2.581	2.619	3.167	3.958	4.131	4.750	4.856	4.869	5.542	6.333	6.397	6.433	6.449
20	2.717	2.757	3.333	4.167	4.348	5.000	5.112	5.125	5.833	6.667	6.733	6.772	6.788
21	2.853	2.895	3.500	4.375	4.566	5.250	5.367	5.381	6.125	7.000	7.070	7.110	7.128
22	2.988	3.032	3.667	4.583	4.783	5.500	5.623	5.638	6.417	7.333	7.407	7.449	7.467
23	3.124	3.170	3.833	4.792	5.001	5.750	5.878	5.894	6.708	7.667	7.743	7.787	7.807
24	3.260	3.308	4.000	5.000	5.218	6.000	6.134	6.150	7.000	8.000	8.080	8.126	8.146
25	3.396	3.446	4.167	5.208	5.435	6.250	6.390	6.406	7.292	8.333	8.417	8.465	8.485
26	3.532	3.584	4.333	5.417	5.653	6.500	6.645	6.663	7.583	8.667	8.753	8.803	8.825
27	3.668	3.722	4.500	5.625	5.870	6.750	6.901	6.919	7.875	9.000	9.090	9.142	9.164
28	3.803	3.859	4.667	5.833	6.088	7.000	7.156	7.175	8.167	9.333	9.427	9.480	9.504
29	3.939	3.997	4.833	6.042	6.305	7.250	7.412	7.431	8.458	9.667	9.763	9.819	9.843
30	4.075	4.135	5.000	6.250	6.523	7.500	7.668	7.688	8.750	10.000	10.100	10.158	10.183
31	4.211	4.273	5.167	6.458	6.740	7.750	7.923	7.944	9.042	10.333	10.437	10.496	10.522
32	4.347	4.411	5.333	6.667	6.957	8.000	8.179	8.200	9.333	10.667	10.773	10.835	10.861
33	4.483	4.549	5.500	6.875	7.175	8.250	8.434	8.456	9.625	11.000	11.110	11.173	11.201
34	4.618	4.686	5.667	7.083	7.392	8.500	8.690	8.713	9.917	11.333	11.447	11.512	11.540
35	4.754	4.824	5.833	7.292	7.610	8.750	8.945	8.969	10.208	11.667	11.783	11.850	11.880
36	4.890	4.962	6.000	7.500	7.827	9.000	9.201	9.225	10.500	12.000	12.120	12.189	12.219
37	5.026	5.100	6.167	7.708	8.044	9.250	9.457	9.481	10.792	12.333	12.457	12.528	12.558
38	5.162	5.238	6.333	7.917	8.262	9.500	9.712	9.738	11.083	12.667	12.793	12.866	12.898
39	5.298	5.376	6.500	8.125	8.479	9.750	9.968	9.994	11.375	13.000	13.130	13.205	13.237
40	5.433	5.513	6.667	8.333	8.697	10.000	10.223	10.250	11.667	13.333	13.467	13.543	13.577

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
41	5.569	5.651	6.833	8.542	8.914	10.250	10.479	10.506	11.958	13.667	13.803	13.882	13.916
42	5.705	5.789	7.000	8.750	9.132	10.500	10.735	10.763	12.250	14.000	14.140	14.221	14.256
43	5.841	5.927	7.167	8.958	9.349	10.750	10.990	11.019	12.542	14.333	14.477	14.559	14.595
44	5.977	6.065	7.333	9.167	9.566	11.000	11.246	11.275	12.833	14.667	14.813	14.898	14.934
45	6.113	6.203	7.500	9.375	9.784	11.250	11.501	11.531	13.125	15.000	15.150	15.236	15.274
46	6.248	6.340	7.667	9.583	10.001	11.500	11.757	11.788	13.417	15.333	15.487	15.575	15.613
47	6.384	6.478	7.833	9.792	10.219	11.750	12.012	12.044	13.708	15.667	15.823	15.913	15.953
48	6.520	6.616	8.000	10.000	10.436	12.000	12.268	12.300	14.000	16.000	16.160	16.252	16.292
49	6.656	6.754	8.167	10.208	10.653	12.250	12.524	12.556	14.292	16.333	16.497	16.591	16.631
50	6.792	6.892	8.333	10.417	10.871	12.500	12.779	12.813	14.583	16.667	16.833	16.929	16.971
51	6.928	7.030	8.500	10.625	11.088	12.750	13.035	13.069	14.875	17.000	17.170	17.268	17.310
52	7.063	7.167	8.667	10.833	11.306	13.000	13.290	13.325	15.167	17.333	17.507	17.606	17.650
53	7.199	7.305	8.833	11.042	11.523	13.250	13.546	13.581	15.458	17.667	17.843	17.945	17.989
54	7.335	7.443	9.000	11.250	11.741	13.500	13.802	13.838	15.750	18.000	18.180	18.284	18.329
55	7.471	7.581	9.167	11.458	11.958	13.750	14.057	14.094	16.042	18.333	18.517	18.622	18.668
56	7.607	7.719	9.333	11.667	12.175	14.000	14.313	14.350	16.333	18.667	18.853	18.961	19.007
57	7.743	7.857	9.500	11.875	12.393	14.250	14.568	14.606	16.625	19.000	19.190	19.299	19.347
58	7.878	7.994	9.667	12.083	12.610	14.500	14.824	14.863	16.917	19.333	19.527	19.638	19.686
59	8.014	8.132	9.833	12.292	12.828	14.750	15.079	15.119	17.208	19.667	19.863	19.976	20.026
60	8.150	8.270	10.000	12.500	13.045	15.000	15.335	15.375	17.500	20.000	20.200	20.315	20.365
61	8.286	8.408	10.167	12.708	13.262	15.250	15.591	15.631	17.792	20.333	20.537	20.654	20.704
62	8.422	8.546	10.333	12.917	13.480	15.500	15.846	15.888	18.083	20.667	20.873	20.992	21.044
63	8.558	8.684	10.500	13.125	13.697	15.750	16.102	16.144	18.375	21.000	21.210	21.331	21.383
64	8.693	8.821	10.667	13.333	13.915	16.000	16.357	16.400	18.667	21.333	21.547	21.669	21.723
65	8.829	8.959	10.833	13.542	14.132	16.250	16.613	16.656	18.958	21.667	21.883	22.008	22.062
66	8.965	9.097	11.000	13.750	14.350	16.500	16.869	16.913	19.250	22.000	22.220	22.347	22.402
67	9.101	9.235	11.167	13.958	14.567	16.750	17.124	17.169	19.542	22.333	22.557	22.685	22.741
68	9.237	9.373	11.333	14.167	14.784	17.000	17.380	17.425	19.833	22.667	22.893	23.024	23.080
69	9.373	9.511	11.500	14.375	15.002	17.250	17.635	17.681	20.125	23.000	23.230	23.362	23.420
70	9.508	9.648	11.667	14.583	15.219	17.500	17.891	17.938	20.417	23.333	23.567	23.701	23.759
71	9.644	9.786	11.833	14.792	15.437	17.750	18.146	18.194	20.708	23.667	23.903	24.039	24.099
72	9.780	9.924	12.000	15.000	15.654	18.000	18.402	18.450	21.000	24.000	24.240	24.378	24.438
73	9.916	10.062	12.167	15.208	15.871	18.250	18.658	18.706	21.292	24.333	24.577	24.717	24.777
74	10.052	10.200	12.333	15.417	16.089	18.500	18.913	18.963	21.583	24.667	24.913	25.055	25.117
75	10.188	10.338	12.500	15.625	16.306	18.750	19.169	19.219	21.875	25.000	25.250	25.394	25.456
76	10.323	10.475	12.667	15.833	16.524	19.000	19.424	19.475	22.167	25.333	25.587	25.732	25.796
77	10.459	10.613	12.833	16.042	16.741	19.250	19.680	19.731	22.458	25.667	25.923	26.071	26.135
78	10.595	10.751	13.000	16.250	16.959	19.500	19.936	19.988	22.750	26.000	26.260	26.410	26.475
79	10.731	10.889	13.167	16.458	17.176	19.750	20.191	20.244	23.042	26.333	26.597	26.748	26.814
80	10.867	11.027	13.333	16.667	17.393	20.000	20.447	20.500	23.333	26.667	26.933	27.087	27.153

Engineering Class Chains

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
81	11.003	11.165	13.500	16.875	17.611	20.250	20.702	20.756	23.625	27.000	27.270	27.425	27.493
82	11.138	11.302	13.667	17.083	17.828	20.500	20.958	21.013	23.917	27.333	27.607	27.764	27.832
83	11.274	11.440	13.833	17.292	18.046	20.750	21.213	21.269	24.208	27.667	27.943	28.102	28.172
84	11.410	11.578	14.000	17.500	18.263	21.000	21.469	21.525	24.500	28.000	28.280	28.441	28.511
85	11.546	11.716	14.167	17.708	18.480	21.250	21.725	21.781	24.792	28.333	28.617	28.780	28.850
86	11.682	11.854	14.333	17.917	18.698	21.500	21.980	22.038	25.083	28.667	28.953	29.118	29.190
87	11.818	11.992	14.500	18.125	18.915	21.750	22.236	22.294	25.375	29.000	29.290	29.457	29.529
88	11.953	12.129	14.667	18.333	19.133	22.000	22.491	22.550	25.667	29.333	29.627	29.795	29.869
89	12.089	12.267	14.833	18.542	19.350	22.250	22.747	22.806	25.958	29.667	29.963	30.134	30.208
90	12.225	12.405	15.000	18.750	19.568	22.500	23.003	23.063	26.250	30.000	30.300	30.473	30.548
91	12.361	12.543	15.167	18.958	19.785	22.750	23.258	23.319	26.542	30.333	30.637	30.811	30.887
92	12.497	12.681	15.333	19.167	20.002	23.000	23.514	23.575	26.833	30.667	30.973	31.150	31.226
93	12.633	12.819	15.500	19.375	20.220	23.250	23.769	23.831	27.125	31.000	31.310	31.488	31.566
94	12.768	12.956	15.667	19.583	20.437	23.500	24.025	24.088	27.417	31.333	31.647	31.827	31.905
95	12.904	13.094	15.833	19.792	20.655	23.750	24.280	24.344	27.708	31.667	31.983	32.165	32.245
96	13.040	13.232	16.000	20.000	20.872	24.000	24.536	24.600	28.000	32.000	32.320	32.504	32.584
97	13.176	13.370	16.167	20.208	21.089	24.250	24.792	24.856	28.292	32.333	32.657	32.843	32.923
98	13.312	13.508	16.333	20.417	21.307	24.500	25.047	25.113	28.583	32.667	32.993	33.181	33.263
99	13.448	13.646	16.500	20.625	21.524	24.750	25.303	25.369	28.875	33.000	33.330	33.520	33.602
100	13.583	13.783	16.667	20.833	21.742	25.000	25.558	25.625	29.167	33.333	33.667	33.858	33.942
101	13.719	13.921	16.833	21.042	21.959	25.250	25.814	25.881	29.458	33.667	34.003	34.197	34.281
102	13.855	14.059	17.000	21.250	22.177	25.500	26.070	26.138	29.750	34.000	34.340	34.536	34.621
103	13.991	14.197	17.167	21.458	22.394	25.750	26.325	26.394	30.042	34.333	34.677	34.874	34.960
104	14.127	14.335	17.333	21.667	22.611	26.000	26.581	26.650	30.333	34.667	35.013	35.213	35.299
105	14.263	14.473	17.500	21.875	22.829	26.250	26.836	26.906	30.625	35.000	35.350	35.551	35.639
106	14.398	14.610	17.667	22.083	23.046	26.500	27.092	27.163	30.917	35.333	35.687	35.890	35.978
107	14.534	14.748	17.833	22.292	23.264	26.750	27.347	27.419	31.208	35.667	36.023	36.228	36.318
108	14.670	14.886	18.000	22.500	23.481	27.000	27.603	27.675	31.500	36.000	36.360	36.567	36.657
109	14.806	15.024	18.167	22.708	23.698	27.250	27.859	27.931	31.792	36.333	36.697	36.906	36.996
110	14.942	15.162	18.333	22.917	23.916	27.500	28.114	28.188	32.083	36.667	37.033	37.244	37.336
111	15.078	15.300	18.500	23.125	24.133	27.750	28.370	28.444	32.375	37.000	37.370	37.583	37.675
112	15.213	15.437	18.667	23.333	24.351	28.000	28.625	28.700	32.667	37.333	37.707	37.921	38.015
113	15.349	15.575	18.833	23.542	24.568	28.250	28.881	28.956	32.958	37.667	38.043	38.260	38.354
114	15.485	15.713	19.000	23.750	24.786	28.500	29.137	29.213	33.250	38.000	38.380	38.599	38.694
115	15.621	15.851	19.167	23.958	25.003	28.750	29.392	29.469	33.542	38.333	38.717	38.937	39.033
116	15.757	15.989	19.333	24.167	25.220	29.000	29.648	29.725	33.833	38.667	39.053	39.276	39.372
117	15.893	16.127	19.500	24.375	25.438	29.250	29.903	29.981	34.125	39.000	39.390	39.614	39.712
118	16.028	16.264	19.667	24.583	25.655	29.500	30.159	30.238	34.417	39.333	39.727	39.953	40.051
119	16.164	16.402	19.833	24.792	25.873	29.750	30.414	30.494	34.708	39.667	40.063	40.291	40.391
120	16.300	16.540	20.000	25.000	26.090	30.000	30.670	30.750	35.000	40.000	40.400	40.630	40.730

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
121	16.436	16.436	20.167	20.167	26.307	30.250	30.926	31.006	35.292	40.333	40.737	40.969	41.069
122	16.572	16.572	20.333	20.333	26.525	30.500	31.181	31.263	35.583	40.667	41.073	41.307	41.409
123	16.708	16.708	20.500	20.500	26.742	30.750	31.437	31.519	35.875	41.000	41.410	41.646	41.748
124	16.843	16.843	20.667	20.667	26.960	31.000	31.692	31.775	36.167	41.333	41.747	41.984	42.088
125	16.979	16.979	20.833	20.833	27.177	31.250	31.948	32.031	36.458	41.667	42.083	42.323	42.427
126	17.115	17.115	21.000	21.000	27.395	31.500	32.204	32.288	36.750	42.000	42.420	42.662	42.767
127	17.251	17.251	21.167	21.167	27.612	31.750	32.459	32.544	37.042	42.333	42.757	43.000	43.106
128	17.387	17.387	21.333	21.333	27.829	32.000	32.715	32.800	37.333	42.667	43.093	43.339	43.445
129	17.523	17.523	21.500	21.500	28.047	32.250	32.970	33.056	37.625	43.000	43.430	43.677	43.785
130	17.658	17.658	21.667	21.667	28.264	32.500	33.226	33.313	37.917	43.333	43.767	44.016	44.124
131	17.794	17.794	21.833	21.833	28.482	32.750	33.481	33.569	38.208	43.667	44.103	44.354	44.464
132	17.930	17.930	22.000	22.000	28.699	33.000	33.737	33.825	38.500	44.000	44.440	44.693	44.803
133	18.066	18.066	22.167	22.167	28.916	33.250	33.993	34.081	38.792	44.333	44.777	45.032	45.142
134	18.202	18.202	22.333	22.333	29.134	33.500	34.248	34.338	39.083	44.667	45.113	45.370	45.482
135	18.338	18.338	22.500	22.500	29.351	33.750	34.504	34.594	39.375	45.000	45.450	45.709	45.821
136	18.473	18.473	22.667	22.667	29.569	34.000	34.759	34.850	39.667	45.333	45.787	46.047	46.161
137	18.609	18.609	22.833	22.833	29.786	34.250	35.015	35.106	39.958	45.667	46.123	46.386	46.500
138	18.745	18.745	23.000	23.000	30.004	34.500	35.271	35.363	40.250	46.000	46.460	46.725	46.840
139	18.881	18.881	23.167	23.167	30.221	34.750	35.526	35.619	40.542	46.333	46.797	47.063	47.179
140	19.017	19.017	23.333	23.333	30.438	35.000	35.782	35.875	40.833	46.667	47.133	47.402	47.518
141	19.153	19.153	23.500	23.500	30.656	35.250	36.037	36.131	41.125	47.000	47.470	47.740	47.858
142	19.288	19.288	23.667	23.667	30.873	35.500	36.293	36.388	41.417	47.333	47.807	48.079	48.197
143	19.424	19.424	23.833	23.833	31.091	35.750	36.548	36.644	41.708	47.667	48.143	48.417	48.537
144	19.560	19.560	24.000	24.000	31.308	36.000	36.804	36.900	42.000	48.000	48.480	48.756	48.876
145	19.696	19.696	24.167	24.167	31.525	36.250	37.060	37.156	42.292	48.333	48.817	49.095	49.215
146	19.832	19.832	24.333	24.333	31.743	36.500	37.315	37.413	42.583	48.667	49.153	49.433	49.555
147	19.968	19.968	24.500	24.500	31.960	36.750	37.571	37.669	42.875	49.000	49.490	49.772	49.894
148	20.103	20.103	24.667	24.667	32.178	37.000	37.826	37.925	43.167	49.333	49.827	50.110	50.234
149	20.239	20.239	24.833	24.833	32.395	37.250	38.082	38.181	43.458	49.667	50.163	50.449	50.573
150	20.375	20.375	25.000	25.000	32.613	37.500	38.338	38.438	43.750	50.000	50.500	50.788	50.913
151	20.511	20.511	25.167	25.167	32.830	37.750	38.593	38.694	44.042	50.333	50.837	51.126	51.252
152	20.647	20.647	25.333	25.333	33.047	38.000	38.849	38.950	44.333	50.667	51.173	51.465	51.591
153	20.783	20.783	25.500	25.500	33.265	38.250	39.104	39.206	44.625	51.000	51.510	51.803	51.931
154	20.918	20.918	25.667	25.667	33.482	38.500	39.360	39.463	44.917	51.333	51.847	52.142	52.270
155	21.054	21.054	25.833	25.833	33.700	38.750	39.615	39.719	45.208	51.667	52.183	52.480	52.610
156	21.190	21.190	26.000	26.000	33.917	39.000	39.871	39.975	45.500	52.000	52.520	52.819	52.949
157	21.326	21.326	26.167	26.167	34.134	39.250	40.127	40.231	45.792	52.333	52.857	53.158	53.288
158	21.462	21.462	26.333	26.333	34.352	39.500	40.382	40.488	46.083	52.667	53.193	53.496	53.628
159	21.598	21.598	26.500	26.500	34.569	39.750	40.638	40.744	46.375	53.000	53.530	53.835	53.967
160	21.733	21.733	26.667	26.667	34.787	40.000	40.893	41.000	46.667	53.333	53.867	54.173	54.307

Engineering Class Chains

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.078
161	21.869	22.191	26.833	33.542	35.004	40.250	41.149	41.256	46.958	53.667	54.203	54.512	54.646
162	22.005	22.329	27.000	33.750	35.222	40.500	41.405	41.513	47.250	54.000	54.540	54.851	54.986
163	22.141	22.467	27.167	33.958	35.439	40.750	41.660	41.769	47.542	54.333	54.877	55.189	55.325
164	22.277	22.605	27.333	34.167	35.656	41.000	41.916	42.025	47.833	54.667	55.213	55.528	55.664
165	22.413	22.743	27.500	34.375	35.874	41.250	42.171	42.281	48.125	55.000	55.550	55.866	56.004
166	22.548	22.880	27.667	34.583	36.091	41.500	42.427	42.538	48.417	55.333	55.887	56.205	56.343
167	22.684	23.018	27.833	34.792	36.309	41.750	42.682	42.794	48.708	55.667	56.223	56.543	56.683
168	22.820	23.156	28.000	35.000	36.526	42.000	42.938	43.050	49.000	56.000	56.560	56.882	57.022
169	22.956	23.294	28.167	35.208	36.743	42.250	43.194	43.306	49.292	56.333	56.897	57.221	57.361
170	23.092	23.432	28.333	35.417	36.961	42.500	43.449	43.563	49.583	56.667	57.233	57.559	57.701
171	23.228	23.570	28.500	35.625	37.178	42.750	43.705	43.819	49.875	57.000	57.570	57.898	58.040
172	23.363	23.707	28.667	35.833	37.396	43.000	43.960	44.075	50.167	57.333	57.907	58.236	58.380
173	23.499	23.845	28.833	36.042	37.613	43.250	44.216	44.331	50.458	57.667	58.243	58.575	58.719
174	23.635	23.983	29.000	36.250	37.831	43.500	44.472	44.588	50.750	58.000	58.580	58.914	59.059
175	23.771	24.121	29.167	36.458	38.048	43.750	44.727	44.844	51.042	58.333	58.917	59.252	59.398
176	23.907	24.259	29.333	36.667	38.265	44.000	44.983	45.100	51.333	58.667	59.253	59.591	59.737
177	24.043	24.397	29.500	36.875	38.483	44.250	45.238	45.356	51.625	59.000	59.590	59.929	60.077
178	24.178	24.534	29.667	37.083	38.700	44.500	45.494	45.613	51.917	59.333	59.927	60.268	60.416
179	24.314	24.672	29.833	37.292	38.918	44.750	45.749	45.869	52.208	59.667	60.263	60.606	60.756
180	24.450	24.810	30.000	37.500	39.135	45.000	46.005	46.125	52.500	60.000	60.600	60.945	61.095
181	24.586	24.948	30.167	37.708	39.352	45.250	46.261	46.381	52.792	60.333	60.937	61.284	61.434
182	24.722	25.086	30.333	37.917	39.570	45.500	46.516	46.638	53.083	60.667	61.273	61.622	61.774
183	24.858	25.224	30.500	38.125	39.787	45.750	46.772	46.894	53.375	61.000	61.610	61.961	62.113
184	24.993	25.361	30.667	38.333	40.005	46.000	47.027	47.150	53.667	61.333	61.947	62.299	62.453
185	25.129	25.499	30.833	38.542	40.222	46.250	47.283	47.406	53.958	61.667	62.283	62.638	62.792
186	25.265	25.637	31.000	38.750	40.440	46.500	47.539	47.663	54.250	62.000	62.620	62.977	63.132
187	25.401	25.775	31.167	38.958	40.657	46.750	47.794	47.919	54.542	62.333	62.957	63.315	63.471
188	25.537	25.913	31.333	39.167	40.874	47.000	48.050	48.175	54.833	62.667	63.293	63.654	63.810
189	25.673	26.051	31.500	39.375	41.092	47.250	48.305	48.431	55.125	63.000	63.630	63.992	64.150
190	25.808	26.188	31.667	39.583	41.309	47.500	48.561	48.688	55.417	63.333	63.967	64.331	64.489
191	25.944	26.326	31.833	39.792	41.527	47.750	48.816	48.944	55.708	63.667	64.303	64.669	64.829
192	26.080	26.464	32.000	40.000	41.744	48.000	49.072	49.200	56.000	64.000	64.640	65.008	65.168
193	26.216	26.602	32.167	40.208	41.961	48.250	49.328	49.456	56.292	64.333	64.977	65.347	65.507
194	26.352	26.740	32.333	40.417	42.179	48.500	49.583	49.713	56.583	64.667	65.313	65.685	65.847
195	26.488	26.878	32.500	40.625	42.396	48.750	49.839	49.969	56.875	65.000	65.650	66.024	66.186
196	26.623	27.015	32.667	40.833	42.614	49.000	50.094	50.225	57.167	65.333	65.987	66.362	66.526
197	26.759	27.153	32.833	41.042	42.831	49.250	50.350	50.481	57.458	65.667	66.323	66.701	66.865
198	26.895	27.291	33.000	41.250	43.049	49.500	50.606	50.738	57.750	66.000	66.660	67.040	67.205
199	27.031	27.429	33.167	41.458	43.266	49.750	50.861	50.994	58.042	66.333	66.997	67.378	67.544
200	27.167	27.567	33.333	41.667	43.483	50.000	51.117	51.250	58.333	66.667	67.333	67.717	67.883

Chain Pitch Conversions

Chain Pitch 1.630" - 4.073" Converted to Feet

No. of Pitches	1.630	1.654	2.000	2.500	2.609	3.000	3.067	3.075	3.500	4.000	4.040	4.063	4.073
201	27.303	27.705	33.500	41.875	43.701	50.250	51.372	51.506	58.625	67.000	67.670	68.055	68.223
202	27.438	27.842	33.667	42.083	43.918	50.500	51.628	51.763	58.917	67.333	68.007	68.394	68.562
203	27.574	27.980	33.833	42.292	44.136	50.750	51.883	52.019	59.208	67.667	68.343	68.732	68.902
204	27.710	28.118	34.000	42.500	44.353	51.000	52.139	52.275	59.500	68.000	68.680	69.071	69.241
205	27.846	28.256	34.167	42.708	44.570	51.250	52.395	52.531	59.792	68.333	69.017	69.410	69.580
206	27.982	28.394	34.333	42.917	44.788	51.500	52.650	52.788	60.083	68.667	69.353	69.748	69.920
207	28.118	28.532	34.500	43.125	45.005	51.750	52.906	53.044	60.375	69.000	69.690	70.087	70.259
208	28.253	28.669	34.667	43.333	45.223	52.000	53.161	53.300	60.667	69.333	70.027	70.425	70.599
209	28.389	28.807	34.833	43.542	45.440	52.250	53.417	53.556	60.958	69.667	70.363	70.764	70.938
210	28.525	28.945	35.000	43.750	45.658	52.500	53.673	53.813	61.250	70.000	70.700	71.103	71.278
211	28.661	29.083	35.167	43.958	45.875	52.750	53.928	54.069	61.542	70.333	71.037	71.441	71.617
212	28.797	29.221	35.333	44.167	46.092	53.000	54.184	54.325	61.833	70.667	71.373	71.780	71.956
213	28.933	29.359	35.500	44.375	46.310	53.250	54.439	54.581	62.125	71.000	71.710	72.118	72.296
214	29.068	29.496	35.667	44.583	46.527	53.500	54.695	54.838	62.417	71.333	72.047	72.457	72.635
215	29.204	29.634	35.833	44.792	46.745	53.750	54.950	55.094	62.708	71.667	72.383	72.795	72.975
216	29.340	29.772	36.000	45.000	46.962	54.000	55.206	55.350	63.000	72.000	72.720	73.134	73.314
217	29.476	29.910	36.167	45.208	47.179	54.250	55.462	55.606	63.292	72.333	73.057	73.473	73.653
218	29.612	30.048	36.333	45.417	47.397	54.500	55.717	55.863	63.583	72.667	73.393	73.811	73.993
219	29.748	30.186	36.500	45.625	47.614	54.750	55.973	56.119	63.875	73.000	73.730	74.150	74.332
220	29.883	30.323	36.667	45.833	47.832	55.000	56.228	56.375	64.167	73.333	74.067	74.488	74.672
221	30.019	30.461	36.833	46.042	48.049	55.250	56.484	56.631	64.458	73.667	74.403	74.827	75.011
222	30.155	30.599	37.000	46.250	48.267	55.500	56.740	56.888	64.750	74.000	74.740	75.166	75.351
223	30.291	30.737	37.167	46.458	48.484	55.750	56.995	57.144	65.042	74.333	75.077	75.504	75.690
224	30.427	30.875	37.333	46.667	48.701	56.000	57.251	57.400	65.333	74.667	75.413	75.843	76.029
225	30.563	31.013	37.500	46.875	48.919	56.250	57.506	57.656	65.625	75.000	75.750	76.181	76.369
226	30.698	31.150	37.667	47.083	49.136	56.500	57.762	57.913	65.917	75.333	76.087	76.520	76.708
227	30.834	31.288	37.833	47.292	49.354	56.750	58.017	58.169	66.208	75.667	76.423	76.858	77.048
228	30.970	31.426	38.000	47.500	49.571	57.000	58.273	58.425	66.500	76.000	76.760	77.197	77.387
229	31.106	31.564	38.167	47.708	49.788	57.250	58.529	58.681	66.792	76.333	77.097	77.536	77.726
230	31.242	31.702	38.333	47.917	50.006	57.500	58.784	58.938	67.083	76.667	77.433	77.874	78.066
231	31.378	31.840	38.500	48.125	50.223	57.750	59.040	59.194	67.375	77.000	77.770	78.213	78.405
232	31.513	31.977	38.667	48.333	50.441	58.000	59.295	59.450	67.667	77.333	78.107	78.551	78.745
233	31.649	32.115	38.833	48.542	50.658	58.250	59.551	59.706	67.958	77.667	78.443	78.890	79.084
234	31.785	32.253	39.000	48.750	50.876	58.500	59.807	59.963	68.250	78.000	78.780	79.229	79.424
235	31.921	32.391	39.167	48.958	51.093	58.750	60.062	60.219	68.542	78.333	79.117	79.567	79.763
236	32.057	32.529	39.333	49.167	51.310	59.000	60.318	60.475	68.833	78.667	79.453	79.906	80.102
237	32.193	32.667	39.500	49.375	51.528	59.250	60.573	60.731	69.125	79.000	79.790	80.244	80.442
238	32.328	32.804	39.667	49.583	51.745	59.500	60.829	60.988	69.417	79.333	80.127	80.583	80.781
239	32.464	32.942	39.833	49.792	51.963	59.750	61.084	61.244	69.708	79.667	80.463	80.921	81.121
240	32.600	33.080	40.000	50.000	52.180	60.000	61.340	61.500	70.000	80.000	80.800	81.260	81.460

Engineering Class Chains

Chain Pitch Conversions

Chain Pitch 4.250" - 24.000" Converted to Feet

No. of Pitches	4.250	4.500	4.760	5.000	5.500	6.000	6.050	7.000	8.000	9.000	12.000	18.000	24.000
1	0.354	0.375	0.397	0.417	0.458	0.500	0.504	0.583	0.667	0.750	1.000	1.500	2.000
2	0.708	0.750	0.793	0.833	0.917	1.000	1.008	1.167	1.333	1.500	2.000	3.000	4.000
3	1.063	1.125	1.190	1.250	1.375	1.500	1.513	1.750	2.000	2.250	3.000	4.500	6.000
4	1.417	1.500	1.587	1.667	1.833	2.000	2.017	2.333	2.667	3.000	4.000	6.000	8.000
5	1.771	1.875	1.983	2.083	2.292	2.500	2.521	2.917	3.333	3.750	5.000	7.500	10.000
6	2.125	2.250	2.380	2.500	2.750	3.000	3.025	3.500	4.000	4.500	6.000	9.000	12.000
7	2.479	2.625	2.777	2.917	3.208	3.500	3.529	4.083	4.667	5.250	7.000	10.500	14.000
8	2.833	3.000	3.173	3.333	3.667	4.000	4.033	4.667	5.333	6.000	8.000	12.000	16.000
9	3.188	3.375	3.570	3.750	4.125	4.500	4.538	5.250	6.000	6.750	9.000	13.500	18.000
10	3.542	3.750	3.967	4.167	4.583	5.000	5.042	5.833	6.667	7.500	10.000	15.000	20.000
11	3.896	4.125	4.363	4.583	5.042	5.500	5.546	6.417	7.333	8.250	11.000	16.500	22.000
12	4.250	4.500	4.760	5.000	5.500	6.000	6.050	7.000	8.000	9.000	12.000	18.000	24.000
13	4.604	4.875	5.157	5.417	5.958	6.500	6.554	7.583	8.667	9.750	13.000	19.500	26.000
14	4.958	5.250	5.553	5.833	6.417	7.000	7.058	8.167	9.333	10.500	14.000	21.000	28.000
15	5.313	5.625	5.950	6.250	6.875	7.500	7.563	8.750	10.000	11.250	15.000	22.500	30.000
16	5.667	6.000	6.347	6.667	7.333	8.000	8.067	9.333	10.667	12.000	16.000	24.000	32.000
17	6.021	6.375	6.743	7.083	7.792	8.500	8.571	9.917	11.333	12.750	17.000	25.500	34.000
18	6.375	6.750	7.140	7.500	8.250	9.000	9.075	10.500	12.000	13.500	18.000	27.000	36.000
19	6.729	7.125	7.537	7.917	8.708	9.500	9.579	11.083	12.667	14.250	19.000	28.500	38.000
20	7.083	7.500	7.933	8.333	9.167	10.000	10.083	11.667	13.333	15.000	20.000	30.000	40.000
21	7.438	7.875	8.330	8.750	9.625	10.500	10.588	12.250	14.000	15.750	21.000	31.500	42.000
22	7.792	8.250	8.727	9.167	10.083	11.000	11.092	12.833	14.667	16.500	22.000	33.000	44.000
23	8.146	8.625	9.123	9.583	10.542	11.500	11.596	13.417	15.333	17.250	23.000	34.500	46.000
24	8.500	9.000	9.520	10.000	11.000	12.000	12.100	14.000	16.000	18.000	24.000	36.000	48.000
25	8.854	9.375	9.917	10.417	11.458	12.500	12.604	14.583	16.667	18.750	25.000	37.500	50.000
26	9.208	9.750	10.313	10.833	11.917	13.000	13.108	15.167	17.333	19.500	26.000	39.000	52.000
27	9.563	10.125	10.710	11.250	12.375	13.500	13.613	15.750	18.000	20.250	27.000	40.500	54.000
28	9.917	10.500	11.107	11.667	12.833	14.000	14.117	16.333	18.667	21.000	28.000	42.000	56.000
29	10.271	10.875	11.503	12.083	13.292	14.500	14.621	16.917	19.333	21.750	29.000	43.500	58.000
30	10.625	11.250	11.900	12.500	13.750	15.000	15.125	17.500	20.000	22.500	30.000	45.000	60.000
31	10.979	11.625	12.297	12.917	14.208	15.500	15.629	18.083	20.667	23.250	31.000	46.500	62.000
32	11.333	12.000	12.693	13.333	14.667	16.000	16.133	18.667	21.333	24.000	32.000	48.000	64.000
33	11.688	12.375	13.090	13.750	15.125	16.500	16.638	19.250	22.000	24.750	33.000	49.500	66.000
34	12.042	12.750	13.487	14.167	15.583	17.000	17.142	19.833	22.667	25.500	34.000	51.000	68.000
35	12.396	13.125	13.883	14.583	16.042	17.500	17.646	20.417	23.333	26.250	35.000	52.500	70.000
36	12.750	13.500	14.280	15.000	16.500	18.000	18.150	21.000	24.000	27.000	36.000	54.000	72.000
37	13.104	13.875	14.677	15.417	16.958	18.500	18.654	21.583	24.667	27.750	37.000	55.500	74.000
38	13.458	14.250	15.073	15.833	17.417	19.000	19.158	22.167	25.333	28.500	38.000	57.000	76.000
39	13.813	14.625	15.470	16.250	17.875	19.500	19.663	22.750	26.000	29.250	39.000	58.500	78.000
40	14.167	15.000	15.867	16.667	18.333	20.000	20.167	23.333	26.667	30.000	40.000	60.000	80.000

Chain Pitch Conversions

Chain Pitch 4.250" - 24.000" Converted to Feet

No. of Pitches	4.250	4.500	4.760	5.000	5.500	6.000	6.050	7.000	8.000	9.000	12.000	18.000	24.000
41	14.521	15.375	16.263	17.083	18.792	20.500	23.917	23.917	27.333	30.750	41.000	61.500	82.000
42	14.875	15.750	16.660	17.500	19.250	21.000	24.500	24.500	28.000	31.500	42.000	63.000	84.000
43	15.229	16.125	17.057	17.917	19.708	21.500	25.083	25.083	28.667	32.250	43.000	64.500	86.000
44	15.583	16.500	17.453	18.333	20.167	22.000	25.667	25.667	29.333	33.000	44.000	66.000	88.000
45	15.938	16.875	17.850	18.750	20.625	22.500	26.250	26.250	30.000	33.750	45.000	67.500	90.000
46	16.292	17.250	18.247	19.167	21.083	23.000	26.833	26.833	30.667	34.500	46.000	69.000	92.000
47	16.646	17.625	18.643	19.583	21.542	23.500	27.417	27.417	31.333	35.250	47.000	70.500	94.000
48	17.000	18.000	19.040	20.000	22.000	24.000	28.000	28.000	32.000	36.000	48.000	72.000	96.000
49	17.354	18.375	19.437	20.417	22.458	24.500	28.583	28.583	32.667	36.750	49.000	73.500	98.000
50	17.708	18.750	19.833	20.833	22.917	25.000	29.167	29.167	33.333	37.500	50.000	75.000	100.000
51	18.063	19.125	20.230	21.250	23.375	25.500	29.750	29.750	34.000	38.250	51.000	76.500	102.000
52	18.417	19.500	20.627	21.667	23.833	26.000	30.333	30.333	34.667	39.000	52.000	78.000	104.000
53	18.771	19.875	21.023	22.083	24.292	26.500	30.917	30.917	35.333	39.750	53.000	79.500	106.000
54	19.125	20.250	21.420	22.500	24.750	27.000	31.500	31.500	36.000	40.500	54.000	81.000	108.000
55	19.479	20.625	21.817	22.917	25.208	27.500	32.083	32.083	36.667	41.250	55.000	82.500	110.000
56	19.833	21.000	22.213	23.333	25.667	28.000	32.667	32.667	37.333	42.000	56.000	84.000	112.000
57	20.188	21.375	22.610	23.750	26.125	28.500	33.250	33.250	38.000	42.750	57.000	85.500	114.000
58	20.542	21.750	23.007	24.167	26.583	29.000	33.833	33.833	38.667	43.500	58.000	87.000	116.000
59	20.896	22.125	23.403	24.583	27.042	29.500	34.417	34.417	39.333	44.250	59.000	88.500	118.000
60	21.250	22.500	23.800	25.000	27.500	30.000	35.000	35.000	40.000	45.000	60.000	90.000	120.000
61	21.604	22.875	24.197	25.417	27.958	30.500	35.583	35.583	40.667	45.750	61.000	91.500	122.000
62	21.958	23.250	24.593	25.833	28.417	31.000	36.167	36.167	41.333	46.500	62.000	93.000	124.000
63	22.313	23.625	24.990	26.250	28.875	31.500	36.750	36.750	42.000	47.250	63.000	94.500	126.000
64	22.667	24.000	25.387	26.667	29.333	32.000	37.333	37.333	42.667	48.000	64.000	96.000	128.000
65	23.021	24.375	25.783	27.083	29.792	32.500	37.917	37.917	43.333	48.750	65.000	97.500	130.000
66	23.375	24.750	26.180	27.500	30.250	33.000	38.500	38.500	44.000	49.500	66.000	99.000	132.000
67	23.729	25.125	26.577	27.917	30.708	33.500	39.083	39.083	44.667	50.250	67.000	100.500	134.000
68	24.083	25.500	26.973	28.333	31.167	34.000	39.667	39.667	45.333	51.000	68.000	102.000	136.000
69	24.438	25.875	27.370	28.750	31.625	34.500	40.250	40.250	46.000	51.750	69.000	103.500	138.000
70	24.792	26.250	27.767	29.167	32.083	35.000	40.833	40.833	46.667	52.500	70.000	105.000	140.000
71	25.146	26.625	28.163	29.583	32.542	35.500	41.417	41.417	47.333	53.250	71.000	106.500	142.000
72	25.500	27.000	28.560	30.000	33.000	36.000	42.000	42.000	48.000	54.000	72.000	108.000	144.000
73	25.854	27.375	28.957	30.417	33.458	36.500	42.583	42.583	48.667	54.750	73.000	109.500	146.000
74	26.208	27.750	29.353	30.833	33.917	37.000	43.167	43.167	49.333	55.500	74.000	111.000	148.000
75	26.563	28.125	29.750	31.250	34.375	37.500	43.750	43.750	50.000	56.250	75.000	112.500	150.000
76	26.917	28.500	30.147	31.667	34.833	38.000	44.333	44.333	50.667	57.000	76.000	114.000	152.000
77	27.271	28.875	30.543	32.083	35.292	38.500	44.917	44.917	51.333	57.750	77.000	115.500	154.000
78	27.625	29.250	30.940	32.500	35.750	39.000	45.500	45.500	52.000	58.500	78.000	117.000	156.000
79	27.979	29.625	31.337	32.917	36.208	39.500	46.083	46.083	52.667	59.250	79.000	118.500	158.000
80	28.333	30.000	31.733	33.333	36.667	40.000	46.667	46.667	53.333	60.000	80.000	120.000	160.000

Engineering Class Chains

Chain Pitch Conversions

Chain Pitch 4.250" - 24.000" Converted to Feet

No. of Pitches	4.250	4.500	4.760	5.000	5.500	6.000	6.050	7.000	8.000	9.000	12.000	18.000	24.000
81	28.688	30.375	32.130	33.750	37.125	40.500	40.838	47.250	54.000	60.750	81.000	121.500	162.000
82	29.042	30.750	32.527	34.167	37.583	41.000	41.342	47.833	54.667	61.500	82.000	123.000	164.000
83	29.396	31.125	32.923	34.583	38.042	41.500	41.846	48.417	55.333	62.250	83.000	124.500	166.000
84	29.750	31.500	33.320	35.000	38.500	42.000	42.350	49.000	56.000	63.000	84.000	126.000	168.000
85	30.104	31.875	33.717	35.417	38.958	42.500	42.854	49.583	56.667	63.750	85.000	127.500	170.000
86	30.458	32.250	34.113	35.833	39.417	43.000	43.358	50.167	57.333	64.500	86.000	129.000	172.000
87	30.813	32.625	34.510	36.250	39.875	43.500	43.863	50.750	58.000	65.250	87.000	130.500	174.000
88	31.167	33.000	34.907	36.667	40.333	44.000	44.367	51.333	58.667	66.000	88.000	132.000	176.000
89	31.521	33.375	35.303	37.083	40.792	44.500	44.871	51.917	59.333	66.750	89.000	133.500	178.000
90	31.875	33.750	35.700	37.500	41.250	45.000	45.375	52.500	60.000	67.500	90.000	135.000	180.000
91	32.229	34.125	36.097	37.917	41.708	45.500	45.879	53.083	60.667	68.250	91.000	136.500	182.000
92	32.583	34.500	36.493	38.333	42.167	46.000	46.383	53.667	61.333	69.000	92.000	138.000	184.000
93	32.938	34.875	36.890	38.750	42.625	46.500	46.888	54.250	62.000	69.750	93.000	139.500	186.000
94	33.292	35.250	37.287	39.167	43.083	47.000	47.392	54.833	62.667	70.500	94.000	141.000	188.000
95	33.646	35.625	37.683	39.583	43.542	47.500	47.896	55.417	63.333	71.250	95.000	142.500	190.000
96	34.000	36.000	38.080	40.000	44.000	48.000	48.400	56.000	64.000	72.000	96.000	144.000	192.000
97	34.354	36.375	38.477	40.417	44.458	48.500	48.904	56.583	64.667	72.750	97.000	145.500	194.000
98	34.708	36.750	38.873	40.833	44.917	49.000	49.408	57.167	65.333	73.500	98.000	147.000	196.000
99	35.063	37.125	39.270	41.250	45.375	49.500	49.913	57.750	66.000	74.250	99.000	148.500	198.000
100	35.417	37.500	39.667	41.667	45.833	50.000	50.417	58.333	66.667	75.000	100.000	150.000	200.000
101	35.771	37.875	40.063	42.083	46.292	50.500	50.921	58.917	67.333	75.750	101.000	151.500	202.000
102	36.125	38.250	40.460	42.500	46.750	51.000	51.425	59.500	68.000	76.500	102.000	153.000	204.000
103	36.479	38.625	40.857	42.917	47.208	51.500	51.929	60.083	68.667	77.250	103.000	154.500	206.000
104	36.833	39.000	41.253	43.333	47.667	52.000	52.433	60.667	69.333	78.000	104.000	156.000	208.000
105	37.188	39.375	41.650	43.750	48.125	52.500	52.938	61.250	70.000	78.750	105.000	157.500	210.000
106	37.542	39.750	42.047	44.167	48.583	53.000	53.442	61.833	70.667	79.500	106.000	159.000	212.000
107	37.896	40.125	42.443	44.583	49.042	53.500	53.946	62.417	71.333	80.250	107.000	160.500	214.000
108	38.250	40.500	42.840	45.000	49.500	54.000	54.450	63.000	72.000	81.000	108.000	162.000	216.000
109	38.604	40.875	43.237	45.417	49.958	54.500	54.954	63.583	72.667	81.750	109.000	163.500	218.000
110	38.958	41.250	43.633	45.833	50.417	55.000	55.458	64.167	73.333	82.500	110.000	165.000	220.000
111	39.313	41.625	44.030	46.250	50.875	55.500	55.963	64.750	74.000	83.250	111.000	166.500	222.000
112	39.667	42.000	44.427	46.667	51.333	56.000	56.467	65.333	74.667	84.000	112.000	168.000	224.000
113	40.021	42.375	44.823	47.083	51.792	56.500	56.971	65.917	75.333	84.750	113.000	169.500	226.000
114	40.375	42.750	45.220	47.500	52.250	57.000	57.475	66.500	76.000	85.500	114.000	171.000	228.000
115	40.729	43.125	45.617	47.917	52.708	57.500	57.979	67.083	76.667	86.250	115.000	172.500	230.000
116	41.083	43.500	46.013	48.333	53.167	58.000	58.483	67.667	77.333	87.000	116.000	174.000	232.000
117	41.438	43.875	46.410	48.750	53.625	58.500	58.988	68.250	78.000	87.750	117.000	175.500	234.000
118	41.792	44.250	46.807	49.167	54.083	59.000	59.492	68.833	78.667	88.500	118.000	177.000	236.000
119	42.146	44.625	47.203	49.583	54.542	59.500	59.996	69.417	79.333	89.250	119.000	178.500	238.000
120	42.500	45.000	47.600	50.000	55.000	60.000	60.500	70.000	80.000	90.000	120.000	180.000	240.000

Chain Pitch Conversions

Chain Pitch 4.250" - 24.000" Converted to Feet

No. of Pitches	4.250	4.500	4.760	5.000	5.500	6.000	6.050	7.000	8.000	9.000	12.000	18.000	24.000
121	42.854	45.375	47.997	50.417	55.458	60.500	61.004	70.583	80.667	90.750	121.000	181.500	242.000
122	43.208	45.750	48.393	50.833	55.917	61.000	61.508	71.167	81.333	91.500	122.000	183.000	244.000
123	43.563	46.125	48.790	51.250	56.375	61.500	62.013	71.750	82.000	92.250	123.000	184.500	246.000
124	43.917	46.500	49.187	51.667	56.833	62.000	62.517	72.333	82.667	93.000	124.000	186.000	248.000
125	44.271	46.875	49.583	52.083	57.292	62.500	63.021	72.917	83.333	93.750	125.000	187.500	250.000
126	44.625	47.250	49.980	52.500	57.750	63.000	63.525	73.500	84.000	94.500	126.000	189.000	252.000
127	44.979	47.625	50.377	52.917	58.208	63.500	64.029	74.083	84.667	95.250	127.000	190.500	254.000
128	45.333	48.000	50.773	53.333	58.667	64.000	64.533	74.667	85.333	96.000	128.000	192.000	256.000
129	45.688	48.375	51.170	53.750	59.125	64.500	65.038	75.250	86.000	96.750	129.000	193.500	258.000
130	46.042	48.750	51.567	54.167	59.583	65.000	65.542	75.833	86.667	97.500	130.000	195.000	260.000
131	46.396	49.125	51.963	54.583	60.042	65.500	66.046	76.417	87.333	98.250	131.000	196.500	262.000
132	46.750	49.500	52.360	55.000	60.500	66.000	66.550	77.000	88.000	99.000	132.000	198.000	264.000
133	47.104	49.875	52.757	55.417	60.958	66.500	67.054	77.583	88.667	99.750	133.000	199.500	266.000
134	47.458	50.250	53.153	55.833	61.417	67.000	67.558	78.167	89.333	100.500	134.000	201.000	268.000
135	47.813	50.625	53.550	56.250	61.875	67.500	68.063	78.750	90.000	101.250	135.000	202.500	270.000
136	48.167	51.000	53.947	56.667	62.333	68.000	68.567	79.333	90.667	102.000	136.000	204.000	272.000
137	48.521	51.375	54.343	57.083	62.792	68.500	69.071	79.917	91.333	102.750	137.000	205.500	274.000
138	48.875	51.750	54.740	57.500	63.250	69.000	69.575	80.500	92.000	103.500	138.000	207.000	276.000
139	49.229	52.125	55.137	57.917	63.708	69.500	70.079	81.083	92.667	104.250	139.000	208.500	278.000
140	49.583	52.500	55.533	58.333	64.167	70.000	70.583	81.667	93.333	105.000	140.000	210.000	280.000
141	49.938	52.875	55.930	58.750	64.625	70.500	71.088	82.250	94.000	105.750	141.000	211.500	282.000
142	50.292	53.250	56.327	59.167	65.083	71.000	71.592	82.833	94.667	106.500	142.000	213.000	284.000
143	50.646	53.625	56.723	59.583	65.542	71.500	72.096	83.417	95.333	107.250	143.000	214.500	286.000
144	51.000	54.000	57.120	60.000	66.000	72.000	72.600	84.000	96.000	108.000	144.000	216.000	288.000
145	51.354	54.375	57.517	60.417	66.458	72.500	73.104	84.583	96.667	108.750	145.000	217.500	290.000
146	51.708	54.750	57.913	60.833	66.917	73.000	73.608	85.167	97.333	109.500	146.000	219.000	292.000
147	52.063	55.125	58.310	61.250	67.375	73.500	74.113	85.750	98.000	110.250	147.000	220.500	294.000
148	52.417	55.500	58.707	61.667	67.833	74.000	74.617	86.333	98.667	111.000	148.000	222.000	296.000
149	52.771	55.875	59.103	62.083	68.292	74.500	75.121	86.917	99.333	111.750	149.000	223.500	298.000
150	53.125	56.250	59.500	62.500	68.750	75.000	75.625	87.500	100.000	112.500	150.000	225.000	300.000
151	53.479	56.625	59.897	62.917	69.208	75.500	76.129	88.083	100.667	113.250	151.000	226.500	302.000
152	53.833	57.000	60.293	63.333	69.667	76.000	76.633	88.667	101.333	114.000	152.000	228.000	304.000
153	54.188	57.375	60.690	63.750	70.125	76.500	77.138	89.250	102.000	114.750	153.000	229.500	306.000
154	54.542	57.750	61.087	64.167	70.583	77.000	77.642	89.833	102.667	115.500	154.000	231.000	308.000
155	54.896	58.125	61.483	64.583	71.042	77.500	78.146	90.417	103.333	116.250	155.000	232.500	310.000
156	55.250	58.500	61.880	65.000	71.500	78.000	78.650	91.000	104.000	117.000	156.000	234.000	312.000
157	55.604	58.875	62.277	65.417	71.958	78.500	79.154	91.583	104.667	117.750	157.000	235.500	314.000
158	55.958	59.250	62.673	65.833	72.417	79.000	79.658	92.167	105.333	118.500	158.000	237.000	316.000
159	56.313	59.625	63.070	66.250	72.875	79.500	80.163	92.750	106.000	119.250	159.000	238.500	318.000
160	56.667	60.000	63.467	66.667	73.333	80.000	80.667	93.333	106.667	120.000	160.000	240.000	320.000

Engineering Class Chains

Properties of Steel

Relation of Hardness to Strength of Steel							
Rockwell "C" 150 Kg Load 120 deg	Rockwell "B" 100 Kg Load 1/16 inch	Brinell Hardness Number 120 deg	Approximate Tensile Strength of Steel (lbs)	Rockwell "C" 150 Kg Load 120 deg	Rockwell "B" 100 Kg Load 1/16 inch	Brinell Hardness Number	Approximate Tensile Strength of Steel (lbs)
Diamond Cone	Diamond Ball	Standard Ball		Diamond Cone	Diamond Ball	Standard Ball	
68	-	*745	368,000	24	101	248	122,000
63	-	*710	350,000	23	100	241	118,000
62	-	*682	340,000	22	99	235	115,000
60	-	*653	330,000	21	98	229	111,000
59	-	*627	323,000	19	97	223	108,000
57	-	*601	309,000	18	96	217	105,000
56	-	*578	297,000	16	96	212	102,000
55	120	*555	285,000	15	95	207	100,000
54	119	*534	274,000	14	94	201	98,000
53	119	*514	263,000	13	93	197	95,000
52	117	495	259,000	12	92	192	93,000
50	117	477	247,000	10	91	187	90,000
49	116	461	237,000	9	90	183	89,000
47	115	444	226,000	8	89	179	87,000
46	115	429	217,000	6	88	174	85,000
45	114	415	210,000	5	87	170	83,000
43	113	401	202,000	4	86	167	81,000
42	112	388	195,000	3	85	163	79,000
40	112	375	188,000	1	83	156	76,000
39	110	363	182,000	-	81	149	73,000
38	110	352	176,000	-	79	143	71,000
37	109	341	170,000	-	76	137	67,000
36	109	331	166,000	-	74	131	65,000
34	108	321	160,000	-	72	126	63,000
33	108	311	155,000	-	70	121	60,000
32	107	302	150,000	-	68	116	58,000
31	106	293	145,000	-	66	111	56,000
30	106	285	141,000	-	64	107	55,000
29	105	277	137,000	-	61	103	53,000
28	104	269	133,000	-	59	99	51,000
27	103	262	129,000	-	56	95	49,000
25	102	255	126,000				

*Tungsten Carbide Ball

Material	Strength of Materials				
	Tensile Strength (lbs)	Compressive Strength (lbs)	Shear Strength (lbs)	Yield Strength (psi)	Modulus of Elasticity
Gray Cast Iron (average grade)	22,000	100,000	24,000		16,000,000
Gray Cast Iron (good grade)	30,000	125,000	35,000		20,000,000
Gray Cast Iron (high strength grade)	40,000	175,000	45,000		22,000,000
Malleable Iron	53,000	-	48,000	35,000	25,000,000
Wrought Iron	48,000	46,000	40,000	25,000	27,000,000
Cast Medium Carbon Steel	70,000	70,000	60,000	40,000	30,000,000
Hot Rolled Carbon Steel	60,000	60,000	45,000	30,000	30,000,000
Cold Rolled Carbon Steel	75,000	75,000	55,000	40,000	30,000,000
Rivet Steel	57,000	57,000	44,000	36,000	30,000,000
Structural Steel	60,000	60,000	45,000	30,000	30,000,000

Weight of Steel

Weight of Steel Bar Stock											
Size Inches	Weight (lbs/ft)		Size Inches	Weight (lbs/ft)		Size Inches	Weight (lbs/ft)		Size Inches	Weight (lbs/ft)	
	SQUARE	ROUND		SQUARE	ROUND		SQUARE	ROUND		SQUARE	ROUND
0.063	0.013	0.010	3.063	31.88	25.05	6.063	124.95	98.17	9.063	279.21	219.37
0.125	0.053	0.042	3.125	33.20	26.08	6.125	127.54	100.21	9.125	283.07	222.41
0.188	0.120	0.094	3.188	34.54	27.14	6.188	130.15	102.26	9.188	286.96	225.47
0.250	0.212	0.167	3.250	35.91	28.21	6.250	132.80	104.34	9.250	290.88	228.54
0.313	0.332	0.261	3.313	37.30	29.31	6.313	135.47	106.44	9.313	294.82	231.64
0.375	0.478	0.376	3.375	38.72	30.43	6.375	138.16	108.55	9.375	298.79	234.76
0.438	0.651	0.511	3.438	40.17	31.56	6.438	140.88	110.69	9.438	302.79	237.90
0.500	0.850	0.668	3.500	41.65	32.72	6.500	143.63	112.85	9.500	306.81	241.06
0.563	1.076	0.845	3.563	43.15	33.90	6.563	146.41	115.03	9.563	310.86	244.25
0.625	1.328	1.043	3.625	44.67	35.10	6.625	149.21	117.23	9.625	314.94	247.45
0.688	1.607	1.262	3.688	46.23	36.32	6.688	152.04	119.46	9.688	319.04	250.67
0.750	1.912	1.502	3.750	47.81	37.56	6.750	154.89	121.70	9.750	323.17	253.92
0.813	2.244	1.763	3.813	49.41	38.82	6.813	157.78	123.96	9.813	327.33	257.18
0.875	2.603	2.045	3.875	51.05	40.11	6.875	160.68	126.25	9.875	331.51	260.47
0.938	2.988	2.348	3.938	52.71	41.41	6.938	163.62	128.56	9.938	335.72	263.78
1.000	3.400	2.671	4.000	54.39	42.74	7.000	166.58	130.88	10.000	339.96	267.11
1.063	3.838	3.015	4.063	56.11	44.08	7.063	169.57	133.23	10.063	344.22	270.46
1.125	4.303	3.381	4.125	57.85	45.45	7.125	172.58	135.60	10.125	348.51	273.83
1.188	4.794	3.767	4.188	59.61	46.84	7.188	175.62	137.99	10.188	352.83	277.22
1.250	5.312	4.174	4.250	61.41	48.25	7.250	178.69	140.40	10.250	357.17	280.63
1.313	5.856	4.601	4.313	63.22	49.68	7.313	181.79	142.83	10.313	361.54	284.06
1.375	6.427	5.050	4.375	65.07	51.13	7.375	184.91	145.28	10.375	365.94	287.52
1.438	7.025	5.520	4.438	66.94	52.60	7.438	188.05	147.75	10.438	370.36	290.99
1.500	7.649	6.010	4.500	68.84	54.09	7.500	191.23	150.25	10.500	374.81	294.48
1.563	8.300	6.521	4.563	70.77	55.60	7.563	194.43	152.76	10.563	379.28	298.00
1.625	8.977	7.053	4.625	72.72	57.14	7.625	197.65	155.30	10.625	383.78	301.54
1.688	9.681	7.606	4.688	74.70	58.69	7.688	200.91	157.85	10.688	388.31	305.10
1.750	10.41	8.180	4.750	76.70	60.27	7.750	204.19	160.43	10.750	392.87	308.68
1.813	11.17	8.775	4.813	78.74	61.86	7.813	207.50	163.03	10.813	397.45	312.27
1.875	11.95	9.390	4.875	80.79	63.48	7.875	210.83	165.65	10.875	402.06	315.90
1.938	12.76	10.03	4.938	82.88	65.12	7.938	214.19	168.29	10.938	406.69	319.54
2.000	13.60	10.68	5.000	84.99	66.78	8.000	217.57	170.95	11.000	411.35	323.20
2.063	14.46	11.36	5.063	87.13	68.46	8.063	220.99	173.63	11.063	416.04	326.88
2.125	15.35	12.06	5.125	89.29	70.16	8.125	224.43	176.33	11.125	420.75	330.59
2.188	16.27	12.78	5.188	91.48	71.88	8.188	227.89	179.06	11.188	425.49	334.31
2.250	17.21	13.52	5.250	93.70	73.62	8.250	231.39	181.80	11.250	430.26	338.06
2.313	18.18	14.28	5.313	95.95	75.38	8.313	234.90	184.56	11.313	435.06	341.82
2.375	19.18	15.07	5.375	98.22	77.17	8.375	238.45	187.35	11.375	439.88	345.61
2.438	20.20	15.87	5.438	100.51	78.97	8.438	242.02	190.16	11.438	444.72	349.42
2.500	21.25	16.69	5.500	102.84	80.80	8.500	245.62	192.98	11.500	449.60	353.25
2.563	22.32	17.54	5.563	105.19	82.65	8.563	249.25	195.83	11.563	454.50	357.10
2.625	23.43	18.41	5.625	107.57	84.51	8.625	252.90	198.70	11.625	459.42	360.97
2.688	24.55	19.29	5.688	109.97	86.40	8.688	256.58	201.59	11.688	464.38	364.86
2.750	25.71	20.20	5.750	112.40	88.31	8.750	260.28	204.50	11.750	469.36	368.77
2.813	26.89	21.13	5.813	114.86	90.24	8.813	264.01	207.44	11.813	474.36	372.71
2.875	28.10	22.08	5.875	117.34	92.19	8.875	267.77	210.39	11.875	479.40	376.66
2.938	29.33	23.05	5.938	119.85	94.17	8.938	271.56	213.36	11.938	484.46	380.64
3.000	30.60	24.04	6.000	122.39	96.16	9.000	275.37	216.36	12.000	489.54	384.63

Conversion Factors: Cast Iron = 0.9187
 Brass = 1.07
 Copper and Bronze = 1.128

Engineering Class Chains

Torque Values

Torque Values (inch-lbs) Given Horsepower and RPM										
HORSEPOWER										
RPM	0.125	0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	5.00
0.10	78,781	157,563	315,125	472,688						
0.20	39,391	78,781	157,563	236,344	315,125	472,688				
0.30	26,260	52,521	105,042	157,563	210,083	315,125	420,167			
0.40	19,695	39,391	78,781	118,172	157,563	236,344	315,125	393,906	472,688	
0.50	15,756	31,513	63,025	94,538	126,050	189,075	252,100	315,125	378,150	
0.60	13,130	26,260	52,521	78,781	105,042	157,563	210,083	262,604	315,125	
0.70	11,254	22,509	45,018	67,527	90,036	135,054	180,071	225,089	270,107	450,179
0.80	9,848	19,695	39,391	59,086	78,781	118,172	157,563	196,953	236,344	393,906
0.90	8,753	17,507	35,014	52,521	70,028	105,042	140,056	175,069	210,083	350,139
1.00	7,878	15,756	31,513	47,269	63,025	94,538	126,050	157,563	189,075	315,125
1.25	6,303	12,605	25,210	37,815	50,420	75,630	100,840	126,050	151,260	252,100
1.50	5,252	10,504	21,008	31,513	42,017	63,025	84,033	105,042	126,050	210,083
1.75	4,502	9,004	18,007	27,011	36,014	54,021	72,029	90,036	108,043	180,071
2.00	3,939	7,878	15,756	23,634	31,513	47,269	63,025	78,781	94,538	157,563
2.50	3,151	6,303	12,605	18,908	25,210	37,815	50,420	63,025	75,630	126,050
3.00	2,626	5,252	10,504	15,756	21,008	31,513	42,017	52,521	63,025	105,042
4.00	1,970	3,939	7,878	11,817	15,756	23,634	31,513	39,391	47,269	78,781
5.00	1,576	3,151	6,303	9,454	12,605	18,908	25,210	31,513	37,815	63,025
6.00	1,313	2,626	5,252	7,878	10,504	15,756	21,008	26,260	31,513	52,521
7.00	1,125	2,251	4,502	6,753	9,004	13,505	18,007	22,509	27,011	45,018
8.00	985	1,970	3,939	5,909	7,878	11,817	15,756	19,695	23,634	39,391
9.00	875	1,751	3,501	5,252	7,003	10,504	14,006	17,507	21,008	35,014
10.00	788	1,576	3,151	4,727	6,303	9,454	12,605	15,756	18,908	31,513
12.00	657	1,313	2,626	3,939	5,252	7,878	10,504	13,130	15,756	26,260
14.00	563	1,125	2,251	3,376	4,502	6,753	9,004	11,254	13,505	22,509
16.00	492	985	1,970	2,954	3,939	5,909	7,878	9,848	11,817	19,695
18.00	438	875	1,751	2,626	3,501	5,252	7,003	8,753	10,504	17,507
20.00	394	788	1,576	2,363	3,151	4,727	6,303	7,878	9,454	15,756
25.00	315	630	1,261	1,891	2,521	3,782	5,042	6,303	7,563	12,605
30.00	263	525	1,050	1,576	2,101	3,151	4,202	5,252	6,303	10,504
40.00	197	394	788	1,182	1,576	2,363	3,151	3,939	4,727	7,878
50.00	158	315	630	945	1,261	1,891	2,521	3,151	3,782	6,303
60.00	131	263	525	788	1,050	1,576	2,101	2,626	3,151	5,252
70.00	113	225	450	675	900	1,351	1,801	2,251	2,701	4,502
80.00	98	197	394	591	788	1,182	1,576	1,970	2,363	3,939
90.00	88	175	350	525	700	1,050	1,401	1,751	2,101	3,501
100.00	79	158	315	473	630	945	1,261	1,576	1,891	3,151

Horsepower = (Torque x rpm) / 63,000*

Horsepower = (Torque x rpm) / 5,250**

* Torque is given in inch - lbs

** Torque is given in foot - lbs

Torque Values (cont)

Torque Values (inch-lbs) Given Horsepower and RPM										
HORSEPOWER										
RPM	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0	50.0	75.0
0.10										
0.20										
0.30										
0.40										
0.50										
0.60										
0.70										
0.80										
0.90										
1.00	472,688									
1.25	378,150									
1.50	315,125	420,167								
1.75	270,107	360,143								
2.00	236,344	315,125	472,688							
2.50	189,075	252,100	378,150							
3.00	157,563	210,083	315,125	420,167						
4.00	118,172	157,563	236,344	315,125	393,906	472,688				
5.00	94,538	126,050	189,075	252,100	315,125	378,150	441,175			
6.00	78,781	105,042	157,563	210,083	262,604	315,125	367,646	420,167		
7.00	67,527	90,036	135,054	180,071	225,089	270,107	315,125	360,143	450,179	
8.00	59,086	78,781	118,172	157,563	196,953	236,344	275,734	315,125	393,906	
9.00	52,521	70,028	105,042	140,056	175,069	210,083	245,097	280,111	350,139	
10.00	47,269	63,025	94,538	126,050	157,563	189,075	220,588	252,100	315,125	472,688
12.00	39,391	52,521	78,781	105,042	131,302	157,563	183,823	210,083	262,604	393,906
14.00	33,763	45,018	67,527	90,036	112,545	135,054	157,563	180,071	225,089	337,634
16.00	29,543	39,391	59,086	78,781	98,477	118,172	137,867	157,563	196,953	295,430
18.00	26,260	35,014	52,521	70,028	87,535	105,042	122,549	140,056	175,069	262,604
20.00	23,634	31,513	47,269	63,025	78,781	94,538	110,294	126,050	157,563	236,344
25.00	18,908	25,210	37,815	50,420	63,025	75,630	88,235	100,840	126,050	189,075
30.00	15,756	21,008	31,513	42,017	52,521	63,025	73,529	84,033	105,042	157,563
40.00	11,817	15,756	23,634	31,513	39,391	47,269	55,147	63,025	78,781	118,172
50.00	9,454	12,605	18,908	25,210	31,513	37,815	44,118	50,420	63,025	94,538
60.00	7,878	10,504	15,756	21,008	26,260	31,513	36,765	42,017	52,521	78,781
70.00	6,753	9,004	13,505	18,007	22,509	27,011	31,513	36,014	45,018	67,527
80.00	5,909	7,878	11,817	15,756	19,695	23,634	27,573	31,513	39,391	59,086
90.00	5,252	7,003	10,504	14,006	17,507	21,008	24,510	28,011	35,014	52,521
100.00	4,727	6,303	9,454	12,605	15,756	18,908	22,059	25,210	31,513	47,269

Horsepower = (Torque x rpm) / 63,000*

Horsepower = (Torque x rpm) / 5,250**

* Torque is given in inch - lbs

** Torque is given in foot - lbs

Engineering Class Chains

Chain Index

Hitachi Chain Number	Pitch	Product	Page	Hitachi Chain Number	Pitch	Product	Page
JB2	2.000	Mining Chain	87	94R	4.000	Roller Conveyor	12
HP3H	3.075	Drive Chain	7	95R	4.000	Roller Conveyor	12
CC5A	6.000	Raised Sidebar	23	96R	6.000	Roller Conveyor	12
25	0.902	Detachable Chain	91	96RX	6.000	Roller Conveyor	12
H25H	2.500	Drive Chain	7	97R	4.000	Roller Conveyor	12
32	1.154	Detachable Chain	91	102B	4.000	Steel Bushed	32
42	1.375	Detachable Chain	91	C102B	4.000	Cast Combination	39
45	1.630	Detachable Chain	91	WD102	5.000	Welded Steel Drag	53
51	1.155	Detachable Chain	91	102 1/2	4.040	Steel Bushed	32
52	1.506	Detachable Chain	91	C102 1/2	4.040	Cast Combination	39
53R	3.000	Roller Conveyor	12	103	3.075	Detachable Chain	91
55	1.631	Detachable Chain	91	WD104	6.000	Welded Steel Drag	53
C55	1.631	Cast Combination	39	WR106	6.000	Welded Steel	44
C55A	1.631	Transfer Chain	62	110	6.000	Steel Bushed	32
C55B	1.631	Transfer Chain	62	C110	6.000	Cast Combination	39
C55D	1.631	Transfer Chain	62	WD110	6.000	Welded Steel Drag	53
57	2.308	Detachable Chain	91	111	4.760	Steel Bushed	32
C60	2.308	Cast Combination	39	C111	4.760	Cast Combination	39
H60	2.308	H-Class Mill Chain	59	WR111	4.760	Welded Steel	44
62	1.654	Detachable Chain	91	WD112	8.000	Welded Steel Drag	53
64S	2.500	Mining Chain	87	WD113	6.000	Welded Steel Drag	53
64SM	2.500	Mining Chain	87	WD116	8.000	Welded Steel Drag	53
67	2.308	Detachable Chain	91	119R	3.075	Roller Conveyor	12
H74	2.609	H-Class Mill Chain	59	119RX	3.075	Roller Conveyor	12
75	2.609	Detachable Chain	91	WD122	8.000	Welded Steel Drag	53
77	2.297	Detachable Chain	91	H124	4.000	H-Class Mill Chain	59
C77	2.308	Cast Combination	39	WR124	4.000	Welded Steel	44
78	2.609	Detachable Chain	91	WR124H	4.063	Welded Steel	44
H78	2.609	H-Class Mill Chain	59	H130A	4.000	Transfer Chain	62
H78A	2.609	Transfer Chain	62	131	3.075	Steel Bushed	32
H78B	2.609	Transfer Chain	62	C131	3.075	Cast Combination	39
HB78	2.609	Stainless Drive Chain	101	C132	6.050	Cast Combination	39
NH78	2.609	Non Metallic Drive Chain	102	WC132	6.050	Welded Steel	44
WR78	2.609	Welded Steel	44	WR132	6.050	Welded Steel	44
H82	3.075	H-Class Mill Chain	59	H138B	4.000	Transfer Chain	62
WR82	3.075	Welded Steel	44	150X	6.050	Steel Bushed	32
WR82H	3.075	Welded Steel	44	WR155	6.050	Welded Steel	44
83R	4.000	Roller Conveyor	12	160F-SF	4.000	Proofer Chain	80
84R	4.000	Roller Conveyor	12	188	2.609	Steel Bushed	32
86R	6.000	Roller Conveyor	12	C188	2.609	Cast Combination	39
88	2.609	Detachable Chain	91	196R	6.000	Roller Conveyor	12
89R	4.000	Roller Conveyor	12	H238	3.500	Drive Chain	7
90R	4.000	Roller Conveyor	12	278R	2.609	Roller Conveyor	12
91R	4.000	Roller Conveyor	12	H344SXX	3.000	Drive Chain	7
93R	3.000	Roller Conveyor	12	X348	3.015	Drop Forged Rivetless	57

Chain Index

Hitachi Chain Number	Pitch	Product	Page	Hitachi Chain Number	Pitch	Product	Page
378R	1.654	Roller Conveyor	12	973R	9.000	Roller Conveyor	13
378RX	1.654	Roller Conveyor	12	H1031	3.075	Drive Chain	7
442	1.375	400 Class Pintle Chain	64	103100	3.000	Draw Bench Chain	74
445	1.630	400 Class Pintle Chain	64	1113R	4.040	Roller Conveyor	12
452	1.506	400 Class Pintle Chain	64	1126R	6.000	Roller Conveyor	13
455	1.630	400 Class Pintle Chain	64	1126RS	6.000	Roller Conveyor	13
X458	4.031	Drop Forged Rivetless	57	1131R	6.000	Roller Conveyor	12
462	1.634	400 Class Pintle Chain	64	1188R	4.000	Roller Conveyor	12
477	2.308	400 Class Pintle Chain	64	1212R	12.000	Roller Conveyor	13
WD480	8.000	Welded Steel Drag	53	H1242	4.063	Drive Chain	7
488	2.609	400 Class Pintle Chain	64	H1245	4.073	Drive Chain	7
HR588	2.609	Drive Chain	7	R1251	12.000	Roller Conveyor	13
603R	6.000	Roller Conveyor	12	B1263R	12.000	Roller Conveyor	13
604R	6.000	Roller Conveyor	12	D1263R	12.000	Roller Conveyor	13
607R	6.000	Roller Conveyor	12	E1263R	12.000	Roller Conveyor	13
610R	6.000	Roller Conveyor	12	1264R	12.000	Roller Conveyor	13
614R	6.000	Roller Conveyor	12	1265R	12.000	Roller Conveyor	13
625R	6.000	Roller Conveyor	12	1266R	12.000	Roller Conveyor	13
626R	6.000	Roller Conveyor	12	1271R	12.000	Roller Conveyor	13
627R	6.000	Roller Conveyor	12	1272R	12.000	Roller Conveyor	13
628R	6.000	Roller Conveyor	12	1273R	12.000	Roller Conveyor	13
629R	6.000	Roller Conveyor	12	1276R	12.000	Roller Conveyor	13
631R	6.000	Roller Conveyor	12	H1602A	5.000	Drive Chain	7
H635	4.500	Drive Chain	7	1604R	6.000	Roller Conveyor	13
663R	6.000	Roller Conveyor	12	1630R	6.000	Roller Conveyor	13
X678	6.031	Drop Forged Rivetless	57	R1706	12.000	Roller Conveyor	13
SAV715	6.000	Stainless Collector Chain	99	B1863R	18.000	Roller Conveyor	13
NM720S	6.000	Non Metallic Chain	100	D1863R	18.000	Roller Conveyor	13
800RX	8.000	Roller Conveyor	13	F1863R	18.000	Roller Conveyor	13
806R	8.000	Roller Conveyor	13	B1864R	18.000	Roller Conveyor	13
856	6.000	Steel Bushed	32	G1864R	18.000	Roller Conveyor	13
857	6.000	Steel Bushed	32	1866R	18.000	Roller Conveyor	13
859	6.000	Steel Bushed	32	1867R	18.000	Roller Conveyor	13
864	7.000	Steel Bushed	32	1871R	18.000	Roller Conveyor	13
896R	8.000	Roller Conveyor	13	1873R	18.000	Roller Conveyor	13
912R	9.000	Roller Conveyor	13	2102	4.000	Asphalt Chain	82
925R	9.000	Roller Conveyor	13	2130R	6.000	Roller Conveyor	13
961R	9.000	Roller Conveyor	13	2178RX	6.000	Roller Conveyor	12
B963R	9.000	Roller Conveyor	13	2184R	6.000	Roller Conveyor	13
D963R	9.000	Roller Conveyor	13	2184RX	6.000	Roller Conveyor	13
E963R	9.000	Roller Conveyor	13	2198RX	6.000	Roller Conveyor	12
F963R	9.000	Roller Conveyor	13	2268	4.083	Asphalt Chain	82
964R	9.000	Roller Conveyor	13	R2397	12.000	Roller Conveyor	13
965R	9.000	Roller Conveyor	13	2466R	24.000	Roller Conveyor	13
967R	9.000	Roller Conveyor	13	2467R	24.000	Roller Conveyor	13

Engineering Class Chains

Chain Index

Hitachi Chain Number	Pitch	Product	Page	Hitachi Chain Number	Pitch	Product	Page
2471R	24.000	Roller Conveyor	13	6086-OC	6.000	Oven Chain	80
2473R	24.000	Roller Conveyor	13	H6566	6.500	Drive Chain	7
2609SC	2.609	Mining Chain	88	H7080	7.000	Drive Chain	7
R2614	12.000	Roller Conveyor	13	9856	6.000	Asphalt Chain	82
A2800	8.000	Roller Conveyor	13	10475	4.000	Bar and Pin Chain	73
H3011	3.067	Drive Chain	7	10630	6.000	Bar and Pin Chain	73
3075FB	3.075	Mining Chain	89	10660	6.000	Bar and Pin Chain	73
3075SC	3.075	Mining Chain	88	20460	4.000	Bar and Pin Chain	73
3075WB	3.075	Mining Chain	89	20675	6.000	Bar and Pin Chain	73
3433	4.000	Asphalt Chain	82	20860	8.000	Bar and Pin Chain	73
DF3498	1.750	Double Flex Chain	75	21296	12.000	Bar and Pin Chain	73
DF3500	2.500	Double Flex Chain	75	30630	6.000	Bar and Pin Chain	73
DF3910	3.000	Double Flex Chain	75	30646	6.000	Bar and Pin Chain	73
3935	5.187	Asphalt Chain	82	30660	6.000	Bar and Pin Chain	73
3940	6.000	Asphalt Chain	82	103110	3.000	Draw Bench Chain	74
3945	4.000	Asphalt Chain	82	103150	3.250	Draw Bench Chain	74
3950	4.038	Asphalt Chain	82	103200	3.000	Draw Bench Chain	74
3952	4.000	Asphalt Chain	82	104220	4.250	Draw Bench Chain	74
3957	4.000	Asphalt Chain	82	104400	4.000	Draw Bench Chain	74
H4031	4.000	Drive Chain	7	104500	4.250	Draw Bench Chain	74
4034-OC	4.000	Oven Chain	79	108170	8.000	Bar and Pin Chain	73
4041-OC	4.000	Oven Chain	79	108400	8.000	Bar and Pin Chain	73
4100SUSC	4.100	Mining Chain	88	109100	9.000	Bar and Pin Chain	73
4103	3.075	400 Class Pintle Chain	64	110140	10.000	Bar and Pin Chain	73
4604	4.604	Asphalt Chain	82	112250	12.000	Bar and Pin Chain	73
H5035	5.000	Drive Chain	7	203100	3.000	Draw Bench Chain	74
H5042	5.000	Drive Chain	7	205380	5.000	Draw Bench Chain	74
H5542	5.500	Drive Chain	7	304800	4.250	Draw Bench Chain	74
H6042	6.000	Drive Chain	7	305650	5.000	Draw Bench Chain	74
H6066	6.000	Drive Chain	7				

Metric To English Conversions

Length

1 Meter =	39.37 inches	1 foot =	0.3048 meters
	3.28083 feet		30.48 centimeters
	1.09361 yards		304.8 millimeters
1 Centimeter =	0.397 inches	1 inch =	2.54 centimeters
			25.4 millimeters
1 Kilometer =	3,280.83 feet		
	1,093.61 yards		
	0.62137 miles		

Weight

16 ounces =	1 lb	1 kilogram =	2.2046 lbs
2,000 lbs =	1 Short ton	1 Metric Ton =	2,204.6 lbs
2,204.6 lbs =	1 Long ton		

Temperature

C = degrees Centigrade F = ((9/5) x C) + 32
 F = degrees Farenheit C = (5/9) x (F - 32)

Power

1 kilowatt = 1.5 Horsepower (approximate)

1 Horsepower = (1 kilowatt) / (.746 x efficiency)

efficiency = 0.90 for generators

efficiency = 0.87 for motors

1. Price and Payment Terms:

- (a) All prices set forth herein are FOB Seller's Shipping point and are payable net thirty (30) days after invoice date. A one percent (1%) cash discount from net invoice price (exclusive of all other charges) will apply to payments received within ten (10) days of invoice date. Shipments will be invoiced as of date of shipment. Accounts not paid within thirty (30) days of invoice date will bear interest from the invoice date at the rate of one and one-half percent (1 - 1/2%) per month or the maximum rate allowed by law, whichever is less. In the event of failure of timely payment by Buyer, shall pay to Seller all costs of collection, including fifteen percent (15%) of the amount due hereunder as attorney's fees if collected by or through an attorney-at-law.
- (b) Prices on the goods are exclusive of all city, state, and federal excise taxes, including, without limitation, taxes on manufacture, sales, receipts, gross income, occupation, use and similar taxes. Wherever applicable, any tax or taxes will be added to the invoice as a separate charge to be paid by the Buyer.
- (c) In addition to the purchase price for the goods Buyer shall pay and be liable for all expenses incurred by Seller for insurance, freight, cartage, warehousing, and all other charges in connection with loading and shipping the goods to the Buyer. Seller will exercise reasonable efforts to route shipments to incur the lowest available transportation charges; any premium rate shipping shall be at the request and cost of Buyer.
- (d) The minimum net invoice charge on any order shall be \$100.00.
- (e) Payment for the goods shall, if Seller so requires, be made in full prior to delivery and Seller shall be entitled to withhold delivery until such payment has been made and any check or other negotiable instrument given in payment has cleared. Seller shall have the additional right at any time to limit or cancel any credit extended or to be extended hereunder. Upon failure by Buyer to make payment to Seller within thirty (30) days after notice from Seller limiting or cancelling any credit extended or requiring Buyer to make payment before delivery, Seller shall have the option to cancel this and other contracts between Seller and Buyer.
- (f) Prices are subject to change without notice. The price for an order will be the price in effect at the time of shipment.

2. Title to and Reservation of Security Interest in the Goods:

Until Buyer has completed payment for the goods, title and ownership to said goods shall remain with Seller and its assigns. In the event it is determined that, contrary to the foregoing, title has transferred prior to full payment, Seller hereby reserves and Buyer hereby grants to Seller a purchase money security interest in the goods.

3. Limitation Of Warranty, Remedy and Liability:

- (a) Seller warrants the goods to be free from defects in workmanship and/or materials for a period of ninety (90) days from the date of shipment to Buyer. Seller or its authorized distributor must receive written notice of any warranty claim within two weeks of the date that the defect should have been discovered. To claim under this warranty, goods must be returned to Seller, freight prepaid by Buyer, for determination by Seller that such goods are defective because of poor workmanship or defective materials. Seller shall replace or repair, at its sole option and expense, any defective goods or parts thereof, and return such repaired/replacement material to Buyer, freight prepaid by Seller. THIS REMEDY IS THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO BUYER. If Seller determines in its sole discretion that the defect is attributable to any cause other than poor workmanship or defective materials (including, but not limited to, misuse or abusive operation, faulty installation, unauthorized repair), then Seller shall have no obligation whatsoever with respect to repair or replacement of the defective goods, Seller shall return the goods to Buyer, freight to be paid by Buyer, and the warranty described herein shall be void.
- (b) All specifications, performance figures, drawings, and particulars of weights and dimensions made available by Seller and not included in this warranty are approximate only and the descriptions and illustrations contained in Seller's catalogs, price lists, or sales material are intended only to present a general idea of their subject matter, and none of the items referred to above shall form part of this warranty. Recommendations for the use of the goods are suggestions only and not directions and Seller makes no express or implied warranties with respect thereto.
- (c) EXCEPT AS NOTED IN PARAGRAPH (a), THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY BY SELLER, EITHER EXPRESS OR IMPLIED.
- (d) BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, OR, INCIDENTAL OR CONSEQUENTIAL LOSS) IN CONNECTION WITH THE USE, PURCHASE, NON-USE OR OPERATION OF THE GOODS SHALL BE AVAILABLE TO IT UNDER ANY CIRCUMSTANCES, WHETHER BASED UPON NEGLIGENCE OR OTHERWISE AND IRRESPECTIVE OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF ANY SUCH DAMAGES. IN ANY EVENT, THE LIABILITY OF SELLER TO BUYER FOR ANY REASON AND UPON ANY CAUSE OF ACTION WHATSOEVER SHALL BE LIMITED TO THE AMOUNT THEN PREVIOUSLY PAID TO SELLER BY BUYER.

4. Return of Goods/Cancellation:

Once placed, orders may not be cancelled without the seller's consent. The seller may, at its sole discretion, accept returns of standard materials for credit. In this case the buyer shall obtain a RETURNED GOODS AUTHORIZATION (RGA) from the seller. No returns, of any kind, will be accepted by the seller, without a valid RGA. A copy of the RGA for shall be enclosed by the buyer with the shipment of authorized returned products to the seller. Goods returned for credit must be returned FREIGHT PREPAID to the seller's location. Such goods must also be in a resalable condition and are subject to a 20% restocking fee. Goods returned for warranty claim also require a valid RGA and must follow the shipping procedure detailed above. For additional information on how to file a warranty claim see "Limitation of Warranty, Remedy, and Liability" in our "Terms and Conditions of Sale".

5. Delay or Nonperformance:

Seller shall not be liable for delay in shipment for any cause beyond its reasonable control, nor shall such delay entitle Buyer to cancel any order or refuse to accept delivery. Seller shall not be liable for failure or delay in shipment or other performance hereunder if such failure is due in whole or in part to strikes, fires, accidents, wars; rebellions, civil commotion or public strike, acts of any government, whether legal or otherwise, acts of public enemies, force majeure, inability to secure or obtain or delay in securing or obtain transportation, machinery, materials, or sufficient qualified labor, or any other causes beyond Seller's reasonable control. Claims for shortage, damage or nondelivery shall be made directly to carrier, and request for proof of delivery must be made within ninety (90) days of invoice date.

6. Risk of Loss:

Unless otherwise specifically agreed in writing, risk of loss of the goods shall pass from Seller to Buyer when the goods or any portion thereof, property packed and secured in such a manner as to reach their destination in good condition under normal conditions of transport, are placed in the possession of the carrier, FOB Seller's shipping point for shipment to Buyer. The Seller may choose any reasonable carrier for delivery. Tender of delivery shall be deemed made at Seller's shipping point even when freight is prepaid to point of destination or Seller is required to deliver the goods to a particular destination.

7. Modifications:

This document constitutes the entire agreement of the parties with respect to the terms and conditions of sale of the goods. No modification of this document shall be binding upon Seller unless in writing and signed by the party to be bound. Any terms and provisions contained in any document of Buyer which are inconsistent with the terms and provisions hereof shall not be binding on Seller and shall not be considered applicable to the sale or shipment of the goods. No agent, employee, or representative of Seller other than its Officers has any authority to bind Seller to any affirmation, representation or warranty concerning the goods sold under this document and unless an affirmation, representation or warranty made by an Officer of Seller is specifically included in this document, it has not formed a part of the basis of this bargain and shall not in any way be enforceable.

8. Waiver:

A waiver by Seller of a breach by Buyer of any provision of this document shall not be deemed a waiver of future compliance with the provision of the document breached.

9. Controlling Law:

The validity and interpretation of this document shall be governed by the laws of the State of Georgia.

10. Jurisdiction:

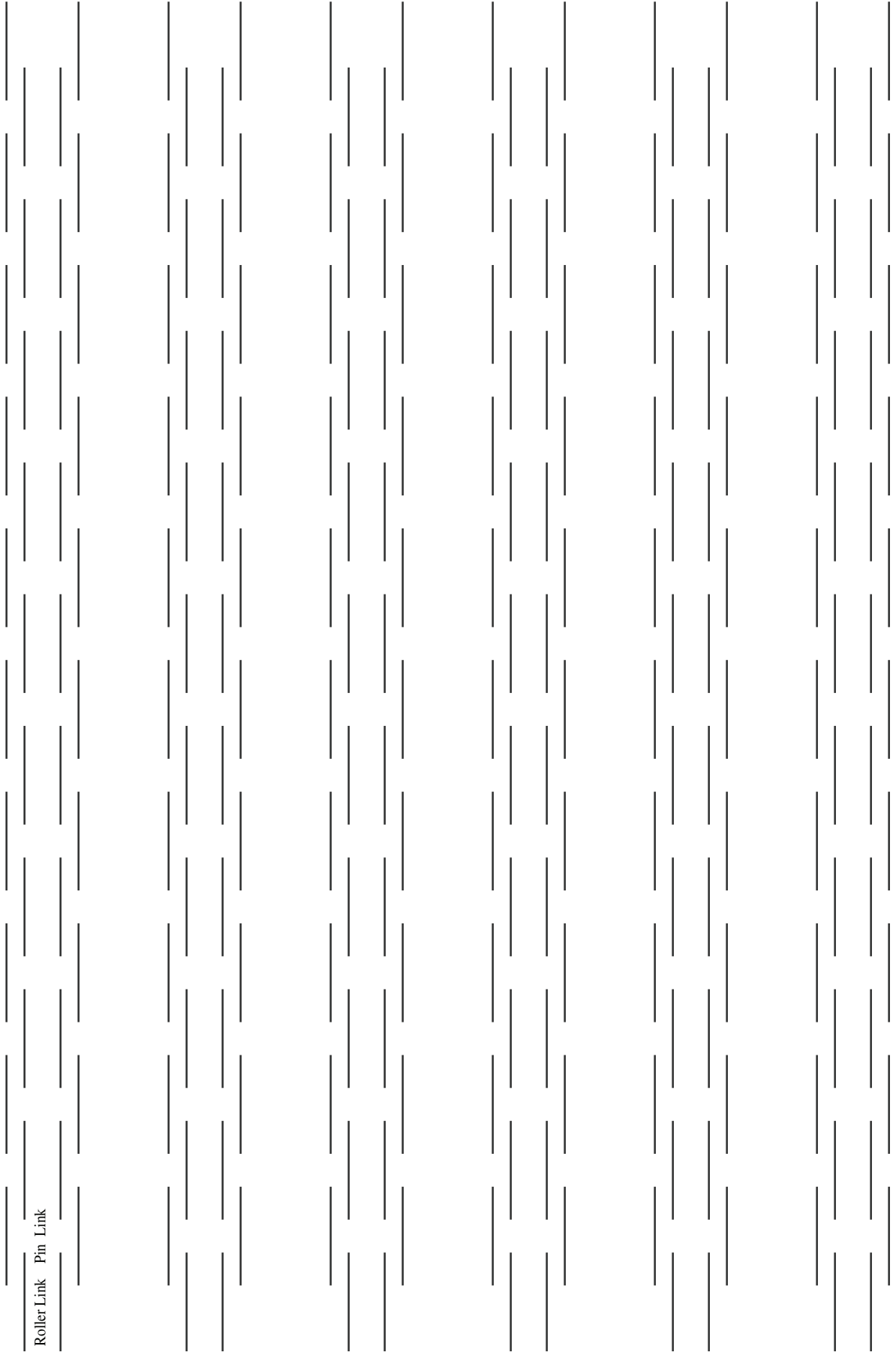
Buyer, to the extent it may lawfully do so, hereby submits to the jurisdiction of any state or federal court located in Cobb County, Georgia as well as to the jurisdiction of all courts from which an appeal may be taken from the aforesaid courts for the purpose of any suit, action or other proceeding arising out of any of the Buyer's obligations under or with respect to this document, and the Buyer expressly waives any and all objections that Buyer may have as to jurisdiction and/or venue in any of such courts.

11. Special Order Goods:

On special order goods, Buyer will indemnify and hold Seller harmless from all costs and damages arising out of any intellectual property infringement claim relating to any goods manufactured by Seller pursuant to the designs or specifications furnished by Buyer as well as any claims arising out of or connected with an end product into which goods sold by Seller are incorporated, including but not limited to any claims relating to product liability, breach of warranty, breach of contract or otherwise.

Engineering Class Chains

Attachment Spacing Line Drawing



HITACHI
Inspire the Next

INSPIRE
SERIES SBR
TM ®



“Inspired”



Hitachi Inspire Series™ SBR® chains are the highest rated standard roller chains in the world.

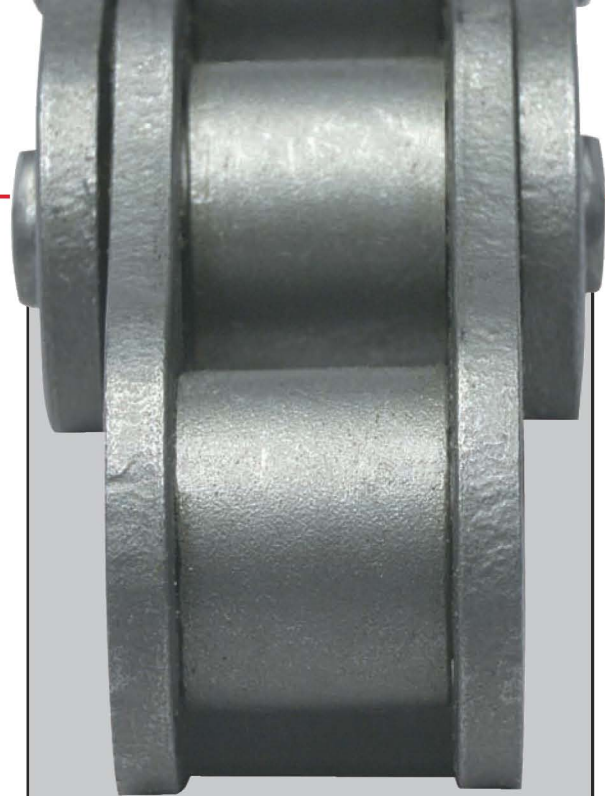
Stainless Steel Blast Treatment

Components of our new INSPIRE SERIES™ SBR® roller chains are coated with a film of stainless steel achieved through a proprietary blast treatment.

The film works with the high quality pre-lubricant to protect the chain from corrosive attack and extend life. The blast also gives the chain an enhanced silver color appearance.

Features Summary:

- 45%-50% Higher Fatigue Strength
- Highest Rated Roller Chains in the World
- Higher Horsepower Capacities
- New Ultra-high Hardness Shell On Bearing Parts
- Unique Stainless Steel Blast Treatment
- Solid Bushings and Solid Rollers

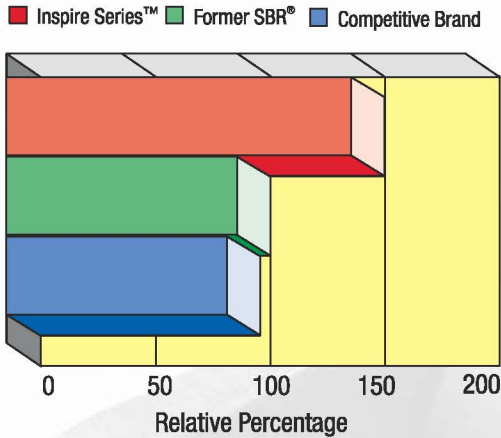


The Difference is New Patent Pending Production Technology...

- The Production Process
- Raw Material - High Quality Alloy Steel.
- Parts Fabrication.
- Heat Treatment.
- Hi-Energy Mechanical Process (Pat. Pend.).
- Stainless Steel Blast (Pat. Pend.).
- Assembly.
- Pre-Lubrication.
- Packaging.
- Shipping.

ASME/ANSI Chain Number	Rated Working Load (lbs)			ASME/ANSI Chain Number	Rated Working Load (lbs)		
	Inspire Series™	Competitive Brand	Percentage Difference		Inspire Series™	Competitive Brand	Percentage Difference
35	560 lb	480 lb	16.7%	120	8,540	6,830	25.0%
40	940 lb	810 lb	16.0%	140	11,310	9,040	25.1%
50	1,620 lb	1,430 lb	13.3%	160	14,900	11,900	25.2%
60	2,470 lb	1,980 lb	24.7%	180	16,600	13,670	21.4%
80	4,140 lb	3,300 lb	25.5%	200	18,600	16,090	15.6%
100	6,400 lb	5,070 lb	25.1%	240	25,400	22,700	12.0%

Fatigue Strength



Compressive Residual Stress Zones

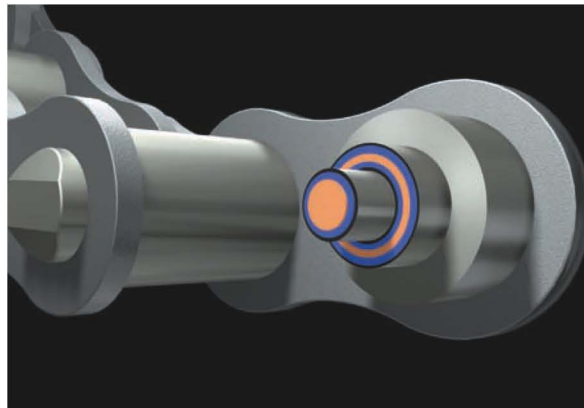
Compressive stress has long been known to improve fatigue strength. Sources of compression in existing chain products include shot peening, high interference fits between pins, bushings and side plates, and the carburized zone found on pins and bushings.

Our unique patent pending "Hi-Energy Mechanical Process" imparts substantial compressive stresses to the chain components (see chart right) resulting in a 45%-50% increase in fatigue strength. Horsepower ratings as well as the rated working loads are the highest in the world.

Triple Zone Hardness Wear Protection

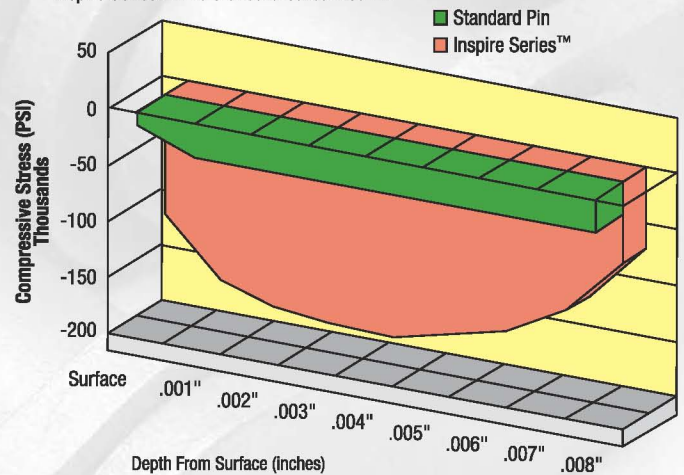
A residual, but important benefit of Hitachi's new "Hi-Energy Mechanical Process" is that an ultra-high hardness shell is developed on the surface of carburized pins and bushings. This effectively gives these wearing components three layers of hardness protection:

1. Ultra-high hardness shell (Black Zone-See Below).
2. High hardness carburized case (Blue Zone-See Below).
3. Core Hardness (Orange Zone-See Below).



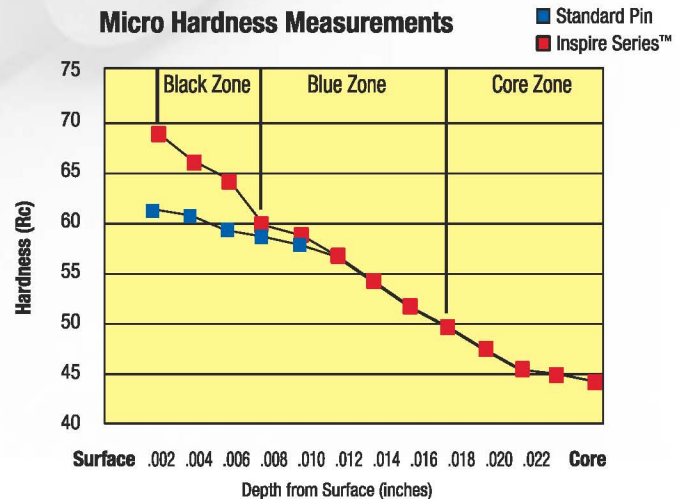
Compressive Residual Stress Measurements

Inspire Series Pin vs Standard Carburized Pin



Compressive stress measurements. The deeper trough of the INSPIRE SERIES™ SBR® pin means that the part has more compressive residual stress and is therefore more resistant to fatigue failure. Link plates, rollers and bushings undergo the same treatment with similar results.

Micro Hardness Measurements

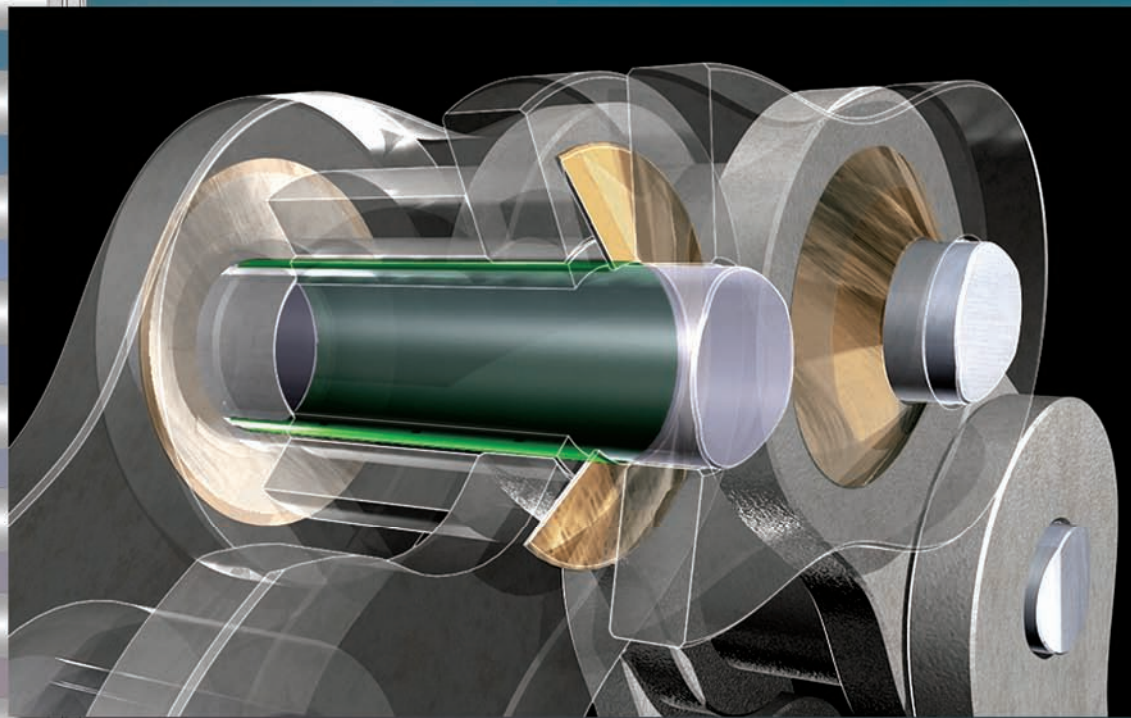


Micro hardness measurements of the pins and bushings reveal an ultra-hard shell which fights chain elongation far better than can be achieved with conventional carburized parts.

Benefits Summary:

- Greater resistance to fatigue failure.
- Longer wear life due to high hardness shell.
- Smaller chain sizes required (Higher HP ratings).
- Corrosion protection from proprietary stainless blast.

HITACHI
Inspire the Next



IMPROVED WEAR LIFE

SEALED JOINTS

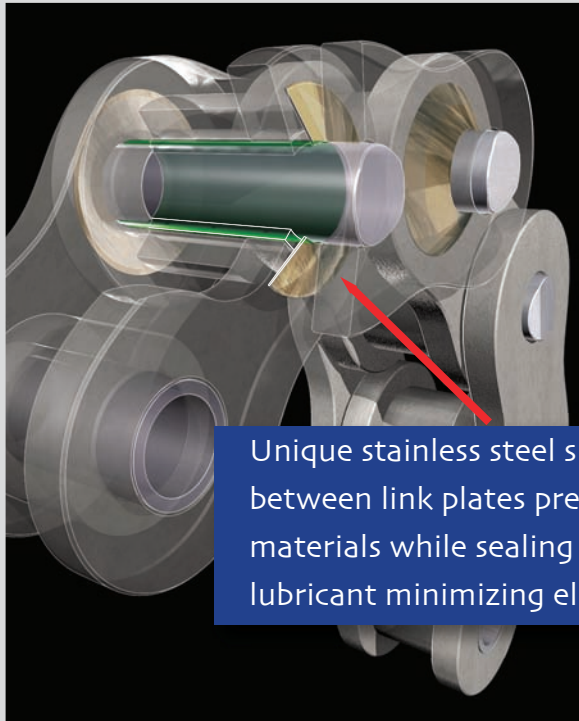
KEEPS LUBRICANT IN

KEEPS ABRASIVE MATERIAL OUT



Maintenance Free Operation now possible for Heavy Duty Roller Chain Drives

Newly developed, patent pending; SEAL GUARD™ Roller Chains from Hitachi extend the benefits of maintenance free operation to larger pitch heavy duty roller chain drives.



Unique stainless steel spring type contact seals fitted between link plates prevent penetration of abrasive materials while sealing in high quality bearing lubricant minimizing elongation due to chain wear

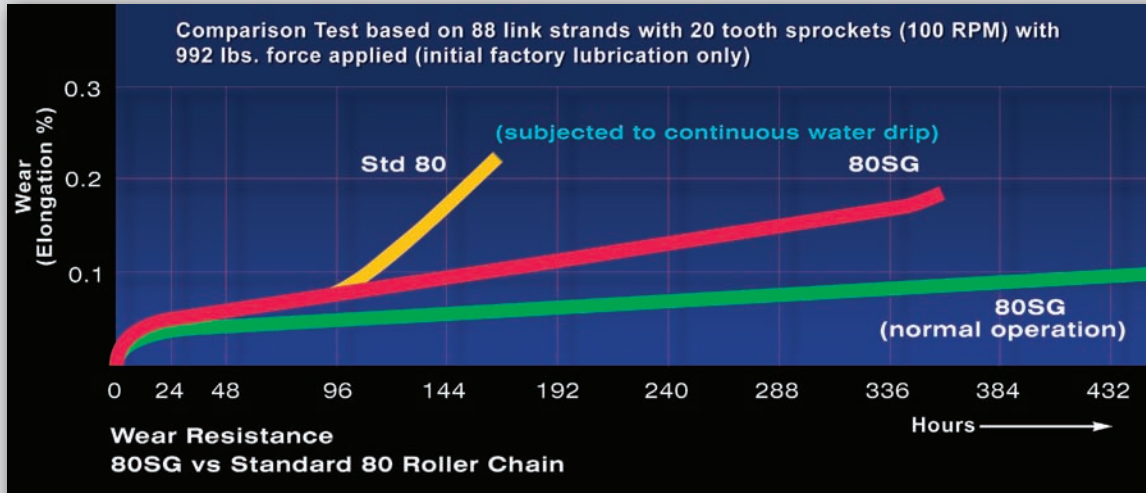
Construction, mining, shot blast equipment, as well as a broad range of heavy duty roller chain applications can now utilize large pitch roller chain - Sizes 60 (3/4" pitch) thru 240 (3" pitch) and enjoy the significant benefits of maintenance free operation. The unique stainless steel contact seals, installed between the link plates, retains a high quality bearing grease inside the chain joint, keeping out damaging abrasives such as grit and other debris that decrease chain life.

These chains never require continuous lubrication, possess the same strength and working load capability as standard duty roller chain and will operate over a wider range of temperatures and speeds. Stainless steel seals are more durable than conventional O-Rings and the lubrication benefits of the internal bearing grease offer superior lubrication over other similar types of maintenance free chains.

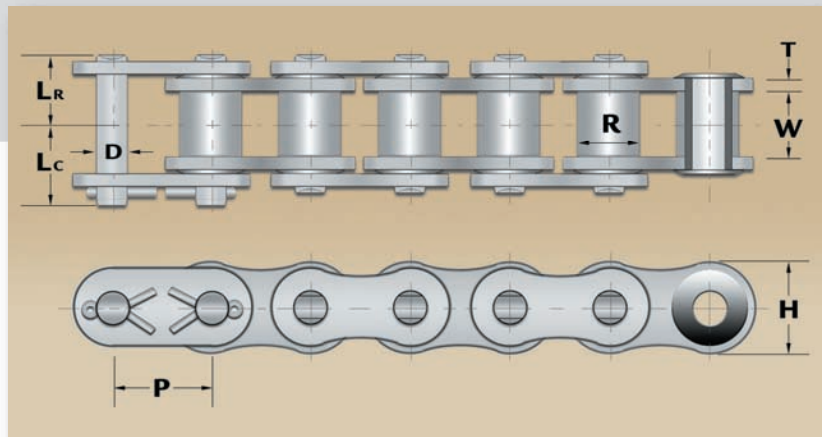


SEAL GUARD™ Roller Chains are available with a variety of corrosion resistant coatings. Our unique Inspire Series™ stainless steel blast coating is standard finish, optional black oxide or our Perfect Coat Plus® surface treatments offer significant added protection against external chain corrosion.

Solid Solutions....Our premium solid bushing-solid roller design provides maximum service life in a wide variety of challenging and demanding applications.



Proven design thoroughly tested in harsh and punishing environments.



Seal Guard Roller Chain

Sizes are given in inches

Hitachi Chain Number	Chain Pitch	Inside Width	Roller Dia.	Pin Dia.	Link Plate Thickness	Link Plate Height	Riveted Pin Length	Cottered Pin Length	Rated Working Load	Average Ultimate Strength	Average Chain Weight
	P	W	R	D	T	H	Lr	Lc	(Lbs.)	(Lbs.)	(Lbs.)
60SG	3/4	0.500	0.469	0.234	0.094	0.691	0.55	0.60	2,470	9,900	1.00
80SG	1	0.625	0.625	0.312	0.125	0.921	0.69	0.79	4,140	17,600	1.75
100SG	1-1/4	0.750	0.750	0.375	0.156	1.154	0.82	0.96	6,360	26,400	2.65
120SG	1-1/2	1.000	0.875	0.437	0.188	1.382	1.02	1.17	8,540	39,000	3.90
140SG	1-3/4	1.000	1.000	0.500	0.219	1.610	1.11	1.28	11,310	50,900	5.10
160SG	2	1.250	1.125	0.562	0.250	1.839	1.31	1.48	14,900	63,200	6.60
180SG	2-1/4	1.406	1.406	0.687	0.281	2.067	1.52	1.71	16,600	81,500	9.10
200SG	2-1/2	1.500	1.562	0.781	0.312	2.354	1.62	1.95	18,600	105,500	11.40
240SG	3	1.875	1.875	0.937	0.375	2.768	1.97	2.27	25,400	152,000	15.90

Specifications subject to change without notice

HITACHI
Inspire the Next



**PERFECT
COAT PLUS**™

MECHANICAL RUST PREVENTION SYSTEM

ZINC BLAST COATING

DI-CHROMATE SEALER

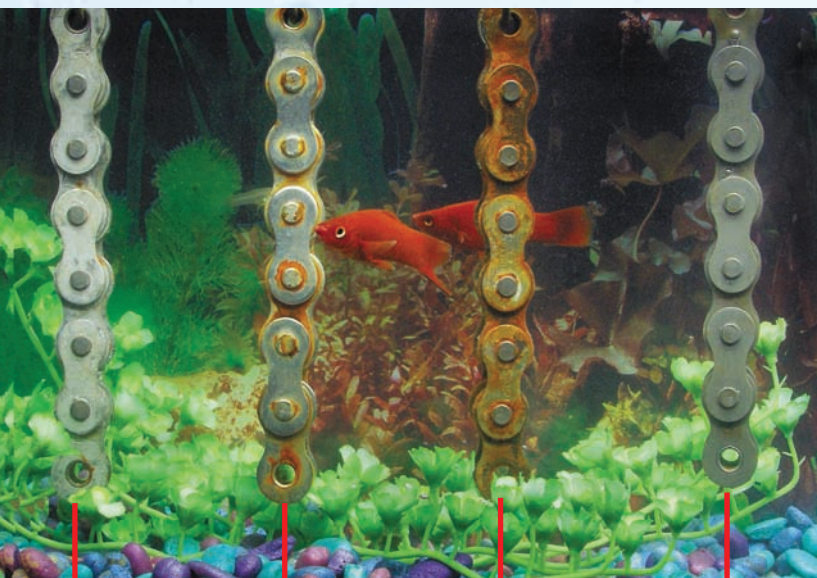
MORE CORROSION PROTECTION

NO HYDROGEN EMBRITTLEMENT



A Mechanical Rust Prevention System

Perfect Coat Plus™ chains offer up to thirty times more protection from corrosive damage compared with conventional nickel plated products. These improved chains feature a mechanical rust prevention system which utilizes a zinc-alloy-iron film coating. The resulting film is extremely durable and will not chip, flake, peel or rust in many mildly corrosive applications.



Traditional Dip-Spin
Zinc-Chrome Coating

Nickel Plated

Carbon Steel

Perfect Coat
Plus™



Carbon Steel Chain



Nickel Plated Chain

After 2 weeks both the carbon steel and nickel plated chains exhibit substantial rust. The chain joints have frozen stiff making the chain difficult to flex.

Salt Water Corrosion Test

Roller chains submerged in and out of an aerated 5% salt water solution (equivalent to seawater). Carbon steel, nickel plated, Dip-Spin Zinc Chromate and Perfect Coat Plus™ chains are tested for 14 days.

The Dip-Spin sample and Perfect Coat Plus™ chain show significantly less rust after two weeks of testing.

Note that rust development on the Dip-Spin sample (Top in photo) begins where the bushing is press fitted into the link plate. When the chain was assembled, the coating chipped, peeled or flaked, causing a corrosive attack at this area. Eventually this rust will spread underneath the plated surface reducing chain life.



Rust development at the press fit area.

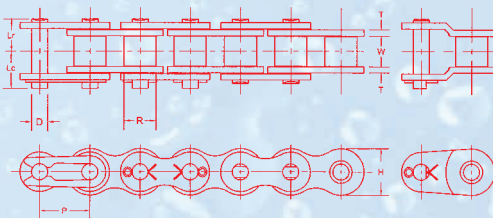
Perfect Coat Plus™ is a significantly more durable coating which does not chip, flake or peel. Virtually no rust developed on this sample.

ADVANTAGES:

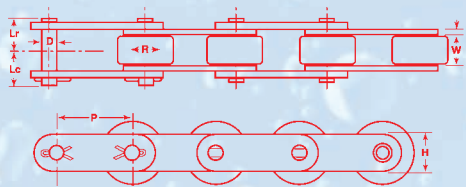
- 30 times more corrosion protection compared with nickel plating.
- Ultimate strength and working load ratings are the same as carbon steel chains.
- The possible occurrence of hydrogen embrittlement is eliminated.
- More economical compared with stainless steel.

Hitachi Perfect Coat Plus™ chains utilize a unique dual coating, mechanical rust prevention system, consisting of a zinc alloy blast and a non-aqueous di-chromate sealing solution. This coating is ideally suited for mildly corrosive, moisture related applications such as wash down lines on conveyors, outdoor service or other similar uses.

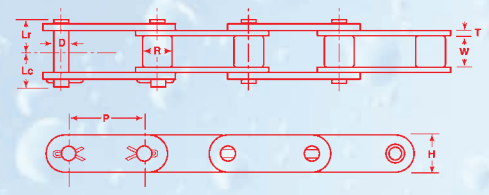
As with all platings including nickel, zinc or cadmium, Perfect Coat Plus™ is NOT FDA approved for direct contact with food products. It can however be used in the food and beverage industry where the chain does not directly contact food products, but where resistance to rust is required.



ASME/ANSI Roller Chains



Double Pitch Roller Chains

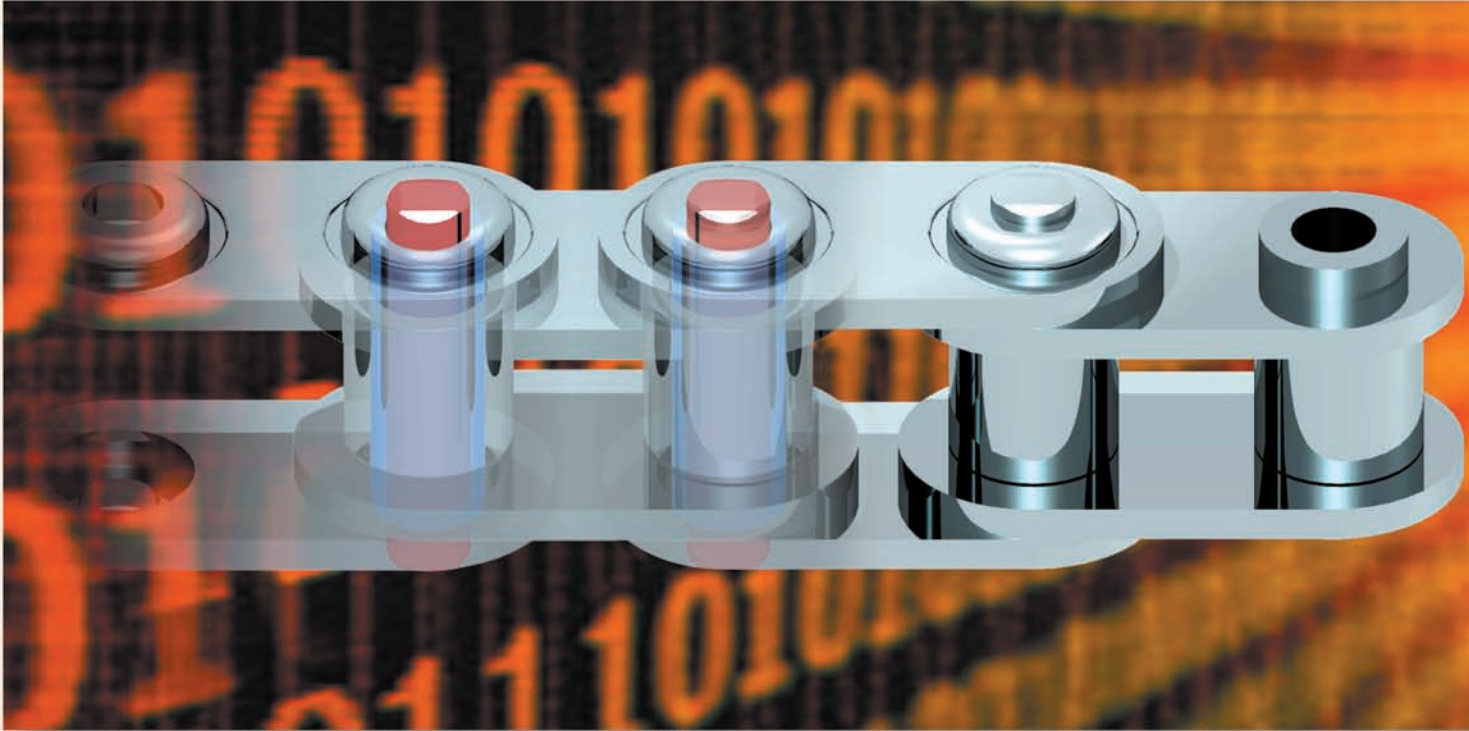


Double Pitch Roller Chains

CHAIN DIMENSIONS ARE GIVEN IN INCHES

Hitachi Roller Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
35PCP	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.272	480	2,400	0.23
40PCP	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	810	4,300	0.40
50PCP	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,400	7,200	0.66
60PCP	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,950	9,900	0.98
80PCP	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	3,300	17,600	1.69
100PCP	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	5,060	26,400	2.62
120PCP	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	6,800	39,000	3.86
C2040PCP	1	0.312	0.312	0.156	0.060	0.450	0.323	0.406	600	4,300	0.32
C2050PCP	1 1/4	0.375	0.400	0.200	0.080	0.591	0.402	0.465	1,000	7,200	0.55
C2060HPCP	1 1/2	0.500	0.469	0.234	0.125	0.670	0.567	0.654	2,000	12,300	0.93
C2080HPCP	2	0.625	0.625	0.312	0.156	0.890	0.701	0.827	3,400	20,200	1.56
C2042PCP	1	0.312	0.625	0.156	0.060	0.450	0.323	0.406	600	4,300	0.55
C2052PCP	1 1/4	0.375	0.750	0.200	0.080	0.591	0.402	0.465	1,000	7,200	0.85
C2062HPCP	1 1/2	0.500	0.875	0.234	0.125	0.670	0.567	0.654	2,000	12,300	1.40
C2082HPCP	2	0.625	1.125	0.312	0.156	0.890	0.701	0.827	3,400	20,200	2.25

HITACHI



MEGA  **CHAIN**
STAINLESS STEEL

INCREASED STRENGTH

LONGER WEAR LIFE

LABYRINTH SEAL

CORROSION RESISTANT

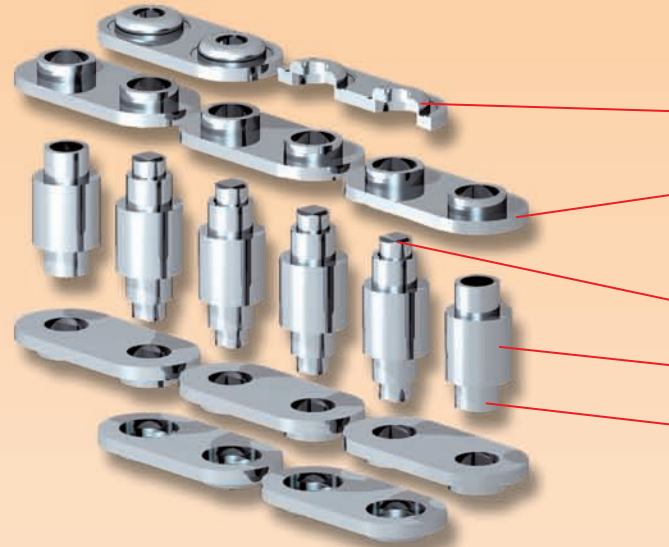
HEAT RESISTANT

*Take a new look
at an old product...*



We've totally re-engineered the traditional stainless steel roller chain product in order to achieve unparalleled strength and wear performance. Now, incredibly, these chains possess ultimate strength ratings which challenge even the best carbon steel products. Wear performance has been increased by 35%-50% due to larger bearing areas and a unique labyrinth seal design.

MEGA CHAIN CONSTRUCTION



ALL PARTS ARE MADE FROM AISI 304 AUSTENETIC STAINLESS STEEL FOR EXCELLENT HEAT AND CORROSION RESISTANCE.

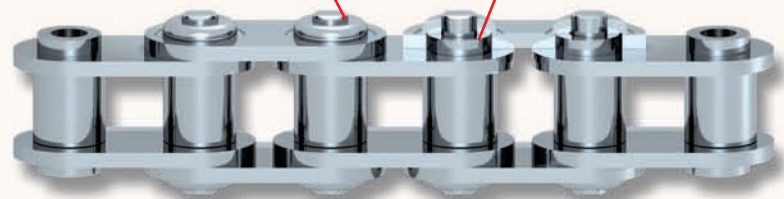
DUAL FUNCTION LINK PLATE CONSTRUCTION

Inside and outside link plates work together to improve strength and wear life in two important ways.

1. The "cap" portion of the outer plate engages the flanged portion of the inside plates under load to significantly improve both ultimate and fatigue strength. The improvement is so dramatic that these chains possess ultimate strength ratings which challenge even the best of the premium carbon steel brands.
2. The unique construction provides a labyrinth seal which helps to protect the pin/bushing wear area from abrasive particles and debris while allowing the penetration of lubricant. This feature, in combination with a larger pin/bushing bearing area, improves wear performance by 35%-50%.

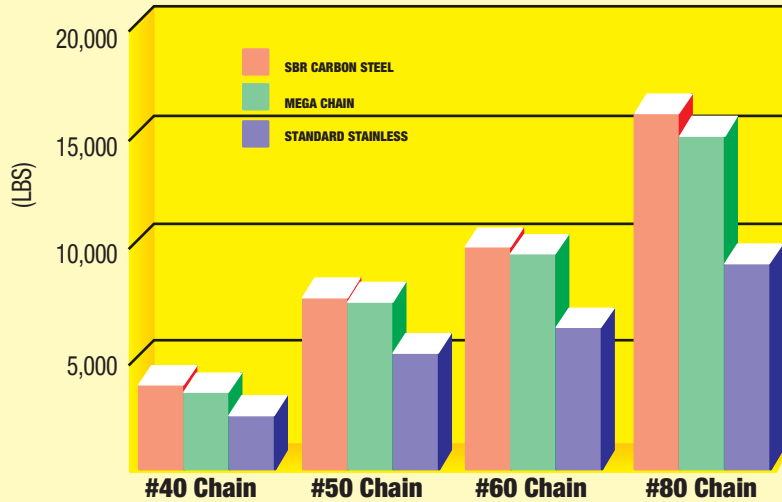
Outside plate "cap" engages the flanged inside plates increasing strength.

Labyrinth seal protects pin / bushing bearing area from contamination while allowing for lubrication.



COMPARE ULTIMATE STRENGTH RATINGS

AVERAGE TENSILE STRENGTH

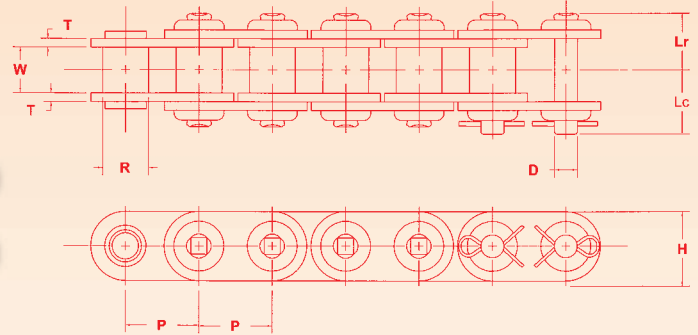
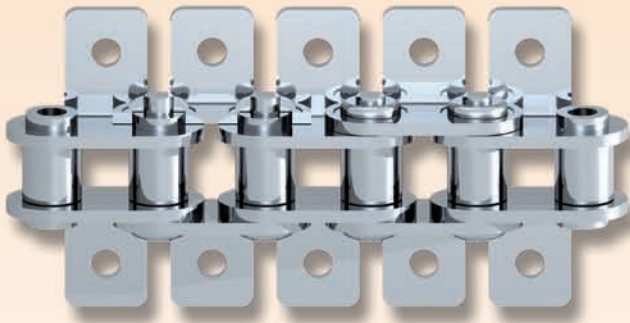


Stainless Steel MEGA CHAIN operates on standard ASME/ANSI sprockets. No special parts are required.

Double strand and double pitch chains are available from the factory.

Attachments are available for both the ANSI/ASME series and the double pitch series.

ASME/ANSI MEGA CHAIN WITH K-1 ATTACHMENT



Hitachi Roller Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length Lr	Cot. Pin Length Lc	Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
40SS Mega	1/2	0.312	0.312	0.156	0.060	0.472	0.388	0.459	250	3,970	.53
50SS Mega	5/8	0.375	0.400	0.200	0.080	0.591	0.486	0.577	400	7,050	.90
60SS Mega	3/4	0.500	0.469	0.234	0.094	0.713	0.591	0.691	570	9,700	1.3
80SS Mega	1	0.625	0.625	0.312	0.125	0.945	0.774	0.874	990	15,850	2.2

ADVANTAGES:

- Eliminates chain breakage caused by high loading.
- Increases chain life by 35% - 50% over standard stainless steel chains.
- Seals out abrasive contaminants which can reduce chain life.



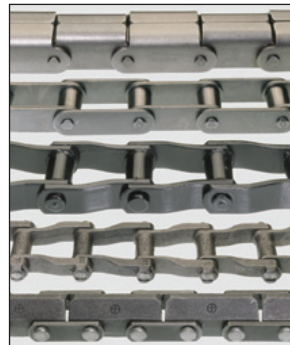
TIMBER!

Hitachi keeps you on the move with our new and complete line of sawmill chains. From our 81X chain for simple applications to our 81XHS and WH78, for tough applications, we've got you covered.

Hitachi's complete line of sawmill chains are designed to give you exactly the strength you need when you need it.

- Our Welded Steel Chain is ideal for difficult conveying, driving and elevating applications.
- When you encounter grit and heavy abrasive conditions, our elevator and conveyor chains stands up to the challenge.
- Hitachi Transfer Chains are real workhorses designed to carry heavy, concentrated loads.
- H Class Mill Chain is rugged enough to stand up to the challenge of a sawmill's heavy drives and transfer conveyors.

No matter what you need.....Hitachi is with you every step of the way.



HITACHI SAWMILL CHAINS

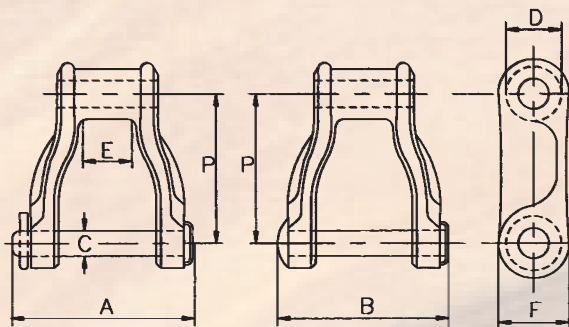


**It's a tough job,
but somebody's
gotta do it**

"H" CLASS

Hitachi "H" class mill chains are extremely strong, serviceable chains originally designed for heavy drives and transfer conveyor purposes in sawmills and the paper and pulp industry. However, "H" class chain has proven itself in other industrial applications as well, especially for use in abrasive

atmospheres where heavy, rugged chain is required. Sidebars of "H" class links are reinforced with wearing shoes which strengthen and stiffen the links and provide wearing surfaces which prolong the chain's life when it is operated in troughs, over floors or runways. "T" head pins are held by two lugs cast into the side of each link to prevent pin rotation.

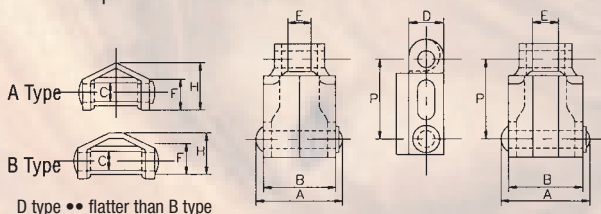


HITACHI CHAIN NUMBER	AVERAGE PITCH IN INCHES	MAX. WORKING LOAD Lbs.	AVERAGE ULTIMATE STRENGTH Lbs.	AVERAGE WEIGHT PER FOOT Lbs.	NO. OF LINKS IN 10 FEET	DIMENSIONS - INCHES					
						A	B	C	D	E	F
H60	2.308	1,170	7,000	2.1	52	2 11/16	2 17/32	5/16	3/4	3/4	3/4
H74	2.609	1,580	10,000	3.0	46	3	2 7/8	3/8	7/8	1	1
H78	2.609	2,380	16,000	4.2	46	3 1/4	3 3/16	1/2	7/8	1 1/8	1 1/8
H82	3.075	3,080	20,000	5.5	39	4	3 7/8	9/16	17/32	1 1/4	1 1/4
H124	4.000	5,000	30,000	8.8	30	5 3/16	4 7/8	3/4	17/16	1 5/8	1 9/16

TRANSFER



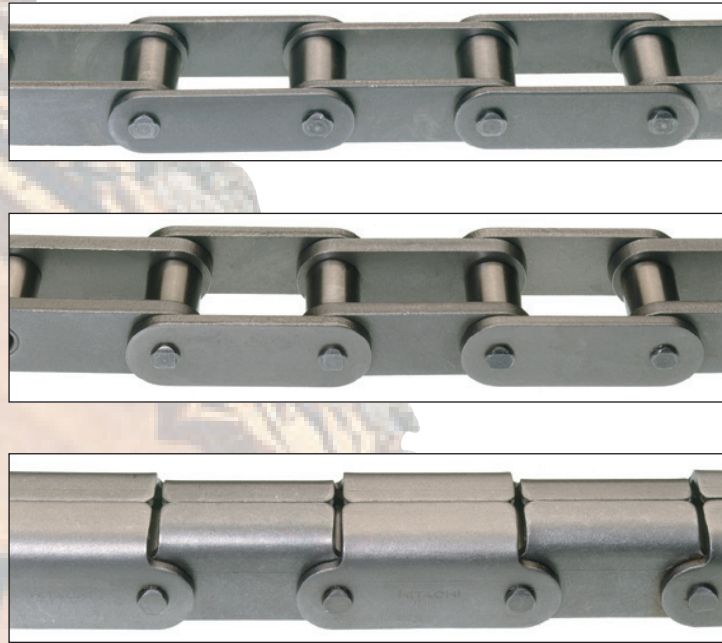
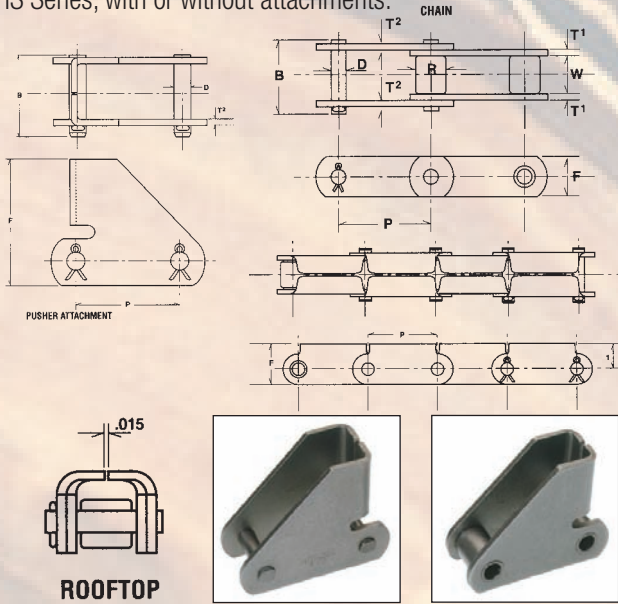
Hitachi transfer chains are designed to carry heavy, concentrated loads such as boxes, lumber, steel shapes and barrels. They are usually installed in chain troughs with two or more parallel strands moving in the same direction, and only the tops protruding. Hitachi transfer chains are furnished in rooftop or camel back design, with riveted construction and made of pearlitic malleable iron.



HITACHI CHAIN NUMBER	TYPE	PITCH	MAX WORKING LOAD LBS.	AVERAGE ULTIMATE STRENGTH LBS.	AVERAGE WEIGHT PER FOOT LBS.	NO. OF LINKS IN 10 FEET	DIMENSIONS - INCHES						
							A	B	C	D	E	F	H
H-78A	A	2.609	2,380	16,000	5.7	46	3 1/8	2 3/4	1/2	7/8	1 1/8	1	1 11/16
H-78B	B	2.609	2,380	16,000	6.2	46	3 1/8	2 3/4	1/2	7/8	1 1/8	1	1 11/16
C-55A	A	1.631	1,110	9,000	3.2	74	2	1 3/16	3/8	23/32	11/16	3/4	1 1/4
C-55B	B	1.631	1,110	9,000	3.2	74	2	1 3/16	3/8	23/32	11/16	3/4	1 1/4
C-55D	••D	1.631	1,110	9,000	3.2	74	2	1 3/16	3/8	23/32	11/16	3/4	1 1/4
H-130A	A	4.000	2,110	14,000	5.2	30	3 1/4	2 13/16	1/2	1	1	1 1/8	1 5/8
H-138B	B	4.000	2,110	15,000	5.8	30	3 1/4	2 13/16	1/2	1	1	1 1/16	1 11/16

81X LUMBER CHAINS

81X Lumber Chains are available in standard, Heavy Series, HS Series, with or without attachments.

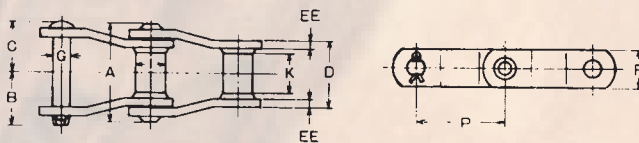


HITACHI CHAIN NUMBER	DIMENSIONS - INCHES										AVG. UTL. STRENGTH Lbs.	AVG. WEIGHT PER FOOT Lbs./Ft.
	PITCH P	ROLLER		PIN	SIDE PLATE		PIN LENGTH		RIV	COTT		
		DIA	WIDTH	DIA.	F	THICKNESS						
		R	W	D	T ₁	T ₂	A	B				
81X	2.609	.906	1.062	.437	1.125	.156	.156	1.890	2.063	25,000	2.6	
81XH	2.609	.906	1.062	.437	1.264	.312	.219	2.376	2.496	42,000	4.5	
81XHS	2.609	.906	1.062	.437	1.264	.312	.312	2.52	2.690	42,000	5.1	
81X Rooftop	2.609	.906	1.062	.437	1.562	.156	.156	2.52	2.690	25,000	6.0	
Pusher Attachment	2.609	.906	1.062	.437	3.125	.156	.156		2.066	25,000	1.4	

WELDED STEEL

Hitachi welded steel mill chains are recommended for most conveying, driving, and elevating applications where a

high-strength steel rollerless chain is required. These chains will operate on the same sprockets as those of the replaceable cast chains. Hitachi welded steel mill chains are recommended for most



HITACHI CHAIN NUMBER	DIMENSIONS - INCHES										AVERAGE ULTIMATE STRENGTH Lbs.	MAX. WORKING LOAD Lbs.	AVERAGE WEIGHT PER FOOT Lbs.
	PITCH P	BARREL		PIN			SIDE BAR		LENGTH OF BEARING D				
		MAX.	DIA.	DIA.	LENGTH			HEIGHT		THICKNESS			
		W	I	G	A	B	C	F		EE			
WR78	2.609	1 1/8	7/8	1/2	2 29/32	1 5/8	1 31/64	1 1/8	1/4	2	24,000	3,000	4.0
WR82	3.075	1 17/64	1 1/16	9/16	3 3/16	1 25/32	1 5/8	1 1/4	1/4	2 1/4	26,000	3,800	4.9
WR124	4.000	1 5/8	1 7/16	3/4	4 7/64	2 25/64	2 7/64	1 1/2	3/8	2 3/4	46,000	6,300	8.5
WR132	6.050	3	1 5/8	1	6 7/64	3 25/64	3 5/32	2	1/2	4 3/8	84,000	13,100	13.4
WH78	2.609	1 1/8	7/8	1/2	2 29/32	1 5/8	1 31/64	1 1/8	1/4	2	36,000	3,500	4.0
WH82	3.075	1 17/64	1 1/16	9/16	3 3/16	1 25/32	1 5/8	1 1/4	1/4	2 1/4	40,000	4,500	4.9
WH124	4.000	1 5/8	1 7/16	3/4	4 7/64	2 25/64	2 7/64	1 1/2	3/8	2 3/4	60,000	7,350	8.5
WH132	6.050	3	1 5/8	1	6 7/64	3 25/64	3 5/32	2	1/2	4 3/8	100,000	15,000	13.4

WR = Heat Treated Pins Only
WH = All Parts Heat Treated

HITACHI SAWMILL CHAINS

 **Hitachi Maxco, Ltd.**

ATLANTA

Ⓞ Hitachi Maxco, Ltd.
1630 Albritton Drive
Kennesaw, GA. 30152
800-241-8209
Tel: (770) 424-9350
Fax: (770) 424-9145



PORTLAND

Ⓞ Hitachi Maxco, Ltd.
3529 N.W. Yeon Avenue
Portland, OR 97210
800-544-7943
Tel: (503) 228-6828
Fax: (503) 228-6703

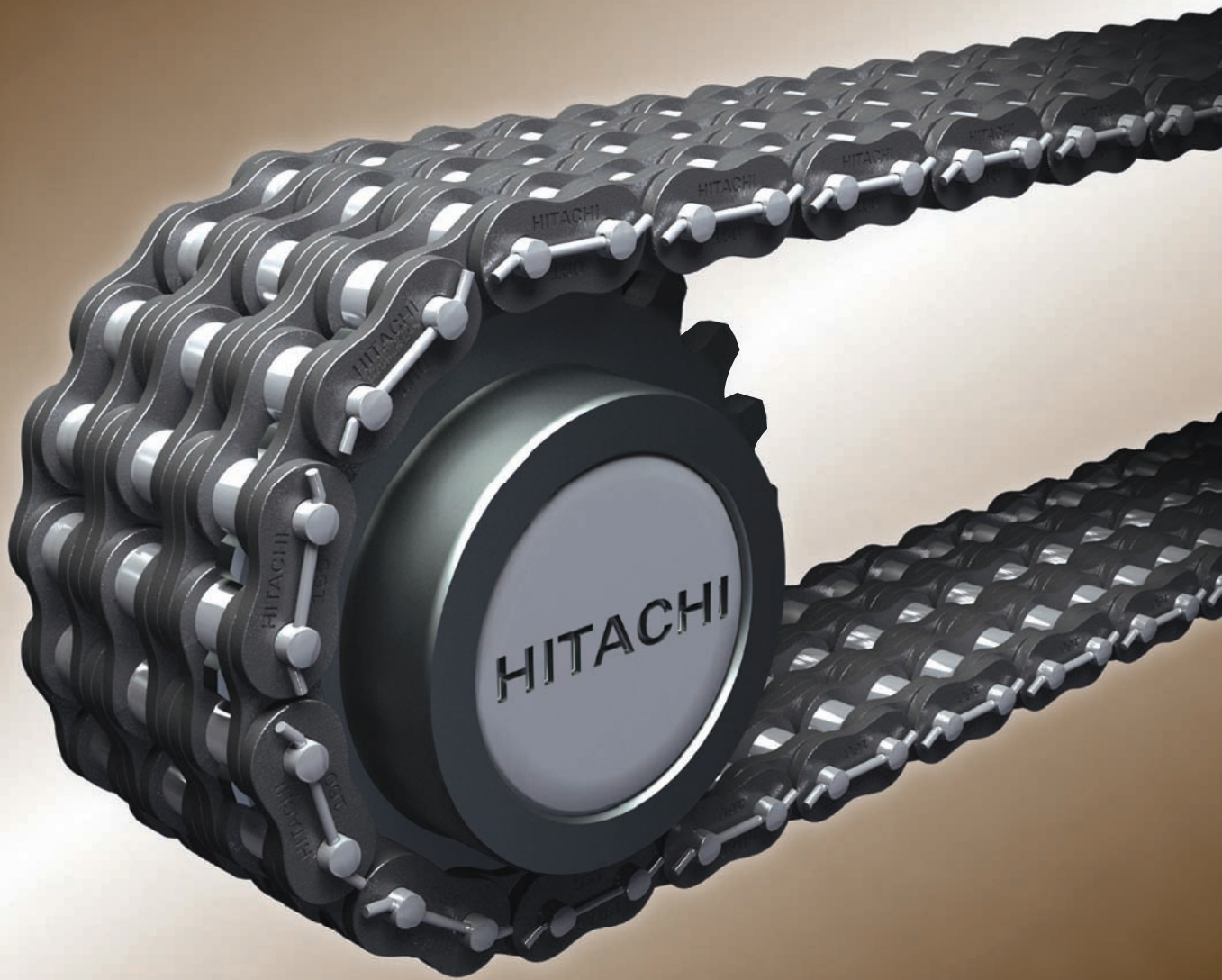


Hitachi customers use chains in various applications. A typical application is a lumber deck conveying unplanned lumber from the sawmill to the planer.

**If It's A Tough
Job, Hitachi
Can Do It!**



HITACHI
Inspire the Next



API Series Oil Field Chains

API Series Oil Field Chains

Unleash the Power - API Series Oil Field Chains from Hitachi

Hitachi API series Oil Field Chains are designed and built to provide maximum performance and reliability for oil field service. These exceptional chains possess the highest fatigue strength ratings and shock load resistance compared with any standard chain series we currently build.

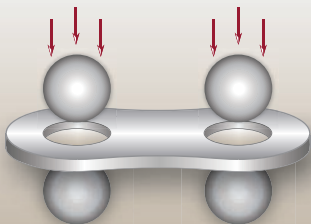
Engineering and Technical Specifications

- Solid bushings and rollers
- Ballized pitch holes
- Wide waist link plates
- Press fitted center link plates for multi-strand chains
- Patented high energy mechanical treatment for pins
- Shot peened rollers and bushings
- Unique "bushed" multi-strand connecting links
- Factory applied hot dipped wax type pre-lubricant
- Special 4-pitch riveted type offset links available
- Patented Stainless Steel blast for link plates

Bushed Type Multi-Strand Connecting Links

Hitachi Multi-strand API Oil Field chain connecting pins possess unique bushed center plates. The bushing provides a press fit to the center plates that improves fatigue strength. These connecting links possess the same dynamic capacity as the base chain yet are easy to install in the field.

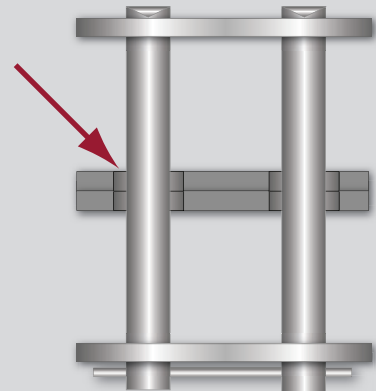
Ball Drifted Link Plates



After heat treatment, link plates on Hitachi API series Oil Field Chains are ball drifted to eliminate small imperfections and impart beneficial compressive residual stresses while improving fatigue strength providing greater reliable service life.



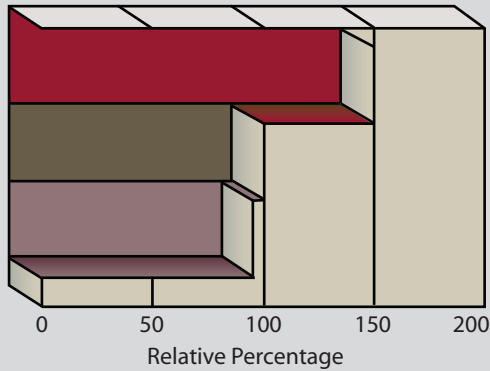
American
Petroleum
Institute
License Number 7F-0025



API Chains, Features and Benefits

Fatigue Strength

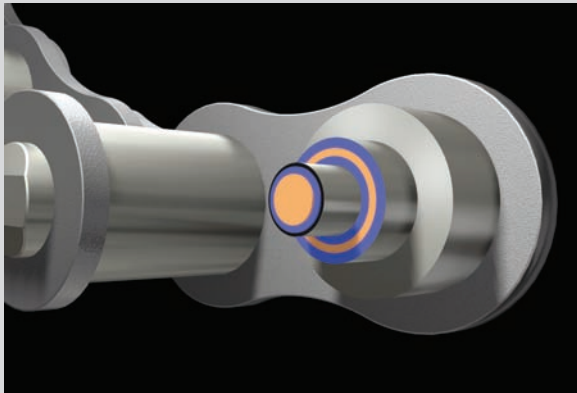
■ Inspire Series™ ■ Former SBR® ■ Competitive Brand



Triple Zone Hardness Wear Protection

A residual, but important benefit of Hitachi's new "Hi-Energy Mechanical Treatment" is that an ultra-high hardness shell is developed on the surface of carburized pins. This effectively gives these wearing components three layers of hardness protection:

1. Ultra-high hardness shell (Black Zone - See Below)
2. High hardness carburized case (Blue Zone - See Below)
3. Core hardness (Orange Zone - See Below)



Micro hardness measurements of the pins reveal an ultra-hard shell which fights chain elongation far better than can be achieved with conventional carburized parts.

Benefits Summary

- Greater resistance to fatigue failure.
- Longer wear life due to high hardness shell.
- Smaller chain sizes required (Higher HP ratings).
- Corrosion protection from proprietary stainless blast.

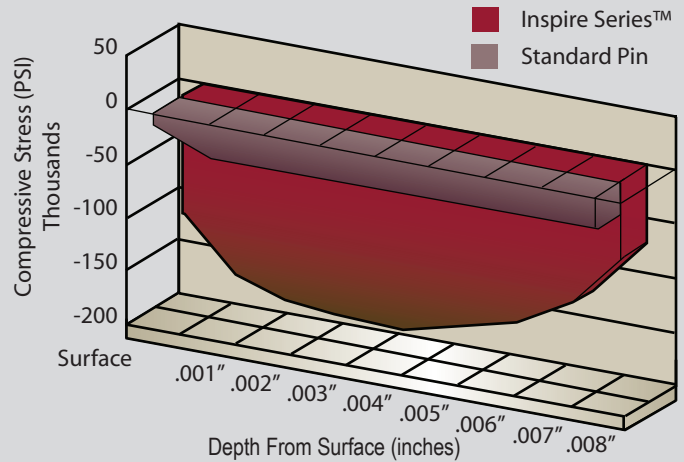
Compressive Residual Stress Zones

Compressive stress has long been known to improve fatigue strength. Sources of compression in existing chain products include shot peening, high interference fits between pins, bushing and side plates, and the carburized zone found on pins and bushings.

Our unique patent pending "Hi-Energy Mechanical Treatment" imparts substantial compressive stresses to the chain components (see chart below) resulting in a 45%-50% increase in fatigue strength. Horsepower ratings as well as the rated working loads are the highest in the world.

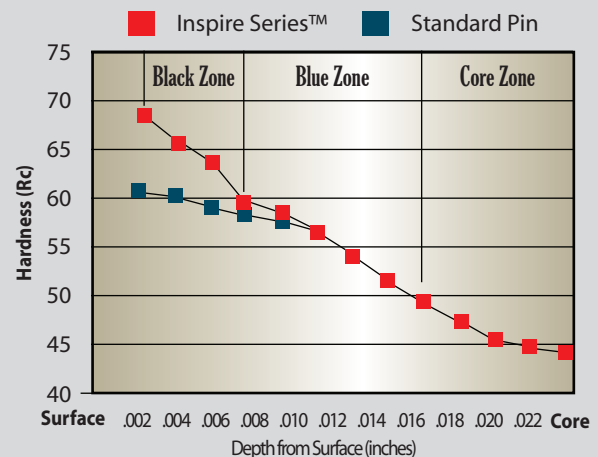
Compressive Residual Stress Measurements

Inspire Series™ Pin vs. Standard Carburized Pin

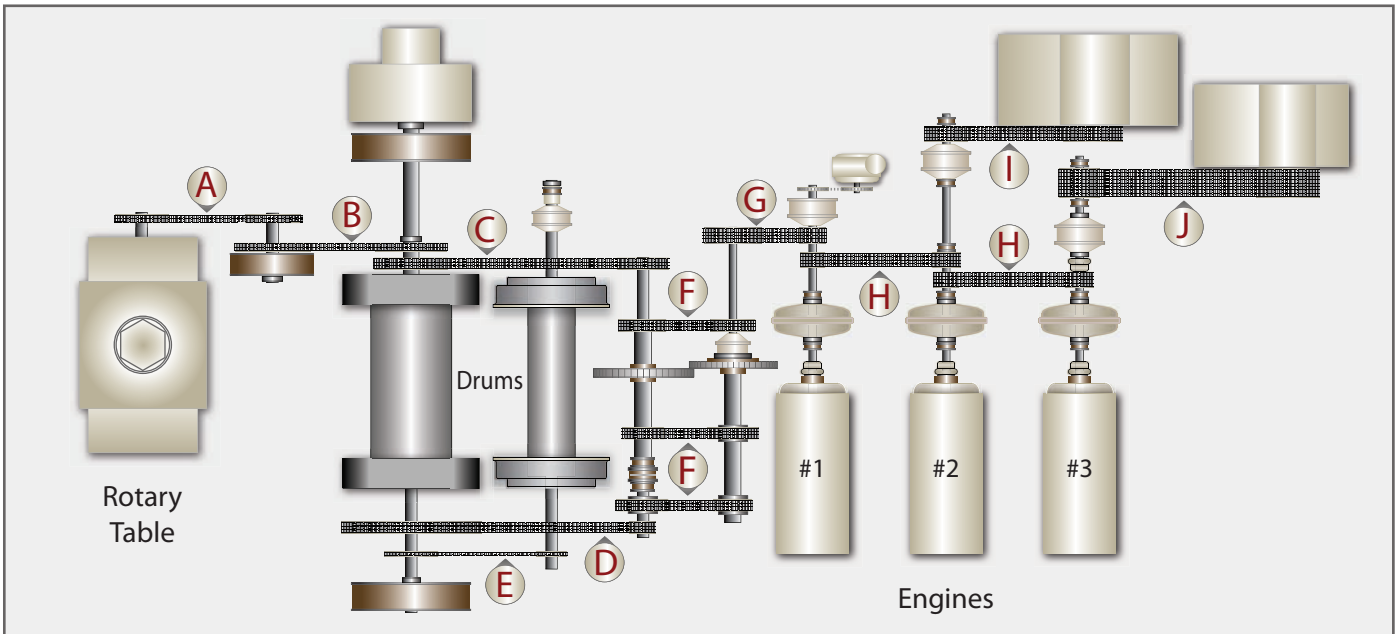


Compressive stress measurements. The deeper trough of the INSPIRE SERIES™ SBR® pin means that the part has more compressive residual stress and is therefore more resistant to fatigue failure.

Micro Hardness Measurements

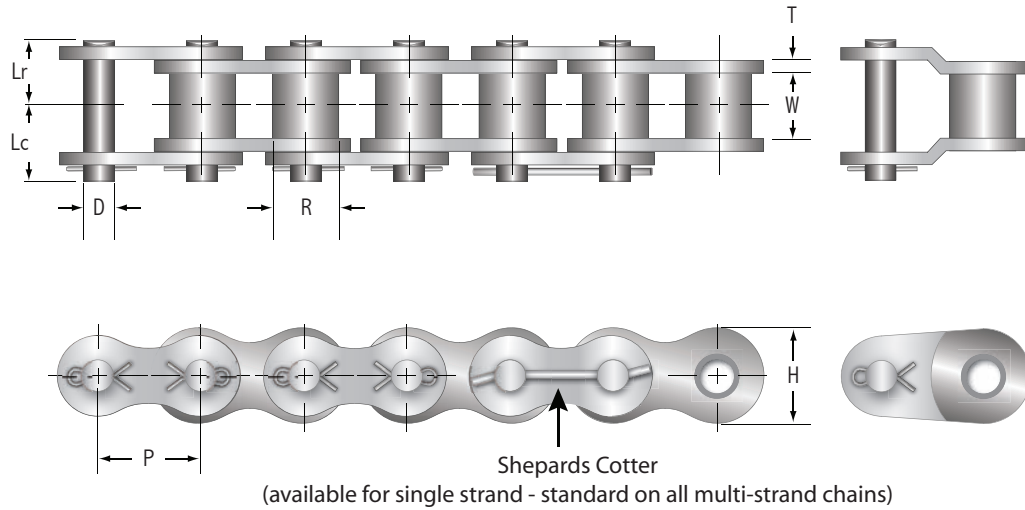


Oil Field Drawworks, Compound and Pump Drives



COMPONENT	Rig Horsepower						
	500	750	1000	1500	2000	3000	4000
A Rotary Table	140-1 120-1	140-2 160-1	140-2 160-1	160-2 140-2	160-2	160-2	160-2
B Rotary Countershaft	140-1 120-1	140-2 160-1	140-2 160-1	160-2 140-2	160-2	160-2 200H-1	160-2
C High Drum	120-3 140-2	160-2 140-2	140-3 160-2	160-3	160-4	200H-3	
D Low Drum	120-3 140-2	160-2 140-3	140-3 160-2	160-3	160-4	200H3	240-3
E Cat Shaft	140-1 120-1	160-1 140-2	160-1 140-2	160-1 140-2	160-2	160-2 200H-1	160-2
F Transmission	120-2 100-3	140-2	160-2 140-3	160-3	160-4 160-3	160-4 200H-3	140-8
G Drawworks Input	100-3 100-4	100-4	120-3 120-4	120-4	120-6	120-8	140-8
H Compound	100-3	100-4	120-3 120-4	120-4	120-6	120-8	140-8
I Mid Pump Drive	100-4 100-3	100-6 100-4	120-4 120-3	120-6 120-4	120-8 120-6	120-8	140-8
J Mid Pump Drive	100-4 100-3	100-6 100-4	120-4 120-3	120-6 120-4	120-8 120-6	120-8	140-8

Single Strand API Series Oil Field Chain

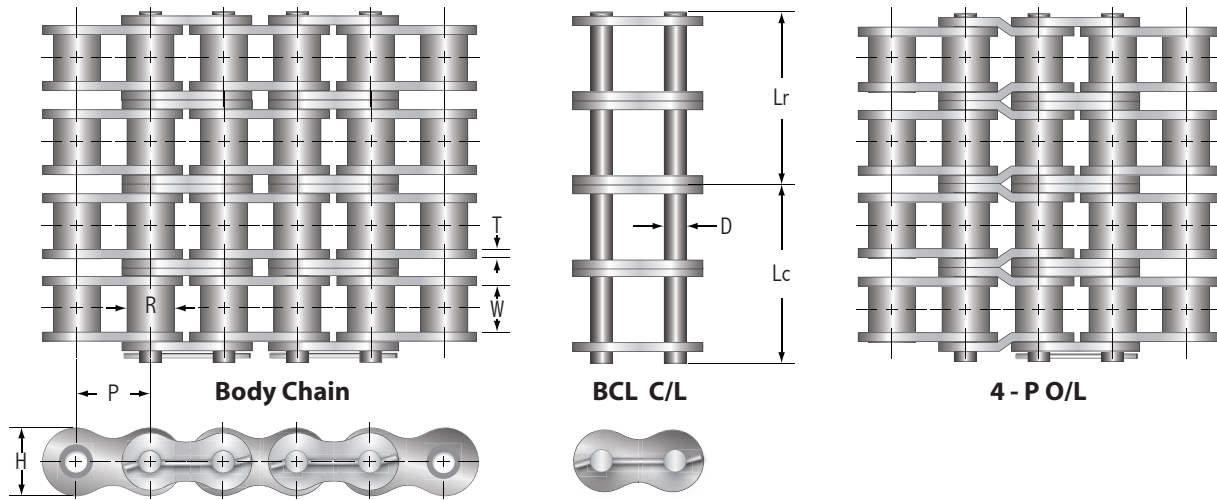


Chain Dimensions Are Given In Inches

	Hitachi Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	R/L Plate Height H	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs/Ft)
	ASME ANSI Standard Chains	80	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	4,140	17,600
	100	1-1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	6,360	26,400	2.62
	120	1-1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	8,540	39,000	3.87
	140	1-3/4	1.000	1.000	0.500	0.219	1.610	1.063	1.232	11,310	50,900	4.98
	160	2	1.250	1.125	0.562	0.250	1.839	1.268	1.437	14,900	63,200	6.58
	180	2-1/4	1.406	1.406	0.687	0.281	2.067	1.429	1.657	16,600	81,500	9.00
	200	2-1/2	1.500	1.562	0.781	0.312	2.354	1.547	1.878	18,600	105,500	11.38
	240	3	1.875	1.875	0.937	0.375	2.768	1.898	2.201	25,400	152,000	15.89
Heavy Series Chains	80H	1	0.625	0.625	0.312	0.156	0.921	0.705	0.819	4,140	20,200	1.88
	100H	1-1/4	0.750	0.750	0.375	0.187	1.154	0.835	0.972	6360	30,800	2.78
	120H	1-1/2	1.000	0.875	0.437	0.219	1.382	1.039	1.213	8,540	41,800	3.91
	140H	1-3/4	1.000	1.000	0.500	0.250	1.610	1.126	1.307	11,310	54,200	5.64
	160H	2	1.250	1.125	0.562	0.281	1.839	1.339	1.535	14,900	68,700	7.28
	180H	2-1/4	1.406	1.406	0.687	0.312	2.067	1.488	1.720	16,600	83,700	10.18
	200H	2-1/2	1.500	1.562	0.781	0.375	2.354	1.669	2.008	18,600	117,000	11.97

Dimensions subject to change

100 / 120 Multi Strand API Series Oil Field Chains



100 API Series Roller Chain Multi-Strand

Dimensions (inches)

ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
100	1-1/4	0.750	0.750	0.375	0.156	1.154	96	Yes	No

Pin Lengths and Chain Ratings

ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
100-2	2	1.475	1.627	2.950	3.102	1.153	8,650	52,800	5.19
100-3	3	2.180	2.332	4.360	4.512	1.153	12,730	79,200	7.77
100-4	4	2.902	3.036	5.804	5.938	1.153	16,800	105,600	10.33
100-6	6	4.308	4.448	8.616	8.756	1.153	23,410	158,400	15.49

120 API Series Roller Chain Multi-Strand

Dimensions (inches)

ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
120	1-1/2	1.000	0.875	0.437	0.187	1.382	80	Yes	No

Pin Lengths and Chain Ratings

ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
120-2	2	1.870	1.020	3.740	2.890	1.787	11,610	78,000	7.77
120-3	3	2.766	2.920	5.532	5.686	1.787	17,080	117,000	11.56
120-4	4	3.664	3.817	7.328	7.481	1.787	22,540	156,000	15.40
120-5	5	4.558	4.710	9.116	9.268	1.787	26,640	195,000	19.25
120-6	6	5.451	5.606	10.902	11.057	1.787	31,420	234,000	23.09
120-8	8	7.234	7.400	18.042	18.209	1.787	42,500	312,000	30.78

140 / 160 Multi Strand API Series Oil Field Chains

140 API Series Roller Chain Multi-Strand

Dimensions (inches)

ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
140	1-3/4	1.000	1.000	0.500	0.219	1.610	68	Yes	No

Pin Lengths and Chain Ratings

ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
140-2	2	2.028	2.197	4.056	4.225	1.925	15,370	101,800	9.83
140-3	3	2.983	3.163	5.966	6.146	1.925	22,600	152,700	14.72
140-4	4	3.961	4.130	7.922	8.091	1.925	29,830	203,600	19.60
140-6	6	5.886	6.055	11.772	11.941	1.925	41,580	305,400	29.38
140-8	8	7.806	7.985	15.612	15.792	1.925	56,000	407,200	39.16

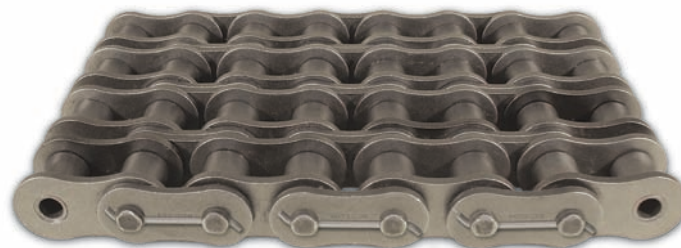
160 API Series Roller Chain Multi-Strand

Dimensions (inches)

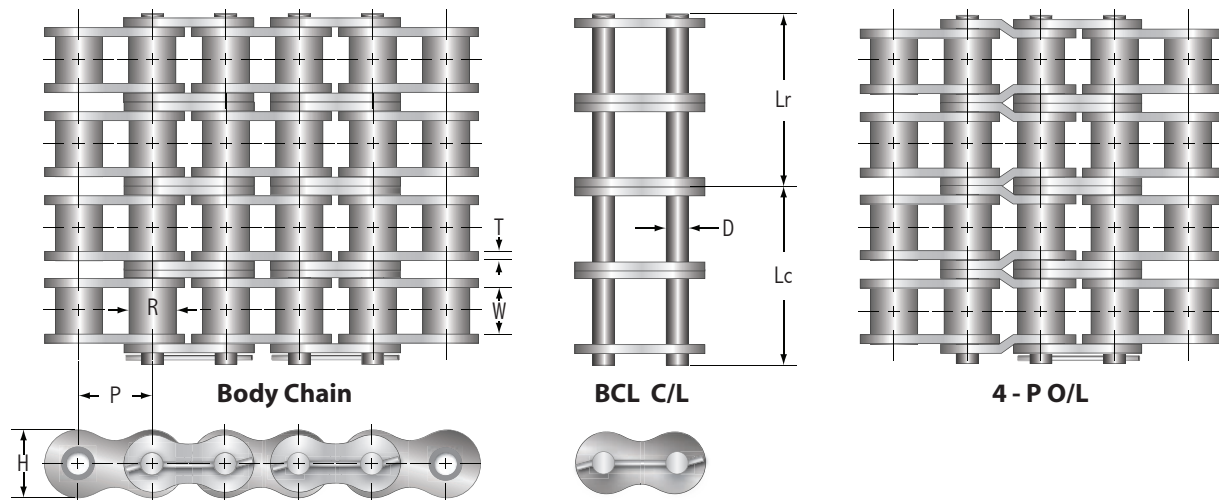
ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
160	2	1.250	1.125	0.562	0.250	1.839	60	Yes	No

Pin Lengths and Chain Ratings

ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
160-2	2	2.417	2.591	4.835	5.008	2.303	20,230	126,400	13.07
160-3	3	3.571	3.740	7.142	7.311	2.303	29,750	189,600	19.60
160-4	4	4.732	4.902	9.465	9.634	2.303	39,270	252,800	26.05



200 / 240 Multi Strand API Series Oil Field Chains



200 API Series Roller Chain Multi-Strand

Dimensions (inches)

ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
200	2-1/2	1.500	1.562	0.781	0.312	2.354	48	Yes	No

Pin Lengths and Chain Ratings

ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
200-2	2	2.953	3.288	5.906	6.241	2.819	27,350	211,000	22.67

240 API Series Roller Chain Multi-Strand

Dimensions (inches)

ASME / ANSI Chain Number	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Roller Link Plate Height H	Number of Links in 10 ft	Available Construction	
								Cottered	Riveted
240	3	1.875	1.875	0.937	0.375	2.768	40	Yes	No

Pin Lengths and Chain Ratings

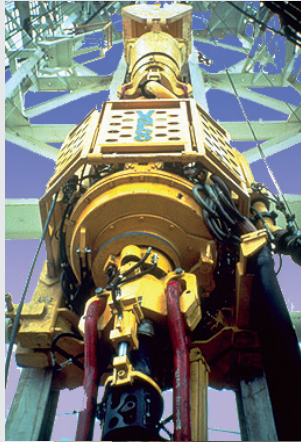
ASME / ANSI Chain Number	Number of Strands	C/L Chain to Riv. Pin End Lr	C/L Chain to Cot. Pin End Lc	Overall Length Riveted Pin Lr + Lr	Overall Length Conn. Pin Lr + Lc	Transverse Pitch for Multi-strand TP	Rated Working Load (Lbs)	Avg Ultimate Strength (Lbs)	Avg Chain Weight (Lbs / foot)
240-3	3	5.354	5.654	10.708	11.008	3.457	55,680	456,000	47.45

Dimensions subject to change

Service Centers

Service Centers

Hitachi maintains full service warehouse centers in Atlanta, GA and Portland, OR as well as regional stocking distributor locations throughout North America



East Coast Service Center
Atlanta
Hitachi Maxco, Ltd.
1630 Cobb International Blvd.
Kennesaw, GA 30152
Ph: 800-241-8209
Fx: 770-424-9145



West Coast Service Center
Portland
Hitachi Maxco, Ltd.
3529 N.W. Yeon Avenue
Portland, OR 97210
Ph: 800-544-7943
Fx: 503-228-6703





The Highest Rated Standard Roller Chains In The World

Development History-SBR®

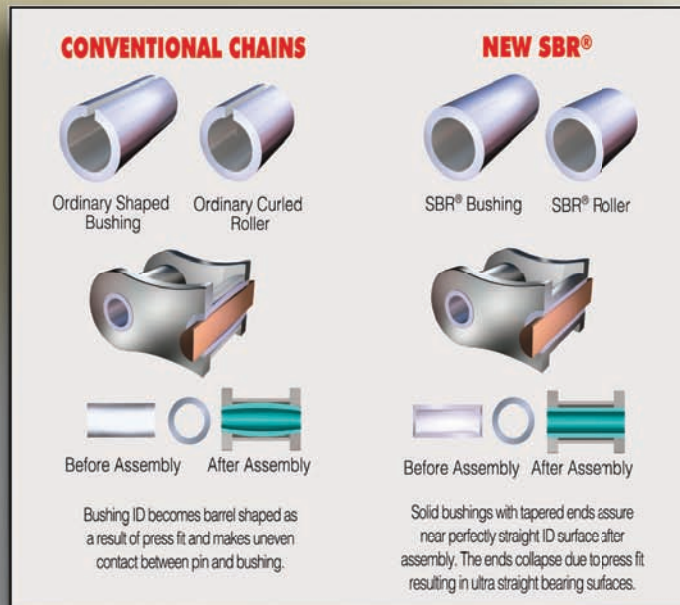
In 1987 Hitachi introduced the first premium line of solid bushing/solid roller (SBR®) industrial chain products to the North American marketplace. Cold forged solid steel parts replaced traditional curled components to increase strength and extend chain life.

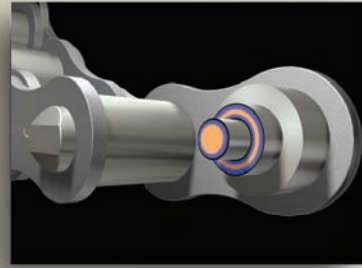
This new idea gained in popularity during the 1990s. Some producers began copying the technology for use in their standard products, while others offered solid bushing - solid roller chains as a high cost premium option.

Neo-SBR®

In 1997 Hitachi added a unique coating to pins and bushings and re-designed the connecting link. A good product was made better as our design focus shifted to improving chain wear life and improving the endurance of the connecting link.

The new coating assisted lubrication and protected against corrosion. A 5% - 10% increase in wear life was achieved and Hitachi roller chains were now challenging the best products in the world.





The INSPIRE SERIES™ SBR®

Today Hitachi stands poised to offer a quantum leap in the performance of standard roller chain. New innovations in manufacturing technologies and parts processing have led to the development of our new INSPIRE SERIES™ SBR® line of standard roller chain products.

A unique patent pending, "Hi-Energy Mechanical Process" is performed on all of the chain's components and has yielded surprising benefits in both the fatigue strength and wear performance of this remarkable new series. INSPIRE SERIES™ SBR® chains possess the highest working load and horsepower capacity ratings in the world.

Serving North American Industry

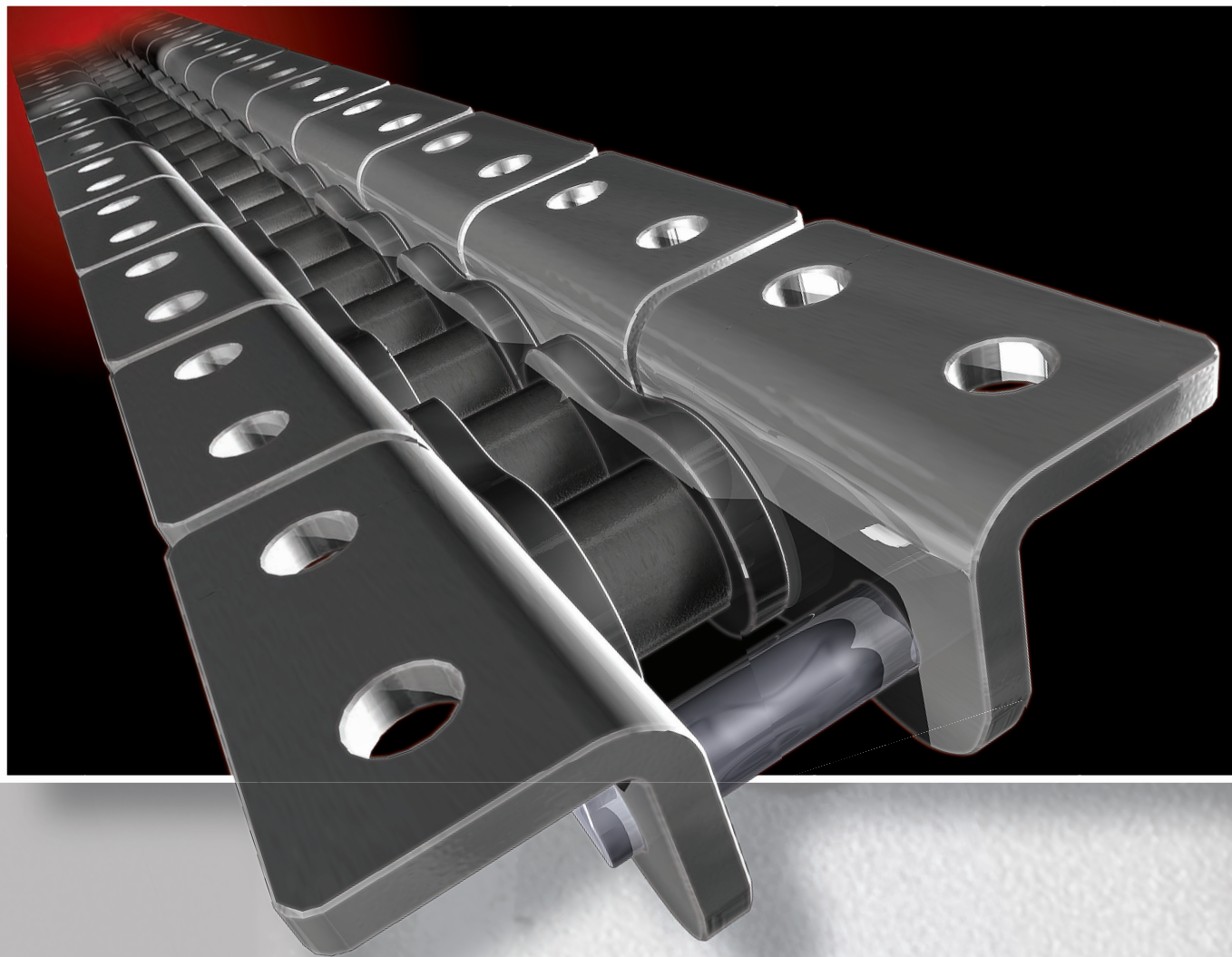
Whether for power transmission or conveying; in the food and beverage, packaging, forest products, mining, pharmaceutical, automotive, or the high speed printing industries, count on Hitachi to provide the ultimate in performance and value for industrial roller chain products . . . and the next . . .



HITACHI

Inspire the Next

HITACHI
Inspire the Next



ATTACHMENT CHAINS

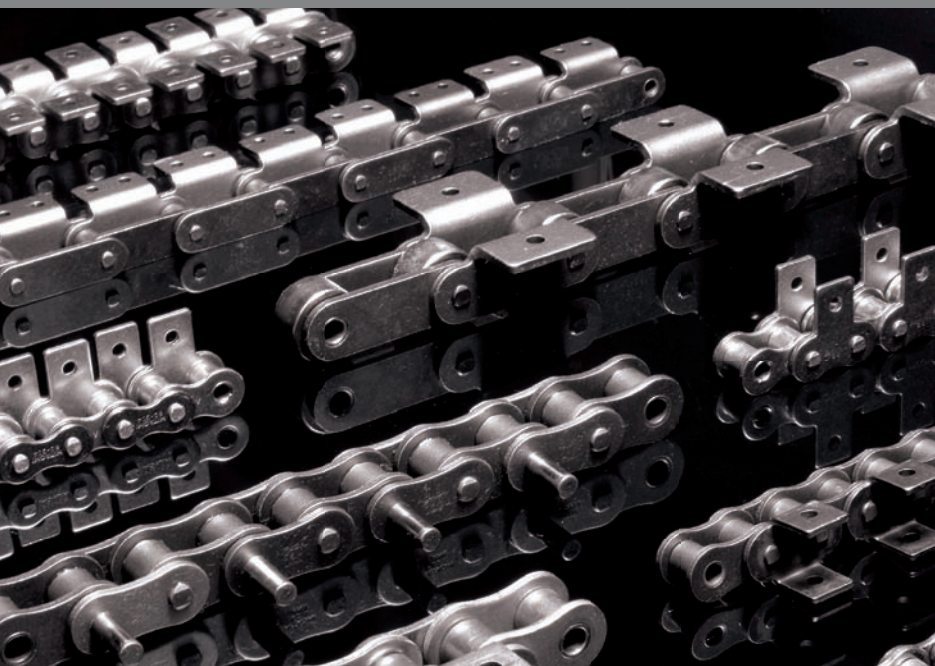
Rapid Deliveries

Substantial Product Selections

Large In-Stock Quantities

Premium Performance . . . Fast Delivery Hitachi Attachment Chains

Hitachi Inspire Series SBR® attachment chains are available in a wide array of sizes and configurations. Built in our strategically located service centers in Kennesaw, GA and Portland, OR these premium series products are available for fast delivery (24-72 hours). We stock both standard and the hard to get non-standard wide contour and double lug attachments in both carbon and stainless steels. These chains are appropriate for use in a variety of industries and applications. Hitachi is committed to keeping users up and running with the best combination of delivery and performance available anywhere.



Stocked Sizes and Attachment Types

Hitachi carries a significant amount of parts and pre-assembled chain inventory to allow quick delivery of a wide variety of chains and attachments on any spacing desired. The tables below illustrate chains and attachments normally stocked. "C&S" indicates that the chains are available in both carbon and stainless steel, "C" indicates the attachments are stocked in carbon steel only.

ASME/ANSI Roller Chains

Attachment Type

Chain Size	ASME/ANSI Roller Chains						Attachment Type					
	A-1	K-1	D-1	D-3	SA-1	SK-1	WA-1	WK-1	WSA-1	WSK-1	AA-1	AA-2
35	C&S	C&S	C&S	C&S	C&S	C&S						
40	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
50	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
60	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
80	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C	C
100	C	C	C	C	C	C						
120	C	C			C	C						

C&S = Carbon and Stainless Steel -- C = Carbon Steel Only

Double Pitch Chains

Attachment Type











Chain Size	Chain Size	Attachment Type									
		A-1	A-2	K-1	K-2	D-1	D-3	SA-1	SA-2	SK-1	SK-2
C2040	C2042	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
C2050	C2052	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
C2060H	C2062H	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
C2080H	C2082H	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S	C&S
C2100H	C2102H	C	C	C	C	C	C	C	C	C	C
C2120H	C2122H	C	C	C	C			C	C	C	C

C&S = Carbon and Stainless Steel -- C = Carbon Steel Only













Attachment Chain Nomenclature

Standard Attachments

Type	Description	ASME/ANSI Standard	Double Pitch
A	Bent Lug One Side A-1: One Hole A-2: Two Holes	 A-1	 A-1 or A-2
K	Bent Lug Both Sides K-1: One Hole K-2: Two Holes	 K-1	 K-1 or K-2
SA	Straight Lug One Side SA-1: One Hole SA-2: Two Holes	 SA-1	 SA-1 or SA-2
SK	Straight Lug Both Sides SK-1: One Hole SK-2: Two Holes	 SK-1	 SK-1 or SK-2
D	Extended Pins D-1: One Pin Extended D-3: Both Pins Extended	 D-1 or D-3	 D-1 or D-3

ASME/ANSI Specialty Attachments

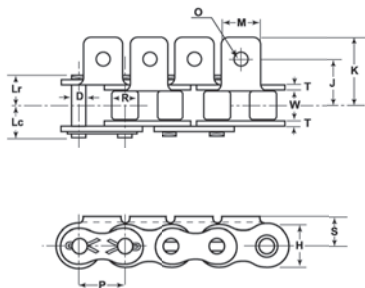
WA	Wide Contour Bent Lug One Side WA-1: One Hole WA-2: Two Holes	 WA-1	 WA-2
WK	Wide Contour Bent Lug Both Sides WK-1: One Hole WK-2: Two Holes	 WK-1	 WK-2
WSA	Wide Contour Straight Lug One Side WSA-1: One Hole WSA-2: Two Holes	 WSA-1	 WSA-2
WSK	Wide Contour Straight Lug Both Sides WSK-1: One Hole WSK-2: Two Holes	 WSK-1	 WSK-2
AA	Double Lug Bent Top & Bottom One Side AA-1: One Hole	 AA-1	
KK	Double Lug Bent Top & Bottom Both Sides KK-1: One Hole	 KK-1	

ASME/ANSI Standard Attachments

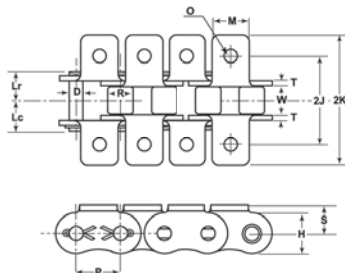
HITACHI
Inspire the Next



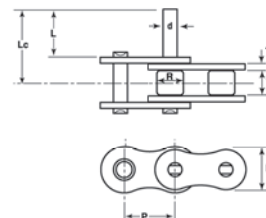
A-1 Attachment



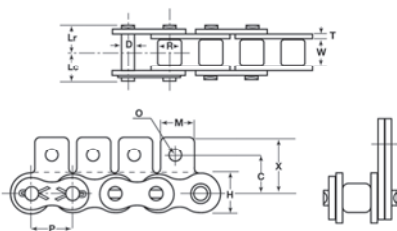
K-1 Attachment



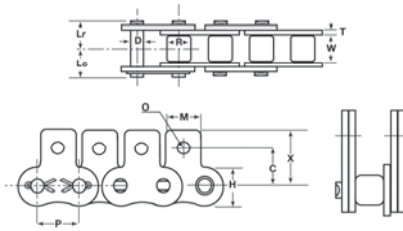
D-1 Attachment



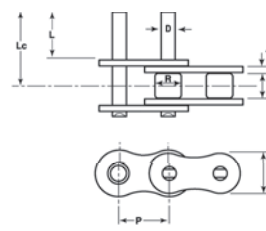
SA-1 Attachment



SK-1 Attachment



D-3 Attachment



ASME/ANSI Base Roller Chain Specifications

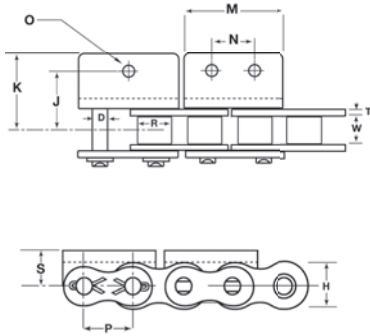
Hitachi Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load		Average
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length LR	Cot. Pin Length LC	Carbon Steel (Lbs)	Stainless Steel (Lbs)	Chain Weight (Lbs/Ft)	
35	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.272	490	115	0.23	
40	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	820	190	0.40	
50	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,410	300	0.66	
60	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,940	450	0.98	
80	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	3,300	770	1.69	
100	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	5,080	1,130	2.62	
120	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	6,930	1,700	3.86	

ASME/ANSI Standard Attachments

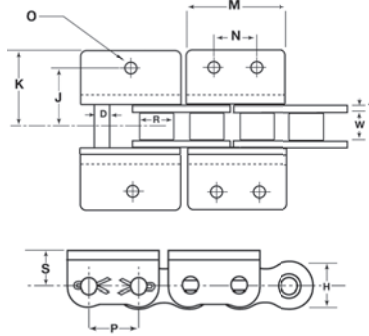
Hitachi Roller Chain Number	A-1 or K-1 Attachments					SA-1 or SK-1 Attachments				D-1 or D-3 Attachments		
	Tab Width M	Att. Hole Diameter O	Att. Plate Height S	C/L Chain Att. Hole J	C/L Chain Att. Edge K	Tab Width M	Att. Hole Diameter O	C/L Chain Att. Hole C	C/L Chain Top Att. X	Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain Pin End Lc
35	0.312	0.106	0.252	0.375	0.563	0.312	0.106	0.375	0.571	0.141	0.375	0.579
40	0.375	0.142	0.311	0.500	0.681	0.375	0.142	0.500	0.728	0.141	0.375	0.661
50	0.500	0.205	0.406	0.625	0.917	0.500	0.205	0.625	0.906	0.200	0.470	0.827
60	0.625	0.205	0.469	0.750	1.106	0.625	0.205	0.720	1.051	0.234	0.562	1.020
80	0.750	0.268	0.626	1.000	1.413	0.750	0.268	0.970	1.358	0.312	0.750	1.335
100	1.000	0.346	0.780	1.250	1.744	1.000	0.346	1.250	1.693	0.375	0.937	1.650
120	1.125	0.413	0.906	1.500	2.154	1.125	0.413	1.440	2.024	0.437	1.125	2.024



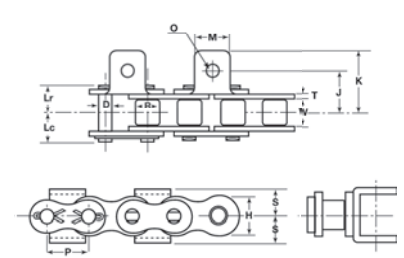
WA-1 WA-2 Attachment



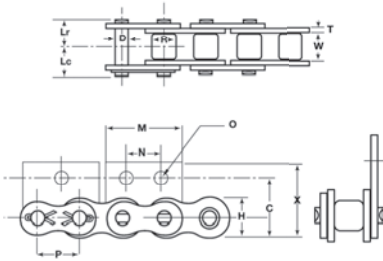
WK-1 WK-2 Attachment



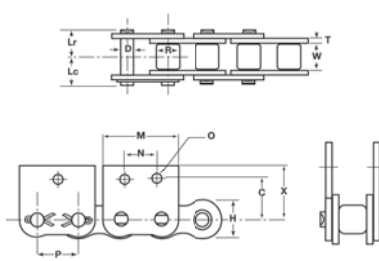
AA-1 Attachment



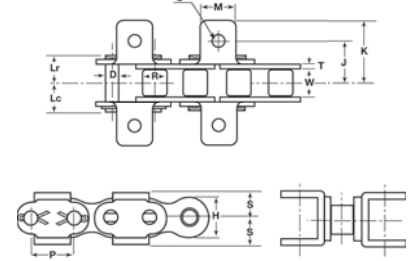
WSA-1 WSA-2 Attachment



WSK-1 WSK-2 Attachment



KK-1 Attachment



ASME/ANSI Base Roller Chain Specifications

Hitachi Roller Chain Number	Chain Dimensions Are Given In Inches									Rated Working Load		Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length LR	Cot. Pin Length LC	Carbon Steel (Lbs)	Stainless Steel (Lbs)		
35	3/8	0.188	0.200	0.141	0.050	0.354	0.236	0.272	490	115	0.23	
40	1/2	0.312	0.312	0.156	0.060	0.463	0.327	0.378	820	190	0.40	
50	5/8	0.375	0.400	0.200	0.080	0.577	0.402	0.465	1,410	300	0.66	
60	3/4	0.500	0.469	0.234	0.094	0.691	0.504	0.555	1,940	450	0.98	
80	1	0.625	0.625	0.312	0.125	0.921	0.646	0.732	3,300	770	1.69	
100	1 1/4	0.750	0.750	0.375	0.156	1.154	0.776	0.917	5,080	1,130	2.62	
120	1 1/2	1.000	0.875	0.437	0.187	1.382	0.976	1.126	6,930	1,700	3.86	

ASME/ANSI Wide Contour and Double Lug Attachments

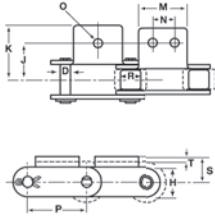
Hitachi Roller Chain Number	WA-1, WA-2, WK-1 or WK-2 Attachments							WSA-1, WSA-2, WSK-1 or WSK-2 Attachments					AA-1 or KK-1 Attachments					
	Tab Width	Att. Diameter	Hole Pitch	Att. Hole	Plate Height	C/L Chain Att. Hole	C/L Chain Chain Edge	Tab Width	Att. Diameter	Hole Pitch	Att. Hole	C/L Chain Top Att.	C/L Chain	Tab Width	Att. Diameter	Plate Height	C/L Chain Att. Hole	C/L Chain Chain Edge
	M	O	N	S	J	K	M	O	N	C	X	M	O	S	J	K		
40	0.957	0.142	0.500	0.311	0.500	0.681	0.957	0.142	0.500	0.500	0.728	0.375	0.142	0.311	0.500	0.681		
50	1.197	0.205	0.625	0.406	0.625	0.917	1.197	0.205	0.625	0.625	0.906	0.500	0.205	0.406	0.625	0.917		
60	1.437	0.205	0.750	0.469	0.750	1.106	1.437	0.205	0.750	0.720	1.051	0.625	0.205	0.469	0.750	1.106		
80	1.913	0.268	1.000	0.626	1.000	1.413	1.913	0.268	1.000	0.970	1.358	0.750	0.268	0.626	1.000	1.413		

Double Pitch Attachments

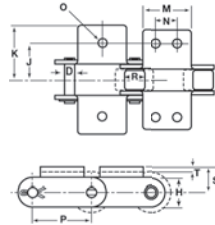
HITACHI
Inspire the Next



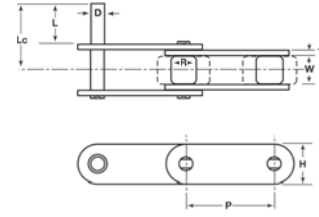
A-1 A-2 Attachment



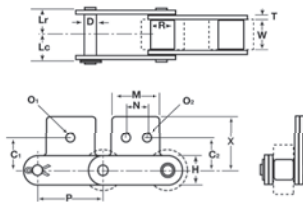
K-1 K-2 Attachment



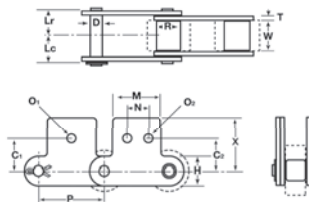
D-1 Attachment



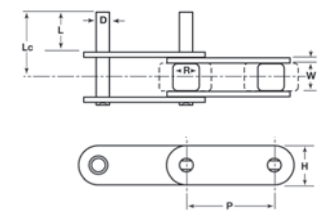
SA-1 SA-2 Attachment



SK-1 SK-2 Attachment



D-3 Attachment



Double Pitch Base Roller Chain Specifications

Hitachi Roller Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load		Average Chain Weight (Lbs/Ft)
	Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Link Plate Thickness T	Link Plate Height H	Riv. Pin Length LR	Cot. Pin Length LC	Carbon Steel (Lbs)	Stainless Steel (Lbs)	
C2040	1	0.312	0.312	0.156	0.060	0.450	0.325	0.405	800	190	0.32
C2042			0.625								0.55
C2050	1 1/4	0.375	0.400	0.200	0.080	0.591	0.400	0.480	1,400	300	0.55
C2052			0.750								0.85
C2060H	1 1/2	0.500	0.469	0.234	0.125	0.670	0.565	0.655	1,900	500	0.93
C2062H			0.875								1.40
C2080H	2	0.625	0.625	0.312	0.156	0.890	0.700	0.830	3,300	800	1.56
C2082H			1.125								2.25
C2100H	2 1/2	0.750	0.750	0.375	0.187	1.125	0.830	0.970	5,100	1,200	2.32
C2102H			1.562								3.78
C2120H	3	1.000	0.875	0.437	0.219	1.375	1.035	1.205	6,800	1,790	3.30
C2122H			1.750								5.28

Double Pitch Attachment Specifications

Hitachi Roller Chain Number	A-1, A-2, K-1 or K-2 Attachments							SA-1 or SK-1 Attachments							D-1 or D-3 Attachments		
	Tab Width M	Att. Hole Diameter O	Att. Hole Pitch N	Att. Plate Height S	C/L Chain Att. Hole J	C/L Chain Att. Edge K	Tab Width M	Att. Hole Diameter O	Att. Hole Diameter O2	Att. Hole Pitch N	C/L Chain Att. Hole C	C/L Chain Att. Hole C2	C/L Chain Top Att. X	Ext. Pin Diameter d	Ext. Pin Projection L	C/L Chain Pin End Lc	
	C2040	C2042	0.750	0.142	0.375	0.360	0.500	0.750	0.750	0.205	0.142	0.375	0.437	0.531	0.780	0.156	0.375
C2050	C2052	0.937	0.205	0.470	0.437	0.625	0.953	0.937	0.268	0.205	0.470	0.562	0.625	0.970	0.200	0.470	0.831
C2060H	C2062H	1.125	0.205	0.562	0.580	0.842	1.228	1.125	0.346	0.205	0.562	0.690	0.750	1.200	0.234	0.562	1.083
C2080H	C2082H	1.500	0.268	0.750	0.750	1.093	1.600	1.500	0.413	0.268	0.750	0.875	1.000	1.580	0.312	0.750	1.402
C2100H	C2102H	1.875	0.346	0.937	0.920	1.310	1.970	1.875	0.551	0.346	0.937	1.125	1.250	1.980	0.375	0.937	1.701
C2120H	C2122H	2.250	0.413	1.125	1.090	1.562	2.437	2.250	0.630	0.413	1.125	1.312	1.470	2.410	0.437	1.125	2.087
C2160H	C2162H	3.000	0.551	1.500	1.437	2.062	3.000	3.000	0.827	0.551	1.500	1.750	2.000	3.000	0.562	1.500	2.717

Got Chain?



**DF3500
Dairy Case
Conveyor Chain**



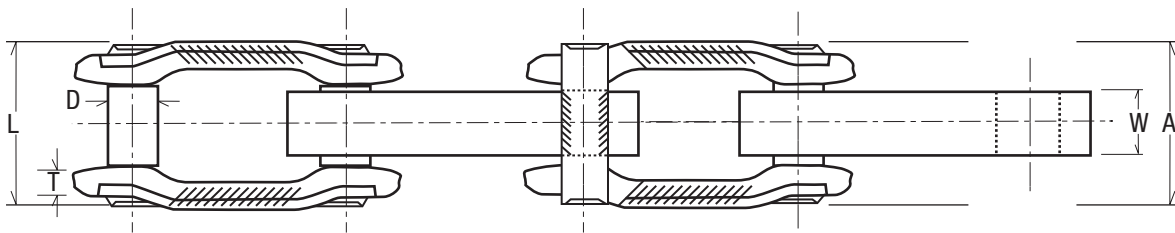
Hitachi Maxco, Ltd.

DF3500 Conveyor Chain

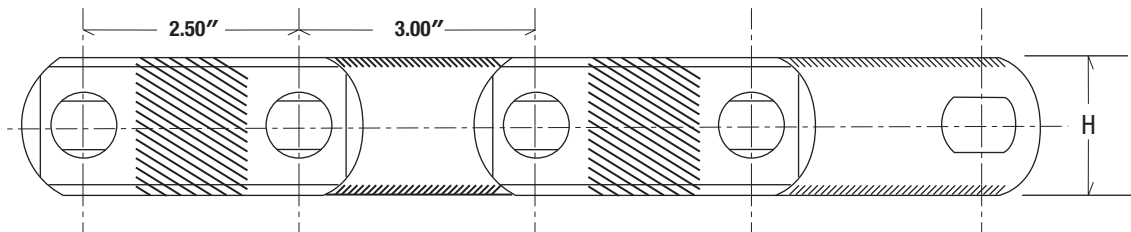
Features:

Benefits:

- Induction Hardened pins ---- Extended wear life-connecting pins are easily peened over
- Induction hardened sliding surfaces (extra large) ---- A "large foot print" means that the down pressure is minimal... the chain and wear strips will last longer
- Cupped shape outer links ---- Protects rivet ends from wear-provides for maximum side flexing
- Rounded chain "edges" ---- Makes side transfers easy



Induction Hardened Areas



Chain	Pitch	Chain Width		Link Plate		Pin		Minimum Track Radius	Average Ultimate Strength (lbs.)	Maximum Allowable Load (lbs.)	Average Weight/Ft. (lbs.)
		Overall	Inside	T	H	D	L				
		A	W								
DF3500	2.500 3.000	1.500	.63	.25	1.25	.57	1.46	20.00	45,000	4,000	3.3

All dimensions are in inches



Heavy Duty Engineering Class Drive Chains

Hitachi Heavy Duty Engineering Class Drive Chains are designed and built to withstand the rugged requirements of high load power transmission applications. In order to offer the best combination of chain strength, wear performance and shock load resistance, these premium performance chains possess the following design features:

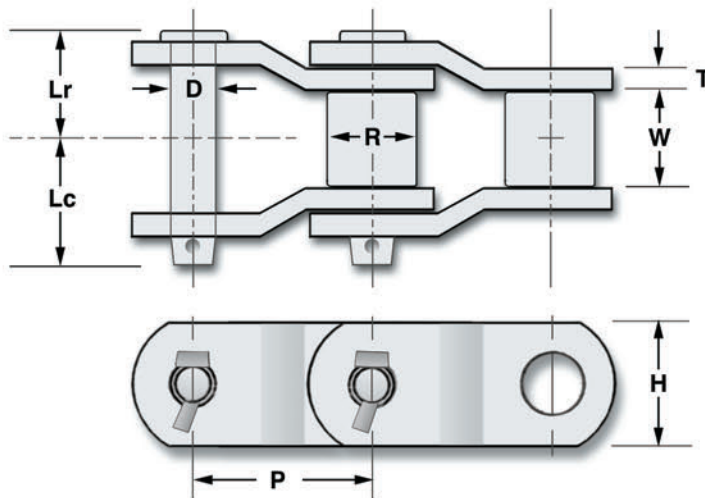
- * Offset side bar construction.
- * High quality heat treated carbon and alloy steels.
- * Induction hardened pins (selected models).
- * Heavy interference fits.
- * Full round pin and bushing design.

Hitachi has long been recognized as a leader in the production of heavy duty construction equipment and our power transmission chains meet or exceed OEM and ASME/ANSI specifications.



Engineering Class Drive Chain powers the crawler track of a crane. Note: For heavy duty, offset side bar style, engineering class drive chains, the correct running direction is to have the narrow end point toward the small sprocket on the "tight" (i.e. tension) side.

OFFSET HEAVY DUTY DRIVE CHAIN



North American Service Centers

ATLANTA GA
 Ⓜ Hitachi Maxco, Ltd.
 1630 Cobb International Blvd.
 Kennesaw, GA 30152
 (800) 241-8209
 Fax: (770) 424-9145

WEST COAST
 Ⓜ Hitachi Maxco, Ltd.
 3529 N.W. Yeon Avenue
 Portland, OR 97210
 (800) 544-7943
 Fax: (503) 228-6703

Hitachi Chain Number	ANSI Chain Number	Chain Dimensions Are Given In Inches								Rated Working Load (Lbs)	Average Ultimate Strength (Lbs)	Average Chain Weight (Lbs/Ft)
		Chain Pitch P	Inside Width W	Roller Diameter R	Pin Diameter D	Side Bar Thickness T	Side Bar Height H	Riv. Pin Length Lr	Cot. Pin Length Lc			
HM882	-	2.609	1.125	0.750	0.438	0.250	1.125	1.250	1.438	2,500	26,000	3.6
HP3H	-	3.075	1.500	1.250	0.650	0.375	1.750	1.850	2.000	5,100	75,000	9.6
H238	2814	3.500	1.500	1.750	0.875	0.500	2.250	2.100	2.400	7,700	140,000	16.1
H1245	3315	4.073	1.938	1.780	0.938	0.562	2.375	2.400	2.800	10,100	170,000	18.0
H635	3618	4.500	2.062	2.250	1.125	0.562	3.00	2.50	2.88	12,300	220,000	25.4
H1602A	4020	5.000	2.750	2.500	1.250	0.625	3.50	3.06	3.88	17,500	310,000	34.0
H6042	4824	6.000	3.000	3.000	1.500	0.750	4.00	3.47	3.88	23,600	420,000	45.0

Specifications Subject to Change Without Notice



Environmental Products



STAINLESS CHAINS

NON-METALLIC CHAINS

FLIGHTS

SPROCKETS

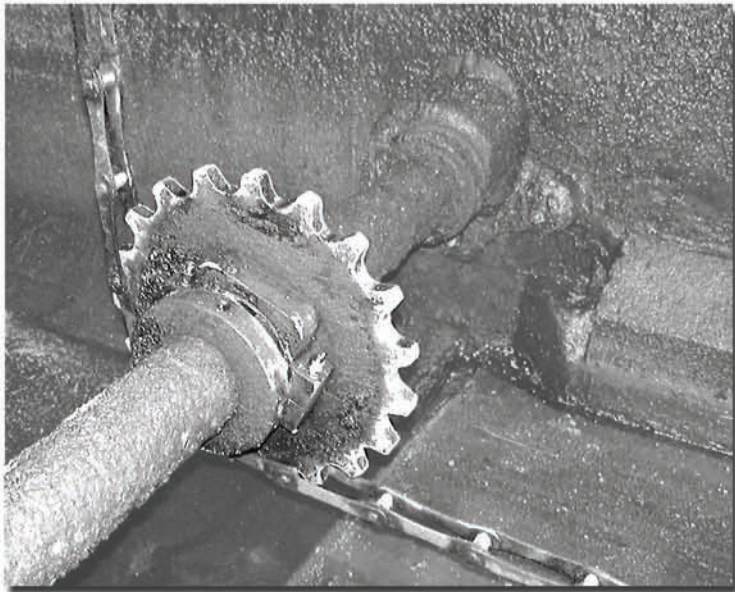
WEAR STRIPS

WEAR SHOES

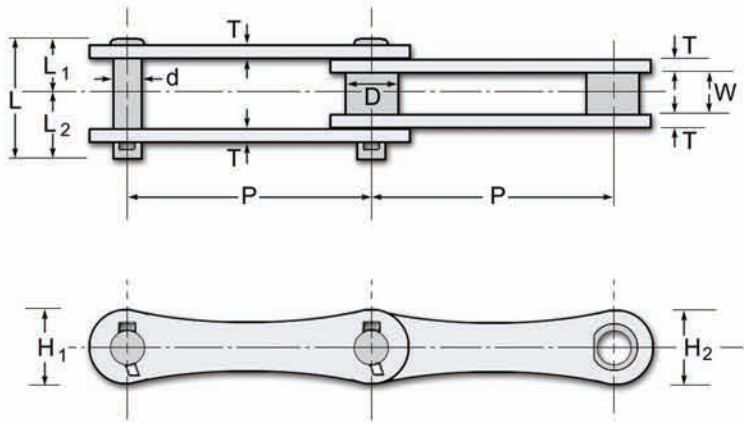
SAV 715 Stainless Steel Chain



- Strong
- Lightweight
- 403 stainless steel



SAV 715 Chain



SAV 715 Chain, the first stainless steel curved sidebar chain equivalent. Lightweight yet with a higher strength to weight ratio than cast chain SAV 715 is fabricated of 403 stainless steel and has been proven superior for high load applications and has readily available several common attachment link designs for Bar Screen and Grit Collector requirements.

The SAV 715 is the result of brilliant design and the application of unique metals technology providing a collector chain of unmatched service life and application potential for a wide range of service requirements. With over 3,000,000 feet of chain in service world wide and a typical service life measured in decades, the SAV 715 is the ideal chain for collector chain service.

Dimensions and Strength of SAV 715 Chain

Chain No.	Pitch P (in.)	Min. Ultimate Strength (lbs.)	Min. Weight (lbs./ft.)	Barrel (min.)		Pin			Side Bars (min.)				
				Outside Dia. D	Width W	Dia. d	Length (in.)			Pin Link (in.)		Bushed Link (in.)	
							L	L ₁	L ₂	H ₁	T		
SAV 715	6.00	29,000	3.7	1.015	1 3/16	0.569	2 27/32	1 9/32	1 9/16	1.54	.224	1.85	.224



SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS

SAV 715 Stainless Steel Chain

SAV 715 Chains are adaptable to a wide range of wastewater applications from rectangular clarifier to grit collection, bar screens, DAF, and API service. The SAV 715 handles the most demanding applications without problem. SAV chains feature a stainless steel "J" cotter for easy assembly of the chains.

Also available from Hitachi Maxco for SAV 715 chain is the Hybrid replaceable tooth sprocket. Hardened stainless steel teeth resists grit and other abrasives, yet the individual tooth sections are easily replaced and can be done with simple tools. The chain does not need to be broken apart to perform the task - less intrusive than having to replace entire sprockets or segments. Assembles with 316 stainless steel hardware.

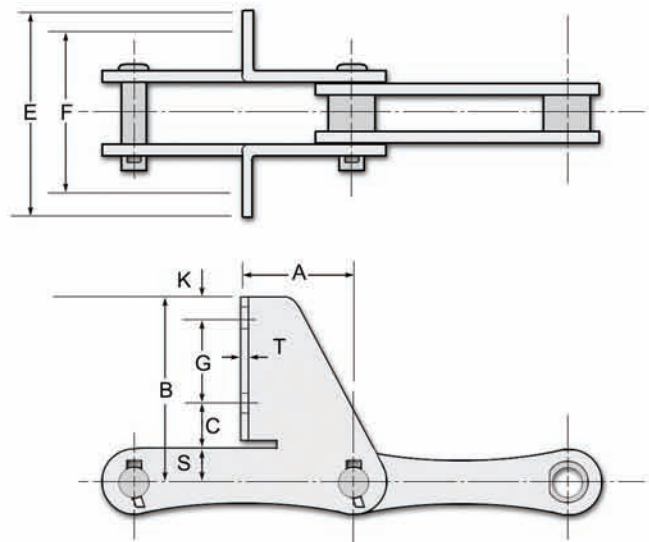


SAV 715 Hybrid Sprocket



Replaceable Individual Teeth
Hardened 410 Stainless
Steel or Non-metallic Hub

SAV 715 "F" Style Attachment Link



Dimensions of SAV Stainless Steel Chain (F Attachment)

Attachment Part No.	Dimension										Attachment Nominal Weight (lbs./ea.)
	A	B	C	E	F	G	K	S	T	Ø	
F-226/715	3	6 ⁷ / ₆₄	1 ¹ / ₂	5 ¹ / ₂	3 ³ / ₄	2 ⁵ / ₈	1 ³ / ₃₂	57/ ₆₄	15/ ₆₄	7/ ₁₆	4.5
F-228/715	3	7 ⁷ / ₈	1 ³¹ / ₆₄	5 ¹ / ₂	3 ³ / ₄	4 ¹ / ₂	1	57/ ₆₄	15/ ₆₄	7/ ₁₆	5.4

also available with AM116, AD474, D-22, K2, A2, and A42 attachments.

SAV 709 Stainless Steel Chain

SAV 709 chain was designed as an economical Stainless steel chain alternative to non-metallic and cast chain for rectangular clarifier usage. Maintaining the same materials and design as SAV 715, the primary difference between the two chains is the SAV 709 chains ability to run on standard 720 series sprockets. The chain can be used with fiberglass or wooden flights. No special modifications to the existing system or tank layout is required.

403 Stainless Steel

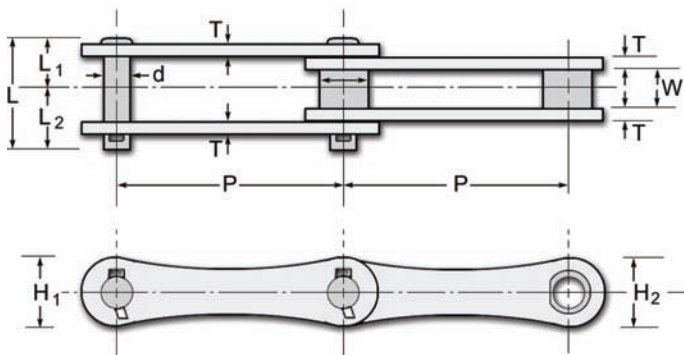
**Direct Interchange with
720 Non-Metallic and Cast Chains**

Lightweight (2.2 Lbs)

High Strength (19,000 Lbs)

“J” Cotter Assembly

SAV 709 Chain



Technical Specifications of SAV 709 Chain

Chain No.	Pitch P (in.)	Average Ultimate Strength (lbs.)	Weight (lbs./ft.)	Barrel		Pin			Side Bars				
				Outside Dia. D	Width W	Dia. d	Length (in.)			Pin Link		Bushed Link	
							L	L ₁	L ₂	H ₁	T	H ₂	T
SAV 709	5.844	19,000	2.2	0.882	1 ¹⁷ / ₆₄	0.453	2 ³⁷ / ₆₄	1 ¹¹ / ₆₄	1 ¹³ / ₃₂	1 ⁷ / ₃₂	3 ³ / ₁₆	1 ²⁹ / ₆₄	3 ³ / ₁₆



SAV 709 Key Features

Average Ultimate Strength of 19,000 lbs. makes the SAV 709 comparable to even high strength composite chains. The 403 stainless steel material has over 28 years of proven experience in wastewater treatment chain applications. Special manufacturing processes provide a chain with unmatched resistance to abrasion and corrosion resulting in extended service life. The light weight offers ease of installation and requires very little maintenance. SAV 709 can be used with non-metallic, steel, or cast iron sprockets.



SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS

SAV 709 Stainless Steel Chain

SAV 709 chain with standard F-226 or F-228 attachment links provides a strong solution for difficult collector operations. Pictured here is SAV 709 with Hitachi Maxco's HMAX Extreme Duty FRP Flights. The tank width is over 36 ft and handles primary sludge. The plant elected to replace mechanical traveling bridge units (visible in background) and discovered that the superior strength and capability of the SAV 709 made it the ideal choice. Typical clarifier design is limited at around 30 ft. width with plastic chain, which would have necessitated the costly prospect of creating two clarifiers out of the original one. SAV 709 and the HMAX flights allowed the plant to retain the original layout saving the plant from a significant expense.



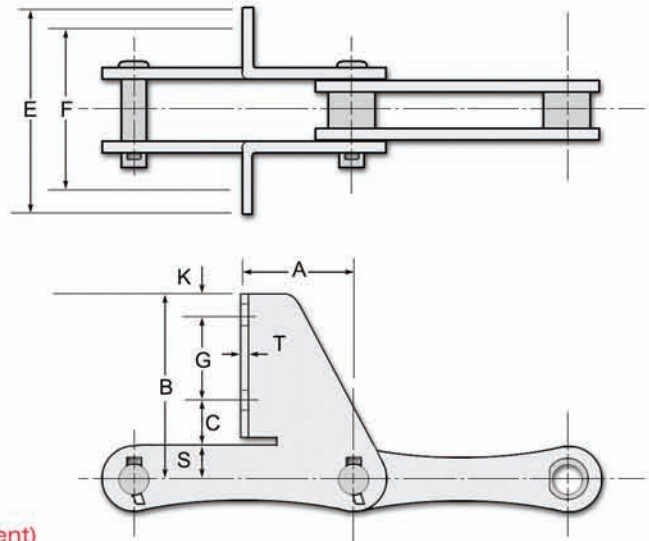
36 ft wide Clarifier - SAV 709 Chain with HMAX Extreme Duty Flights



Closer view - 36 ft wide Clarifier with SAV 709 Chain

- * Strong - Lightweight
- * Versatile in Application
- * Cost Effective Solution

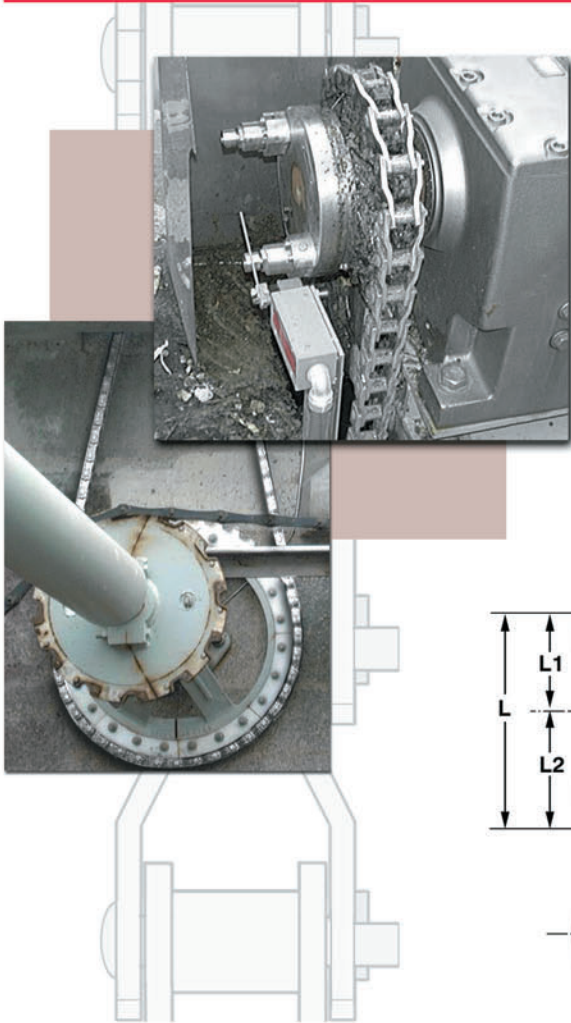
SAV 709 "F" Style Attachment Link



Dimensions of SAV 709 Stainless Steel Chain (F Attachment)

Attachment Part No.	Dimension										Attachment Nominal Weight (lbs./ea.)
	A	B	C	E	F	G	K	S	T	Ø	
F-226/709	2.913	6 1/2	1 41/64	5 1/2	3 3/4	2 5/8	1 15/64	1	3/16	7/16	3.9
F-228/709	2.913	8 17/64	1 41/64	5 1/2	3 3/4	4 1/2	1 1/8	1	3/16	7/16	4.5

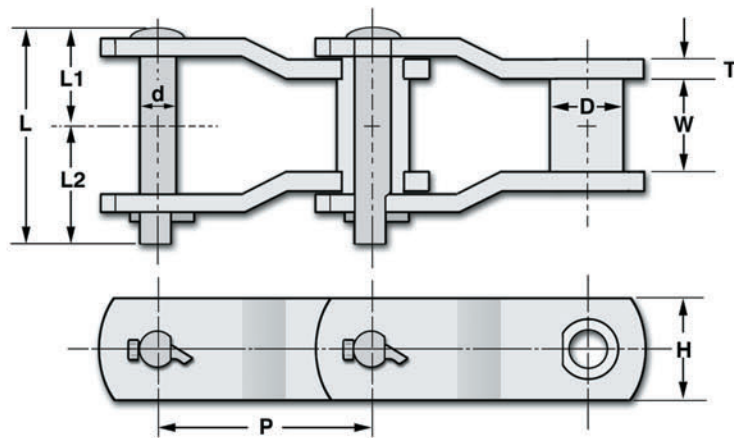
HB 78 Stainless Steel Drive Chain



HB 78 Stainless Steel Drive Chain is the premier pintle drive chain for harsh demanding applications. Ideal for wastewater treatment applications. Made from 403 stainless steel, the chain is extremely strong, yet highly corrosion resistant. Consider the advantages of HB 78 Chain:

- * Directly interchangeable with all Series 78 chains.
- * Runs on Cast, Non-metallic or Stainless tooth series 78 sprockets.
- * Minimal elongation = less tension adjustment.
- * J-cotter pin for easy chain link removal.
- * Available from Inventory.

HB 78 Stainless Drive Chain



Dimensions and Strength of HB 78 Chain

Chain No.	Pitch P (in.)	Working Load (lbs.)	Average Ultimate Strength (lbs.)	Weight (lbs./ft.)	Barrel		Pin			Side Bar		
					Outside Dia. D (in.)	Width W (in.)	Outside Dia. d	Length (in.)			Height H (in.)	Thickness T (in.)
								L	L ₁	L ₂		
HB 78	2.609	3,300	24,000	3.9	7/8	1 1/8	7/16	2 5/8	1 3/16	1 7/16	1 1/4	15/64



SPROCKETS



NON-METALLIC CHAINS

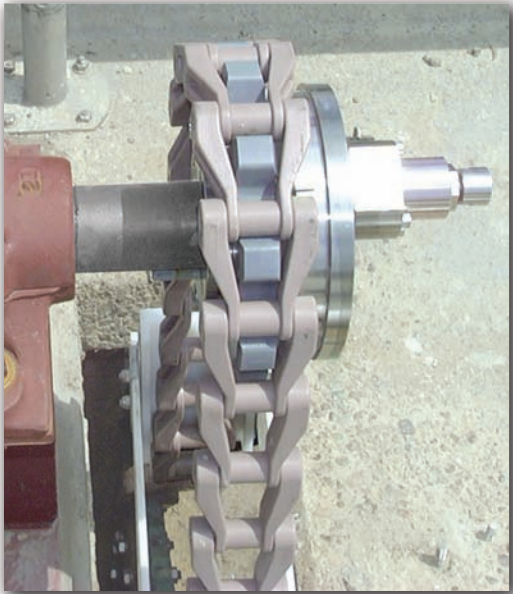


STAINLESS CHAINS



FIBERGLASS FLIGHTS

NH 78 Non-Metallic Drive Chain

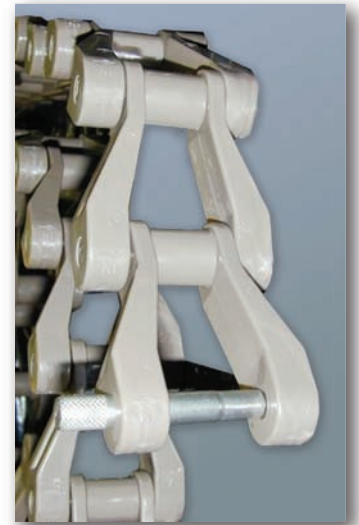
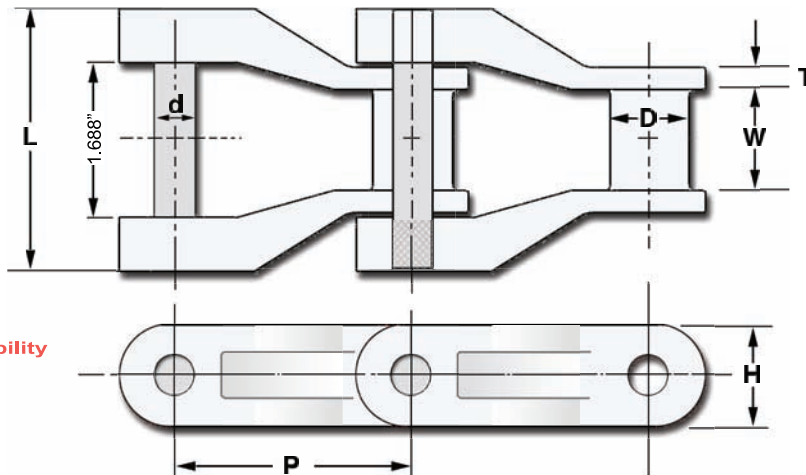


NH 78 Non-Metallic Chain is a strong, yet light weight alternative to metallic or cast drive chains. Directly interchangeable with 78 series chains, the NH 78 chain can be used with cast, plastic, or stainless steel sprockets* for clarifier drives or drag conveyor applications. Featuring a stainless steel knurled pin, the NH 78 easily assembles without the need for cotters, locking pins, or clips. The unfilled Acetal link is highly wear resistant and does not corrode or rust, natural lubricity eliminates the need for oilers or lube lines. Minimal wear means less maintenance. Extremely versatile NH 78 chain is an economical alternative to standard drive chains.

* 78 style sprockets with a maximum face width of .727"

NH 78 Non-Metallic Drive Chain

- Knurled Pin**
- Natural Lubricity**
- Strong, Light Weight**
- Stainless Pin**
- No Cotters, Clips**
- 2.609" Pitch**
- Direct Interchangeability**
- UV Inhibited**



Chain Specifications

Chain Dimensions Are Given In Inches

Chain No.	Pitch P	Working Load (lbs.)	Minimum Ultimate Strength (lbs.)	Weight (lbs./ft.)	Barrel		Pin			Link	Side Bars
					Outside Dia. D	Width W	Dia. d	Length L	Material		
NH 78	2.609	1,750	4,000	1.41	.875	1.062	.438	2.906	18-8 CrNi Steel	Unfilled Acetal Resin	Height H
											1.125

Subject to Change Without Notice



SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS

NM720S Non-Metallic Chain



Hitachi Maxco NM720S Collector Chain

- ◆ **Acetal Link - Reinforced Nylon Pin**
- ◆ **Positive Locking Pin**
- ◆ **High Strength**
- ◆ **Excellent UV Resistance**



6" Pitch NM720S Collector Chain operates with any 720S sprocket. Ideal replacement for Cast Chain, interchangeable with both plastic and cast chain. Reuse existing sprockets, flights and components.

Product details on opposite side



F-226 & F-228 Attachment Links available

Hitachi Maxco's latest generation of non-metallic 6" pitch collector chain features extremely high strength and significant advantages in durability for better service life and a broader range of application capability including DAF, API, and Grit collector service. Directly interchangeable with any 720 type chain, the NM720S is ideal for retro-fit or rehab of existing clarifiers*.

* non-metallic 720 chains are not interlaceable. Hitachi NM720S is interchangeable (fits your existing flights, sprockets, etc.) with other 720S.

5,500 Lbs. Min UTS

1.6 Lbs. per ft.

Snap Tight Pin - No Clips!

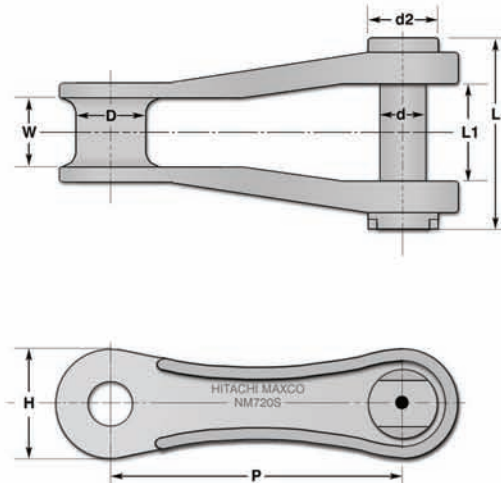
© Hitachi Maxco, Ltd.
1630 Cobb International Blvd.
Kennesaw, GA 30152
Ph: 800-241-8209

NM 720S Non-Metallic Chain

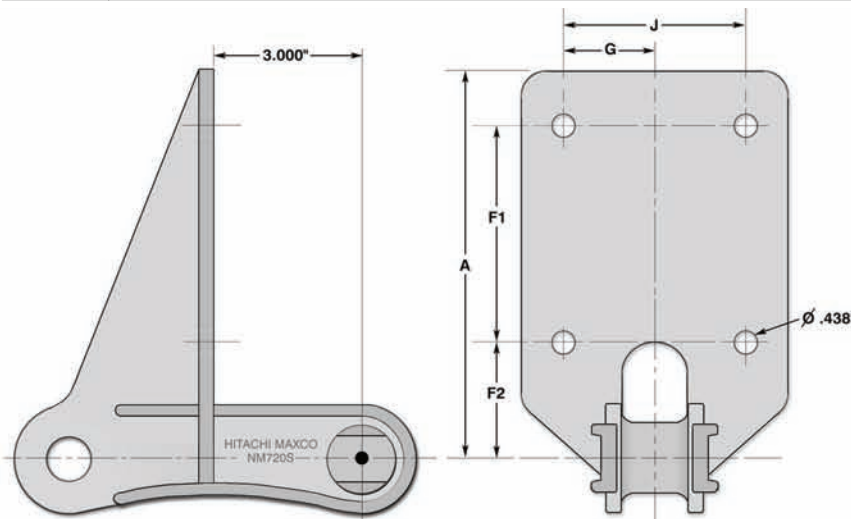
Technical Details



NM 720S Collector Chain



Chain No.	Pitch P (in.)	Minimum Ultimate Strength (lbs.)	Weight (lbs./ft.)	Barrel		Pin			Link	Side Bar	
				Outside Dia. D (in.)	Width W (in.)	Outside Dia. d	Material	Length L (in.)	Material	Height H (in.)	Inside Width L1 (in.)
NM720S	6.000	5,500	1.6	1.438	1.375	.932	Glass Filled Nylon	3.892	Unfilled Acetal	2.250	2.016



Flight Attachments

NM 720S Chain is available with F-226 and F-228 Attachments. The Acetal resin resists breaking under torsional loading due to its lack of brittle characteristics, a common problem with Polyester or Glass Filled Chains. The flight attachments are also capable of handling high service loads and are ideal for use with the HMAX Standard, Hi-Strength, Extreme Duty FRP and HMAX Aluminum flights.

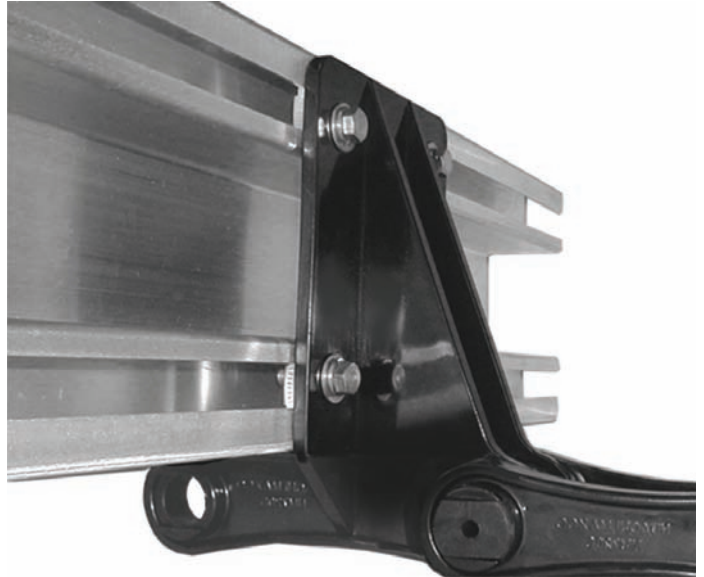
Flight Attachment Size	Height A (in.)	Dimension F1 (in.)	Dimension F2 (in.)	Dimension J (in.)	Dimension G (in.)
F-228	8.000	4.500	2.375	3.750	1.875
F-226	6.125	2.625	2.375	3.750	1.875

EPG 1203

Aluminum Flights

Introduced in 1993, Aluminum flights have proven to be the best cost effective alternative to FRP or wooden flights to date. Made of 6063 T-5 aluminum, the HMAX Aluminum flight is highly resistant to corrosion in use, and does not require special sealants, surface preparation or treatments. The HMAX Aluminum flight features a patented unique attachment method to the chain which eliminates drilling or notching the flight boards. Key to its design is the use of slotted facings which allows the flight attachments to be mounted and aligned to the Aluminum flights without the need for drilling the flights. Wear shoes are also mounted in the same fashion. Environmentally friendly, Aluminum flights are recyclable so that instead of having to pay to have FRP or wooden flights hauled away, the HMAX Aluminum flight has scrap value!

AVAILABLE IN 8" STANDARD FLIGHT SIZE ONLY.



- NO FILLER BLOCKS
- NO DRILLING OR NOTCHING REQUIRED
- EASIEST FLIGHT TO INSTALL
- EXTREMELY STRONG, LIGHTWEIGHT (2.6 LBS PER FT)
- IDEAL FOR HEAVY DUTY SLUDGE LOADS, SNAIL SHELLS, HIGH GRIT LEVELS
- EXTRA LONG LENGTH AVAILABLE (UP TO 40 FT)

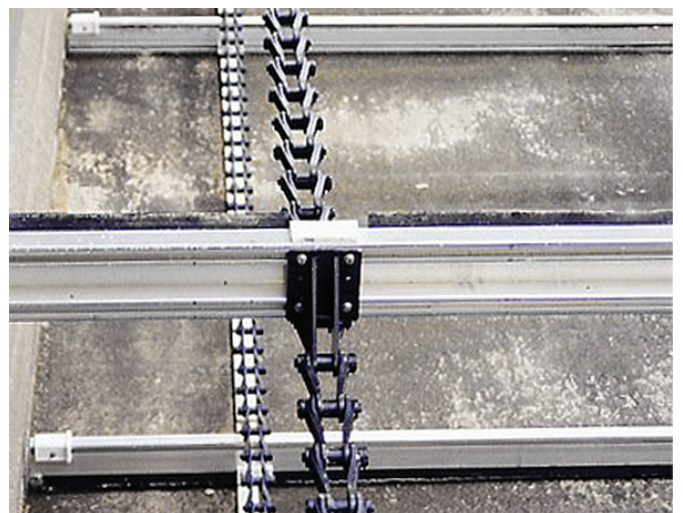


HMAX Aluminum Flights can be used with Non-Metallic, Stainless Steel, and Malleable Chains*

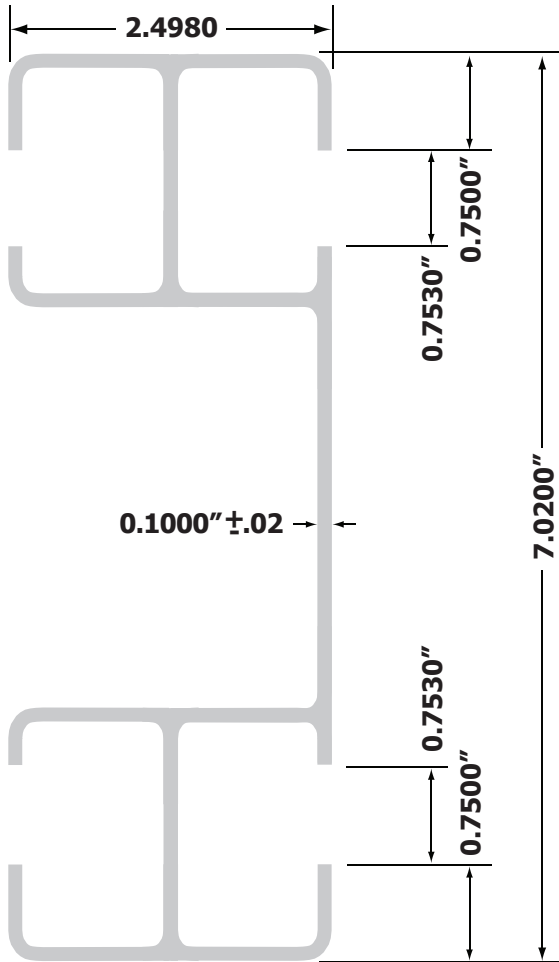
*metallic chains require additional uhmw insulator plate.

AVAILABLE OPTIONS

- NEOPRENE SQUEEGEE / WIPER BLADE
- POWDERED METAL COATING - CHEMICAL DUTY



Aluminum Flights



Area:	2.0478
Perimeter:	40.0294
Bounding Box:	X: -1.4486 - 1.0494 Y: -3.5100 - 3.5100
Centroid:	X: 0.0000 Y: 0.0000
Moment of Inertia:	X: 12.6099
Product of Inertia:	Y: 1.4097 XY: 0.0000
Radii of Gyration:	X: 2.4815 Y: 0.08297

Principal moments and X-Y directions around Centroid:
 I: 1.4097 along (0.0000 1.0000)
 J: 12.6099 along (-1.0000 0.0000)

HMAX 8 Aluminum Flight

Part Number	Product	Material	Weight (lbs./ft.)	Height (in.)	Depth (in.)	Maximum Length (ft.)
HMAX AL-8	ALUMINUM FLIGHT	T5 - 6063 ALUMINUM	2.36	7.02	2.498	40



SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS

Cast Nylon Stub Shafts



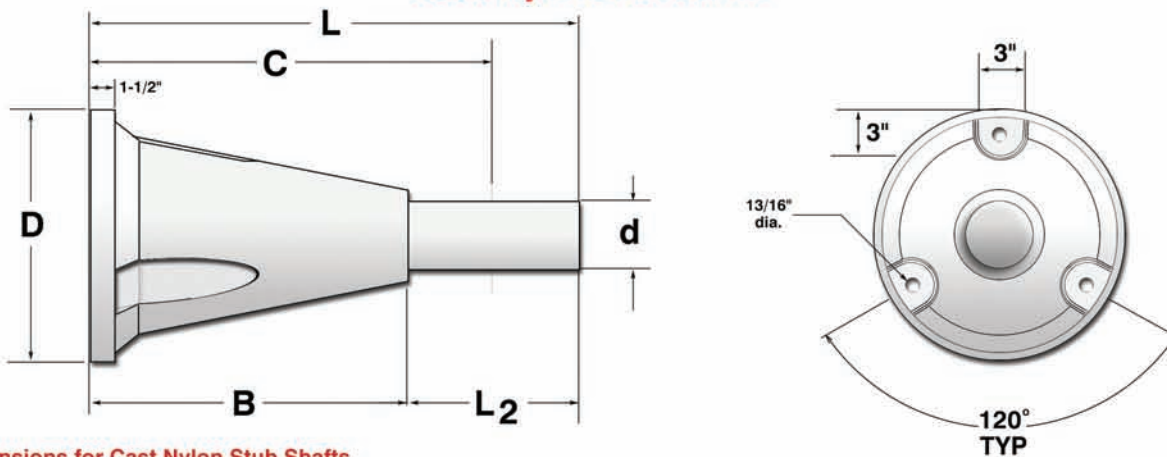
Use with HMAX Static Sleeve Assemblies
 Available in 24", 18" and 12" projection sizes
 Reduces System Drag, Extends Component Life
 Standard Component of the HMAX Non-Metallic System
 Replaces Steel Idler Shafts, Metallic Wall Bearings

Cast Nylon Stub Shafts eliminates steel idler shafting by replacing the metallic wall bearings and heavy steel shafts with high strength Cast Nylon Stub Shafts. Key to the stub shaft is its unique design, a one piece casting, integral strength and extended durability. Unlike steel shafts with metallic wall bearings, the Cast Nylon Stub Shaft does not require lubrication and are highly resistant to deflection under load and UV inhibited to insure a long trouble free life. Stub shafts allow for easy adjustment and very low maintenance. Designed for use with HMAX Static Sleeve Assemblies (sold separately) the Stub Shaft installs without the use of cranes or heavy lift devices. Key features are:

- Reduces System drag - extends life of components
- No Grease Lines / No Lubrication
- In use for over 20 years - tanks up to 300 feet long!
- Ideal for retrofit

Contact Hitachi Maxco, Environmental Products Group for additional details, call 800-241-8209

Cast Nylon Stub Shaft

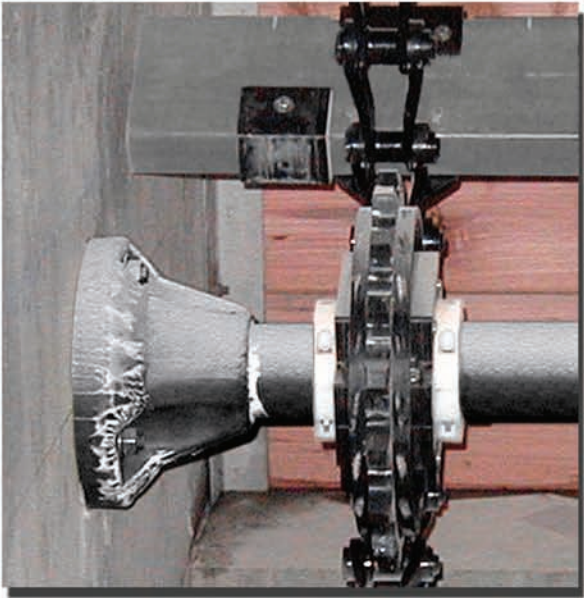


Dimensions for Cast Nylon Stub Shafts

Size	Part Number	Material	Base Plate Dia. D	Overall Length L	Wall to Centerline Sprocket C	Base Length B	Spindle Length L ₂	Spindle Dia. d
24"	HSTD733	Cast Nylon	15"	29-1/4"	24"	19"	10-1/4"	4"
18"	HSTD737	"	15"	25-1/4"	18" - 20"	13"	12-1/4"	"
12"	HSTD736	"	11-1/2"	17-1/4"	12"	7"	10-1/4"	"

HMAX Sleeve Bearing

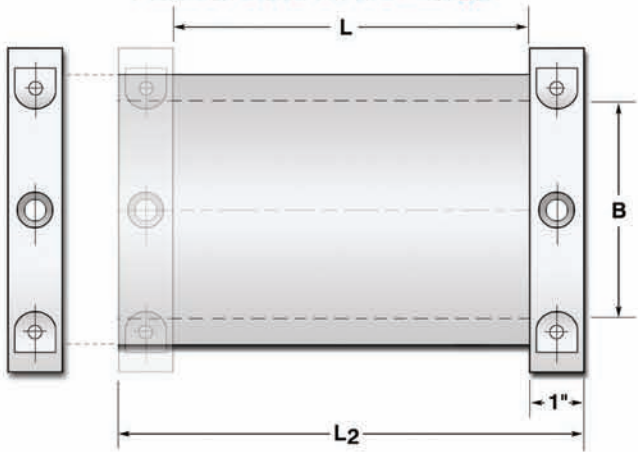
Static Sleeve Bearings eliminate high drag wall bearings where solid shafting turns inside wall bearings. Typical wall bearings and shafting have high drag due to the build up of corrosion causing resistance to the rotation of the shaft turning in the bearings. This requires substantially higher horsepower to simply articulate the system. Static Sleeve Bearings are corrosion free, made of UHMW-PE, a highly wear resistant material with natural lubricity: low friction = less energy = less wear. The Static Sleeve Bearings are ideal for use with Non-Metallic sprockets and are a featured component of the HMAX Cast Nylon Stub Shaft assembly.



"Cast Nylon Spkt" Sleeve Bearing is used with the HMAX Cast Nylon Sprocket. Having a generous LTB* the larger bearing surface provides a greater overall distribution of loading, decreasing wear. It also has a removable set-collar for use with solid bore Stub Shaft Cast Nylon Sprockets.

* Length-Thru-Bore (L2)

HMAX Sleeve Bearings



Dimensions and Materials of Sleeve Bearings

Description	Material	Bore B	Face Width L	LTB (Length-Thru-Bore) L ₂	Hardware	Bearing Thickness
Standard Duty	UHMW-PE	1-15/16" - 5-1/4"	4"	6"	316 SS	1/4"
Cast Nylon Spkt	UHMW-PE	1-15/16" - 5-1/4"	6.63"	8-5/8"	316 SS	7/16"

Standard Duty Sleeves are split construction with integral set-collars both ends.
Cast Nylon Spkt Sleeves are split construction with removable set-collar one end, integral opposite end.

Specifications Subject to Change Without Notice



SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS

SAV 715 Comparison Guide

The term "stainless steel chain" when used to describe collector chain is somewhat of a misnomer these days. Developed by Hitachi, the fabricated stainless steel chain SAV 715 became and remains the standard of the industry for over 20 years. Competition has responded by developing products supposedly identical to the SAV chain. To date, none of these products offer the quality or proven experience of the SAV stainless steel chain.

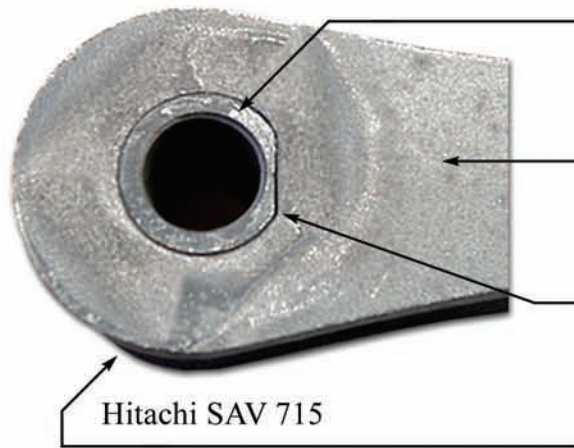
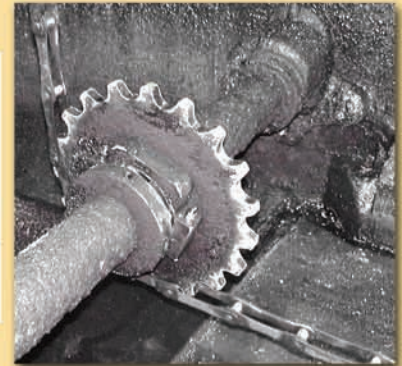
Despite claims of equivalency, today not a single competitor 715 chain has the background, proven experience or product capability as Hitachi SAV 715. With over 20 years unmatched experience worldwide the strong product preference by major and minor municipalities alike, is for SAV 715 chain, a proven product with over 3,000,000 feet installed worldwide.



Competitive 715

SAV 715

Los Angeles County
Installed 1986
20 ft x 300 ft Primary
Links removed to date: 2
Material Loss (pin): .007"
Condition: Excellent



Hitachi SAV 715

THICKER BUSHING - LARGER DIAMETER, SUPERIOR INTERFERENCE FIT

403 STAINLESS STEEL, ANNEALED VS. HEAT-TREATED (LESS CORROSION)

QUALITY WORKMANSHIP, CLOSER TOLERANCES BETTER FIT AND ASSEMBLY

FULLY ROUNDED ENDS, NO FLATS TO DAMAGE CHAIN SAVER RIM SPROCKETS

COMPETITIVE PRODUCTS ARE RELATIVELY NEW TO THE MARKETPLACE, THEIR EXISTENCE IS ONLY BASED ON PRICE POINT. HITACHI SAV CHAINS WERE ORIGINALLY DEVELOPED AROUND THE KEY TENET OF "HARMONY" - BETWEEN EACH INDIVIDUAL COMPONENT IN CONJUNCTION WITH THE OTHER. THIS IS WHY SAV HAS BEEN MOST SUCCESSFUL AS ITS CORE CONCEPT WAS TO PROVIDE THE BEST MATERIALS, QUALITY DESIGN AND WORKMANSHIP AT AN ECONOMICAL PRICE.

Hitachi SAV 715 sidebars are blanked from stainless steel plate. The high-tonnage presses make for extremely accurate and clean cuts, without creating fissures in the sidebar that allow corrosion to set-in. Chains that are clipped or sheared typically have a high number of fissures, which allows corrosion to manifest in short time. The sidebars, during the clip, are deformed on the edge (see image).



Hitachi SAV 715



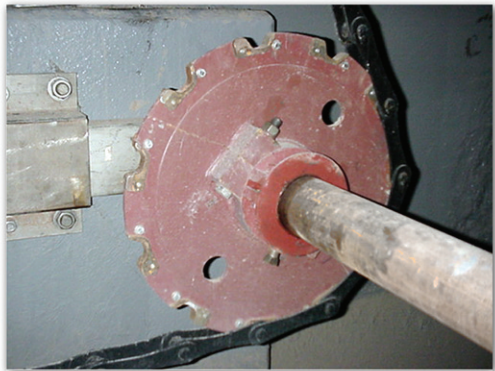
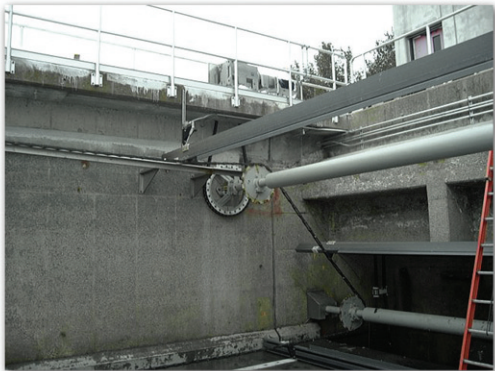
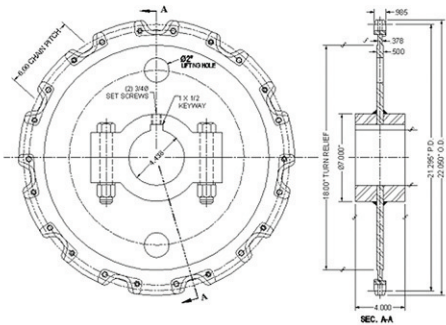
Competitive 715

SAV Hybrid Segmented Sprocket



SAV Hybrid Sprockets feature a hardened stainless steel tooth segment attached to a steel plate sprocket hub. Unlike typical segmented tooth sprockets where entire sections of the sprockets are disassembled, each individual tooth segment is replaced, making installation and replacement easy to perform with minimal effort. Precision shaped, each segment is formed and checked for accuracy within extremely close tolerances.

SAV Hybrid Sprockets are available in standard sprocket sizes for drive and idler locations. Exceptionally economical, the SAV Hybrid sprocket is the smart choice for use with SAV stainless chain. Non-Metallic plate sprocket hubs are available for idler shaft locations with sleeve bearing hubs for added low friction enhancement of your collector system.



Specifications Subject to Change Without Notice



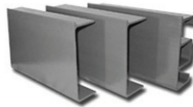
SPROCKETS



NON-METALLIC CHAINS



STAINLESS CHAINS



FIBERGLASS FLIGHTS