

Drive Chains

Tsubaki is proud to offer a market leading portfolio of Engineering Class Drive Chains. This unique and encompassing collection of premium designs has been continuously improved and perfected over the last century. Manufactured in Sandusky, Ohio since 1917, this cornerstone product is widely recognized around the world for its superior quality and workmanship. When it comes to efficient power transfer, Tsubaki Drive Chain is second to none.

TYPICAL APPLICATIONS

- Mechanical Drives
- Drum Drives
- Draw Bench
- Crawler Crane Drives

PINS

- Premium alloy steel.
- Heat treated for superior strength and toughness.
 - Core – Through hardened for superior impact resistance.
 - Surface – Induction hardened for extended wear resistance.
- Precision manufactured to maintain high interference fit with sidebars.
 - Prevents pin rotation and subsequent sidebar wear.

BUSHINGS

- Premium alloy steel.
- Heat treated for superior strength.
 - Surface – Case hardened for ultimate/extended wear resistance.
- Precision manufactured to maintain smooth bearing surfaces and high interference fit with sidebars.
 - Favorable residual stresses resist fatigue and allow for extended life.

SIDEBARS

- Premium alloy steel.
- Heat treated for superior strength, toughness and fatigue resistance.
- Proprietary manufacturing processes ensure consistent hole quality and precise pitch control.

ROLLERS

- Premium alloy steel.
- Through hardened for superior strength, toughness and the ability to withstand high shock loads.

COMMON INDUSTRIES



ASPHALT



MINING



CEMENT



INDUSTRIAL
MINERALS



OIL & GAS



GENERAL
MANUFACTURING



FORESTRY,
PULP, PAPER



How To Select a Drive Chain

The proper chain can be selected from the working load values given in the chain listings.

The working load required can be determined from the following:

WORKING LOAD

$$\frac{(HP \times SF) \times (396,000 \times (E) \times (V))}{(CP) \times (T) \times (RPM)}$$

HP = Actual horsepower required.

(Use motor HP if actual is not known)

SF = Select Service Factor based on Application. (Table 2)

And Type of Input Power. (Table 1)

CP = Chain Pitch. (inches)

Use sprocket HP ratings as a guide.

T = Number of teeth in smaller sprocket.

(12T are suggested)

RPM = Speed of smaller sprocket.

E = Speed factor. (Speed correction factors Table 3)

V = Service factor. (Service factors Table 4)

When the Working Load has been determined, select a chain which has a rated working load equal to or greater than the working load value.

CALCULATE SHAFT CENTERS

Use the following formula to determine the approximate shaft centers in pitches after chain pitch has been determined. Consult Tsubaki Engineering for fixed center drives.

$$C = \frac{L - \frac{N+n}{2} + \sqrt{\left(L - \frac{N+n}{2}\right)^2 - 8 \frac{(N-n)^2}{4\pi^2}}}{4}$$

CALCULATE CHAIN LENGTH

To order the proper length of chain, use the following calculation:

$$\text{Chain Length in Pitches} = \frac{S}{2} + 2C + \frac{K}{C}$$

- Add number of teeth in small sprocket and number of teeth in large sprocket to obtain S.
- Subtract number of teeth in small sprocket from number of teeth in large sprocket to obtain value D. Find D in Table 5, and note corresponding value K.
- Divide center distance in inches by pitches of chain, obtaining C.
- Use the values to solve the formula above.

C = Shaft center distance in pitches.

L = Length of chain in pitches.

N = Number of teeth in larger sprocket.

n = Number of teeth in smaller sprocket.

π = 3.1416

K = See Table 5

S = N + n

A chain cannot contain a fractional part of a pitch. If the chain length obtained contains a fractional part of a pitch, use the next higher whole number.

TABLE 1 - APPLICATION CLASSIFICATIONS

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



Application	Load Class ¹	Application	Load Class ¹	Application	Load Class ¹	Application	Load Class ¹
Agitators		Elevators		Tipple Hoist Drive	M	Suction Roll	U
Pure Liquids	U	Bucket - Uniform Load	U	Transfer Conveyors	M	Washers and Thickeners	M
Liquids and Solids	M	Bucket - Heavy Load	M	Transfer Rolls	M	Winders	U
Liquid - Variable Density	M	Bucket - Cont. Centrifugal		Tray Drive	M	Printing Presses	U
Blowers		Discharge	U	Trimmer Feed	M	Pullers	
Centrifugal	U	Escalators	U	Waste Conveyor	M	Barge Haul	H
Lobe	M	Freight	M	Machine Tools		Pumps	
Vane	U	Gravity Discharge	U	Bending Roll	M	Centrifugal	U
Brewing and Distilling		Man Lifts	H	Punch Press -		Proportioning	M
Bottling Machinery	U	Passenger	H	Gear Driven	H	Reciprocating - Single Acting,	
Brew Kettles - Cont. Duty	U	Fans		Notching Press -		Three or more Cylinders	M
Cookers - Cont. Duty	U	Centrifugal	U	Belt Driven	H	Reciprocating - Double Acting,	
Mash Tubs - Cont. Duty	U	Cooling Towers -		Plate Planers	H	Two or more Cylinders	M
Scale Hopper, Freq. Starts	M	Induced Draft	U	Tapping Machine	H	Reciprocating - Single Acting,	
Can Filling Machines	U	Cooling Towers -		Other Machine Tools -		One or Two Cylinders	M
Cane Knives	M	Forced Draft	U	Main Drives	M	Reciprocating - Double Acting,	
Car Dumpers	H	Induced Draft	M	Other Machine Tools -		Single Cylinder	M
Car Pullers	M	Large (Mine, etc.)	M	Auxiliary Drives	U	Reciprocating -	
Clarifiers	U	Large (Industrial)	M	Metal Mills		Rotary - Gear Type	U
Classifiers	M	Light (Small Diameter)	U	Draw Bench Carriage		Rotary - Lobe, Vane	U
Clay Working Machinery		Feeders		and Main Drive	M	Rubber and Plastics Industries	
Brick Press	H	Apron	M	Pinch, Dryer and Scrubber		Crackers	H
Briquette Machine	H	Belt	M	Rolls, Reversing	H	Laboratory Equipment	M
Clay Working Machinery	M	Disc	U	Slitters	M	Mixing Mills	H
Pub Mill	M	Reciprocating	H	Table Conveyors -		Refiners	M
Compressors		Screw	M	Non-Reversing		Rubber Calendars	M
Centrifugal	U	Food Industry		Group Drives	M	Rubber Mill (Two on Line)	M
Lobe	M	Beet Slicer	M	Table Conveyors -		Rubber Mill (Three on Line)	M
Reciprocating, Multi-Cyl	M	Cereal Cooker	U	Non-Reversing		Sheeter	M
Reciprocating, Single-Cyl	H	Dough Mixer	M	Individual Drives	H	Tire Building Machines	M
Conveyors - Uniformly Loaded or Fed		Meat Grinders	M	Table Conveyors -		Tire and Tube Press Openers	M
Apron	U	Generators (Not Welding)	U	Reversing	H	Tubers and Strainers	M
Assembly	U	Hammer Mills	H	Wire Drawing and		Warming Mills	M
Belt	U	Hoists		Flattening Machine	M	Sand Muller	M
Bucket	U	Heavy Duty	H	Wire Winding Machine	M	Sewage Disposal Equipment	
Chain	U	Medium Duty	M	Mills, Rotary Type		Bar Screens	U
Flight	U	Skip Hoist	M	Ball	M	Chemical Feeders	U
Oven	U	Laundry Washers		Cement Kilns	M	Collectors	U
Screw	U	Reversing	M	Dryers and Coolers	M	Dewatering Screws	M
Conveyors - Heavy Duty		Laundry Tumblers	M	Kilns	M	Scum Breakers	M
Not Uniformly Fed		Line Shafts		Pebble	M	Slow or Rapid Mixers	M
Apron	M	Driving Processing		Rod, Plane, Wedge Bar	M	Thickeners	M
Assembly	M	Equipment	M	Tumbling Barrels	H	Vacuum Filters	M
Belt	M	Light	U	Mixers		Screens	
Bucket	M	Other Line Shafts	U	Concrete Mixers - Cont.	M	Air Washing	U
Chain	M	Lumber Industry		Concrete Mixers - Intermittent	M	Rotary - Stone or Gravel	U
Flight	M	Barkers - Hydraulic,		Constant Density	U	Traveling Water Intake	U
Live Roll	M	Mechanical	M	Variable Density	M	Slab Pushers	M
Oven	M	Burner Conveyor	M	Oil Industry		Steering Gear	H
Reciprocating	H	Chain Saw and Drag Saw	H	Chillers	M	Stokers	U
Screw	M	Chain Transfer	H	Oil Well Pumping	H	Sugar Industry	
Shaker	H	Craneway Transfer	H	Paraffin Filter Press	M	Cane Knives	M
Cranes		De-barking Drum	H	Rotary Kilns	M	Crushers	M
Main Hoists	U	Edger Feed	M	Paper Mills		Mills	H
Bridge Travel	M	Gang Feed	M	Agitators (Mixers)	M	Textile Industry	
Trolley Travel	M	Green Chain	M	Barker - Auxiliaries/Hydraulic	M	Batchers	M
Crusher		Live Rolls	H	Barker - Mechanical	M	Calendars	M
Ore	H	Log Deck	H	Barking Drum	H	Cards	M
Stone	H	Log Haul - Incline	H	Beater and Pulper	M	Dry Cans	M
Sugar	M	Log Haul - Well Type	H	Bleacher	U	Dryers	M
Dredges		Log Turning Device	H	Calendars	M	Dyeing Machinery	M
Cable Reels	M	Main Log Conveyor	H	Calendars - Super	H	Knitting Machines	M
Conveyors		Off Bearing Rolls	M	Converting Machine,		Looms	M
Cutter Head Drives	H	Planer Feed Chains	M	Except Cutters, Platers	M	Mangles	M
Jig Drives	H	Planer Floor Chains	M	Conveyors	U	Nappers	M
Maneuvering Winches	M	Planer Tilting Hoist	M	Couch	M	Pads	M
Pumps	M	Re-saw Merry-go-round		Cutters - Platers	H	Range Drives	M
Screen Drive	H	Conveyor	M	Cylinders	M	Slashers	M
Stackers	M	Roll Cases	H	Dryers	M	Soapers	M
Utility Winches	M	Slab Conveyor	H	Felt Stretcher	M	Spinners	M
Dry Dock Cranes		Small Waste Conveyor -		Felt Whipper	H	Tenter Frames	M
Main Hoist, Auxiliary Hoist,		Belt	U	Jordans	H	Washers	M
Boom (Luffing)	U	Small Waste Conveyor -		Log Haul	H	Winders	M
Rotating (Swing or Slew)	M	Chain	M	Presses	U	Windless	M
Tracking (Drive Wheels)	H	Sorting Table	M	Pulp Machine Reel	M		
		Tipple Hoist Conveyor	M	Stock Chests	M		

¹U = Uniform Load; M = Moderate shock
H = Heavy shock

TABLE 3 - SPEED CORRECTION FACTORS (E)

Teeth	Conveyor 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	10.60	16.70		
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	6.21
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	2.41
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
14	.74	.77	.83	.89	.94	.98	1.02	1.07	1.11	1.15	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	.98	1.01	1.04	1.15	1.26

TABLE 4 - SERVICE FACTORS (V) (See example below table)

Frequency of Shock	Character of Conveyor Loading	Conditions of Operation	Daily Operating Period
Infrequent (1)	Uniform or Steady (1)	Relatively clean and moderate room temperature (1)	8-10 hours (1) ¹
	Moderate Shock (1.2) ¹	Moderately dusty (1.2)	
Frequent (1.2) ¹	Heavy Shock (1.5)	Unprotected from weather, dirty corrosive conditions or unusual temperatures within permissible operating range (1.4) ¹	24 Hours (1.2)

¹Example V = 1.2 x 1.2 x 1.4 x 1.0 = 2.02

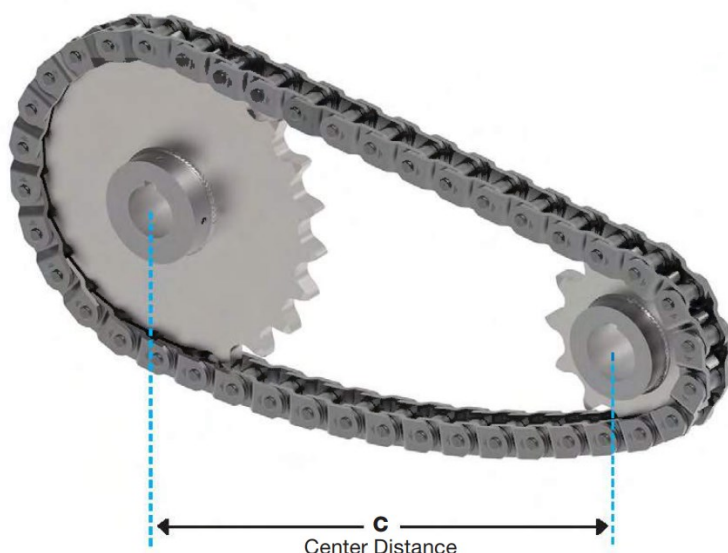


TABLE 5 - K VALUES¹

D	K	D	K	D	K	D	K	D	K	D	K
1	.03	32	25.94	63	100.54	94	223.82	125	395.79	156	616.44
2	.10	33	27.58	64	103.75	95	228.61	126	402.14	157	624.37
3	.23	34	29.28	65	107.02	96	233.44	127	408.55	158	632.35
4	.41	35	31.03	66	110.34	97	238.33	128	415.01	159	640.38
5	.63	36	32.83	67	113.71	98	243.27	129	421.52	160	648.46
6	.91	37	34.68	68	117.13	99	248.26	130	428.08	161	656.59
7	1.24	38	36.58	69	120.60	100	253.30	131	434.69	162	664.77
8	1.62	39	38.53	70	124.12	101	258.39	132	441.36	163	673.00
9	2.05	40	40.53	71	127.69	102	263.54	133	448.07	164	681.28
10	2.53	41	42.58	72	131.31	103	268.73	134	454.83	165	689.62
11	3.06	42	44.68	73	134.99	104	273.97	135	461.64	166	698.00
12	3.65	43	46.84	74	138.71	105	279.27	136	468.51	167	706.44
13	4.28	44	49.04	75	142.48	106	284.67	137	475.42	168	714.92
14	4.96	45	51.29	76	146.31	107	290.01	138	482.39	169	723.46
15	5.70	46	53.60	77	150.18	108	295.45	139	489.41	170	732.05
16	6.48	47	55.95	78	154.11	109	300.95	140	496.47	171	740.68
17	7.32	48	58.36	79	158.09	110	306.50	141	503.59	172	749.37
18	8.21	49	60.82	80	162.11	111	312.09	142	510.76	173	758.11
19	9.14	50	63.33	81	166.19	112	317.74	143	517.98	174	766.90
20	10.13	51	65.88	82	170.32	113	323.44	144	525.25	175	775.74
21	11.17	52	68.49	83	174.50	114	329.19	145	532.57	176	784.63
22	12.26	53	71.15	84	178.73	115	334.99	146	539.94	177	793.57
23	13.40	54	73.86	85	183.01	116	340.84	147	547.36	178	802.57
24	14.59	55	76.62	86	187.34	117	346.75	148	554.83	179	811.61
25	15.83	56	79.44	87	191.73	118	352.70	149	562.36	180	820.70
26	17.12	57	82.30	88	196.16	119	358.70	150	569.93	181	829.85
27	18.47	58	85.21	89	200.64	120	364.76	151	577.56	182	839.04
28	19.86	59	88.17	90	205.18	121	370.86	152	585.23	183	848.29
29	21.30	60	91.19	91	209.76	122	377.02	153	592.96	184	857.58
30	22.80	61	94.25	92	214.40	123	383.22	154	600.73	185	866.93
31	24.34	62	97.37	93	219.08	124	389.48	155	608.56		

¹Used to calculate chain length.

64S STRAIGHT SIDEBAR CHAIN

2.500" PITCH

64S CHAIN - STRAIGHT SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	2	3	7	10	20	30	40	100	200	250	350	450	600
9	1.1	1.4	2.7	3.9	7.7	11.6	15.4	38.6	77.2	96.5	135.1	100.1	65.0
10	1.1	1.5	3.0	4.3	8.6	12.9	17.2	42.9	85.8	107.3	150.2	117.2	76.1
11	1.2	1.7	3.3	4.7	9.4	14.2	18.9	47.2	94.4	118.0	165.2	135.2	87.8
12	1.3	1.8	3.6	5.1	10.3	15.4	20.6	51.5	103.0	128.7	180.2	154.1	100.1
13	1.4	1.9	3.9	5.6	11.2	16.7	22.3	55.8	111.5	139.4	195.2	173.7	112.8
14	1.5	2.0	4.2	6.0	12.0	18.0	24.0	60.1	120.1	150.2	210.2	194.2	126.1
15	1.5	2.1	4.5	6.4	12.9	19.3	25.7	64.4	128.7	160.9	225.2	215.3	139.9
16	1.6	2.2	4.8	6.9	13.7	20.6	27.5	68.6	137.3	171.6	240.3	237.2	154.1
17	1.7	2.3	5.1	7.3	14.6	21.9	29.2	72.9	145.9	182.3	255.3	259.8	168.8
18	1.8	2.4	5.4	7.7	15.4	23.2	30.9	77.2	154.5	193.1	270.3	283.1	183.9
19	1.9	2.5	5.7	8.2	16.3	24.5	32.6	81.5	163.0	203.8	285.3	307.0	-
20	1.9	2.6	6.0	8.6	17.2	25.7	34.3	85.8	171.6	214.5	300.3	331.5	-
21	2.0	2.7	6.3	9.0	18.0	27.0	36.0	90.1	180.2	225.2	315.3	356.7	-
22	2.1	2.8	6.6	9.4	18.9	28.3	37.8	94.4	188.8	236.0	330.4	382.5	-
23	2.1	3.0	6.9	9.9	19.7	29.6	39.5	98.7	197.4	246.7	345.4	405.3	-
24	2.2	3.1	7.2	10.3	20.6	30.9	41.2	103.0	205.9	257.4	360.4	414.4	-
Manual Lubrication							Oil Bath			Oil Stream Lubrication			

3011 OFFSET SIDEBAR CHAIN

3.067" PITCH

3011 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	1	3	6	10	20	40	100	150	200	250	300	350	400
9	1.0	2.4	4.0	6.4	12.7	25.5	63.7	95.6	127.4	159.3	191.1	171.8	140.6
10	1.1	2.6	4.3	7.1	14.2	28.3	70.8	106.2	141.6	177.0	212.4	198.9	164.7
11	1.2	2.7	4.7	7.8	15.6	31.1	77.9	116.8	155.7	194.7	231.3	215.5	190.0
12	1.3	2.9	5.1	8.5	17.0	34.0	85.0	127.4	169.9	212.4	248.6	231.5	216.5
13	1.4	3.1	5.5	9.2	18.4	36.8	92.0	138.0	184.1	230.1	265.3	247.0	232.3
14	1.4	3.3	5.9	9.9	19.8	39.6	99.1	148.7	198.2	247.8	281.4	262.1	246.4
15	1.5	3.5	6.4	10.6	21.2	42.5	106.2	159.3	212.4	265.5	296.9	276.6	260.0
16	1.6	3.7	6.8	11.3	22.7	45.3	113.3	169.9	226.5	283.2	312.0	290.6	273.2
17	1.7	3.8	7.2	12.0	24.1	48.1	120.3	180.5	240.7	300.9	326.5	304.1	285.9
18	1.7	4.0	7.6	12.7	25.5	51.0	127.4	191.1	245.9	318.6	340.5	317.1	-
19	1.8	4.2	8.1	13.5	26.9	53.8	134.5	201.8	269.0	336.3	354.0	329.7	-
20	1.9	4.3	8.5	14.2	28.3	56.6	141.6	212.4	283.2	354.0	367.1	341.9	-
21	1.9	4.5	8.9	14.9	29.7	59.5	148.7	233.0	297.3	371.7	379.6	353.6	-
22	2.0	4.7	9.3	15.6	31.1	62.3	155.7	233.6	311.5	389.4	391.7	364.8	-
23	2.1	4.9	9.8	16.3	32.6	65.1	162.8	244.2	325.6	407.1	403.4	375.7	-
24	2.2	5.1	10.2	17.0	34.0	68.0	169.9	254.9	339.8	424.8	414.6	386.1	-
Manual Lubrication							Oil Bath			Oil Stream Lubrication			

For continuous operation in the highlighted area, some galling of the live bearing surfaces of the chain joints maybe expected even though lubrication is as suggested. The ratings shown on these charts are based on chain which operates over machine cut tooth sprockets.



3514 OFFSET SIDEBAR CHAIN

3.500" PITCH

3514 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	1	3	6	10	20	35	80	100	125	150	200	250	300
9	1.4	3.3	5.5	8.8	17.6	30.8	52.8	88.1	110.1	132.1	176.1	178.7	170.8
10	1.5	3.5	6.0	9.8	19.6	34.2	58.7	97.8	122.3	146.8	195.7	196.1	187.4
11	1.6	3.8	6.5	10.8	21.5	37.7	64.6	107.6	134.5	161.4	215.2	213.0	203.6
12	1.8	4.1	7.0	11.7	23.5	41.1	70.4	117.4	146.8	176.1	234.8	229.5	219.4
13	1.9	4.3	7.6	12.7	25.4	44.5	76.3	127.2	159.0	190.8	254.4	245.6	234.7
14	2.0	4.6	8.2	13.7	27.4	47.9	82.2	137.0	171.2	205.5	273.9	261.2	249.6
15	2.1	4.8	8.8	14.7	29.4	51.4	88.1	146.8	183.4	220.1	292.1	276.3	264.1
16	2.2	5.1	9.4	15.7	31.3	54.8	93.9	156.5	195.7	234.8	307.7	291.1	278.2
17	2.3	5.3	10.0	16.6	33.3	58.2	99.8	166.3	207.9	249.5	322.8	305.5	-
18	2.4	5.5	10.6	17.6	35.2	61.6	105.7	176.1	220.1	264.2	337.6	319.4	-
19	2.5	5.8	11.2	18.6	37.2	65.1	111.5	185.9	232.4	278.8	351.9	333.0	-
20	2.6	6.0	11.7	19.6	39.1	68.5	117.4	195.7	244.6	293.5	365.8	346.1	-
21	2.7	6.2	12.3	20.5	41.1	71.9	123.3	205.5	256.8	308.2	379.3	358.9	-
Manual Lubrication						Oil Bath				Oil Stream Lubrication			

1245 OFFSET SIDEBAR CHAIN

4.073" PITCH

1245 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	1	3	6	10	20	30	40	65	80	100	125	150	200
9	2.0	4.7	8.0	12.8	25.5	38.3	51.1	83.0	102.1	127.7	159.6	168.2	166.3
10	2.2	5.1	8.7	14.2	28.4	42.6	56.7	92.2	113.5	141.8	177.3	185.0	182.9
11	2.4	5.5	9.4	15.6	31.2	46.8	62.4	101.4	124.8	156.0	195.0	201.5	199.2
12	2.5	5.9	10.2	17.0	34.0	51.1	68.1	110.6	136.2	170.2	212.8	217.6	215.1
13	2.7	6.3	11.1	18.4	36.9	55.3	73.8	119.9	147.5	184.4	230.5	233.4	230.7
14	2.9	6.6	11.9	19.9	39.7	59.6	79.4	129.1	158.9	198.6	248.2	248.8	246.0
15	3.0	7.0	12.8	21.3	42.6	63.8	85.1	138.3	170.2	212.8	265.9	263.9	261.0
16	3.2	7.3	13.6	22.7	45.4	68.1	90.8	147.5	181.6	227.0	280.7	278.7	275.6
17	3.3	7.7	14.5	24.1	48.2	72.3	96.5	156.7	192.9	241.1	295.3	293.2	289.9
18	3.5	8.0	15.3	25.5	51.1	76.6	102.1	166.0	204.3	255.3	309.6	307.3	303.9
19	3.6	8.4	16.2	27.0	53.9	80.9	107.8	175.2	215.6	269.5	323.5	321.2	317.6
20	3.8	8.7	17.0	28.4	56.7	85.1	113.5	184.4	227.0	283.7	337.1	334.7	-
21	3.9	9.0	17.9	29.8	59.6	89.4	119.2	193.6	238.3	297.9	350.5	347.9	-
Manual Lubrication						Oil Bath				Oil Stream Lubrication			

For continuous operation in the highlighted area, some galling of the live bearing surfaces of the chain joints maybe expected even though lubrication is as suggested. The ratings shown on these charts are based on chain which operates over machine cut tooth sprockets.

4522 OFFSET SIDEBAR CHAIN

4.500" PITCH

4522 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	1	3	6	10	20	30	35	50	65	80	100	125	150
9	2.6	6.0	10.2	16.3	32.6	48.9	57.0	81.5	105.9	130.4	153.8	156.6	158.8
10	2.8	6.5	11.1	18.1	36.2	54.3	63.4	90.5	117.7	144.9	169.5	172.5	175.0
11	3.0	7.0	12.0	19.9	39.8	59.8	69.7	99.6	129.5	159.4	184.8	188.1	190.8
12	3.3	7.5	13.0	21.7	43.5	65.2	76.1	108.7	141.3	173.9	199.8	203.4	206.3
13	3.5	8.0	14.1	23.5	47.1	70.6	82.4	117.7	153.0	188.3	214.6	218.4	221.6
14	3.7	8.5	15.2	25.4	50.7	76.1	88.7	126.8	164.8	202.8	229.1	233.2	236.6
15	3.9	8.9	16.3	27.2	54.3	81.5	95.1	135.8	176.6	217.3	243.4	247.7	251.3
16	4.1	9.4	17.4	29.0	58.0	86.9	101.4	144.9	188.3	231.8	257.4	261.9	265.7
17	4.2	9.8	18.5	30.8	61.6	92.4	107.8	153.9	200.1	246.3	271.1	275.9	279.9
18	4.4	10.2	19.6	32.6	65.2	97.8	114.1	163.0	211.9	260.8	284.6	289.6	293.8
19	4.6	10.7	20.6	34.4	68.8	103.2	120.4	172.0	223.7	275.3	297.8	303.1	307.5
20	4.8	11.1	21.7	36.2	72.4	108.7	126.8	181.1	235.4	289.8	310.7	316.3	320.9
21	5.0	11.5	22.8	38.0	76.1	114.1	133.1	190.1	247.2	304.2	323.5	329.2	334.0
Manual Lubrication						Oil Bath				Oil Stream Lubrication			

5031 OFFSET SIDEBAR CHAIN

5.000" PITCH

5031 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	.5	1	3	6	10	20	30	35	50	65	80	100	125
9	2.0	3.4	7.8	13.3	21.1	42.2	63.3	73.8	105.5	133.9	139.3	145.3	151.6
10	2.2	3.7	8.5	14.4	23.4	46.9	70.3	82.0	117.2	147.6	153.6	160.2	-
11	2.3	3.9	9.1	15.5	25.8	51.6	77.4	90.3	128.9	161.2	167.7	174.9	-
12	2.5	4.2	9.7	16.9	28.1	56.3	84.4	98.5	140.7	174.5	181.6	189.4	-
13	2.6	4.5	10.3	18.3	30.5	61.0	91.4	106.7	152.4	187.7	195.2	203.7	-
14	2.8	4.7	10.9	19.7	32.8	65.6	98.5	114.9	164.1	200.6	208.7	217.7	-
15	2.9	5.0	11.5	21.1	35.2	70.3	105.5	123.1	175.8	213.4	222.0	231.6	-
16	3.1	5.2	12.1	22.5	37.5	75.0	112.5	131.3	187.5	225.9	235.0	245.2	-
17	3.2	5.5	12.7	23.9	39.9	79.7	119.6	139.5	199.3	238.2	247.8	258.6	-
18	3.4	5.7	13.3	25.3	42.2	84.4	126.6	147.7	211.0	250.4	260.5	271.7	-
Manual Lubrication						Oil Bath				Oil Stream Lubrication			

For continuous operation in the highlighted area, some galling of the live bearing surfaces of the chain joints may be expected even though lubrication is as suggested. The ratings shown on these charts are based on chain which operates over machine cut tooth sprockets.

6042 OFFSET SIDEBAR CHAIN

6.000" PITCH

6042 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	.5	1	3	6	10	20	30	35	40	45	50	60	70
9	3.1	5.3	12.2	20.7	33.0	66.0	96.1	101.5	106.3	110.8	115.0	122.6	129.0
10	3.4	5.7	13.2	22.4	36.6	73.3	106.2	112.1	117.5	122.5	127.1	135.5	-
11	3.6	6.2	14.2	24.2	40.3	80.6	116.1	122.6	128.5	133.9	139.0	148.2	-
12	3.9	6.6	15.2	26.4	44.0	87.9	126.0	133.0	139.4	145.3	150.8	160.8	-
13	4.1	7.0	16.2	28.6	47.6	95.3	135.7	143.2	150.1	156.5	162.4	173.2	-
14	4.4	7.4	17.1	30.8	51.3	102.6	145.3	153.4	160.8	167.6	173.9	185.4	-
15	4.6	7.8	18.0	33.0	55.0	109.9	154.8	163.4	171.3	178.5	185.3	197.5	-
16	4.8	8.2	18.9	35.2	58.6	177.3	164.2	173.3	181.6	189.3	196.5	209.5	-
17	5.1	8.6	19.8	37.4	62.3	124.6	173.4	183.1	191.9	200.0	207.6	221.3	-
18	5.3	9.0	20.7	39.6	66.0	131.9	182.6	192.7	202.0	210.6	218.5	233.0	-
Manual Lubrication										Oil Bath		Oil Stream Lubrication	

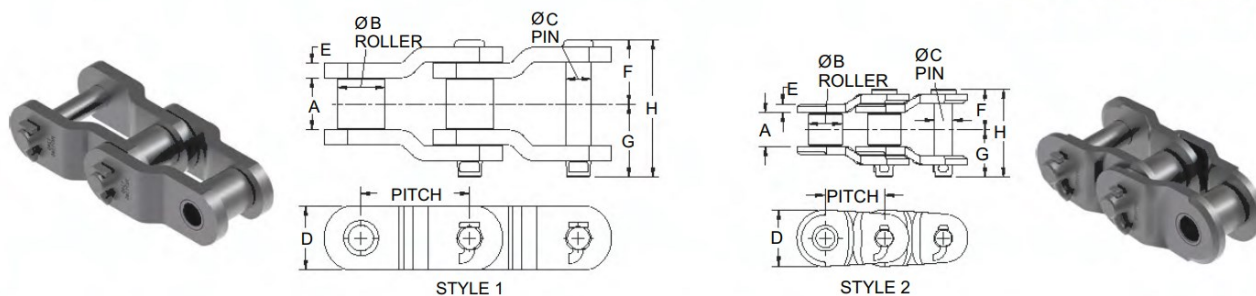
7080 OFFSET SIDEBAR CHAIN

7.000" PITCH

7080 CHAIN - OFFSET SIDEBAR CHAIN													
Teeth	Horsepower Capacity RPM												
	.1	.5	1	2	4	6	10	15	20	25	30	35	40
9	1.3	4.6	7.7	13.1	22.2	30.2	48.1	67.1	76.7	85.0	92.5	99.4	105.7
10	1.4	4.9	8.4	14.2	24.0	32.7	53.5	74.2	84.8	94.0	102.3	109.9	-
11	1.6	5.3	9.0	15.2	25.9	35.3	58.8	81.2	92.8	103.0	112.0	120.3	-
12	1.7	5.7	9.6	16.3	27.6	38.5	64.2	88.2	100.8	111.8	121.7	130.7	-
13	1.8	6.0	10.2	17.3	29.4	41.7	69.5	95.1	108.7	120.6	131.2	140.9	-
14	1.9	6.4	10.8	18.3	31.1	44.9	74.8	102.0	116.5	129.2	140.6	151.1	-
15	2.0	6.7	11.4	19.3	32.7	48.1	80.2	108.8	124.3	137.8	150.0	161.1	-
16	2.1	7.1	12.0	20.3	34.4	51.3	85.5	115.5	132.0	146.4	159.3	171.1	-
17	2.2	7.4	12.5	21.2	36.4	54.5	90.9	122.2	139.6	154.8	168.5	180.9	-
18	2.3	7.7	13.1	22.2	38.5	57.7	96.2	128.8	147.1	163.2	177.5	190.7	-
Manual Lubrication													

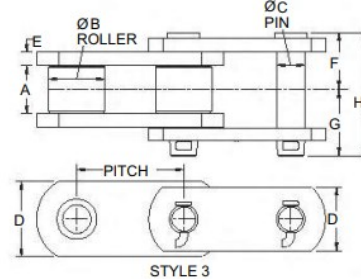
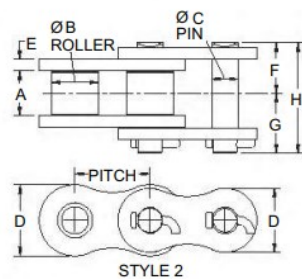
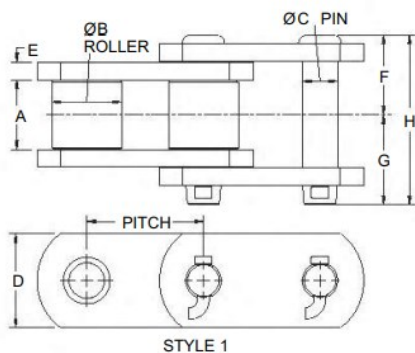
For continuous operation in the highlighted area, some galling of the live bearing surfaces of the chain joints maybe expected even though lubrication is as suggested. The ratings shown on these charts are based on chain which operates over machine cut tooth sprockets.

Drive Chain - Offset Sidebar



Chain Number	Alternate Part Number	Tsubaki Part Number	Sidebar Style	Pitch	Weight per Pitch (lbs.)	Maximum Continuous Strand Length Available (Pitches)	Dimensions								AUS (lbs.)	Max Working Load (lbs.)
							Inside Width	Roller Diameter	Pin Diameter	Sidebar Height	Sidebar Thickness	Pin Head to CL	Pin End to CL	Overall Width		
	R03140	23183	2	1.750	.90	622	1.00	1.00	0.55	1.66	0.25	1.19	1.41	2.59	60,000	2,900
US2065	R01613AK	25461	1	2.000	1.3	556	1.27	1.13	0.59	1.63	0.31	1.44	1.69	3.13	70,000	3,900
	R03180	23701	2	2.250	1.8	385	1.44	1.41	0.69	2.09	0.28	1.47	1.74	3.21	86,000	4,800
	R025H	25490	1	2.500	2.0	445	1.50	1.25	0.65	1.63	0.38	1.72	1.95	3.67	84,000	5,100
	R01625	23697	2	2.500	2.7	305	1.53	1.56	0.78	2.37	0.31	1.60	1.91	3.51	96,000	5,900
520RX	-	1284	1	2.563	1.0	564	1.06	1.13	0.50	1.25	0.25	1.22	1.44	2.66	31,000	2,700
US882	R0588	11067	1	2.609	.80	616	1.13	0.88	0.44	1.13	0.25	1.20	1.42	2.63	30,000	2,500
1184RX	-	14662	1	2.640	1.1	456	1.06	1.13	0.50	1.50	0.25	1.22	1.44	2.63	40,000	2,700
US3011	R0568N	17219	1	3.067	3.3	262	1.56	1.63	0.75	2.25	0.38	1.75	2.13	3.88	116,000	6,100
US1030	-	1240	1	3.075	1.7	392	1.50	1.25	0.63	1.50	0.31	1.56	1.85	3.41	31,000	4,650
US1031	R03	11037	1	3.075	1.7	392	1.50	1.25	0.63	1.50	0.31	1.56	1.84	3.41	59,000	4,650
US3075	R03H	16398	1	3.075	2.4	336	1.50	1.25	0.65	1.75	0.38	1.72	1.95	3.67	78,000	5,100
-	R03125	23569	1	3.125	3.4	257	1.56	1.62	0.88	2.25	0.38	1.75	2.12	3.87	127,000	7,100
-	R03125H	23233	1	3.125	4.2	257	1.63	1.63	0.88	2.25	0.50	2.09	2.44	4.53	153,000	8,000
US3514	R01616	10954	1	3.500	4.8	229	1.50	1.75	0.88	2.25	0.50	2.03	2.38	4.41	158,000	7,700
-	R01338	23816	1	3.625	6.2	210	1.67	2.13	0.94	2.38	0.56	2.25	2.63	4.88	181,000	9,200
-	R01644A	23157	1	3.750	5.7	203	1.50	1.75	0.94	2.38	0.56	2.17	2.54	4.71	181,000	8,600
-	R03924T	23696	1	3.906	9.1	137	1.51	2.25	1.19	3.38	0.56	2.16	2.60	4.76	279,000	11,000
-	R01664A	23155	1	4.000	9.6	134	2.20	2.25	1.19	3.38	0.56	2.52	2.93	5.45	269,000	14,000
-	R05	23704	1	4.063	5.1	197	1.52	1.75	0.88	2.25	0.50	2.04	2.37	4.41	152,000	7,700
US1241	-	2513	1	4.063	5.5	197	1.94	1.75	0.88	2.25	0.50	2.25	2.59	4.81	139,000	9,000
US1242	R04	11068	1	4.063	5.4	197	1.94	1.75	0.88	2.25	0.50	2.25	2.56	4.81	158,000	9,000
-	R04HF	23162	1	4.063	6.9	187	1.94	1.75	0.94	2.38	0.63	2.52	2.89	5.40	181,000	10,500
US1245	R01245	10523	1	4.073	6.4	187	1.94	1.78	0.94	2.38	0.56	2.39	2.37	5.13	181,000	10,000
US4121	R01343	25534	1	4.090	7.6	160	1.94	1.88	1.10	2.75	0.56	2.39	2.76	5.15	235,000	11,700
US4122	R01345	25535	1	4.090	7.8	160	1.94	2.00	1.10	2.75	0.56	2.39	2.76	5.15	235,000	11,700
US4522	R0635	11039	1	4.500	9.9	105	2.06	2.25	1.10	3.00	0.56	2.45	2.86	5.31	249,000	12,300
-	R01634A	23694	1	5.000	10.8	120	2.31	2.50	1.13	3.00	0.56	2.56	3.00	5.56	236,000	13,500
US5031	R01602AA	11634	1	5.000	14.0	103	2.75	2.50	1.25	3.50	0.63	2.92	3.36	6.28	321,000	17,500
US5035	-	17443	1	5.000	15.8	103	2.56	2.50	1.38	3.50	0.75	3.08	3.51	6.59	350,000	19,500
-	R01605AK	25367	1	5.000	16.3	103	2.75	2.50	1.37	3.50	0.75	3.17	3.58	6.75	389,000	20,500
US5542	-	17289	1	5.500	21.9	82	3.00	3.00	1.50	4.00	0.75	3.40	3.85	7.25	440,000	23,600
US5738	-	18321	1	5.750	21.0	78	3.00	3.00	1.50	4.00	0.69	3.28	3.72	7.00	402,000	23,000
US6042	R06042	10809	1	6.000	22.6	75	3.00	3.00	1.50	4.00	0.75	3.41	3.84	7.25	451,000	23,600
US6066	-	19226	1	6.000	28.0	63	3.00	N/A	1.75	4.75	0.75	3.55	3.83	7.38	516,000	27,600
-	R01626A	23926	1	6.000	23.4	75	2.31	3.25	1.50	4.00	0.75	3.06	3.50	6.56	451,000	20,000

Drive Chain - Straight Sidebar



Chain Number	Tsubaki Part Number	Sidebar Style	Pitch	Weight per Pitch (lbs.)	Maximum Continuous Strand Length Available (Pitches)	Dimensions								AUS (lbs.)	Max Working Load (lbs.)
						Inside Width	Roller Diameter	Pin Diameter	Sidebar Height	Sidebar Thickness	Pin Head to CL	Pin End to CL	Overall Width		
						A	B	C	D	E	F	G	H		
US64S	8356	2	2.500	2.8	304	1.50	1.56	0.88	2.12/2.37	0.38	1.69	2.00	3.69	122,000	6,900
344SXX	11808	1	3.000	5.4	253	1.94	1.78	0.94	2.38	0.56	2.38	2.75	5.13	181,500	10,000
US4031	14139	1	4.000	12.7	129	2.75	2.50	1.25	3.50	0.63	2.91	3.36	6.28	321,000	17,500
US1353	21400	3	4.090	11.8	147	2.25	2.63	1.31	3.00/3.50	0.63	2.66	3.09	5.75	305,500	16,000
US5021	22874	3	5.000	12.9	103	2.25	2.63	1.31	3.00/3.50	0.63	2.66	3.09	5.75	276,000	16,000
US5042	13423	1	5.000	20.8	90	3.00	3.00	1.50	4.00	0.75	3.41	3.84	7.25	440,000	23,600
US6566	19711	1	6.500	42.9	46	3.25	3.50	1.75	6.00	0.88	3.95	4.23	8.19	572,000	30,600
US6065	24853	3	6.500	45.0	44	3.25	3.75	1.75	5.00/6.00	0.88	3.95	4.23	8.19	572,300	30,600
US6550	24531	1	6.500	31.9	56	3.50	3.50	2.01	5.00	.63/.75	3.47	3.97	7.44	474,000	35,000
US7080	17496	1	7.000	50.8	39	3.25	4.50	2.13	6.00	0.88	3.81	4.19	8.00	753,500	37,300