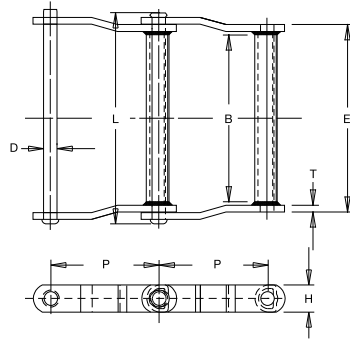


DRAG CHAIN

Drag Chains move very heavy loads.

They provide efficient and economical service when used in drag conveyor applications such as those involving chips and sawdust. Like Mill Chains, Drag Chains combine strength, precision, impact resistance and wear resistance. This versatile and economical chain is built to withstand punishing shock loads and abrasive conditions to provide longer wear life in your operation.



Drag Chain

All dimensions in inches unless otherwise stated.

Chain Number	Pitch P	Sidebars			Chain Width		Effective Distance Between Welds B	Ultimate Strength (lbs.)	Maximum Allowable Load (lbs.)	Approx. Weight (lbs./ft.)
		Thickness T	Height H	Pin Dia. D	Overall L	Length of Bearing E				
WD102	5.000	0.38	1.50	0.75	9.25	7.75	6.38	51,000	10,200	12.1
WDH104	6.000	0.38	1.50	0.75	6.75	5.34	4.13	51,000	10,200	10.1
WD110	6.000	0.38	1.50	0.75	11.75	10.22	9.00	51,000	10,200	12.7
WDH110	6.000	0.38	1.50	0.75	11.75	10.22	9.00	56,000	11,385	12.7
WDH112	8.000	0.38	1.50	0.75	11.75	10.22	9.00	56,000	10,200	10.4
WD116	8.000	0.38	1.75	0.75	15.50	14.13	13.00	51,000	10,200	14.8
WD118	8.000	0.50	2.00	* 0.88	16.63	14.88	13.25	70,000	14,000	18.7
WD120	6.000	0.50	2.00	* 0.88	12.00	10.25	8.75	85,000	14,000	18.4
WD122	8.000	0.50	2.00	* 0.88	12.00	10.25	8.75	70,000	14,000	15.3
WD480	8.000	0.50	2.00	* 0.88	14.50	12.75	11.00	70,000	14,000	20.0
WDH480	8.000	0.50	2.00	* 0.88	14.50	12.75	11.00	85,000	17,286	20.0
† WDRS480LB	8.000	0.50	2.00	1.00	14.50	12.75	11.00	85,000	17,100	21.1
WD580	8.000	0.50	2.00	1.00	14.50	12.75	11.00	70,000	10,000	21.1

*Also available in 1" pin diameter.

Heavy Duty and "Large Barrel" Style Drag Chain

All dimensions in inches unless otherwise stated.

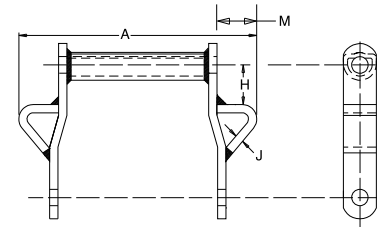
Chain Number	Pitch P	Sidebars			Chain Width		Effective Distance Between Welds B	Ultimate Strength (lbs.)	Maximum Allowable Load (lbs.)	Approx. Weight (lbs./ft.)
		Thickness T	Height H	Pin Dia. D	Overall L	Length of Bearing E				
WD120XHD	6.000	0.63	2.00	1.00	12.75	10.50	8.75	122,000	24,000	22.5
WD118XHD	8.000	0.63	2.00	1.00	17.38	15.13	11.00	122,000	24,000	22.5
WD122XHD	8.000	0.63	2.00	1.00	12.75	10.50	8.75	122,000	24,000	19.5
WD480XHD	8.000	0.63	2.00	1.00	15.25	13.00	11.00	122,000	24,000	23.3
† WDRS480XHDLB	8.000	0.63	2.00	1.00	15.25	13.00	11.00	122,000	24,000	23.3

† "Large Barrel" style

DRAG CHAIN ATTACHMENTS

When versatility really matters

Folded Wing Attachment



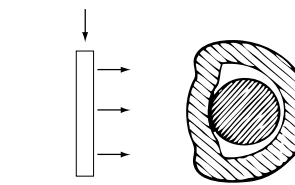
All dimensions in inches unless otherwise stated.

Chain Number	A *	H	J	M
WD102	14.50	1.50	0.38	3.25
WD104	12.00	2.25	0.38	3.38
WD110	17.00	2.25	0.38	3.38
WD112	17.00	2.25	0.38	3.38
WD113	17.00	2.25	0.38	3.38
WD116	22.00	2.50	0.38	3.94
WD118	22.00	2.50	0.50	3.56
WD120	17.00	2.50	0.50	3.38
WD122	17.00	2.50	0.50	3.38
WD480	22.00	2.50	0.50	4.63
WD120XHD	17.25	2.50	0.50	3.25
WD118XHD	22.25	2.50	0.50	3.44
WD480XHD	22.25	2.50	0.50	4.50

*The nominal dimension is shown in the chart. Please specify exact width required when order is placed.

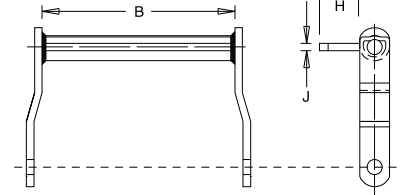
C1/2, C1, C-3 and C-4 Attachments

C-1/2 Attachments



End view of drag chain barrel
C-1/2 is welded to barrel face.

C-1, C-3 and C-4 Attachments



All dimensions in inches unless otherwise stated.

Chain Number	C-1/2*			C-1			C-3			C-4		
	B	J	H	B	J	H	B	J	H	B	J	H
WD102	6.75	0.38	1.50	6.75	0.38	1.50	6.75	0.38	1.75	6.75	0.38	3.00
WD104	4.50	0.38	1.50	4.50	0.38	1.50	4.50	0.38	1.75	4.50	0.38	3.00
WD110	9.25	0.38	1.50	9.25	0.38	1.50	9.25	0.38	1.75	9.25	0.38	3.00
WD112	9.25	0.38	1.50	9.25	0.38	1.50	9.25	0.38	1.75	9.25	0.38	3.00
WD113	9.00	0.50	1.50	9.00	0.50	1.75	9.00	0.50	1.75	9.00	0.50	4.00
WD116	13.00	0.38	1.75	13.00	0.38	1.75	13.00	0.38	1.75	13.00	0.38	4.00
WD118	13.50	0.50	2.00	13.50	0.50	1.75	13.50	0.50	2.00	13.50	0.50	4.00
WD120	9.00	0.50	2.00	9.00	0.50	1.75	9.00	0.50	2.00	9.00	0.50	4.00
WD122	9.00	0.50	2.00	9.00	0.50	1.75	9.00	0.50	2.00	9.00	0.50	4.00
WD480	11.50	0.50	2.00	11.50	0.50	1.75	11.50	0.50	2.00	11.50	0.50	4.00

*Note: C-1/2 attachments are welded on front barrel. C-1, C-3, C-4 attachments are welded on top of barrel. C-1/2 attachments do not extend above sidebar height.

WELDED STEEL CHAIN TECHNICAL DISCUSSION

Application: Outdoor Chip Conveyor
Savings: \$16,300.00
Tsubaki solution: Downtime savings were realized on this outdoor conveyor with Tsubaki life resulting in 14 months compared to previous brand at 6 months.

It really mattered to this Tsubaki customer

COST SAVINGS

STRENGTH

Why/when do you use 1" pin for drag chain vs standard (.88)?

A larger diameter pin will decrease the bearing pressure of the same chain as the forces are spread over a larger surface. This allows the chain to withstand larger loads over the same chain footprint. Basically, a larger pin will allow larger tensions and loads to be transmitted by the same chain over a smaller pin diameter.

Why go with Large Barrel?

Large Barrel has the same strength as the WDH480 base chain except that it comes complete with a thicker barrel. This added thickness provides extra strength, resistance to crushing forces and additional life as the barrel will have more material to wear through.

CORROSION

What options are available to eliminate corrosion?

Welded steel chains are generally used in very demanding applications. These applications are often outdoors, creating an environment conducive to corrosion. In order to eliminate corrosion, a plating or coating can be used to prevent and/or reduce the rate of corrosion. Tsubaki's ACC (Anti-Corrosion Coating) can be applied to assembled chain to maximize the life of your chains.

WEAR

Why/when use IBR, IBRS?

IBR/IBRS (Induction Hardened Barrels & Rivets, Sideplates) is a heat treatment that will give a chain increased wear properties. The parts are initially through hardened and then induction hardened to a higher hardness, which will allow the parts to wear longer in abrasive conditions.

What is considered the proper direction of travel open end or closed end and why?

There is no rule for the proper direction of chain travel. For interference concerns, the barrel end should be run first so that if the chain contacts something, it will be pushed out of the way rather than pulled in and potentially jam the chain or damage the chain and/or other parts. For wear concerns, it is recommended that the open end be run first. This causes a reduction in sprocket wear as the motion between the chain and sprocket tooth is reduced. The wear is reduced by restricting the joint articulation to the pin-barrel, which is best able to withstand this type of wear.

Should conveyor troughs be flared and what are the benefits?

Conveyor troughs should be flared so that the chain will enter and exit the conveyor smoothly. This will avoid the chain wearing unevenly and/or getting jammed on any part of the entry or exit of the conveyor.

What are the advantages of full face sprockets vs. A plates?

Advantage of full face sprockets over "A" style is that they support the chain and its attachments over a greater surface area of the barrel. This ensures that the stress of the load is not concentrated in a smaller area of the chain and can help reduce fatigue-type failures on the barrels.

What is the recommended clearance between trough and wing attachments?

It is best to have no more than a 1/2" clearance between the inside trough edge and the outer edge of a chain. This includes any attachment that has been welded to the chain. Ensure that the chain and trough are aligned and that the chain does not move from side to side under normal operating conditions.

INSTALLATION

Can Tsubaki chain be joined with another manufacturer's chain?

Tsubaki WSC chain is interchangeable with other manufacturers of WSC. It is best to use the same manufacturer's rivet and corresponding sidebars for assurance of a premium fit.

How can I speed up and facilitate chain assembly and disassembly?

Tsubaki of Canada manufactures a specifically designed tool, the ECCT, for easy assembly and disassembly while in the field. See page 47 for details.

When my chain starts stretching and needs changing, what else should I check?

Upon changing the chain it is best to change the sprocket at the same time to ensure that all components wear evenly. Putting a new chain on used sprockets, even if they look to be in fair condition, can have adverse effects on the new chain's lifespan. While the chain is off of the conveyor, it is recommended to check all points of the infrastructure, troughs, beds, sprocket teeth/alignment and take-up systems to ensure all parts are in good working order.

What is the maximum recommended elongation for mill/drag chains?

2% - 3% elongation is where the chain should be replaced. Of course, elaborate take-up systems can be adjusted to ensure a chain can be run even longer but wear of individual components such as the pin and barrel will surpass an acceptable wear limit and the chain's load ratings will be compromised. In addition, if the chain is sliding in a trough and the sidebar height is reduced by 5% or more, the chain should be replaced.

