



U.S. Tsubaki, Inc.

Engineering Chain Division

Roller Conveyor Chains

to move heavy industry

- Increase profits
- Reduce downtime
- Improve operations

Power and Performance



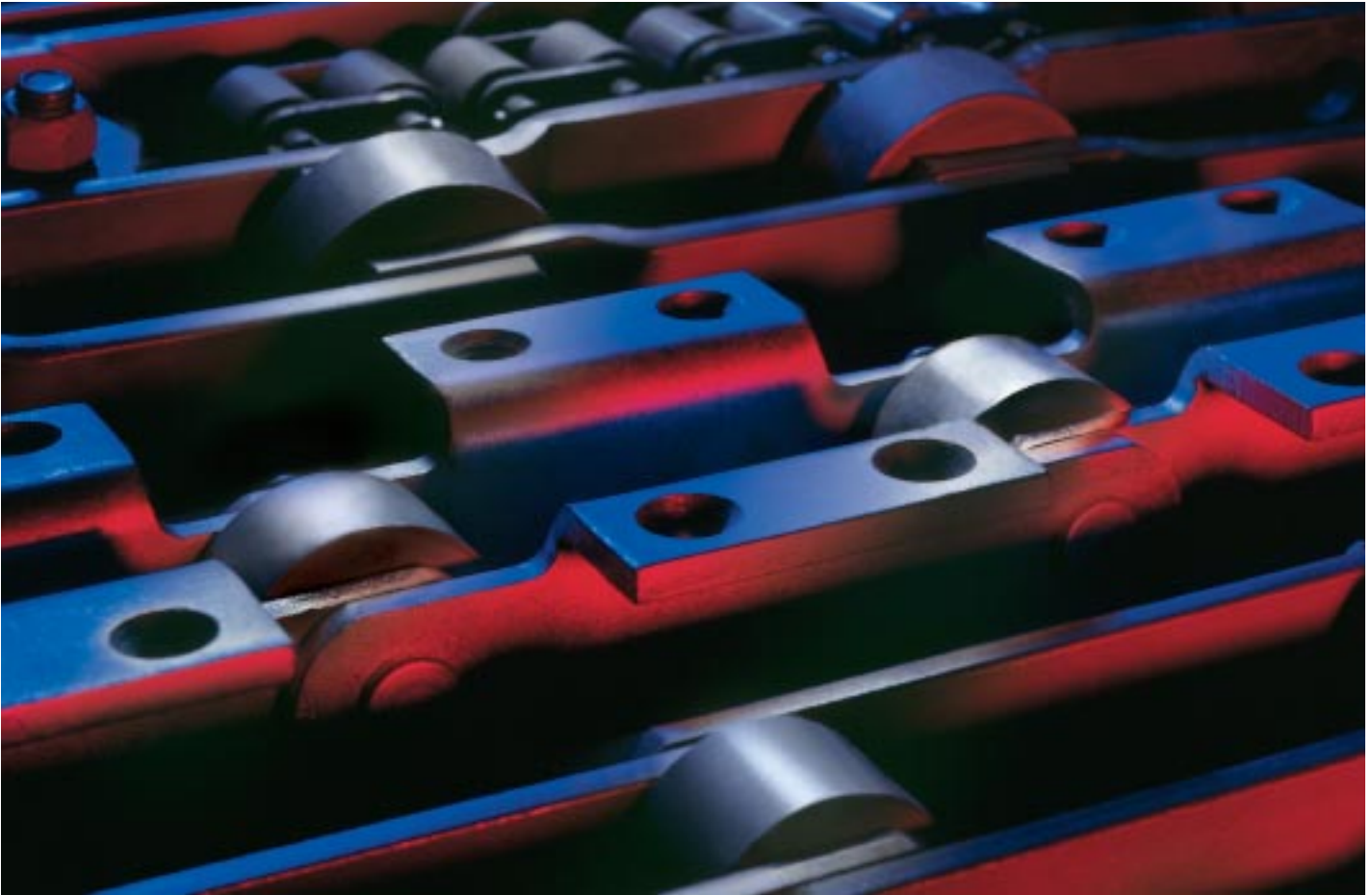
Union[®] Roller Conveyor Chain keeps industry moving.

HERE ARE SOME OF THE INDUSTRIES THAT PUT OUR CHAINS TO WORK: AGRICULTURE • AMUSEMENT PARKS • ASPHALT PLANTS • BAKERIES • BOTTLING • BRICKYARDS • CANNERIES • CEMENT PLANTS • CHEMICAL PLANTS • CLAY WORKS • CONSTRUCTION MACHINERY MANUFACTURERS • FOOD PROCESSING & PACKAGING • HIGHWAY CONSTRUCTION • MINING • OIL REFINERIES • PACKING PLANTS • PAINT PLANTS • POWER PLANTS • PULP, PAPER, & WOOD MILLS • QUARRIES • SAND & GRAVEL PLANTS • STEEL MILLS • SUGAR REFINERIES • WAREHOUSES • WATER & WASTEWATER TREATMENT PLANTS




U.S. TSUBAKI

When the going gets tough,



Roller Conveyor Chain from U.S. Tsubaki has what it takes to move heavy industry. Our specialized chains and attachments are built to Union® specifications to handle maximum production and high shock loads. We keep your lines running longer under tough conditions — reducing your downtime and increasing your bottom line.

It pays to choose U.S. Tsubaki:

- Reduced downtime
- Lower maintenance costs
- Fewer replacements
- Increased productivity





Inspection Checklist

Lubrication

- Manual: Carefully follow lubrication schedule.
- Drip: Inspect the filling of oiler cups and the rate of feed. Check that the feed cups are not clogged and are properly positioned over the chain.
- Bath: Inspect the oil level and check that there is no sludge. Drain, flush, and refill the system as the application requires.
- Automatic: Inspect grease lubrication reservoir and fill accordingly. Manually grease joints periodically to ensure proper grease injection from system.

If the chains have not been lubricated properly, the joints may have a brownish (rusty) color. The pins may also be roughened, grooved, or galled with a permanent staining of the material due to breakdown of lubrication. Properly lubricated chains will not be discolored at the joints; they will appear brightly polished with a high luster.

Check link plates and sides of sprocket teeth for wear, which indicates misalignment.

Check shaft and sprocket alignment to prevent wear.

The Pro-Align™ Laser Alignment System uses advanced laser technology to ensure precise chain-sprocket interaction for maximum performance.

Check wear on the working faces of sprocket teeth.

These faces should develop a bright, polished appearance as the system runs. Scratches, galls, grooves, or visible changes in tooth form may be caused by lubrication failure or overloading.

Check and adjust chain tension.

An elongation of three percent (3%) or more indicates that the chain is riding near its limit of allowable height on the sprocket teeth. A gradual increase in chain length is the result of normal wear. A sudden increase in slack indicates one or more of the following:

- Lubrication failure
- Excessive overloading or shock
- Displacement of shaft bearings
- Displacement or failure of take-ups

Check that the chain is free from dirt, grit, or other abrasive material.

Clean the chain periodically.

Check guides, tracks, and areas below the conveyor for buildup of dirt or material that will cause interference or binding of the chain.

Entry and exit points of guides and tracks must permit the chain to pass with a minimum amount of impact or interference. Check that chain tracks are not over-lubricated or contaminated, which can force the rollers to slide rather than roll.

Inspect apron and pan bead openings.

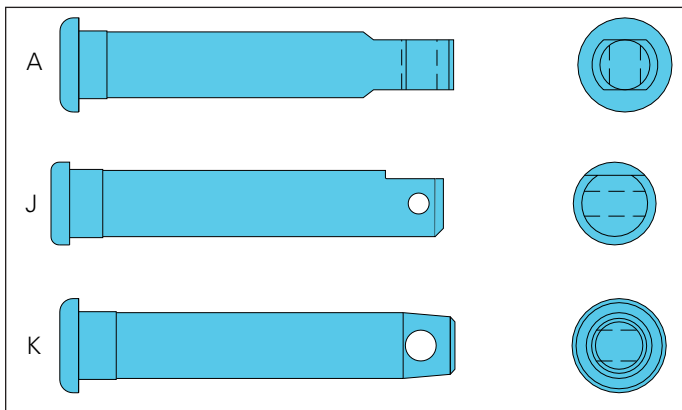
If the beads have been wedged apart or otherwise distorted, fine material may bleed into moving parts and cause excessive wear.

You can count on quality in Roller Conveyor Components

Strong, Long-Lasting Pins

Every pin is built from high-grade carbon or alloy steel to stand up to the most rugged conditions. Each is available in through-hardened, case-hardened, and induction-hardened treatments to extend the service life even more. And we take the utmost care to ensure a smooth bearing surface and proper sidebar fit for trouble-free operation.

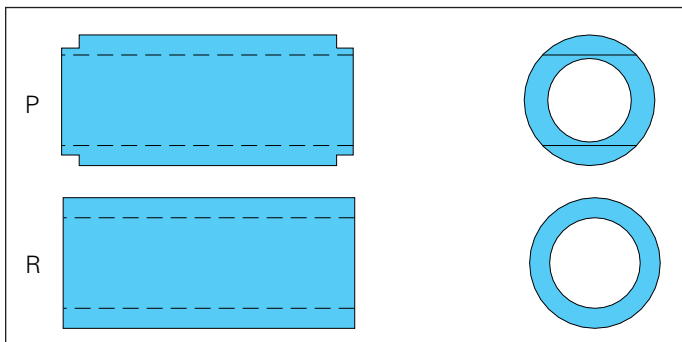
Pin Styles



Smooth Bushings

Our carbon and alloy-steel bushings are carburized and case-hardened using computer-controlled furnaces. The result is high surface hardness for excellent wear resistance with a tough core. We carefully control bushing dimensions to provide a uniform bearing surface and precise sidebar fit so your system runs smooth and strong. Stainless steel bushings are also available.

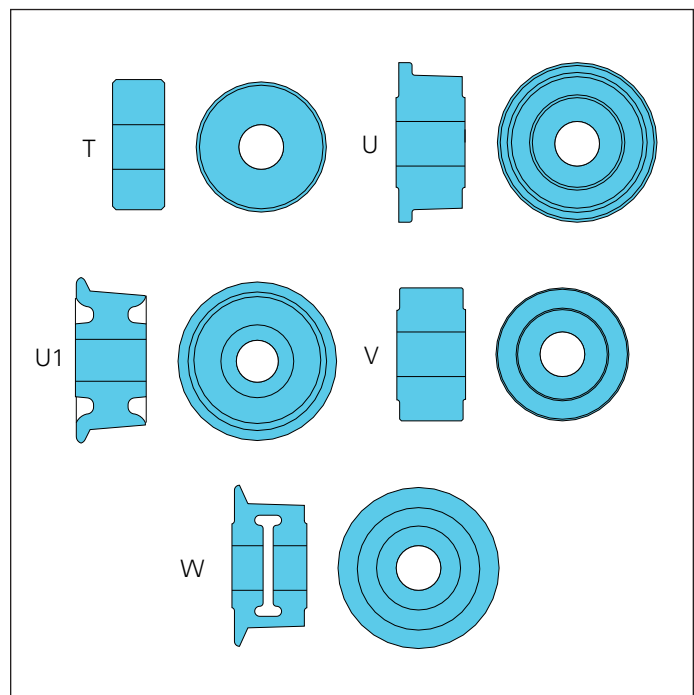
Bushing Styles



Reliable Rollers

A variety of steel grades and treatments means we can provide the right roller for your application. Our standard rollers are built from carburized, case-hardened carbon or alloy steel. You get a hard bearing surface with a ductile core for greater strength and durability. Rollers are also available in stainless steel, powdered metal, Hytrel, Delrin and UHMW plastic, and with plastic insert sleeves.

Roller Styles



Precision-Manufactured Sidebars

Union® manufactures sidebars to stand up to tough operating conditions. Our standard sidebars feature special-grade carbon or alloy steel for long-lasting performance. Heat-treated sidebars provide even greater strength and durability. Stainless steel sidebars withstand corrosive and high-temperature environments. We carefully control pitch and hole size in every sidebar style to ensure our chains and sprockets articulate correctly, extending the life of both. A wide variety of attachments are also available to meet your specific needs.

APRON CONVEYORS

Apron Weights/Each Unassembled

All dimensions are in inches unless otherwise indicated.

Pitch	Thickness	Approximate Weight (lbs.)											
		18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"
3.000 ¹	.19	4.3	5.7	7.2	8.6	10.0	11.5	12.9	14.3	15.7	17.2	18.6	20.0
4.000 ¹	.19	5.8	7.7	9.6	11.5	13.4	15.3	17.3	19.2	21.1	23.0	24.9	26.8
4.000 ¹	.25	7.7	10.2	12.7	15.3	17.8	20.4	23.0	25.5	28.0	30.6	33.2	35.7
4.000 ¹	.31	9.6	12.8	16.0	19.2	22.4	25.6	28.8	31.9	35.1	38.3	41.5	44.7
4.000 ¹	.38	11.5	15.3	19.1	23.0	26.8	30.6	34.4	38.3	42.0	45.9	49.8	53.6
6.000	.19	8.1	10.8	13.5	16.4	19.0	21.7	24.4	27.1	29.8	32.5	35.2	38.0
6.000	.25	10.8	14.5	18.1	21.7	25.3	28.9	32.6	36.2	39.8	43.5	47.0	50.6
6.000	.31	13.6	18.1	22.6	27.1	31.6	36.2	40.7	45.2	49.7	54.2	58.8	63.3
6.000 ¹	.38	16.3	21.7	27.2	32.5	38.0	43.4	48.7	54.2	59.6	65.0	71.5	76.0
6.000 ¹	.50	21.7	28.9	36.1	43.4	50.6	57.9	65.0	72.3	79.4	86.6	93.9	101.0
9.000	.19	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0	48.0	52.0	56.0
9.000	.25	16.0	21.2	26.6	31.9	37.2	42.5	47.9	53.2	58.5	63.8	69.0	74.5
9.000	.31	18.4	24.6	30.7	36.9	43.0	49.1	55.3	61.5	67.6	73.8	80.0	86.1
9.000	.38	23.9	31.9	39.8	47.8	55.8	63.7	71.7	79.7	87.7	95.7	103.6	111.6
12.000 ²	.19	15.8	21.0	26.3	31.6	37.9	42.1	47.4	52.6	58.0	63.2	68.5	73.8
12.000 ²	.25	21.1	28.1	35.1	42.1	49.1	56.1	63.1	70.1	77.1	84.1	91.1	98.1
12.000 ²	.31	26.3	35.1	43.9	52.6	61.4	70.2	79.0	87.7	96.5	105.2	113.9	122.7
12.000 ²	.38	31.6	42.2	52.7	63.2	73.8	84.4	94.8	105.2	115.9	126.3	136.9	147.5

¹Style A aprons only.

²Style B aprons only.

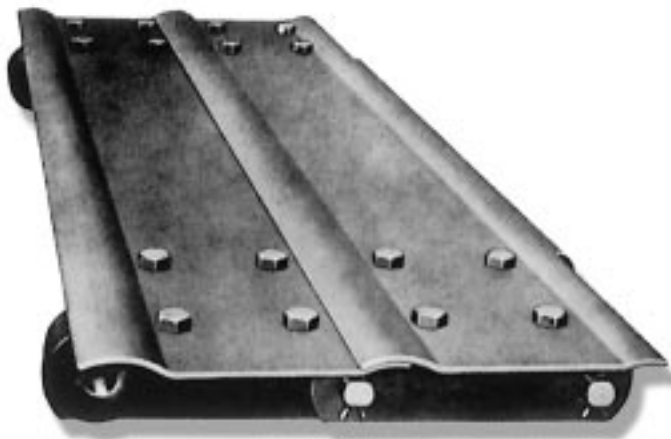
Steel Pan Ends

Separate Steel Pan Ends Approximate Weight (lbs.)						
Chain Pitch	Thick. of Ends	Unassembled Height of End Above Center Line of Chain				
		2"	3"	4"	5"	6"
3.000	.19	.7	.8	.9	1.0	1.3
4.000	.19	.6	.8	1.3	1.5	1.7
4.000	.25	.8	1.1	1.7	2.0	2.3
6.000	.19	1.0	1.3	1.8	2.1	2.4
6.000	.25	1.4	1.9	2.4	2.9	3.3

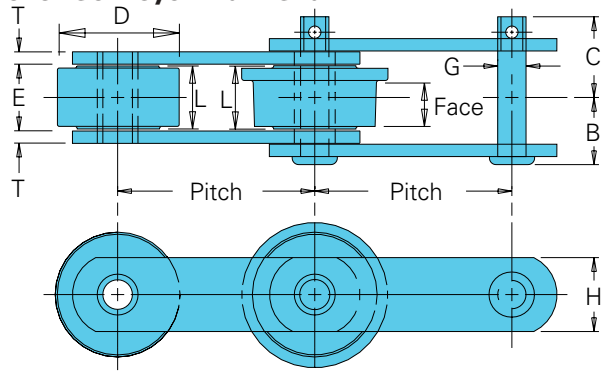
Through-Rod Weights

Chain Pin Dia.	Approximate Weight/Through-Rods (lbs.)							
	Distances Between Centers							
	18"	24"	30"	36"	42"	48"	54"	60"
.63	1.6	2.1	2.6	3.0	3.7	4.2	4.7	5.2
.75	2.3	3.0	3.8	4.5	5.3	6.0	6.8	7.5
.88	3.1	4.1	5.1	6.1	7.1	8.1	9.1	10.1
1.00	4.0	5.4	6.7	8.0	9.4	10.7	12.0	13.4
1.13	5.1	6.8	8.5	10.2	11.8	13.5	15.2	16.9
1.25	6.3	8.4	10.4	12.5	14.6	16.7	18.8	21.9
1.50	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0

Note: Through-rods are made from high carbon steel. The portions of the ends that act as chain pins are heat-treated for wear resistance.



Roller Conveyor Plain Chain



Roller Conveyor Chain Specifications

All dimensions are in inches unless otherwise indicated.

Chain No.	Pitch	Width			Roller					Pin			Sidebar		Bushing	Bear- ing Area (in. ²)	Avg. Ult. Stgth. (lbs.)	Max. Work Load (lbs.)	Approx. Wgt. (lbs./ft.)	
		Pin Head to CL	Pin End to CL	In- side	Dia.	Lgth.	Sty. ¹	Matl. ²	Face Width	Dia.	Sty. ¹	Matl. ²	Hgt.	Th.	Matl. ²					Matl. ²
		B	C	E	D	L			G			H	T							
378R	1.654	1.03	1.25	1.00	.88	.97	T	AHT	.44	A	CHT	1.13	.19	HC	ACH	.61	13,000	2,100	3.7	
378RX	1.654	1.03	1.25	1.00	.88	.97	T	AHT	.44	A	CHT	1.13	.19	CHT	ACH	.60	20,000	2,100	3.7	
20002	2.000	1.31	1.50	1.25	1.13	1.28	T	ACH	.56	A	AHT	1.50	.25	CHT	ACH	.98	21,000	3,500	6.6	
US-278R	2.609	1.13	1.31	1.13	.88	1.09	T	AHT	.44	J	CHT	1.13	.19	HC	CCH	.66	13,000	2,300	3.0	
81X	2.609	.91	1.16	1.06	.91	1.00	T	CCH	.44	K	CCH	1.13	.16	CHT	CCH	.61	15,000	2,150	2.5	
87R	2.609	1.20	1.45	1.13	.88	1.06	T	AHT	.44	A	CHT	1.13	.25	HC	CCH	.72	18,000	2,500	3.8	
26001	2.609	1.36	1.55	1.14	1.13	1.06	T	ACH	.56	A	AHT	1.63	.31	AHT	ACH	.99	60,000	3,400	6.3	
53R	3.000	1.03	1.25	1.00	1.50	.97	T	PMHT	.44	A	CHT	1.13	.19	CRS	ACH	.61	13,000	2,100	3.9	
30002	3.000	1.01	1.23	1.00	2.00	.97	T	CCH	.44	A	AHT	1.13	.19	HC	AHT	.60	17,000	2,100	5.6	
93R	3.000	1.28	1.47	1.25	1.50	1.19	T	CCH	.50	A	CHT	1.25	.25	HC	ACH	.88	20,000	3,000	4.8	
119R	3.075	1.59	1.84	1.50	1.25	1.44	T	AHT	.63	A	ACH	1.50	.31	HC	ACH	1.34	28,000	4,600	6.8	
119RX	3.075	1.59	1.84	1.50	1.25	1.44	T	AHT	.63	A	ACH	1.50	.31	CHT	ACH	1.34	48,000	4,600	6.8	
30701	3.075	1.67	1.95	1.50	1.25	1.43	T	ACH	.63	A	AHT	1.75	.38	CHT	ACH	1.41	70,000	4,900	6.3	
95R	4.000	1.03	1.25	1.00	1.50	.97	T	PMHT	.44	A	CHT	1.13	.19	CRS	ACH	.61	13,000	2,100	3.4	
1188R	4.000	1.13	1.28	1.13	1.75	1.06	T	CRS	.44	A	ACH	1.13	.19	CRS	CCH	.66	13,000	2,100	3.3	
US-90R	4.000	1.11	1.33	1.19	2.00	1.13	T	CCH	.44	A	CHT	1.25	.19	HC	ACH	.69	16,500	2,400	5.3	
94R	4.000	1.11	1.30	.88	1.50	.81	T	PMHT	.50	A	CHT	1.25	.25	CRS	ACH	.61	19,000	2,400	4.1	
97R	4.000	1.11	1.30	.88	1.75	.81	T	PMHT	.50	A	CHT	1.25	.25	CRS	ACH	.61	19,000	2,400	4.5	
83R	4.000	1.38	1.63	1.31	2.00	1.25	T	CCH	.63	A	CHT	1.50	.25	HC	CCH	1.14	22,000	3,650	6.6	
40001	4.000	1.31	1.60	1.25	2.00	1.18	T	CCH	.56	A	ACH	1.50	.25	HC	CCH	.97	27,000	3,450	7.4	
91R	4.000	1.50	1.75	1.31	1.75	1.25	T	CRS	.63	A	CHT	1.50	.31	HC	ACH	1.11	28,000	4,100	7.0	
89R	4.000	1.59	1.88	1.31	2.25	1.25	T	CCH	.63	A	CHT	1.50	.38	HC	CCH	1.10	28,000	4,500	10.6	
84R	4.000	2.08	2.44	2.31	2.25	2.25	T	CCH	.63	A	CHT	1.50	.38	HC	ACH	1.93	28,000	4,700	13.5	
40004	4.000	1.20	1.52	1.06	2.50	1.00	T	CHT	.63	A	CHT	2.00	.25	CHT	CCH	.98	31,000	3,400	9.4	
40003	4.000	1.28	1.65	1.25	2.50	1.18	T	CCH	.56	K	SSHT	1.50	.31	SSHT	SSHT	1.03	31,000	3,950	10.6	
40005	4.000	1.37	1.66	1.38	2.50	1.32	V	CCH	.63	A	CHT	2.00	.25	CHT	CCH	1.17	31,000	4,100	10.7	
3433	4.000	1.98	2.26	2.08	1.50	2.02	T	CCH	.63	A	ACH	1.50	.38	HC	ACH	1.77	40,000	6,300	8.5	
3945	4.000	1.81	2.09	2.00	1.25	1.93	T	AHT	.63	K	AHT	1.50	.31	CHT	ACH	1.64	44,000	5,700	6.5	
40002	4.000	1.12	1.51	.94	2.50	.89	T	CCH	.56	J	ACH	1.50	.31	HC	CCH	.69	50,000	3,050	7.8	
3952	4.000	1.93	2.34	2.00	1.44	1.93	T	AHT	.75	A	CHT	1.75	.38	CHT	CCH	2.06	60,000	7,200	9.4	
DS1113	4.040	1.47	1.75	1.31	2.00	1.25	T	PMHT	.63	A	CHT	1.50	.31	HC	SSHT	1.21	26,000	3,150	11.4	

Dimensions shown are nominal. Obtain certified prints for design and construction.

■ Indicates this chain is normally stocked. All others are made-to-order.

¹Styles for rollers, pins, sidebars and bushings are shown on pages 4-5.

²Material: ACH = Alloy case hardened; AHT = Alloy heat-treated; AHTIH = Alloy heat-treated induction hardened; AIHT = Alloy iron heat-treated; CCH = Carbon case hardened; CHT = Carbon heat-treated; CRS = Cold rolled steel; HC = High carbon; Hytrel = Hytrel material; PMCCH = Powdered metal carbon case hardened; PMHT = Powdered metal heat-treated; SSHT = Stainless steel heat-treated.

³Offset sidebar.

⁴CC5 is only provided in high sidebar design.

⁵Chains available with polyurethane bonded rollers.

* Attachment pitch is 27 in. with an E measurement of 1.03 in.

** Attachment pitch is 30 in. with an E measurement of 1.03 in.

⁶Also available in all Stainless Steel construction.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

APRON CONVEYORS

Apron Conveyors

All dimensions are in inches unless otherwise indicated.

Style	Chain Number	Pitch	Width ¹			Centerline Chain to Top of Pan Bead	Pan End Height	Pan Th.	Work Load (lbs.) ²	Approximate Weight (lbs.)		
			Overall	Center to Center Sprocket	Track Gauge					Conveyor Weight (ft. 18" Pan ³)	Approx. Wgt. Each 1" Added to Height	Weight Added Each 6" of Width
			A	B	C	D	G	T				
Style A Aprons	95R	4.000	21.88	19.38		2.00		.19	4,200	24.2		3.8
	US-90R	4.000	21.44	19.56		2.00		.19	4,800	28.0		3.8
	US-90R	4.000	21.44	19.56		2.06		.25	4,800	33.7		5.1
	89R	4.000	23.94	20.06		2.06		.25	9,000	44.3		5.1
	89R	4.000	23.94	20.06		2.31		.31	9,000	50.0		6.4
	89R	4.000	23.94	20.06		2.38		.38	9,000	55.7		7.7
	604R	6.000	23.00	19.81		2.19		.19	7,000	27.0		5.4
	631R	6.000	24.19	20.13		2.25		.25	11,200	43.0		7.2
	631R	6.000	24.19	20.13		2.31		.31	11,200	48.6		9.0
610R	6.000	24.81	20.44		2.88		.38	14,900	59.6		10.8	
Style A-OBR Aprons ⁴	961R	9.000	28.06	14.75	22.56	2.88	4.00	.25	18,000	115.2	2.9	8.3
	2397R	12.000	27.25	15.19	21.81	3.75	4.00	.25	18,400	92.5	2.6	7.5
	1706R	12.000	28.06	14.75	22.56	3.75	4.00	.25	28,000	108.7	2.6	7.5
	2614R	12.000	27.69	14.19	22.06	4.25	4.00	.25	35,000	157.1	2.6	7.5
	2614R	12.000	27.69	14.19	22.06	4.38	4.00	.38	35,000	172.4	4.0	11.3
Style A-FRS Aprons	961R	9.000	19.25	14.75 max.		2.88	4.00	.25	18,000	61.5	2.9	8.3
	2614R	12.000	19.75	14.19 max.		4.38	4.00	.38	35,000	76.6	4.0	11.3
Style B Aprons	603R	6.000	23.69	20.75	20.13	1.06	3.50	.19	7,000	40.5	3.0	5.4
	625R	6.000	24.63	21.16	20.31	1.06	3.50	.19	8,300	43.4	3.0	5.4
	625R	6.000	24.63	21.16	20.31	1.13	3.50	.25	8,300	48.8	3.0	7.2
	625R	6.000	24.63	21.16	20.31	1.19	4.00	.31	8,300	55.6	3.0	9.0
	B-663R	6.000	26.38	22.13	21.13	1.13	3.50	.25	14,400	56.0	4.6	7.2
	B-663R	6.000	26.38	22.13	21.13	1.19	4.00	.31	14,400	63.2	4.6	9.0
	B-963R	9.000	26.38	22.13	21.13	1.38	4.00	.25	14,400	56.7	4.6	7.1
	B-963R	9.000	26.38	22.13	21.13	1.44	4.00	.31	14,400	60.0	4.6	8.2
	B-963R	9.000	26.38	22.13	21.13	1.75	4.00	.38	14,400	67.3	4.6	10.6
	B-964R	9.000	26.88	22.44	21.19	1.44	4.00	.31	18,400	66.7	4.2	8.2
	B-964R	9.000	26.88	22.44	21.19	1.75	5.00	.38	18,400	78.1	4.2	10.6
	B-1263R	12.000	26.38	22.13	21.13	1.38	4.00	.25	14,400	53.1	3.8	7.0
	B-1263R	12.000	26.38	22.13	21.13	1.44	4.00	.31	14,400	58.3	3.8	8.8
	B-1263R	12.000	26.38	22.13	21.13	1.75	4.00	.38	14,400	63.6	3.8	10.5
	B-1264R	12.000	26.88	22.44	21.19	1.44	4.00	.31	18,400	61.5	3.8	8.8
B-1264R	12.000	26.88	22.44	21.19	1.75	5.00	.38	18,400	70.6	3.8	10.5	
Style D Aprons	625R	6.000	24.63	21.16	20.31	1.06	3.50	.19	8,300	43.4	3.0	5.4
	625R	6.000	24.63	21.16	20.31	1.13	3.50	.25	8,300	48.8	3.0	7.2
	625R	6.000	24.63	21.16	20.31	1.19	4.00	.31	8,300	55.6	3.0	9.0
	B-963R	9.000	26.38	22.13	21.13	1.38	4.00	.25	14,400	56.7	4.6	7.1
	B-963R	9.000	26.38	22.13	21.13	1.44	4.00	.31	14,400	60.0	4.6	8.2
	B-963R	9.000	26.38	22.13	21.13	1.75	4.00	.38	14,400	67.3	4.6	10.6
	B-964R	9.000	26.88	22.44	21.19	1.44	4.00	.31	18,400	66.7	4.2	8.2
	B-964R	9.000	26.88	22.44	21.19	1.75	5.00	.38	18,400	78.1	4.2	10.6
	B-1263R	12.000	26.38	21.13	21.13	1.38	4.00	.25	14,400	53.1	3.8	7.0
	B-1263R	12.000	26.38	21.13	21.13	1.44	4.00	.31	14,400	58.3	3.8	8.8
	B-1263R	12.000	26.38	21.13	21.13	1.75	4.00	.38	14,400	63.6	3.8	10.5
	B-1264R	12.000	26.88	22.44	21.19	1.44	4.00	.31	18,400	61.5	3.8	8.8
	B-1264R	12.000	26.88	22.44	21.19	1.75	5.00	.38	18,400	70.6	3.8	10.5

¹All widths and weights are based on 18" apron pan widths. For weight est. refer to "Approximate Weight (lbs.)" column for your specific conveyor width.

²Indicates working load for two strands of chain.

³Indicates without through-rods. Refer to page 33 for rod weights.

⁴OBR style can be furnished stub shaft every pitch or every 2nd pitch depending on load criteria. All weights shown above are for OBR every pitch. Consult the Engineering Chain Division for selection assistance.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

Roller Conveyor Chain Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Chain No.	Pitch	Width			Roller				Face Width	Pin			Sidebar			Bushing	Bear- ing Area (in. ²)	Avg. Ult. Stgth. (lbs.)	Max. Work Load (lbs.)	Approx. Wgt. (lbs./ft.)
		Pin Head to CL	Pin End to CL	In- side	Dia.	Lgth.	Sty. ¹	Matl. ²		Dia.	Sty. ¹	Matl. ²	Hgt.	Th.	Matl. ²					
		B	C	E	D	L			G			H	T							
896R	8.000	1.69	2.09	1.50	3.50	1.44	V	CCH	1.31	.75	A	ACH	2.00	.38	HC	ACH	1.70	47,000	5,900	14.3
806R	8.000	2.22	2.63	1.81	3.00	1.75	T	CCH		1.00	K	AHT	2.50	.50	CHT	CCH	2.81	95,000	9,800	22.5
800RX	8.000	2.19	2.63	1.81	3.50	1.75	V	CCH	1.63	1.00	K	ACH	3.00	.50	CHT	ACH	2.81	125,000	9,800	22.5
90001	9.000	1.02	1.11	1.00	2.50	.97	T	ACH		.44	A	CHT	1.13	.19	HC	ACH	.60	13,000	2,100	3.8
90002	9.000	1.01	1.11	1.00	2.00	.97	T	CCH		.44	A	CHT	1.13	.19	HC	ACH	.60	15,000	2,100	2.8
90002	9.000	1.02	1.24	1.00	2.25	.93	T	CCH		.44	A	CHT	1.25	.19	HC	ACH	.60	16,500	2,100	4.1
925R	9.000	1.56	1.84	1.69	3.00	1.63	U	AIHT	1.13	.63	A	CHT	2.00	.25	HC	CCH	1.38	25,000	4,150	8.2
90003 ⁵	9.000	1.32	1.39	1.31	2.00	1.25	T	CCH		.56	A	ACH	1.50	.25	HC	ACH	1.02	29,000	3,550	4.5
90004 ⁵	9.000	1.32	1.39	1.31	3.00	1.25	T	PMCCCH		.56	A	ACH	1.50	.25	HC	ACH	1.02	30,000	3,550	6.5
B-963R	9.000	1.94	2.34	2.00	3.50	1.94	U	AIHT	1.25	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	13.0
D-963R	9.000	1.94	2.34	2.00	3.50	1.94	V	CCH	1.81	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	13.0
E-963R	9.000	1.94	2.34	2.00	4.00	1.94	W	AIHT	1.25	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	14.0
B-912R	9.000	1.59	1.88	1.50	3.00	1.44	V	CCH	1.38	.63	A	ACH	2.00	.31	HC	ACH	1.34	47,000	4,650	8.6
961R ³	9.000	2.25	2.69	1.91	1.75	1.91	T	AHT		.88	A	ACH	2.25	.50	HC	CCH	2.56	60,000	9,000	10.0
4009	9.000	2.06	2.50	2.19	3.00	2.13	T	CCH		.88	K	AHT	2.50	.38	AHT	ACH	2.60	67,000	9,200	13.0
B-964R	9.000	2.09	2.47	2.25	4.00	2.19	W	AIHT	1.50	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	9,200	17.0
965R	9.000	2.09	2.47	2.25	3.00	2.19	V	CCH	2.06	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	9,200	16.5
4004	9.000	2.63	3.03	2.63	3.00	2.56	T	CCH		1.00	K	AHTIH	2.50	.50	HC	ACH	3.63	75,000	12,700	18.0
973R	9.000	2.59	3.06	2.63	5.00	2.56	U1	AIHT	1.75	1.00	K	AHT	2.50	.50	HC	ACH	3.63	75,000	12,700	23.6
4065	9.000	3.06	3.38	3.06	4.25	3.00	V	CCH	2.88	1.25	K	AHT	3.50	.63	HC	CCH	5.40	148,000	18,900	35.7
98401	9.843	2.09	2.53	1.62	4.00	1.56	V	ACH		1.12	J	AHTIH	2.75	.50	CHT	ACH	2.95	141,000	13,250	19.3
98402	9.843	2.82	3.58	2.21	4.50	1.99	V	AHT		1.50	K	AHTIH	3.50	.63	AHT	AHTIH	5.19	268,000	23,050	39.0
27001 ^{5*}	12.000	1.23	1.36	1.66	3.00	1.59	V	CCH		.63	A	ACH	1.50	.25	HC	CCH	1.21	28,000	3,200	6.2
30001 ^{5**}	12.000	1.23	1.36	1.66	3.00	1.59	T	CCH		.63	A	ACH	1.50	.25	HC	CCH	1.21	28,000	3,200	6.2
12001 ⁵	12.000	1.32	1.39	1.31	2.00	1.25	T	CCH		.56	A	ACH	1.50	.25	HC	ACH	1.02	29,000	3,550	4.0
12002 ⁵	12.000	1.32	1.39	1.31	3.00	1.25	T	PMCCCH		.56	A	ACH	1.50	.25	HC	ACH	1.02	29,000	3,550	5.5
B-1212R	12.000	1.59	1.88	1.50	3.00	1.44	V	CCH	1.38	.63	A	ACH	2.00	.31	HC	ACH	1.34	41,000	4,650	7.5
B-1266R	12.000	1.88	2.16	1.63	3.25	1.56	V	CCH	1.38	.75	A	CHT	2.00	.38	HC	CCH	1.79	41,000	6,300	9.5
B-1263R	12.000	1.94	2.34	2.00	3.50	1.94	U	AIHT	1.25	.75	A	CHT	2.00	.38	HC	CCH	2.07	41,000	7,200	11.0
D-1263R	12.000	1.94	2.34	2.00	3.50	1.94	V	CCH	1.81	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	11.0
E-1263R	12.000	1.94	2.34	2.00	4.00	1.94	W	AIHT	1.25	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	12.0
1276R	12.000	1.94	2.22	2.00	4.00	1.94	U	AIHT	1.25	.75	A	CHT	2.50	.31	HC	CCH	1.97	41,000	7,200	12.0
12003 ⁵	12.000	1.20	1.42	1.06	2.00	1.03	V	HYTREL		.56	K	ACH	1.50	.25	CHT	ACH	.88	42,000	3,050	3.8
B-1264R	12.000	2.09	2.47	2.25	4.00	2.19	W	AIHT	1.50	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	9,200	15.0
1265R	12.000	2.09	2.47	2.25	3.00	2.19	V	CCH	2.06	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	10,000	12.7
1273R	12.000	2.59	3.06	2.63	5.00	2.56	U1	AIHT	1.75	1.00	K	CHT	2.50	.50	HC	ACH	3.63	75,000	12,700	21.5
1271R	12.000	2.66	3.06	2.75	5.00	2.69	W	AIHT	1.75	1.25	K	AHT	3.00	.50	HC	CCH	4.69	100,000	16,400	27.0
B-1863R	18.000	1.94	2.34	2.00	3.50	1.94	V	AIHT	1.81	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	9.5
D-1863R	18.000	1.94	2.34	2.00	3.50	1.94	U	AIHT	1.25	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	9.5
F-1863R	18.000	1.94	2.34	2.00	4.00	1.94	U1	AIHT	1.25	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	10.0
B-1864R	18.000	2.09	2.47	2.25	4.00	2.19	W	AIHT	1.50	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	9,200	12.0
G-1864R	18.000	2.09	2.47	2.25	4.00	2.19	V	CCH	2.00	.88	J	CHT	2.50	.38	HC	ACH	2.65	70,000	9,200	11.0
1873R	18.000	2.59	3.06	2.63	5.00	2.56	U1	AIHT	1.75	1.00	K	AHT	2.50	.50	HC	ACH	3.63	75,000	12,700	17.0
1871R	18.000	2.66	3.06	2.75	5.00	2.69	W	AIHT	1.75	1.25	K	AHT	3.00	.50	HC	ACH	4.69	100,000	16,400	21.0
1866R	18.000	3.03	3.47	2.75	6.00	2.69	U1	AIHT	1.88	1.25	K	CCH	3.00	.63	HC	CCH	5.01	115,000	17,500	26.5
1867R	18.000	3.28	3.59	3.00	6.00	2.94	U1	AIHT	1.88	1.50	K	CCH	3.50	.63	HC	CCH	6.39	150,000	22,300	31.5
24001 ⁶	24.000	1.94	2.31	1.69	3.75	1.63	V	CHT		1.25	J	CHT	2.75	.38	HC	CHT	3.05	63,000	10,650	10.6
24005 ⁶	24.000	1.89	2.31	1.69	3.88	1.63	V	CHT		1.25	J	CHT	2.75	.38	HC	CHT	3.05	63,000	10,650	10.8

Dimensions shown are nominal. Obtain certified prints for design and construction.

█ Indicates this chain is normally stocked. All others are made-to-order.

¹Styles for rollers, pins, sidebars and bushings are shown on pages 4-5.

²Material: ACH = Alloy case hardened; AHT = Alloy heat-treated; AHTIH = Alloy heat-treated induction hardened; AIHT = Alloy iron heat-treated; CCH = Carbon case hardened; CHT = Carbon heat-treated; CRS = Cold rolled steel; HC = High carbon; Hytrel = Hytrel material; PMCCCH = Powdered metal carbon case hardened; PMHT = Powdered metal heat-treated; SSHT = Stainless steel heat-treated.

³Offset sidebar.

⁴CC5 is only provided in high sidebar design.

⁵Chains available with polyurethane bonded rollers.

* Attachment pitch is 27 in. with an E measurement of 1.03 in.

** Attachment pitch is 30 in. with an E measurement of 1.03 in.

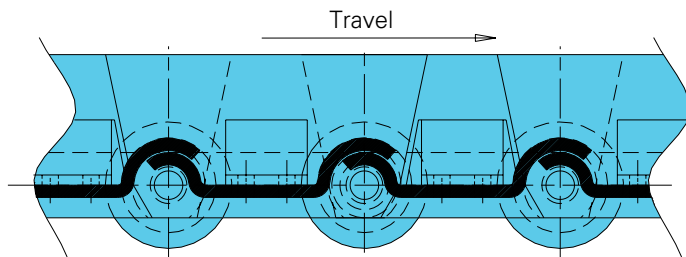
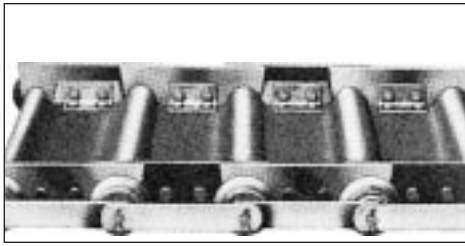
⁶Also available in all Stainless Steel construction.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

APRON CONVEYORS

Style B



Uses

- Suitable for heavy duty conditions; generally used in longer pitch conveyors.
- Adaptable to various service and operational conditions for horizontal or incline applications as much as 35 degrees.

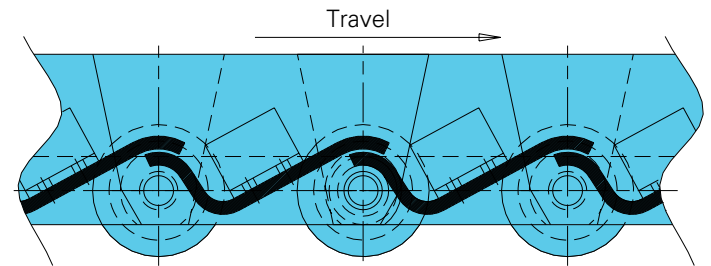
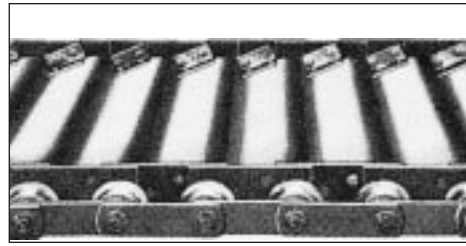
Advantages

- Deep beads form a rigid pan for heavy loads on wide conveyors.
- Chain rollers permit return strand to roll on a track.
- Through-rods and load deflection rail supports may be used to prevent excessive chain loading under heavy impact conditions.

Attachments

- G-2 attachments (high sidebars with angles) contain material, add strength, and function as moving pan ends.

Style D



Uses

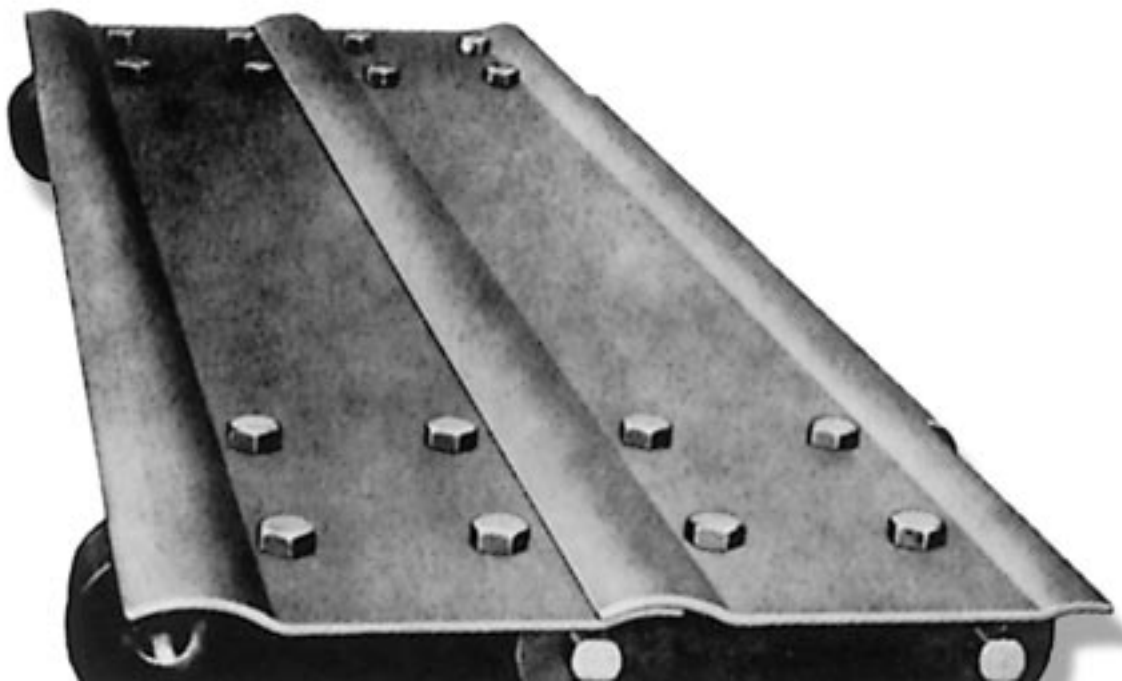
- Positive discharge aprons.
- Adaptable to various service and operating conditions for horizontal or incline applications as much as 35 degrees.

Advantages

- Higher angle of discharge reduces height of fall when unloading, reducing lump breakage.
- Angular mounting of apron on chain helps resist rollback motion of material on inclined conveyors.

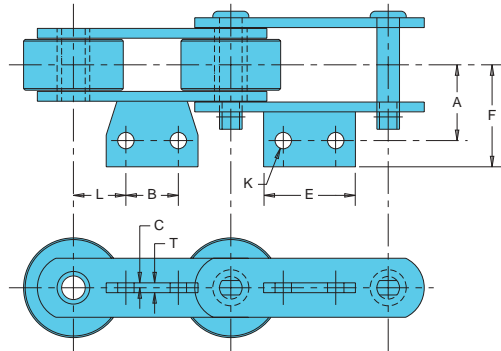
Attachments

- G-2 attachments (high sidebars with angles) contain material, add strength, and function as moving pan ends.

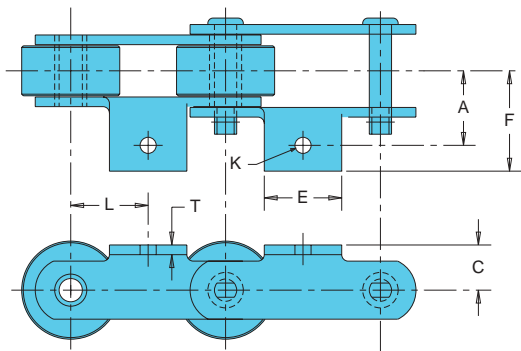




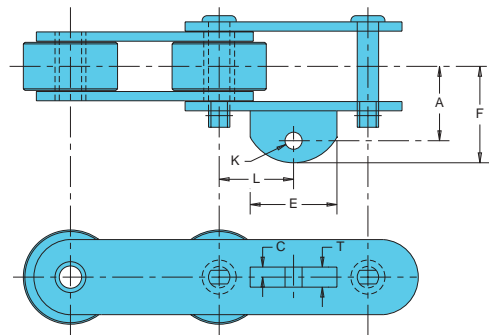
A-11 and A-63 Attachment



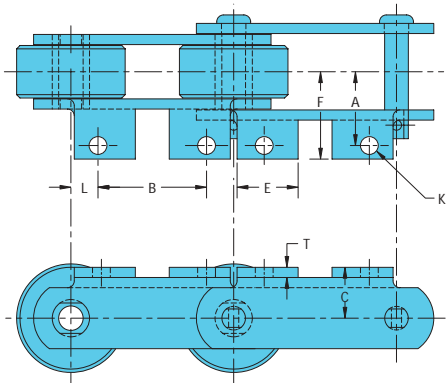
A-1 Attachment



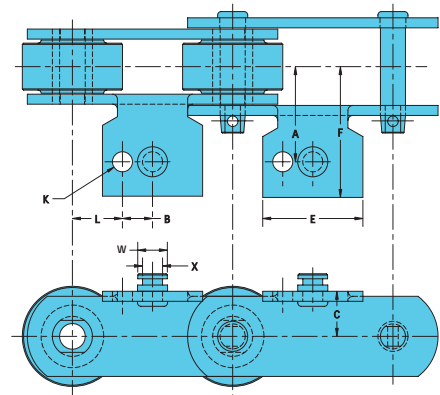
A-22 and A-42 Attachment



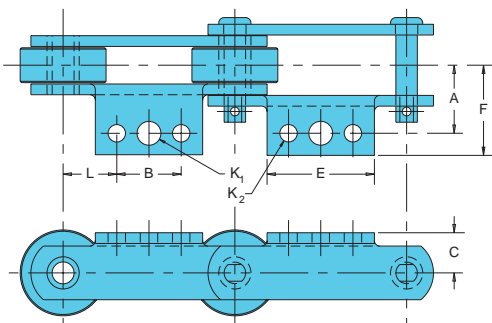
Double A-1 Attachment



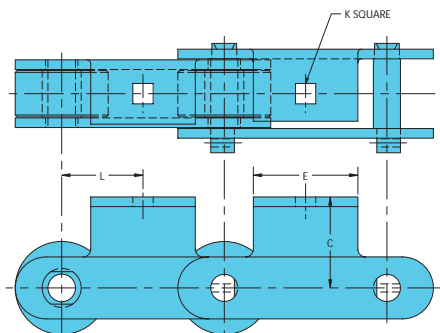
CP-1 Attachment



A-1/A-2 Attachment

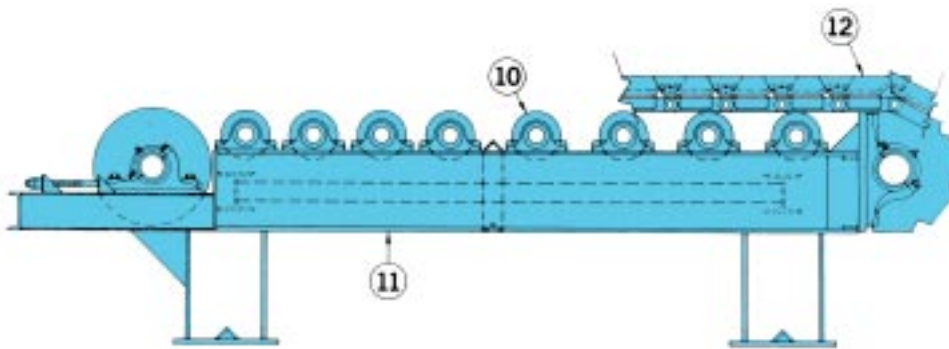
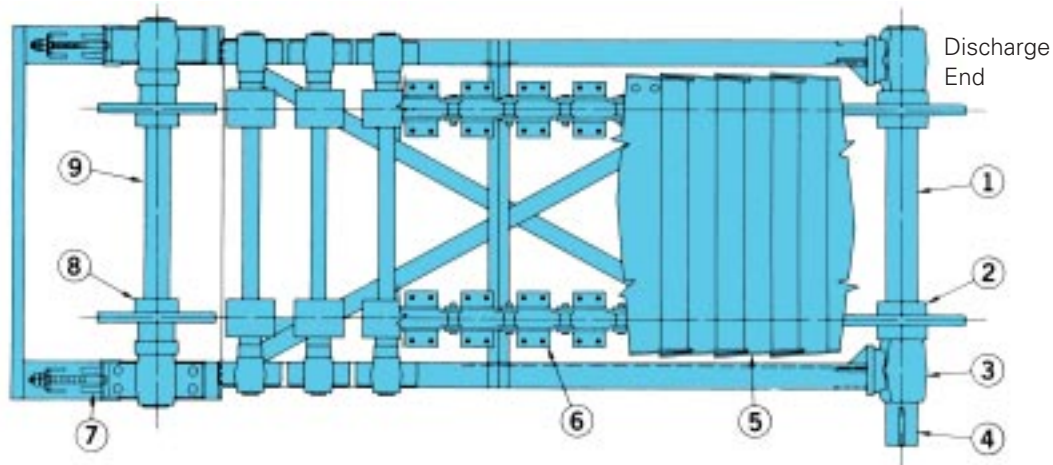


E-1 Attachment

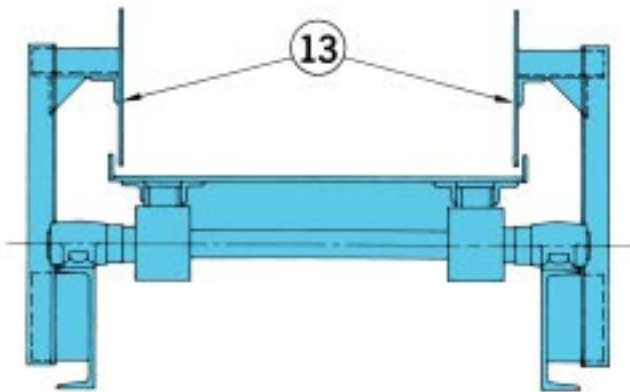


APRON CONVEYORS

Typical Arrangement—Apron Conveyors



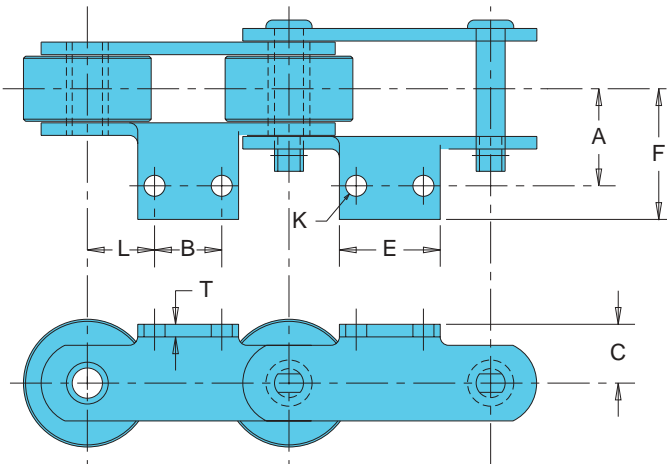
Chains supported by fixed rollers



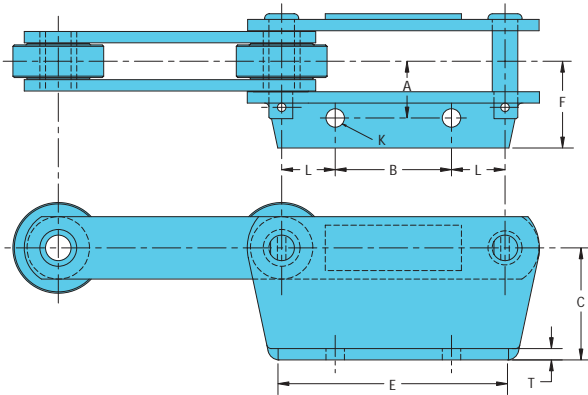
Typical end section with side boards

1. Head shaft — Discharge end.
2. Head shaft sprockets — Keyed to shaft.
3. Pillow blocks.
4. Drive end — Chain drive.
5. Apron assembly — Bolted to chain attachments.
6. Conveyor chain — Offset sidebar or straight sidebar (two or three strands normally used).
7. Take up — Normally located on tail shaft end.
8. Tail shaft sprockets — Only one keyed to shaft (other sprockets locked in place with collars).
9. Tail shaft.
10. Intermediate rollers — Supports chain sections when conveyor is heavily loaded.
11. Conveyor structure.
12. Pan ends — Welded to aprons.
13. Stationary sideboards — Offer additional capacity.

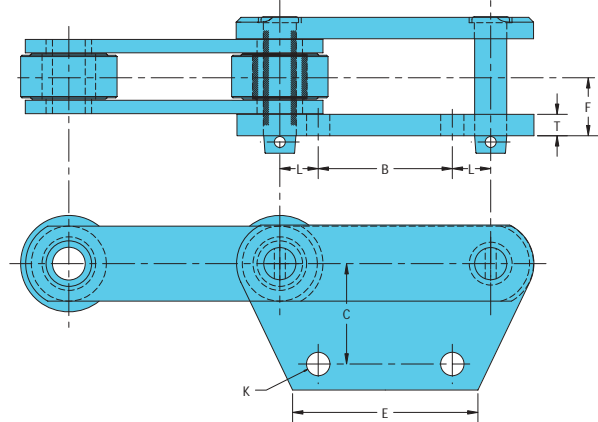
A-2 Attachment



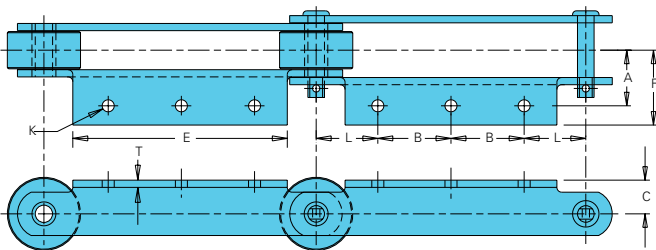
MA-2 Attachment



SA-2 Attachment

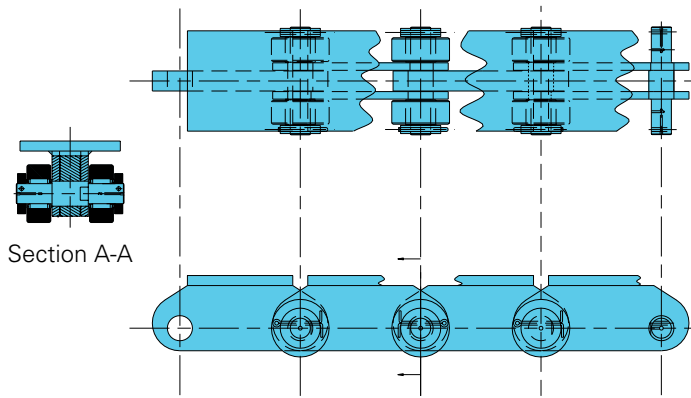


A-3 Attachment

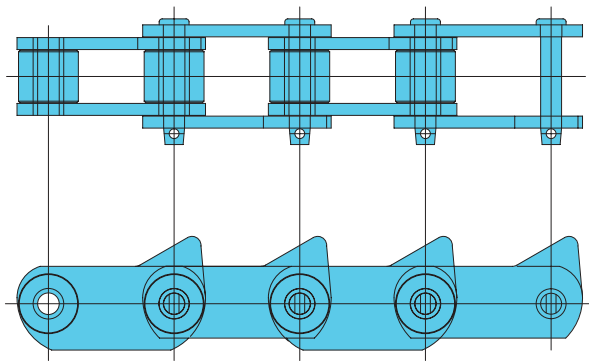


ROLLER CONVEYOR ATTACHMENTS

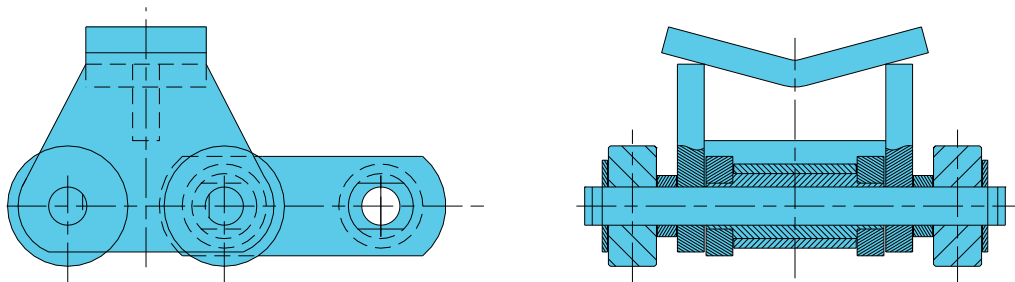
Flat Top Chain



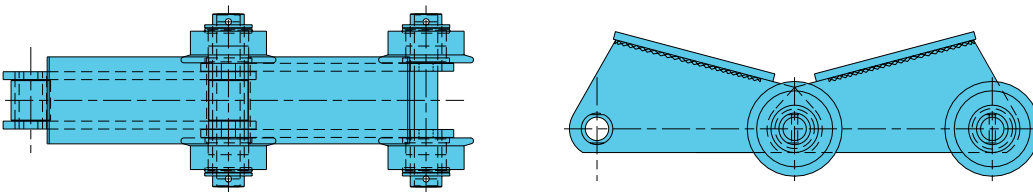
Coiled Wire Chain



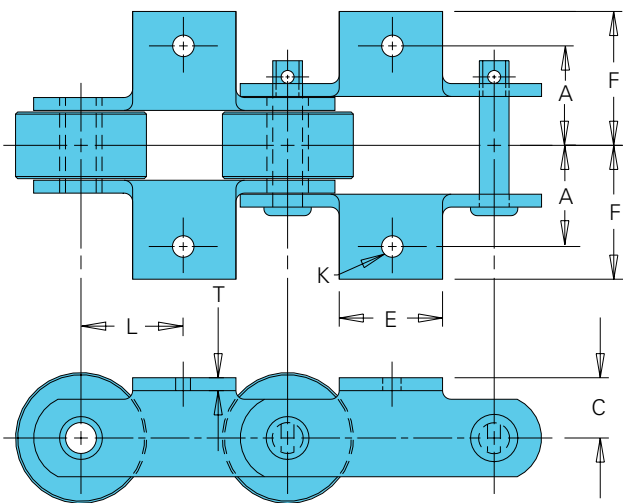
Gull Wing Chain



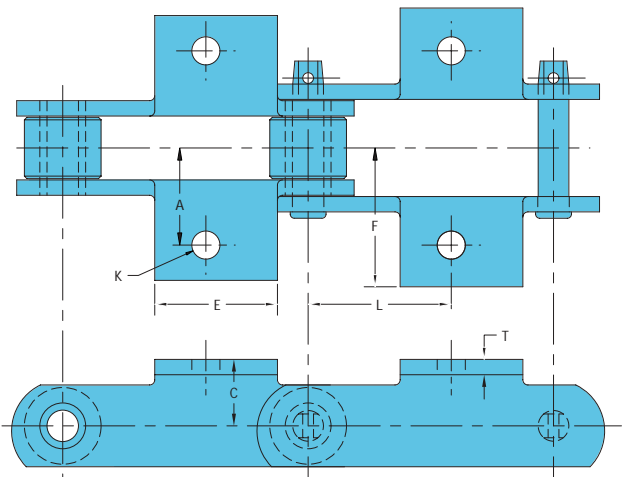
Saddle Attachment



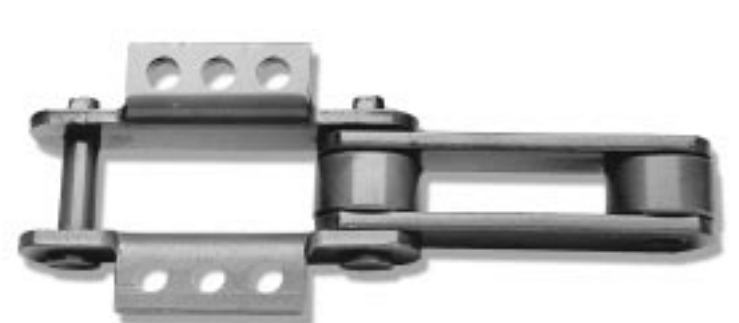
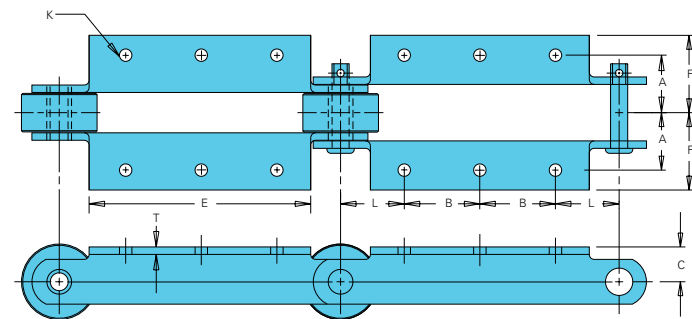
K-1 Attachment



K-11 Attachment

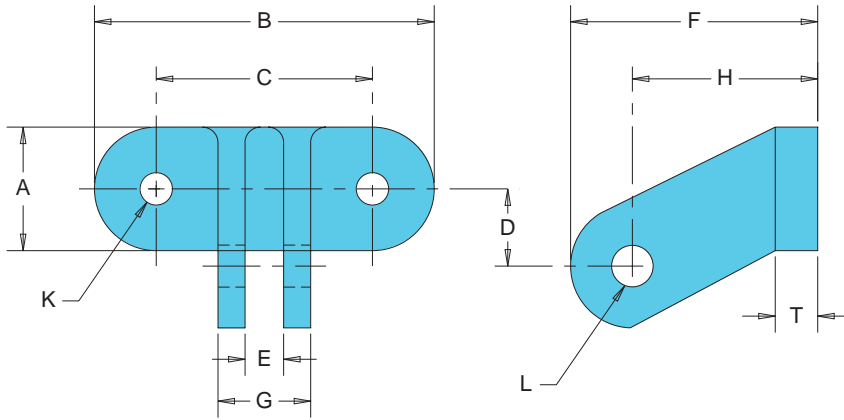


K-3 Attachment



ROLLER CONVEYOR ATTACHMENTS

Style C Attachment

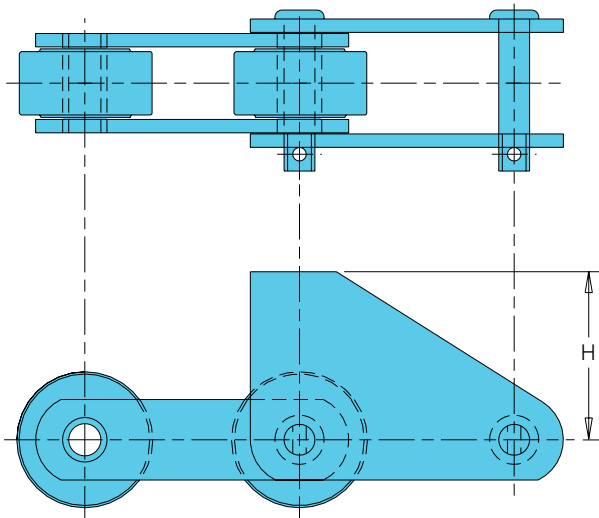


Hinged Bucket and Scraper Flight Wing Attachment Specifications

All dimensions are in inches unless otherwise indicated.

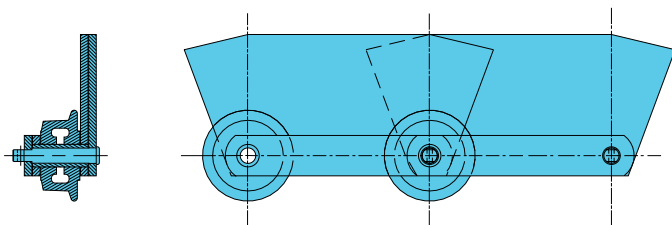
Bucket Wing Style	Attach. No.	Standard	A	B	C	D	E	F	G	H	Bolt Dia. K	Rivet Dia. L	T	Approx. Weight (lbs./ft.)
Style C	2C	X	2.00	5.13	3.50	1.00	.63	4.00	1.50	3.08	.50	.63	.69	2.8
	15C		1.75	3.50	2.50	.81	.44	1.81	1.00	1.13	.31	.38	.28	.7

L-2 and S-1 Attachments



Attachments L-2 and S-1 can be furnished with any chain to suit special requirements provided height of dimension "H" does not exceed five inches from center line of chain.

G-2 Attachment

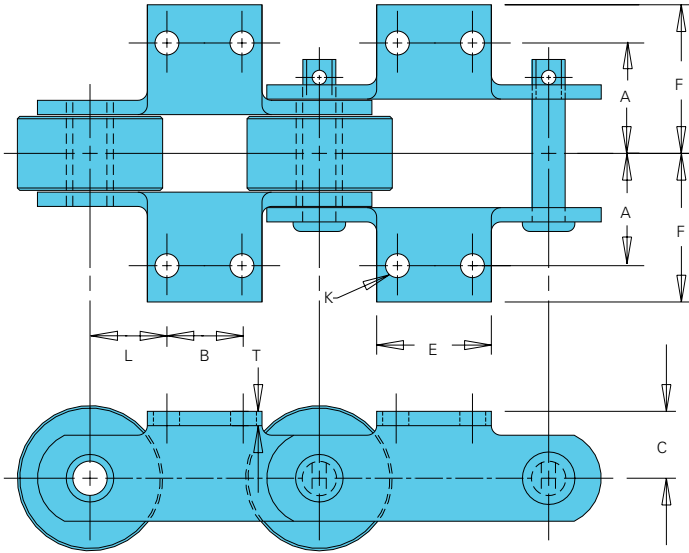


Attachment G-2 is simply an extra height chain sidebar with attachment angle usually used as pan ends on style B and D apron conveyors as shown on page 31. It can be furnished with any chain in any reasonable height to suit requirements. The attachment is designated by G-2 followed by a hyphen and number giving overall height in inches. For example, G-2-5 is a sidebar with overall height of 5". G-2-6 1/2 is a sidebar with overall height of 6 1/2".

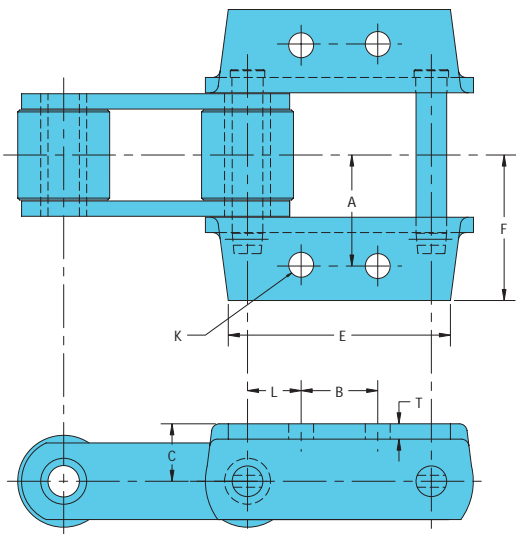
Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

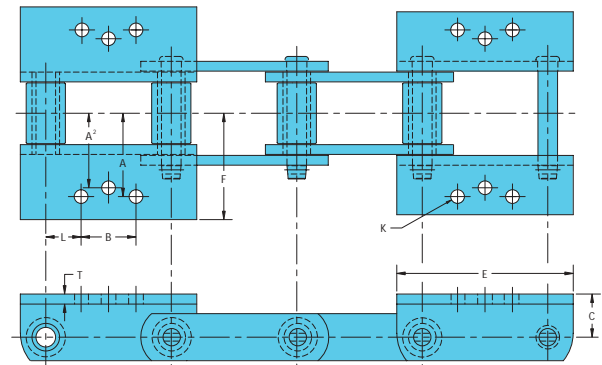
K-2 Attachment



K-2/K-44 Attachment

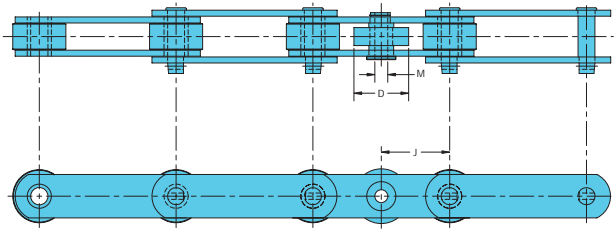


K-1/K-2 or K-3 Attachment

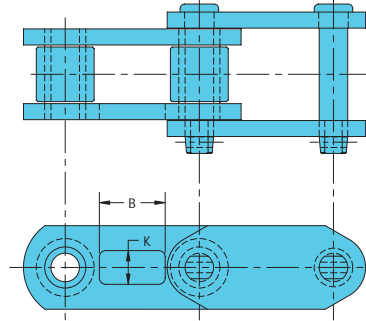


ROLLER CONVEYOR ATTACHMENTS

Mid-Pitch Attachment



Slotted Hole Attachment



Roller Conveyor Chain Attachment Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Attachment Number	Chain Number	A	B	C	E	F	Bolt Diameter	K	L	T	D ²	M	J	Approx. Weight (lbs./ft.)
G-19	89R	2.63	3.25		4.50	3.44	.50	2.50	.38					11.7
	89RX	2.63	3.25		4.50	3.24	.50	2.50	.38					11.7
	925R	2.56	3.50		5.50	3.38	.50	2.63	.25					9.8
	B-1263R	2.78	3.50		5.50	3.78	.50	2.63	.25					13.9
	C-1263R	2.78	3.50		5.50	3.78	.50	2.63	.25					14.2
	D-1263R	2.78	3.50		5.50	3.78	.50	2.63	.25					13.4
	E-1263R	2.78	3.50		5.50	3.78	.50	2.63	.25					15.3
	B-1264R	2.91	3.50		5.50	3.91	.50	2.63	.31					18.2
	B-1266R	2.59	3.50		5.50	3.59	.50	2.63	.25					12.0
	1273R	3.34	5.00		7.50	4.34	.50	2.63	.38					27.6
	B-1863R	2.78	3.50		5.50	3.78	.50	5.63	.25					11.0
	D-1863R	2.78	3.50		5.50	3.78	.50	5.63	.25					11.5
	F-1863R	2.78	3.50		5.50	3.78	.50	5.63	.25					11.9
	B-1864R	2.91	3.50		5.50	3.91	.50	5.63	.31					14.2
	G-1864R	2.91	3.50		5.50	3.91	.50	5.63	.31					14.0
	1867R	3.78	3.50		5.50	4.78	.50	5.63	.38					35.9
	1871R	3.41	3.50		5.50	4.41	.50	5.63	.38					24.7
1873R	3.34	5.00		7.50	4.34	.50	5.63	.38					21.2	
G-29	94R	1.84	1.13		1.25	3.69	.38	.63	.25					5.3
	1131R	2.78	1.50		2.00	5.03	.44	1.00	.38					15.2
M-1	40002*	1.16					.38	2.00						7.8
	40003	1.16					.43	2.00						10.6
	42501	1.16					.43	2.13						8.9
M-2	90001	1.13	4.00	.31			.25	2.50						3.8
	90005		4.00	.25			.28	2.50						3.8
MM-1	9856		2.75	3.75	3.06		.81	2.59						29.1
Slotted Hole	26001		1.28				.66							6.3
	30701		1.28				.66							8.8
Mid-Pitch	40004									1.31	1.15	2.00		
	70901									2.84	.67	3.54		

Note: G-29 attachment can be rotated to fit your application.

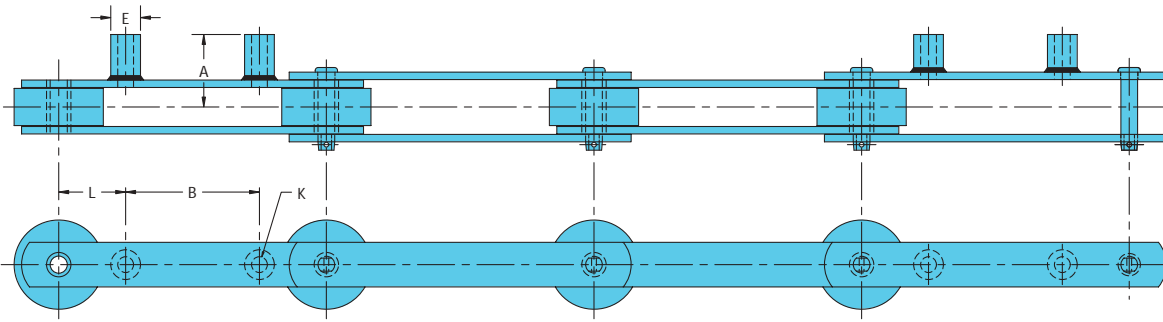
* Furnished with round M-1 attachment holes and flush pin head design.

Indicates this chain is normally stocked. All others are made-to-order.

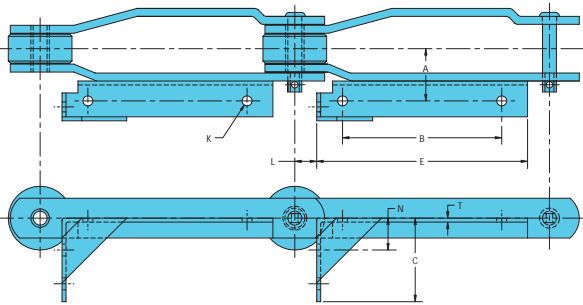
Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

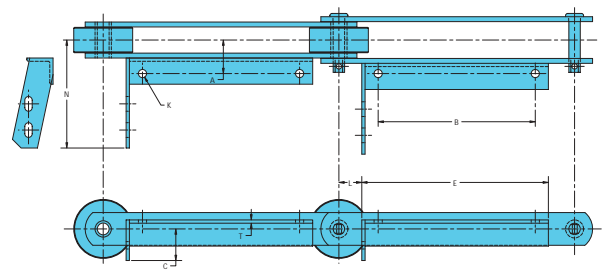
Boss Attachment



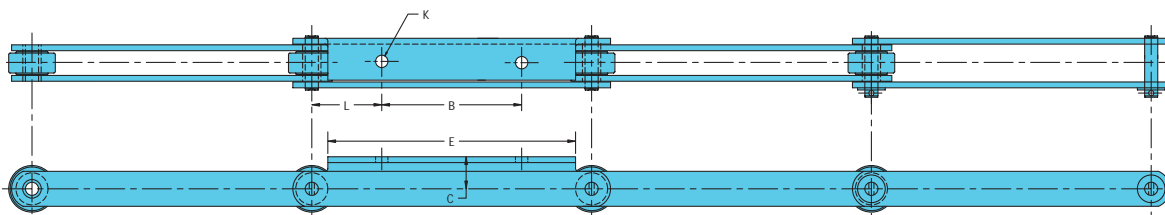
D-63 Attachment



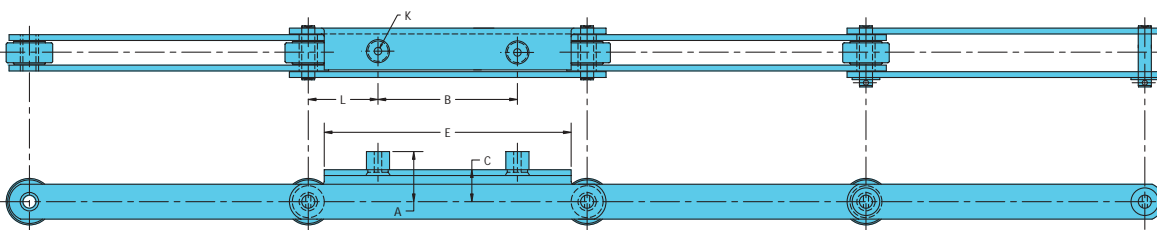
Spec. D-63 Attachment



E-2 Attachment

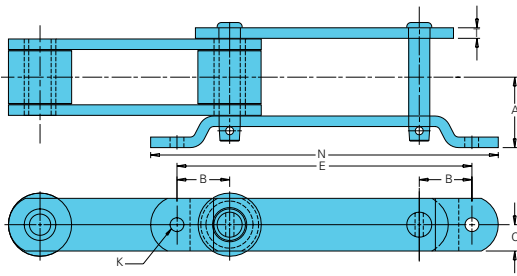


E-2 with Boss Attachment

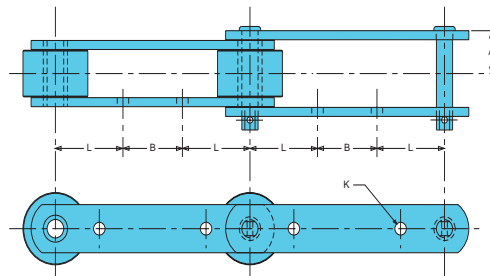


ROLLER CONVEYOR ATTACHMENTS

G-5 Attachment



G-6 Attachment



Roller Conveyor Chain Attachment Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

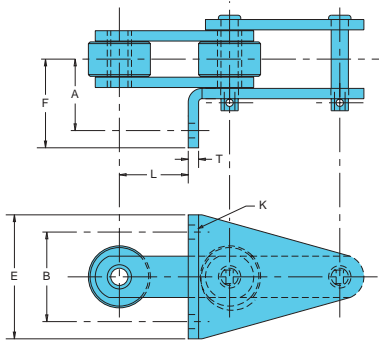
Attachment Number	Chain Number	A	B	C	E	Bolt Diameter	K	L	N	T	Approx. Weight (lbs./ft.)
Boss	12002	2.44	6.00		1.00	.50		3.00			5.5
	90004	2.44	6.00		1.00	.50		1.50			6.5
D-63	80002	1.64	5.00	2.62	6.50	.28		.69	1.00	.13	4.6
	80003	1.78	5.00	2.62	6.50	.28		.69	2.41	1.00	5.9
Spec. D-63	90002	1.28	6.00	1.21	7.13	4.33		.28	.88	.13	4.1
E-2	12003		6.00	1.38	10.63	.50		3.00			3.8
	90003	2.94	6.00	1.38	7.63	.50		1.50			4.5
E-2 with Boss	12001	2.94	6.00	1.38	10.63	.50		3.00			4.1
G-5	4004	3.34	2.50	1.25	14.00	.63			16.50	.50	18.5
	4009	3.03	2.50	1.25	14.00	.63			16.50	.38	14.7
	4065	3.94	2.50	1.75	14.00	.63			16.50	.63	38.6
G-6	809R	1.53	2.75			.50		3.13			14.2
	B-912R	1.41	2.75			.50		3.13			10.0
	925R	1.38	2.75			.50		3.13			8.5
	B-963R	1.78	3.00			.50		3.00			13.9
	D-963R	1.78	3.00			.50		3.00			13.2
	E-963R	1.78	3.00			.50		3.00			15.8
	B-964R	1.91	2.50			.50		3.25			18.1
	973R	2.34	3.50			.63		2.75			25.5
	B-1212R	1.41	3.75			.50		4.13			8.2
	B-1263R	1.78	3.75			.50		4.13			11.6
	C-1263R	1.78	3.75			.50		4.13			11.9
	D-1263R	1.78	3.75			.50		4.13			11.8
	E-1263R	1.78	3.75			.50		4.13			13.0
	B-1264R	1.91	3.75			.50		4.13			15.4
	B-1266R	1.59	3.75			.50		4.13			10.1
	1273R	2.34	3.75			.63		4.13			23.2
	1276R	1.66	5.50			.50		3.25			20.6
	B-1863R	1.78	6.00			.50		6.00			9.9
	D-1863R	1.78	6.00			.50		6.00			10.4
	F-1863R	1.78	6.00			.50		6.00			10.8
	B-1864R	1.91	6.00			.63		6.00			12.8
	G-1864R	1.91	6.00			.63		6.00			12.6
	1867R	2.78	6.00			.63		6.00			34.9
1871R	2.41	6.00			.63		6.00			23.3	
1873R	2.34	6.00			.63		6.00			18.8	
60005	1.17	2.00				.33		2.00			5.4

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

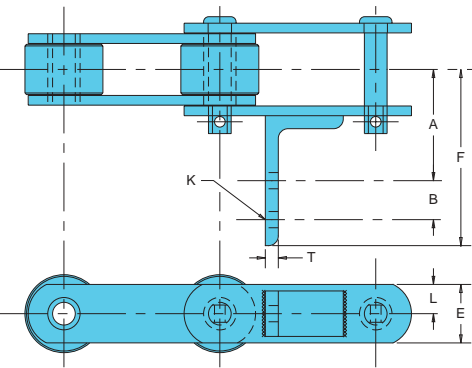
Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.



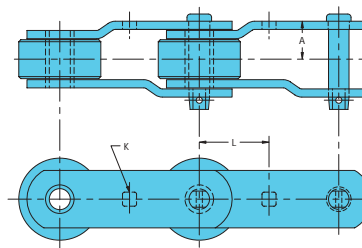
G-19 Attachment



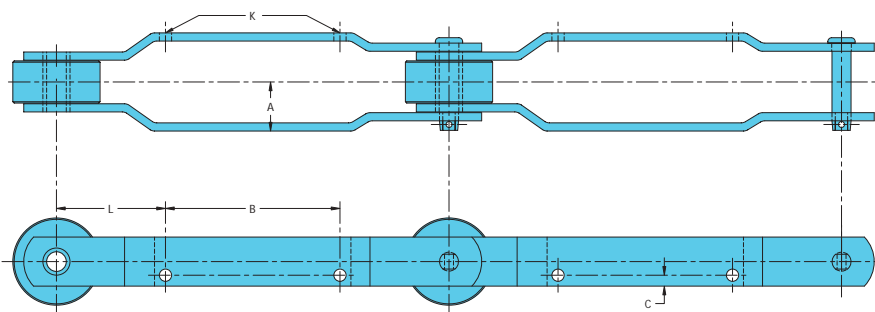
G-29 Attachment



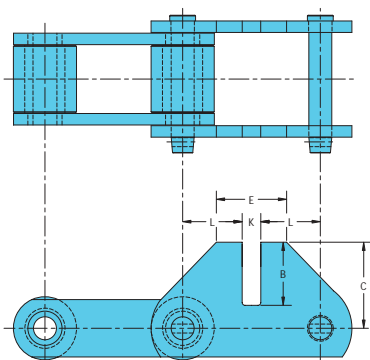
M-1 Attachment



M-2 Attachment



MM-1 Attachment



ROLLER CONVEYOR ATTACHMENTS

Roller Conveyor Chain Attachment Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Attachment Number	Chain Number	A	A ²	B	C	E	F	Bolt Diameter	K	L	T	Approx. Weight (lbs./ft.)
K-2	53R	1.47		1.06	.81	2.00	2.16	.25	.97	.19		4.9
	83R	2.00		1.75	1.00	2.88	2.84	.38	1.13	.25		9.4
	84R	2.66		1.75	1.25	2.88	3.41	.38	1.13	.38		20.7
	87R	2.13		1.25	.81	2.13	2.63	.31	.68	.25		5.8
	US-90R	2.00		2.00	1.13	3.25	2.63	.38	1.00	.19		7.3
	91R	1.81		1.75	1.06	2.88	2.47	.50	1.13	.31		8.8
	93R	1.88		1.25	1.00	2.00	2.69	.38	.88	.25		6.0
	94R	1.38		1.50	.88	2.50	1.88	.38	1.25	.25		5.3
	95R	1.38		1.19	.81	2.63	2.16	.31	1.41	.19		4.4
	96R	2.19		3.00	1.63	5.50	3.00	.50	1.50	.38		15.8
	96RX	2.19		3.00	1.63	5.50	2.93	.50	1.50	.38		15.8
	119R	2.00		1.88	1.25	2.88	2.56	.31	.59	.31		9.0
	US-196R	2.00		2.00	1.25	3.50	2.63	.38	2.00	.25		7.5
	DS196R	2.00		2.00	1.25	3.50	2.63	.38	2.00	.25		7.5
	US-278R	2.09		1.25	.81	2.13	2.72	.31	.68	.19		4.1
	603R	2.00		2.00	1.13	3.50	2.72	.38	2.00	.25		9.1
	604R	2.00		2.00	1.13	3.50	2.72	.38	2.00	.25		7.0
	607R	2.00		2.00	1.13	3.50	2.72	.38	2.00	.25		7.4
	614R	2.13		2.63	1.63	5.50	2.92	.50	1.69	.38		15.0
	625R	2.19		2.00	1.63	4.63	2.91	.38	2.00	.25		13.9
	626R	2.19		2.00	1.63	3.50	3.05	.38	2.00	.38		14.7
	627R	2.00		2.00	1.13	3.50	2.80	.38	2.00	.31		10.7
	628R	2.38		2.00	1.63	3.50	3.25	.50	2.00	.38		11.7
	629R	2.00		2.50	2.00	3.50	2.86	.38	1.75	.31		13.7
	631R	2.13		2.63	1.63	5.50	2.92	.50	1.69	.38		16.4
	800RX	2.59		4.50	2.19	7.00	3.55	.63	1.75	.50		26.1
	806R	2.59		3.50	2.19	6.88	3.80	.63	2.25	.50		22.5
	B-912R	2.56		3.50	1.75	5.50	3.91	.50	2.75	.25		13.1
	925R	2.50		3.50	1.75	5.50	3.38	.50	2.75	.25		13.2
	B-963R	2.88		3.50	2.50	5.50	4.28	.50	2.75	.25		16.6
	D-963R	2.88		3.50	2.50	5.50	4.28	.50	2.75	.25		16.0
	E-963R	2.88		3.50	2.50	5.50	4.28	.50	2.75	.25		18.5
	B-964R	3.00		3.50	2.88	5.50	4.41	.50	2.75	.31		22.3
	973R	3.00		3.00	3.00	5.00	4.00	.50	2.00	.38		30.0
	1113R	2.06		1.50	1.25	2.88	2.77	.38	1.27	.31		11.0
	DS1113	2.06		1.50	1.25	2.88	2.77	.38	1.27	.31		11.4
	1131R	3.00		2.63	1.63	5.50	3.75	.50	1.69	.38		18.4
	1188R	2.00		2.00	1.00	3.50	2.78	.38	1.00	.19		5.9
	B-1212R	2.56		6.00	1.75	8.00	3.56	.50	3.00	.25		11.7
	B-1263R	2.88		6.00	2.50	8.00	4.28	.50	3.00	.25		15.2
	D-1263R	2.88		6.00	2.50	8.00	4.28	.50	3.00	.25		15.4
	E-1263R	2.88		6.00	2.50	8.00	4.28	.50	3.00	.25		16.6
	B-1264R	3.00		6.00	2.88	8.00	4.41	.50	3.00	.31		20.3
	B-1266R	2.69		6.00	1.88	8.00	3.69	.50	3.00	.25		14.0
	1273R	3.75		6.00	3.63	8.00	5.34	.50	3.00	.38		30.4
	1276R	3.03		6.00	2.75	8.00	4.13	.50	3.00	.25		19.2
	2178RX	2.19		3.00	1.63	4.50	3.02	.50	1.50	.38		15.3
	2198R	2.19		3.00	1.63	4.50	3.31	.50	1.50	.50		18.2
	2198RX	2.19		3.00	1.63	4.50	3.31	.50	1.50	.50		18.2
	DS6272	2.00		2.00	1.38	3.50	2.64	.38	2.00	.31		9.2
	60175	2.19		3.00	2.00	4.25	2.91	.56	.88	.50		23.5
K-2/K-44	3940	3.13		2.31	2.00	7.38	3.89	.56	1.84	.38		14.8
	3952	2.75		1.75	1.63	6.00	3.36	.53	1.13	.38		12.8
	9856	3.63		2.50	1.88	7.25	4.75	.81	1.75	.50		30.0
K-1/K-2 or K-3	3433	2.66	2.38	1.75	1.00	2.82	2.42	.41	1.13	.38		9.7
	3945	2.66	2.38	1.75	1.38	5.63	3.25	.44	1.13	.31		9.8

Note: Some K-2 attachments are supplied with three holes. Use the two outside holes.

Indicates this chain is normally stocked. All others are made-to-order.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

Roller Conveyor Chain Attachment

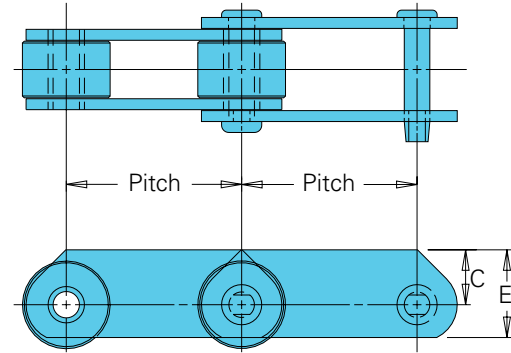
Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Attach. Number	Chain Number	Pitch			Approx. Weight (lbs./ft.)
			C	E	
High Side Bar Chains	CC5	6.000	1.50	2.50	11.0
	53R	3.000	.94	1.50	5.0
	84R	4.000	1.50	2.25	16.4
	89R	4.000	1.25	2.00	11.9
	US-90R	4.000	1.25	2.00	7.0
	94R	4.000	.88	1.50	4.8
	95R	4.000	.94	1.50	4.1
	614R	6.000	2.00	3.00	14.7
	627R	6.000	1.25	2.00	6.6
6053R	6.000	1.38	2.00	5.1	

Indicates this chain is normally stocked. All others are made-to-order.

High Sidebar Chains

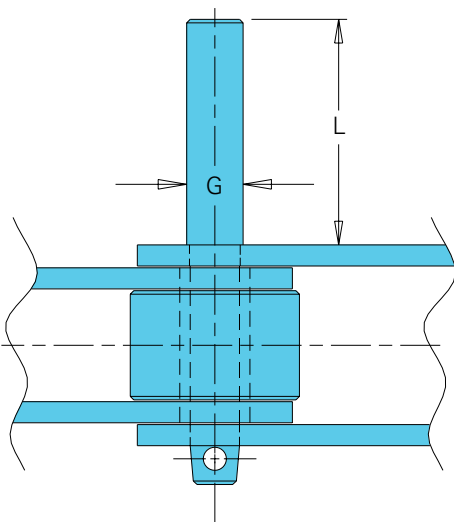


D-1 and D-5 Attachments

Chain Number	Diameter		Approx. Weight (lbs./ft.)
	G	L	
53R	.75	2.00	4.9
94R	.75	2.00	4.8
US-196R	.75	3.00	5.8
20002	.57	1.75	6.2



D-1 and D-5



Extended pin attachments of any length can be furnished on all chains listed provided "G" dimension is the same as or exceeds the chain pin diameter.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

ROLLER CONVEYOR ATTACHMENTS

Roller Conveyor Chain Attachment Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Attachment Number	Chain Number	A	B	C	E	F	Bolt Diameter K	L	T	Approx. Weight (lbs./ft.)
K-1	53R	1.47		.81	2.00	2.16	.31	1.50	.19	4.9
	83R	2.00		1.00	2.00	2.84	.38	2.00	.25	9.4
	84R	2.66		1.25	2.00	3.66	.63	2.00	.38	20.7
	89R	2.00		1.25	2.00	3.17	.38	2.00	.38	13.0
	US-90R	2.00		1.13	3.13	2.63	.38	2.00	.19	7.3
	91R	1.81		1.06	2.88	2.47	.50	2.00	.31	8.8
	93R	1.88		1.00	1.63	2.69	.50	1.34	.25	6.0
	94R	1.38		.88	2.50	1.88	.38	2.00	.25	5.3
	95R	1.38		.81	2.63	2.16	.38	2.00	.19	4.4
	96R	2.19		1.63	5.50	2.89	.63	3.00	.38	15.8
	119R	2.09		1.06	2.88	2.80	.50	1.54	.31	9.0
	US-196R	2.00		1.25	3.50	2.63	.38	3.00	.25	7.5
	US-278R	1.91		.81	2.13	2.47	.38	1.30	.19	4.1
	378R	1.50		.88	.88	1.89	.31	.83	.19	5.1
	603R	2.00		1.13	3.50	2.72	.38	3.00	.25	9.7
	604R	2.00		1.13	3.50	2.72	.38	3.00	.25	7.2
	607R	2.00		1.13	3.50	2.78	.38	3.00	.25	8.3
	610R	2.56		1.50	4.00	3.32	.63	3.00	.38	17.3
	614R	2.13		1.63	2.50	3.08	.50	3.00	.38	15.0
1188R	1.72		1.00	3.38	2.58	.38	2.00	.19	5.9	
K-11	2111	2.38		1.63	3.00	3.40	.69	3.50	.38	12.1
K-3	B-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25	14.1
	D-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25	14.6
	F-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25	15.0
	B-1864R	3.00	5.50	2.88	14.00	4.00	.50	3.50	.31	17.3
	G-1864R	3.00	5.50	2.25	14.00	4.00	.50	3.50	.31	18.6
	1866R	4.00	5.50	4.13	13.50	5.16	.50	3.50	.38	37.7
	1867R	4.13	5.00	4.13	13.00	5.28	.50	4.00	.38	42.5
	1871R	3.75	5.50	3.63	14.00	4.91	.50	3.50	.38	31.7
1873R	3.75	5.50	3.63	14.00	4.84	.50	3.50	.38	27.7	

Note: Some K-1 attachments are supplied with three holes. Use the center hole.

☐ Indicates this chain is normally stocked. All others are made-to-order.



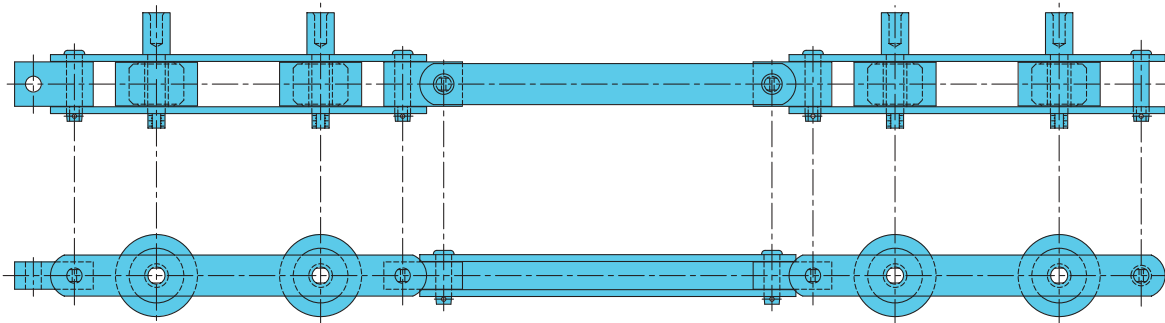
Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

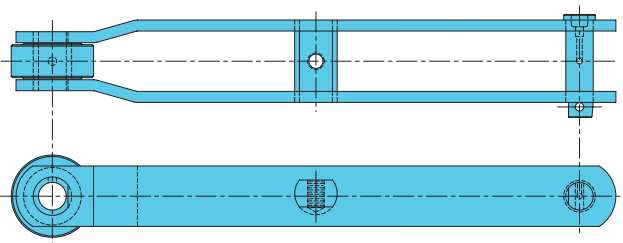
Specialty Attachments

The following Specialty Attachments are available on a made-to-order basis. Contact the Engineering Chain Division for specific chain dimensions.

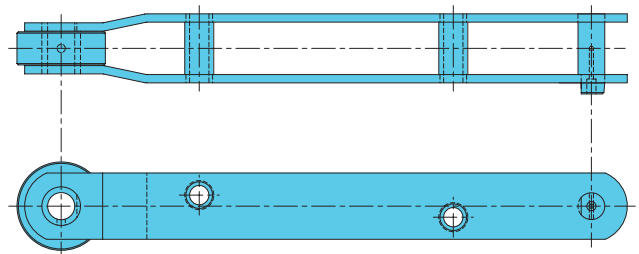
Bi-Planer Attachment



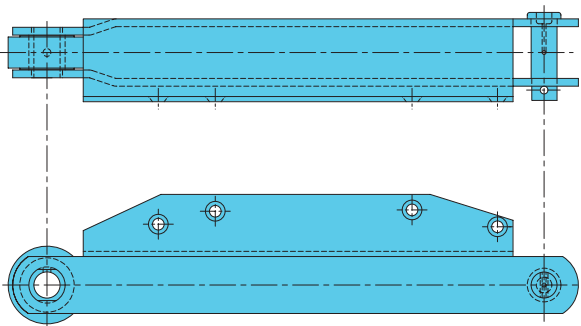
TWSA Attachment



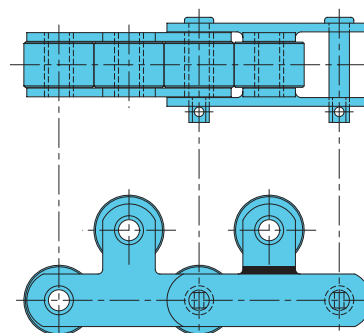
TWSB Attachment



TWSC Attachment



Top Roller Attachment



ROLLER CONVEYOR ATTACHMENTS

Roller Conveyor Chain Attachment Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Attachment Number	Chain Number	A	B	C	E	F	Bolt Diameter	K	L	T	Approx. Weight (lbs./ft.)	
A-2	53R	1.47	1.06	.81	2.00	2.16	.25	.97	.19		4.4	
	83R	2.00	1.75	1.00	2.88	2.84	.38	1.13	.25		8.1	
	84R	2.66	1.75	1.25	2.88	3.41	.38	1.13	.38		18.0	
	86R	2.00	2.00	1.13	3.50	2.72	.38	2.00	.25		6.2	
	87R	2.13	1.25	.81	2.13	2.63	.31	.68	.25		4.8	
	US-90R	2.00	2.00	1.13	3.13	2.63	.38	1.00	.19		6.3	
	91R	1.81	1.75	1.06	2.88	2.47	.50	1.13	.31		7.9	
	93R	1.88	1.25	1.00	2.00	2.69	.38	.88	.25		5.5	
	94R	1.38	1.50	.88	2.50	1.88	.38	1.25	.25		4.7	
	95R	1.38	1.19	.81	2.63	2.16	.31	1.41	.19		3.9	
	96R	2.19	3.00	1.63	5.50	3.00	.50	1.50	.38		13.7	
	119R	2.00	1.88	1.25	2.88	2.56	.31	.59	.31		7.9	
	US-196R	2.00	2.00	1.25	3.50	2.63	.38	2.00	.25		6.6	
	US-278R	2.09	1.25	.81	2.13	2.72	.31	.68	.19		3.9	
	603R	2.00	2.00	1.13	3.50	2.72	.38	2.00	.25		8.9	
	604R	2.00	2.00	1.13	3.50	2.72	.38	2.00	.25		6.0	
	607R	2.00	2.00	1.13	3.50	2.72	.38	2.00	.25		6.9	
	614R	2.13	2.63	1.63	5.50	2.92	.50	1.69	.38		13.0	
	625R	2.19	2.00	1.63	4.63	2.91	.38	2.00	.25		12.5	
	626R	2.19	2.00	1.63	3.50	3.05	.38	2.00	.38		12.7	
	627R	2.00	2.00	1.13	3.50	2.80	.38	2.00	.31		8.5	
	628R	2.36	2.00	1.63	3.50	3.25	.50	2.00	.38		10.2	
	629R	2.00	2.50	2.00	3.50	2.86	.38	1.75	.31		11.7	
	631R	2.13	2.63	1.63	5.50	2.92	.50	1.69	.38		14.2	
	B-912R	2.56	3.50	1.75	5.50	3.91	.50	2.75	.25		11.1	
	925R	2.50	3.50	1.75	5.50	3.38	.50	2.75	.25		10.7	
	B-963R	2.88	3.50	2.50	5.50	4.28	.50	2.75	.25		14.6	
	C-963R	2.88	3.50	2.50	5.50	4.28	.50	2.75	.25		15.0	
	D-963R	2.88	3.50	2.50	5.50	4.28	.50	2.75	.25		13.9	
	E-963R	2.88	3.50	2.50	5.50	4.28	.50	2.75	.25		13.9	
	B-964R	3.00	3.50	2.88	5.50	4.41	.50	2.75	.31		19.4	
	973R	3.75	3.50	3.63	5.50	4.88	.50	2.75	.38		26.0	
	1113R	2.06	1.50	1.25	2.88	2.77	.38	1.27	.31		9.3	
	1131R	3.00	2.63	1.63	5.50	3.75	.50	1.69	.38		15.5	
	1188R	2.00	2.00	1.00	3.50	2.78	.38	1.00	.19		5.0	
	B-1212R	2.56	6.00	1.75	8.00	3.56	.50	3.00	.25		9.5	
	B-1263R	2.88	6.00	2.50	8.00	4.28	.50	3.00	.25		12.9	
	D-1263R	2.88	6.00	2.50	8.00	4.28	.50	3.00	.25		13.1	
	E-1263R	2.88	6.00	2.50	8.00	4.28	.50	3.00	.25		14.3	
	B-1264R	3.00	6.00	2.88	8.00	4.41	.50	3.00	.31		17.1	
	B-1266R	2.69	6.00	1.88	8.00	3.69	.50	3.00	.25		11.5	
	1273R	3.75	6.00	3.63	8.00	5.34	.50	3.00	.38		25.8	
	1276R	3.03	6.00	2.75	8.00	4.13	.50	3.00	.25		16.9	
	40001	2.00	2.00	1.00	3.25	2.59	.38	1.00	.25		7.4	
	60001	2.08	2.13	1.25	3.25	2.69	.38	1.94	.31		8.4	
	60002	2.08	2.13	1.25	3.25	2.69	.38	1.94	.31		9.7	
	60003	2.88	1.50	1.19	2.88	3.70	.53	2.25	.31		16.8	
	60004	2.00	2.00	1.25	3.50	2.63	.41	2.00	.25		6.6	
	MA-2	98401	2.50	5.12	4.94	10.15	3.82	.81	2.36	.50		25.3
	SA-2	98402		6.26	4.69	8.65	2.11	1.09	1.79	1.00		46.5
A-3	B-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25		11.4	
	D-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25		11.9	
	F-1863R	2.88	5.50	2.50	14.00	4.28	.50	3.50	.25		12.3	
	B-1864R	3.00	11.00	2.88	14.00	4.00	.50	3.50	.31		15.1	
	G-1864R	3.00	11.00	2.88	14.00	4.00	.50	3.50	.31		14.9	
	1866R	4.00	11.00	4.13	13.50	5.17	.50	3.50	.38		32.0	
	1867R	4.13	10.00	4.13	13.00	5.28	.50	4.00	.38		37.0	
	1871R	3.75	11.00	3.63	14.00	4.91	.50	3.50	.38		26.3	
1873R	3.75	11.00	3.63	14.00	4.84	.50	3.50	.38		22.3		

Note: Some A-2 attachments are supplied with three holes. Use the two outside holes.

☐ Indicates this chain is normally stocked. All others are made-to-order.

Style "A" attachments are furnished on the cotted side as standard. If requested, they can be furnished on the opposite side of the chain.

Wear pads are available on all chains on a made-to-order basis.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

Apron Conveyors

Move loose bulk materials like coal, lime, sand, stone, and sugar cane along horizontal or inclined conveyors. Apron Conveyors are especially useful as feeders to elevating systems, for picking tables and loading booms, and for long horizontal or inclined conveyors.

Create Custom Solutions

Our engineers will help you create a complete apron conveyor system for your application, including the right attachments, rollers, and lubrication packages to meet your specific requirements.

Apron Conveyors from U.S. Tsubaki

- Wide selection and styles.
- Customized for your application.
- Reliable, hassle-free operation.
- Cost-efficient value for your investment.

Choosing Metal Thickness

Experience is usually the best guideline for specifying the metal thickness for pans and aprons. Make sure you consider the following points:

1. Number of chain strands to be used.
2. Required service life.
3. Manufacturing restrictions.
4. Weight of each apron support. Deflection must be limited to prevent binding between overlapping pans.
5. Corrosive and abrasive properties of conveyed materials.



Applications Chart

Pan/Apron Suggested Thickness (inches)	Service Conditions	Material Handled
3/8	Heavy	Highly abrasive, corrosive or large impact loads
1/4 - 5/16	Medium	Moderately corrosive, abrasive or impact loads
3/16	Light	Mildly abrasive, corrosive or impact loads

ROLLER CONVEYOR ATTACHMENTS

Roller Conveyor Chain Attachment Specifications

All dimensions are in inches unless otherwise indicated.

Attachment Number	Chain Number	A	B	C	E	F	Bolt Diameter		L	T	W	X	Approx. Weight (lbs./ft.)
							K ₁	K ₂					
A-1	53R	1.47		.81	2.00	2.16	.31		1.50	.19			4.4
	83R	2.00		1.00	2.00	2.84	.38		2.00	.25			8.1
	84R	2.66		1.25	2.00	3.66	.63		2.00	.38			18.0
	89R	2.00		1.25	2.00	3.17	.38		2.00	.38			11.0
	US-90R	2.00		1.13	3.13	2.63	.38		2.00	.19			6.3
	91R	1.81		1.06	2.88	2.47	.50		2.00	.31			7.9
	93R	1.88		1.00	1.63	2.69	.50		1.34	.25			5.5
	94R	1.38		.88	2.50	1.88	.38		2.00	.25			4.7
	95R	1.38		.81	2.63	2.16	.38		2.00	.19			3.9
	119R	2.09		1.06	2.88	2.80	.50		1.54	.31			7.9
	US-196R	2.00		1.25	3.50	2.63	.38		3.00	.25			6.6
	US-278R	1.91		.88	2.13	2.52	.38		1.30	.19			3.5
	378R	1.50		.88	.88	1.89	.31		.83	.19			4.4
	603R	2.00		1.13	3.50	2.70	.38		3.00	.25			8.8
	604R	2.00		1.13	3.50	2.72	.38		3.00	.25			6.3
	607R	2.00		1.13	3.50	2.70	.38		3.00	.25			7.4
	610R	2.56		1.50	4.00	3.33	.63		3.00	.38			15.4
614R	2.13		1.63	2.50	3.08	.50		3.00	.38			13.0	
1188R	1.72		1.00	3.38	2.53	.38		2.00	.19			5.0	
50001	1.69		1.13	2.25	2.31	.50		2.50	.31			8.1	
52502	2.00		3.06	2.25	2.80	.53		2.63	.31			11.0	
Double A-1	50002	1.23	4.31	1.25	1.00	1.48	.27		.34	.19			4.4
	30002	1.36	2.00	.94	1.13	1.61	.33		.50	.19			6.3
A-1/A-2	53R	1.47	1.06	.81	2.00	2.16	.31	.25	.97	.19			4.4
	US-90R	2.00	2.00	1.13	3.13	2.63	.38	.38	1.00	.19			6.3
	94R	1.38	1.50	.88	2.50	1.88	.38	.38	1.25	.25			4.7
	95R	1.38	1.19	.81	2.63	2.16	.31	.38	1.41	.19			3.9
A-11	53R	1.58	1.06	.09	2.00	1.94	.25		.97	.19			4.4
	94R	1.75	1.38	.13	2.50	2.50	.50		1.31	.25			5.2
	603R	2.56	2.25	.13	3.25	3.06	.25		1.88	.25			7.6
	604R	2.56	2.25	.13	3.25	3.06	.38		1.88	.25			7.6
	607R	2.56	2.25	.13	3.25	3.17	.38		1.88	.25			7.6
	614R	2.75	2.88	.19	4.50	3.56	.50		1.56	.38			12.5
	626R	2.19	2.25	.13	3.25	2.88	.38		1.88	.25			12.0
A-63	53R	1.63	.63	.09	1.50	2.09	.25		1.19	.19			4.4
A-22	94R	1.84		.19	1.25	2.44	.38		2.00	.38			4.5
	614R	2.25		.25	2.00	3.06	.50		3.00	.38			11.9
A-42	53R	1.56		.13	1.00	2.00	.38		1.50	.25			4.2
	86R	2.34		.19	2.00	3.16	.50		3.00	.38			6.4
	95R	1.63		.19	1.25	2.13	.38		2.00	.38			3.6
	119R	2.00		.25	1.38	2.69	.63		1.50	.50			7.5
	604R	2.34		.25	2.00	3.16	.63		3.00	.50			6.2
	614R	2.75		.25	2.00	3.75	.63		3.00	.50			12.3
	631R	2.75		.25	2.00	3.50	.63		3.00	.50			13.5
	1131R	2.84		.25	2.00	3.84	.63		3.00	.50			13.8
	1604R	2.31		.25	2.00	3.06	.63		3.00	.50			6.7
	2184RX	2.63		.25	2.00	3.63	.63		3.00	.50			13.6
CP-1	40005	2.38	.75	1.13	2.50	3.37	.50		1.25	.25	.74	.50	11.5
E-1	52501			2.94	3.38		.66		2.63	.31			15.2

Note: Some A-1 attachments are supplied with three holes. Use the center hole.

Indicates this chain is normally stocked. All others are made-to-order.

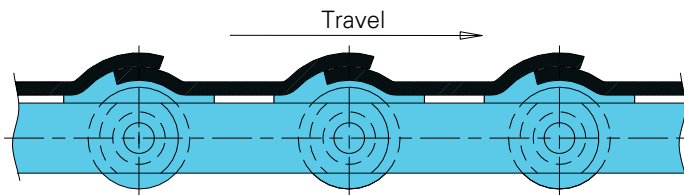
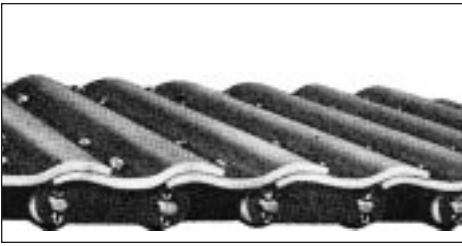
Style "A" attachments are furnished on the cottered side as standard. If requested, they can be furnished on the opposite side of the chain.

Wear pads are available on all chains on a made-to-order basis.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

Style A



Uses

- Adaptable for any pitch conveyor.
- Most widely used style for horizontal or incline applications up to 35 degrees.

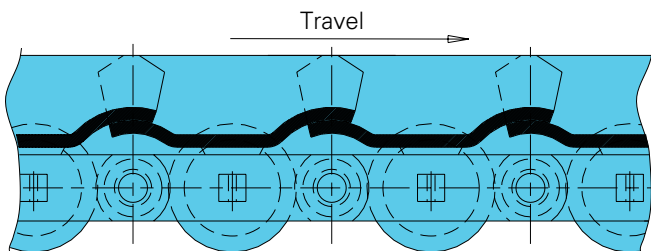
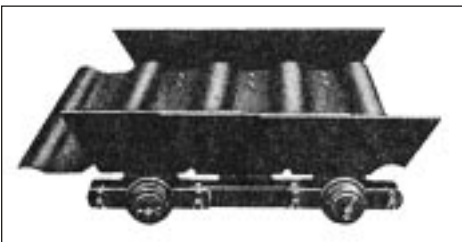
Advantages

- More leakproof than other styles of apron conveyor.
- With K attachments, the load is distributed evenly on both chains.
- Pan ends, when needed, fasten directly to apron and not to chain.

Attachments

- A attachments (one side of chain only) for long center distances.
- K attachments (both sides of chain) for short center distances.

Style A — Outboard Roller Support (OBR)



Uses

- Handles fine abrasive materials on incline applications up to 35 degrees.
- Longer pitch conveyors with two strands of chain mounted below and close to the ends of the pans.

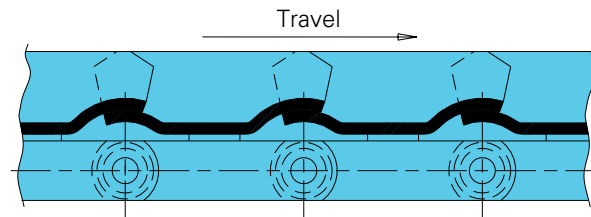
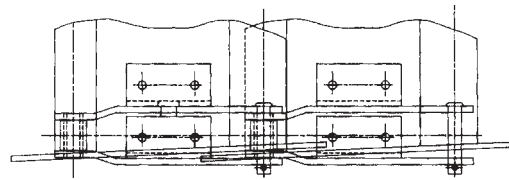
Advantages

- Close-fitting members hold leakage to a minimum, protecting the conveyor and avoiding damage when handling abrasives.
- Reduced maintenance costs because outboard rollers may be removed for inspection or renewal without dismantling chains or pans.
- Conveyed load is carried on outboard rollers.
- Head shaft terminal load is carried on chain rollers.

Attachments

- A-2, E-2, M-1 attachments are commonly used.

Style A — Fixed Roller Support



Uses

- Handles heavy conveyed materials.
- Withstands high-impact loads.

Advantages

- Chain is supported under sidebars by fixed frame rolls that transfer load instead of chain joint rollers.
- The close-fitting members keep leakage to a minimum, protecting your equipment from abrasives.

Attachments

- K attachments usually improve load distribution.
- K-1, K-2, A-1, A-2, E-2 attachments are commonly used.

ROLLER CONVEYOR CHAIN

Roller Conveyor Chain Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Chain No.	Pitch	Width			Roller					Pin			Sidebar			Bushing	Bear- ing Area (in ²)	Avg. Ult. Stgth. (lbs.)	Max. Work Load (lbs.)	Approx. Wgt. (lbs./ft.)
		Pin Head to CL	Pin End to CL	In- side	Dia.	Lgth.	Sty. ¹	Matl. ²	Face Width	Dia.	Sty. ¹	Matl. ²	Hgt.	Th.	Matl. ²	Matl. ²				
		B	C	E	D	L			G			H	T							
24003 ⁵	24.000	1.56	2.06	1.56	4.00	1.50	T	CHT		1.21	J	CHT	3.00	.38	HC	CHT	2.80	79,000	9,800	11.5
24002 ⁵	24.000	2.19	2.19	1.69	3.75	1.63	V	CHT		1.25	J	CHT	2.75	.50	HC	CHT	3.36	85,000	11,750	13.1
24006 ⁵	24.000	2.19	2.56	1.69	3.88	1.63	V	CHT		1.25	J	CHT	2.75	.50	HC	CHT	3.36	85,000	11,750	13.3
24004 ⁵	24.000	1.81	2.31	1.56	4.00	1.50	T	CHT		1.21	J	CHT	3.00	.50	HC	CHT	3.10	106,000	10,100	14.2

Dimensions shown are nominal. Obtain certified prints for design and construction.

█ Indicates this chain is normally stocked. All others are made-to-order.

¹Styles for rollers, pins, sidebars and bushings are shown on pages 4-5.

²Material: ACH = Alloy case hardened; AHT = Alloy heat-treated; AHTIH = Alloy heat-treated induction hardened; AIHT = Alloy iron heat-treated; CCH = Carbon case hardened; CHT = Carbon heat-treated; CRS = Cold rolled steel; HC = High carbon; Hytel = Hytel material; PMCCH = Powdered metal carbon case hardened; PMHT = Powdered metal heat-treated; SSHT = Stainless steel heat-treated.

³Offset sidebar.

⁴CC5 is only provided in high sidebar design.

⁵Chains available with polyurethane bonded rollers.

* Attachment pitch is 27 in. with an E measurement of 1.03 in.

** Attachment pitch is 30 in. with an E measurement of 1.03 in.

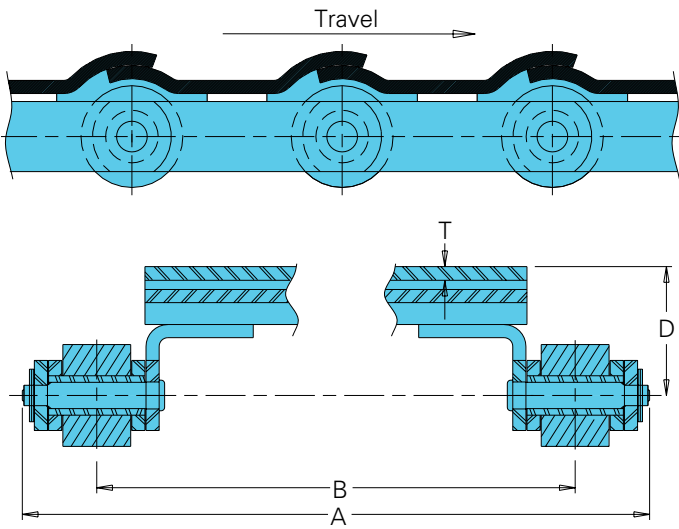
⁶Also available in all Stainless Steel construction.



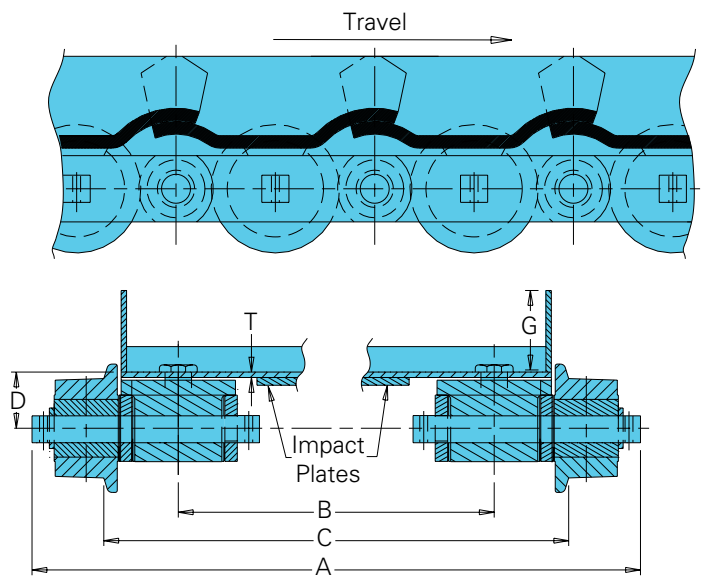
Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

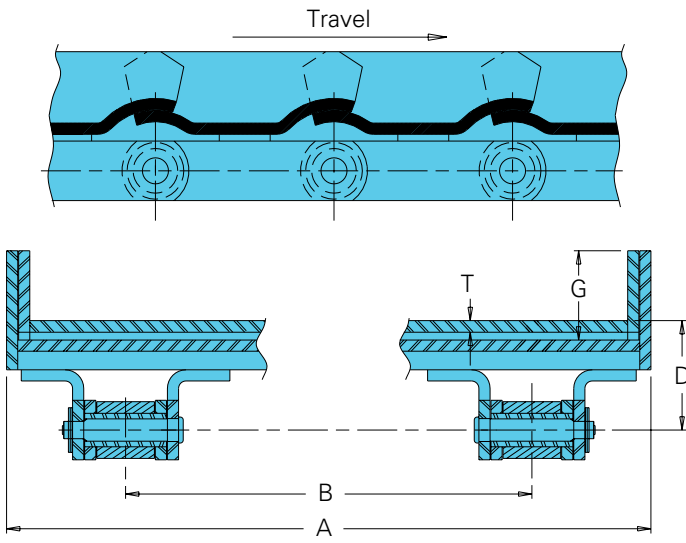
Style A Aprons



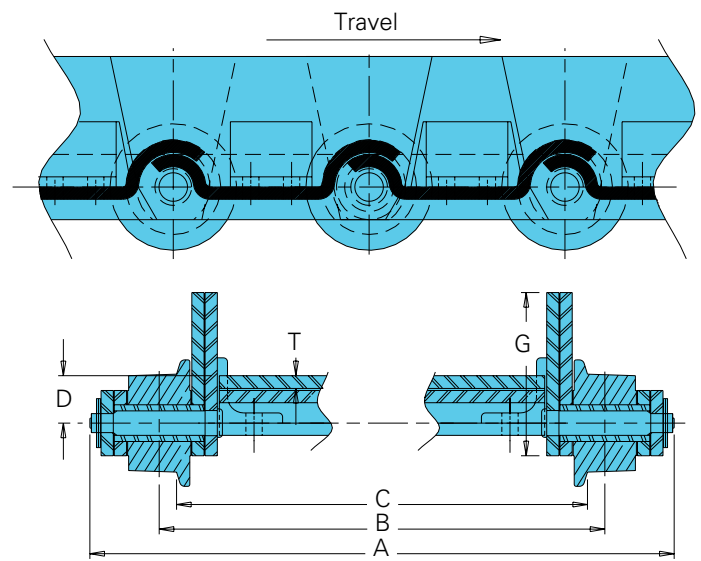
Style A-OBR Aprons



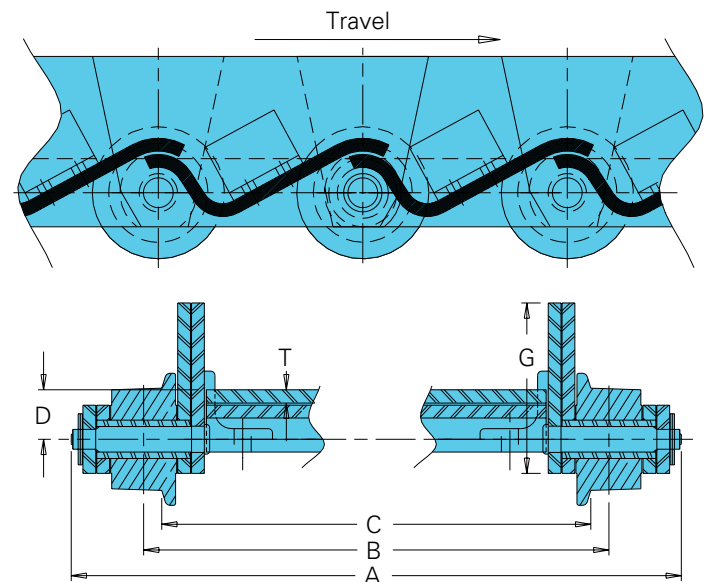
Style A-FRS Aprons



Style B Aprons



Style D Aprons



ROLLER CONVEYOR CHAIN

Roller Conveyor Chain Specifications (Continued)

All dimensions are in inches unless otherwise indicated.

Chain No.	Pitch	Width			Roller					Pin			Sidebar			Bushing	Bear- ing Area (in. ²)	Avg. Ult. Stgth. (lbs.)	Max. Work Load (lbs.)	Approx. Wgt. (lbs./ft.)
		Pin Head to CL	Pin End to CL	In-side	Dia.	Lgth.	Sty. ¹	Matl. ²	Face Width	Dia.	Sty. ¹	Matl. ²	Hgt.	Th.	Matl. ²	Matl. ²				
		B	C	E	D	L			G			H	T							
1113R	4.040	1.50	1.75	1.31	2.00	1.25	T	CCH	.63	A	CHT	1.50	.31	HC	ACH	1.09	26,000	4,250	7.4	
42501	4.250	1.37	1.47	1.25	2.50	1.18	T	SSHT	.56	A	SSHT	1.75	.25	SSHT	SSHT	1.03	31,000	3,800	8.9	
50002	5.000	1.04	1.32	1.06	2.00	1.00	T	CCH	.44	A	CHT	1.13	.19	HC	CCH	.63	15,000	2,200	4.0	
50001	5.000	1.48	1.68	1.19	2.25	1.16	T	CCH	.63	A	ACH	1.50	.31	CHT	ACH	1.01	45,000	3,960	7.1	
52502	5.250	1.56	1.85	1.50	2.75	1.43	V	SSHT	.63	A	SSHT	1.50	.31	HC	SSHT	1.26	37,000	4,650	11.0	
52501	5.250	1.62	1.91	1.56	3.00	1.50	T	SSHT	.88	K	SSHT	2.00	.31	HC	SSHT	1.89	47,000	6,950	15.2	
6053R	6.000	1.03	1.25	1.00	1.50	.97	T	PMHT	.44	A	CHT	1.13	.19	HC	ACH	.61	13,000	2,100	3.1	
DS196R	6.000	1.20	1.45	1.13	2.00	1.06	T	CCH	.44	A	CHT	1.25	.25	HC	SSHT	.71	18,000	1,950	7.5	
US-196R	6.000	1.20	1.45	1.13	2.00	1.06	T	CCH	.44	A	CHT	1.25	.25	HC	CCH	.72	18,000	2,500	5.0	
604R	6.000	1.33	1.58	1.31	2.00	1.25	T	CCH	.56	A	CHT	1.50	.25	HC	ACH	1.01	21,000	3,500	5.4	
607R	6.000	1.33	1.58	1.31	2.50	1.25	T	CCH	.56	A	CHT	1.50	.25	HC	ACH	1.01	21,000	3,500	6.5	
603R	6.000	1.33	1.58	1.31	2.50	1.25	U	AIHT	.56	A	CHT	1.50	.25	HC	ACH	1.01	21,000	3,500	5.5	
60005	6.000	1.32	1.58	1.31	2.00	1.25	T	CCH	.56	A	CHT	1.50	.25	HC	ACH	1.02	21,000	3,550	5.5	
86R	6.000	1.38	1.63	1.31	2.00	1.25	V	AIHT	.63	A	CHT	1.50	.25	HC	CCH	1.14	22,000	3,600	5.4	
1604 ³	6.000	1.22	1.44	1.06	3.00	.88	T	CCH	.50	A	ACH	1.25	.25	CHT	CCH	.78	24,000	2,750	5.4	
60004	6.000	1.20	1.42	1.13	2.00	1.06	T	CCH	.44	A	CHT	1.25	.25	HC	SSHT	.71	25,000	2,500	4.6	
625R	6.000	1.56	1.81	1.69	3.00	1.63	U	AIHT	.63	A	CHT	2.00	.25	HC	CCH	1.38	25,000	4,750	9.8	
DS6272	6.000	1.47	1.75	1.31	2.25	1.25	T	PMHT	.63	A	CHT	1.50	.31	HC	SSHT	1.21	26,000	3,150	9.2	
627R	6.000	1.47	1.75	1.31	2.00	1.25	T	CCH	.63	A	CHT	1.50	.31	HC	ACH	1.22	26,000	4,250	6.6	
629R	6.000	1.59	1.84	1.50	3.00	1.44	V	CCH	1.31	.63	A	ACH	1.50	.31	HC	ACH	1.30	26,000	4,650	9.7
628R	6.000	1.59	1.88	1.31	2.25	1.25	T	CRS	.63	A	ACH	1.75	.38	HC	CCH	1.11	28,000	4,500	8.7	
626R	6.000	1.59	1.88	1.31	3.00	1.25	V	CCH	1.13	.63	A	ACH	2.00	.38	HC	CCH	1.10	28,000	4,500	10.7
1126R ³	6.000	1.59	1.91	1.31	2.25	1.25	T	CRS	.63	A	ACH	1.50	.38	HC	CCH	1.10	28,000	4,500	8.0	
1126RS ³	6.000	1.59	1.91	1.31	3.00	1.25	T	CCH	.63	A	ACH	1.50	.38	HC	CCH	1.10	28,000	4,500	10.0	
2130R ³	6.000	1.72	2.00	1.31	2.50	1.25	T	CCH	.75	A	ACH	2.00	.38	HC	CCH	1.55	38,000	5,250	11.0	
631R	6.000	1.63	2.03	1.38	3.00	1.31	T	CCH	.75	A	CHT	2.00	.38	HC	CCH	1.61	38,000	5,600	12.2	
614R	6.000	1.63	2.03	1.38	2.50	1.31	T	CCH	.75	A	CHT	2.00	.38	HC	CCH	1.48	38,000	5,600	11.0	
B-663R	6.000	1.94	2.38	2.00	3.00	1.94	U	AIHT	1.50	.75	A	CHT	2.00	.38	HC	ACH	2.07	41,000	7,200	14.0
1630R ³	6.000	1.66	2.03	1.38	2.50	1.31	T	CCH	.88	A	ACH	2.00	.38	HC	ACH	1.66	43,000	6,500	11.0	
2184R ³	6.000	1.66	2.03	1.38	3.00	1.31	V	PMHT	1.18	.88	J	ACH	2.00	.38	HC	ACH	1.66	43,000	6,500	12.3
60001	6.000	1.39	1.68	1.19	2.50	1.16	T	CCH	.63	A	ACH	1.50	.31	CHT	ACH	1.01	45,000	3,960	7.4	
610R	6.000	1.78	2.19	1.69	2.75	1.63	T	CCH	.88	A	ACH	2.25	.38	HC	CCH	2.16	45,000	7,450	13.5	
60002	6.000	1.39	1.67	1.19	3.00	1.15	T	CCH	.63	A	ACH	1.50	.31	CHT	ACH	1.01	46,000	3,950	8.7	
96R	6.000	1.69	2.09	1.50	2.75	1.44	T	CCH	.75	A	ACH	2.00	.38	HC	ACH	1.61	47,000	5,900	11.8	
1131R	6.000	1.69	2.09	1.50	3.00	1.44	T	CCH	.75	A	ACH	2.00	.38	HC	ACH	1.61	47,000	5,900	12.5	
CC5 ⁴	6.000	1.50	1.69	1.38	2.50	1.31	T	CCH	.69	A	CCH	2.50	.31	HC	CCH	1.38	50,000	4,800	11.0	
60003	6.000	1.69	2.13	1.56	3.50	1.31	V	CHT	1.13	K	ACH	2.50	.31	CHT	ACH	2.46	60,000	8,600	16.1	
96RX	6.000	1.69	2.09	1.50	2.75	1.44	T	CCH	.75	A	ACH	2.00	.38	CHT	ACH	1.61	70,000	5,900	11.8	
2184RX ³	6.000	1.66	2.03	1.38	3.00	1.31	V	PMHT	1.18	.88	J	ACH	2.00	.38	CHT	ACH	1.66	75,000	6,500	12.0
2111	6.000	1.75	2.12	1.56	1.88	1.50	T	ACH	.75	A	AHT	2.00	.38	CHT	ACH	1.73	83,000	5,900	9.3	
2178RX	6.000	1.72	2.09	1.50	2.75	1.44	V	CCH	1.31	.88	A	AHT	2.25	.38	CHT	ACH	2.00	85,000	6,900	13.1
3940	6.000	1.93	2.28	2.00	1.62	1.93	T	CCH	.75	J	AHTIH	2.25	.38	CHT	CCH	2.06	90,000	7,200	10.2	
2198RX	6.000	1.97	2.38	1.50	2.75	1.44	V	CCH	1.31	.88	A	AHT	2.25	.50	CHT	ACH	1.80	100,000	7,700	15.3
9063RXX	6.000	1.78	2.16	1.50	3.00	1.43	V	CCH	.94	K	AHT	2.50	.38	AHT	ACH	2.11	138,000	7,350	15.1	
9856	6.000	2.78	3.21	3.00	2.75	2.93	T	AHT	1.00	K	AHTIH	2.50	.50	CHT	ACH	4.00	140,000	14,000	22.2	
60175	6.000	2.06	2.50	1.56	3.00	1.50	V	CCH	1.13	A	AHT	2.75	.50	CHT	ACH	2.88	145,000	10,100	20.0	
70901	7.090	1.49	1.91	1.41	2.75	1.36	T	ACH	.88	J	ACH	2.25	.31	CHT	ACH	1.78	68,000	6,200	10.3	
80002	8.000	.89	1.61	.97	2.00	.90	T	CCH	.44	A	CHT	1.25	.25	HC	ACH	.64	18,000	2,500	4.6	
80003	8.000	1.41	1.47	1.25	2.50	1.16	T	CCH	.63	A	AHT	1.50	.25	CHT	ACH	1.09	37,000	3,800	5.9	

Dimensions shown are nominal. Obtain certified prints for design and construction.

█ Indicates this chain is normally stocked. All others are made-to-order.

¹Styles for rollers, pins, sidebars and bushings are shown on pages 4-5.

²Material: ACH = Alloy case hardened; AHT = Alloy heat-treated; AHTIH = Alloy heat-treated induction hardened; AIHT = Alloy iron heat-treated; CCH = Carbon case hardened; CHT = Carbon heat-treated; CRS = Cold rolled steel; HC = High carbon; Hytrel = Hytrel material; PMCCH = Powdered metal carbon case hardened; PMHT = Powdered metal heat-treated; SSHT = Stainless steel heat-treated.

³Offset sidebar.

⁴CC5 is only provided in high sidebar design.

⁵Chains available with polyurethane bonded rollers.

* Attachment pitch is 27 in. with an E measurement of 1.03 in.

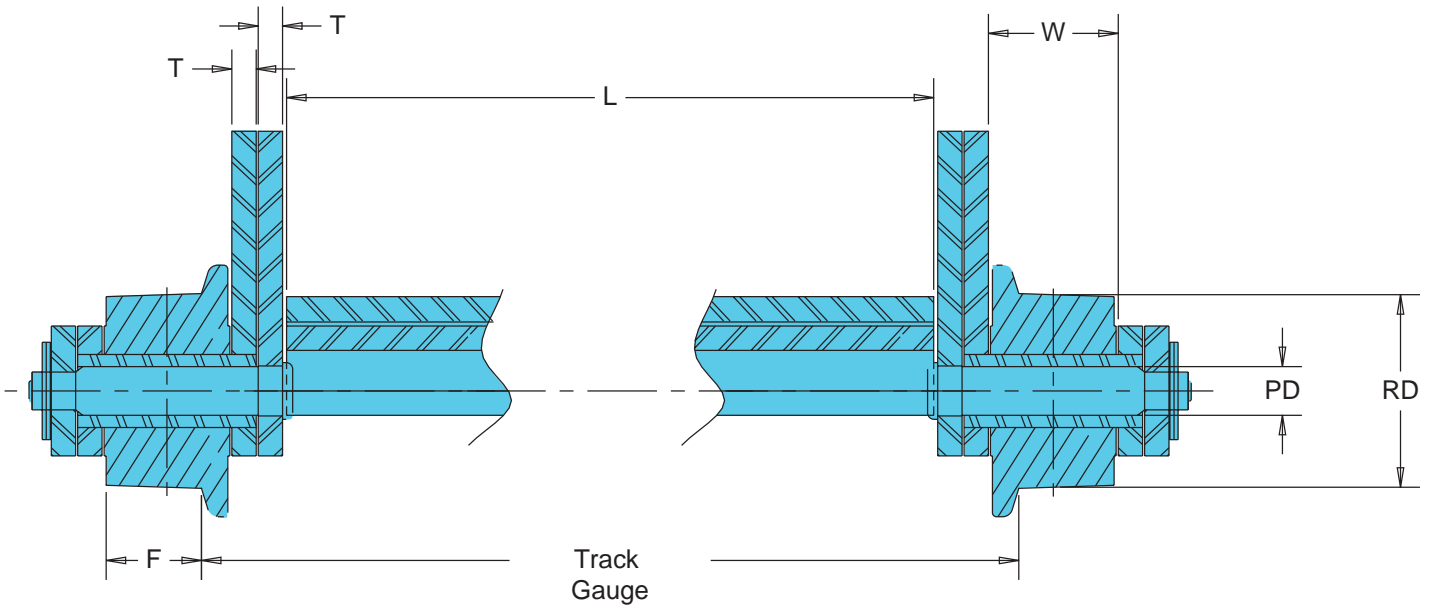
** Attachment pitch is 30 in. with an E measurement of 1.03 in.

⁶Also available in all Stainless Steel construction.

Contact the Engineering Chain Division to locate compatible sprockets for your chain.

Note: Dimensions are subject to change. Contact the Engineering Chain Division to obtain certified prints for design and construction.

Apron Conveyor Dimensions



Apron Conveyor Dimensions for Chain with Single Flange Rollers Styles B & D Conveyors

Center to Center of chain = $L + 4T + W + 3/16"$

Track Gauge = $L + 4T + 2k + 1/2"$

Center to Center of sprocket = $L + 4T + 2k + F + 1/4"$

Overall Width = $L + 8T + 2W + 2c + 1/4"$

Where:

L = Length of apron

T = Thickness of sidebars (chain dimension)

W = Inside width (chain dimension)

F = Width or face of roller tread

k = Constant for diameter of roller

c = Constant for diameter of pin

Values of F and k

Roller Diam. RD	F	k
2.50	.88	.31
3.00	1.09	.41
3.00	1.25	.31
3.50	1.25	.56
4.00	1.25	.59
4.00	1.50	.59
5.00	1.75	.66
5.00	1.75 ¹	.72
6.00	1.88	.69
6.00	1.88 ¹	.81

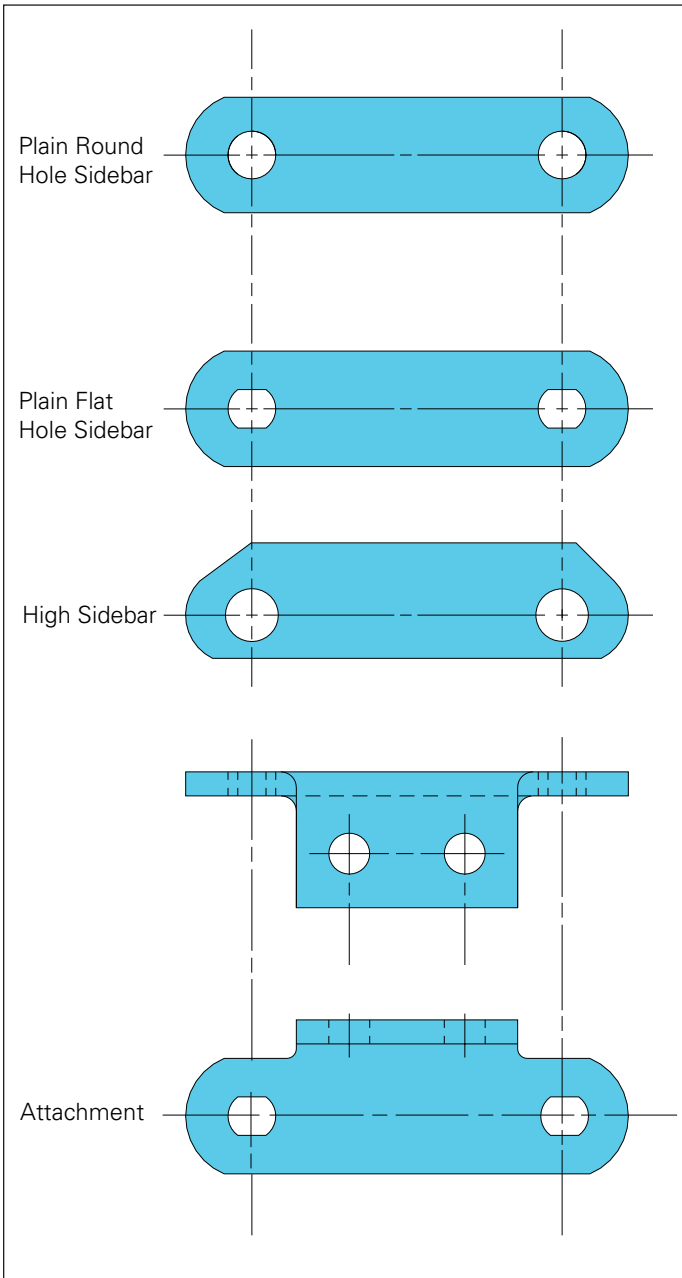
¹Indicates heavier wheel of same width of roller tread.

Values of c

Pin Diam. PD	c
.56	.41
.63	.47
.75	.56
.88	.56
1.00	.69
1.13	.69
1.25	.69
1.50	.81

every link of Union[®] chain.

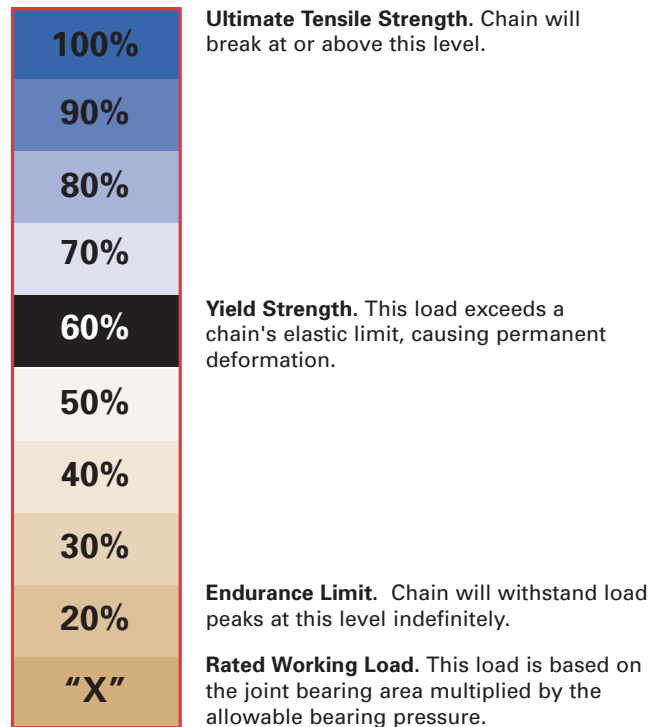
Sidebar Styles



Built to Last

The service life of Union Roller Conveyor Chain will last years with proper care and maintenance during operation. Consider the basic chain loading requirements of your application when selecting chain.

Basic Chain Loading



Working Load is equal to bearing area (pin diameter multiplied by bushing length) multiplied by the allowable pressure for the materials involved. The nominal value for allowable pressure is 3500 psi. At this level, a chain will wear out by elongation rather than break.

Chain can be expected to experience ultimate wear performance when actual chain pull does not exceed the Rated Working Load. Relative life expectancy varies by application.

Get the right chain for your system.

Use the table below to determine the plating, heat-treatment, and material composition that will best meet the needs of your application.

Specification Matrix

	Carbon Steel	Alloy Steel	Plating					Heat-Treatment				Stainless Steel			Special Considerations			
			Zinc	Chromium	Nickel	Sandstrom 9-A	ULTRA WP®	T-2 (Titanium)	Through-Hardened	Case-Hardened	Selective-Hardened	Multi-Hardened	300 Series - Austenitic Stainless Steel	400 Series - Martensitic Stainless Steel	600 Series - Martensitic Stainless Steel	Lubrication Fitting	Seals	Bearings
Basic Chain	X	X																
Increase Strength		X						X	X	X								
Improve Pin/Bushing Wear Resistance				X				X	X	X	X				X			
Improve Pin/Bushing Corrosion Resistance			X	X	X		X	X				X	X	X		X		
Improve Roller/Bushing Wear Resistance				X				X	X	X	X				X			
Improve Roller/Bushing Corrosion Resistance			X	X	X		X	X				X	X	X		X		
Increase Strength & Improve Pin/Bushing Wear Resistance & Corrosion Resistance		X						X	X	X								
Improve Pin/Bushing Wear Resistance & Corrosion Resistance			X	X	X		X	X	X	X	X	X	X	X	X			
Improve Pin/Bushing & Roller/Bushing Wear Resistance			X	X	X		X	X	X	X	X	X	X	X	X	X		
Increase Strength & Improve Roller/Bushing Wear Resistance		X						X	X		X		X					
Increase Strength & Improve Roller/Bushing Wear Resistance & Corrosion Resistance		X	X	X	X	X	X	X	X	X	X	X	X	X		X		
Increase Strength & Improve Pin/Bushing & Roller/Bushing Wear Resistance		X						X	X	X	X				X	X	X	
Increase Strength & Improve Pin/Bushing Wear Resistance & Corrosion Resistance		X				X		X	X	X	X	X	X	X	X	X	X	
Increase Strength & Improve All-Around Part Wear Resistance & Corrosion Resistance		X				X		X	X	X	X	X	X	X	X	X	X	



we keep you going.

Performance is Built In

Every step in the production of our Roller Conveyor Chain is designed to deliver better performance and longer service life for your application.

1. Quality Materials

Focus on profits, not repairs. Union® uses only top-grade Special Bar Quality steel, which means our chains are built to last. Choose from carbon-based or alloy-based to suit your application. Our global engineering team can help you select the right chain and develop innovative solutions to your design challenges.



2. Precision Manufacturing

State-of-the-art manufacturing techniques build outstanding performance into every Union chain. Our ISO-certified facilities are equipped for testing hardness, ductility, size specifications, and average ultimate chain pull. You get chains with tight clearances and optimum press fits for stronger, longer lasting operation.



3. Accurate Assembly

Whether you need new or replacement chain, you can count on Union for consistent, reliable results. We've developed special production equipment to ensure that every Union chain meets our exacting standards.

- Hydraulic presses ensure proper set-down of chains
- Tight tolerances and precise pitch control keep chains running straight and true, eliminating the need for staggered-pin construction
- Accurate magnetic heating characteristics increase durability by localizing heat within the pins
- Precision die setting tools control assembly, generating repeatable performance from every chain
- Attachment chains built to your specifications maximize the efficiency of your application

4. Quick Delivery

We keep a large inventory of the most widely used conveyor chains in stock and ready for shipment. We also provide quick turnarounds on chains made to order.* That means you get the chain you need faster than ever before so you can keep production rolling.

*Contact the Engineering Chain Division for specific delivery information.



Maintenance Checkpoints

Checkpoints	Comments
Centering	A guide rail is essential to ensure proper centering of the conveyor. If centering is not accurate (with no side guide rail), scrubbing of the sidebars will occur which results in shorter conveyor chain life and/or possible chain failure.
Sprocket alignment	When two or more sprockets are installed in a row, be sure to align the position of the sprocket teeth. If the sprocket teeth are not properly aligned, the working load will not be equally divided and will cause the chain to twist. To align sprockets quickly, easily, and effectively, contact U.S. Tsubaki for information about the Pro-Align™ Laser Alignment System.
Take-up	If take-ups on both sides are uneven, the conveyor chain will not engage smoothly with the sprocket.
Initial chain tension	Maintain adequate chain slack. If chain tension is too high, loss of power will result. This is a dangerous situation and, if too loose, the chain will climb the sprocket.
Break-in	The first running of the system after installation should be made under no-load conditions. Run the system through several cycles while listening for noises which may indicate obstructions and/or problems within the system. After inspection, continuous operation may begin.
Stopping conveyor	Stop the conveyor under no-load conditions to prevent remaining material from overloading the system when the conveyor starts again.
Lubrication	Lubricate conveyor chain periodically. Lubrication of reducers, bearings, and other components is also essential.
Securing conveyor parts	Parts fastened to the conveyor, such as buckets, aprons, slats, etc., may loosen due to vibration. Fasten nuts and bolts securely and check periodically.
Amount of chain slack	Chain slack varies per application. Regularly check and adjust the amount of chain slack based on visual inspection during actual run and downtime. Consult troubleshooting guide when required.
Use and maintenance record	After installing the conveyor, prepare a record of the expected capacity to be conveyed, conveyor speed, r.p.m. of main shaft, electric current, voltage, working horsepower, actual conveying capacity, inspection date, lubricating date, details of troubles, etc. This record will serve as protection against unexpected problems and will be helpful during maintenance and repairs.

WARNING

USE CARE TO PREVENT INJURY COMPLY WITH FOLLOWING TO AVOID SERIOUS PERSONAL INJURY:

1. Guards must be provided on all chain and sprocket installations in accordance with provisions of ANSI/ASME B15.1 — 2000 “Safety Standards for Mechanical Power Transmission Apparatus,” and ANSI/ASME B20.1 — 2000 “Safety Standards for Conveyors and Related Equipment,” or other applicable safety standards. When revisions of these standards are published, the updated edition shall apply.
2. Always lock out the power switch before installing, removing, lubricating or servicing a chain system.
3. When connecting or disconnecting chain:
 - a. Eye protection is required. Wear safety glasses, protective clothing, gloves and safety shoes.
 - b. Support the chain to prevent uncontrolled movement of chain and parts.
 - c. Use of pressing equipment is suggested. Tools must be in good condition and properly used.
 - d. Do not attempt to connect or disconnect chain unless you understand chain construction, including the correct direction for pin/rievet removal or insertion.
 - e. Do not attempt to rework damaged chains by replacing only the components obviously faulty. The entire chain may be compromised, and it should be discarded.
4. Other cautions:
 - a. **Alterations and Repairs** to chains should be made only by qualified personnel with parts and components authorized by U.S. Tsubaki.
 - b. **Electroplating of Assembled Chains** is not condoned. Plating of assembled chains could result in failure from hydrogen embrittlement.
 - c. **Inspect Chains** for shipment damage before installation. During operation, all chain systems should be inspected on a regular schedule. Visually check for worn, damaged and broken parts caused by improper installation or maintenance, abnormal stress, temperature, humidity, abrasion or corrosion, possible interference with other system components and improper lubrication. (For correct lubrication procedures and systems, see the Engineering Section.)
 - d. **Heating Chain** with a cutting torch is not suggested unless absolutely necessary for removal. If cut in such a manner, it should not be reused.
 - e. **Welding** should not be performed on any chain or component.
 - f. **Average Ultimate Strength** of a chain means the average load at which it will break when subjected to a destructive tensile test. *It does not mean working load.* For complete information, contact U.S. Tsubaki Engineering.
 - g. **Product Dimensions** in this catalog are subject to changes and are intended for general reference only. For exact current dimensions, request certified prints from U.S. Tsubaki.

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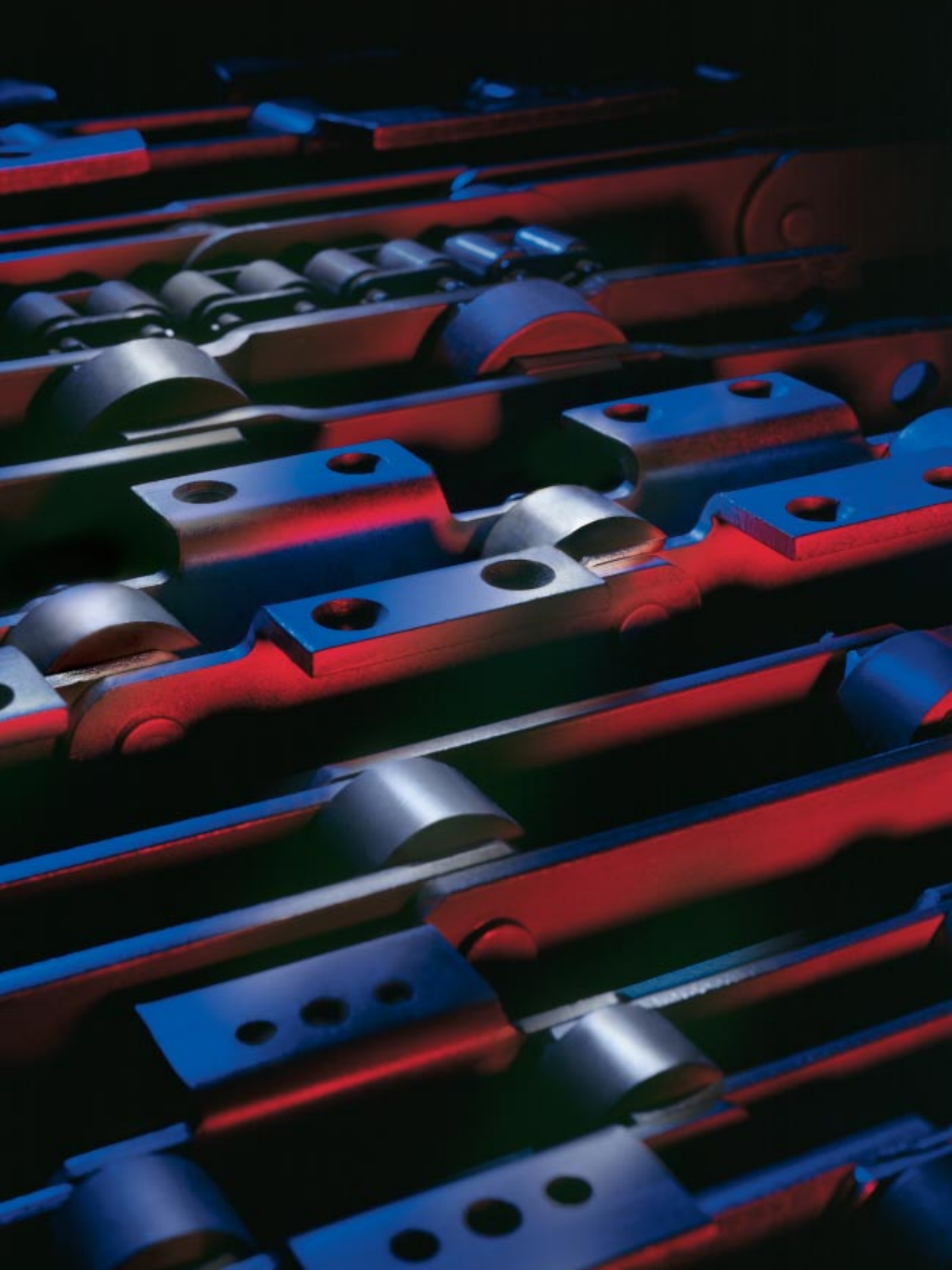
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U.S. Tsubaki
**Engineered
to move
heavy industry**



- High-quality, long-lasting operation
- Superior performance with high shock loads
- Reduced downtime and maintenance



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