



MSR CLASS BUSHED ROLLER STEEL CHAIN

MSR Class Bushed Roller Steel Chain has high strength and long wear, and is manufactured for heavy duty operation under severe conditions. Pins and bushings lock into specially produced sidebars, assuring close pitch control and achieving as close to 100% bearing between the pin and sidebar as possible. This configuration is frequently referred to as a "bushed roller".

Moline chain parts are manufactured from carefully selected raw material, machined and heat treated employing precise and exacting specifications; the parts are assembled with dispatch and precision for maximum performance and service.

This class of chain is available in a wide range of pitch sizes. Average Ultimate Strength and Recommended Working Load are conservatively stated in all sizes to support optimum performance with long life. This chain is made according to manufacturers' standards and may be interchanged with standard bushed roller chain of other manufacturers. It is offered in four styles that are shown in the dimensional drawings.

Assorted attachments are offered in a wide range of MSR chain.

MSR chain is available in riveted and cottered construction except as noted. Cottered construction will be furnished unless riveted is requested, except 81X and MSR 303.

Sprockets are available in Brutaloy, cast steel, and flame cut when required.

Allied-Locke Industries Inc.

... reach for the star of quality

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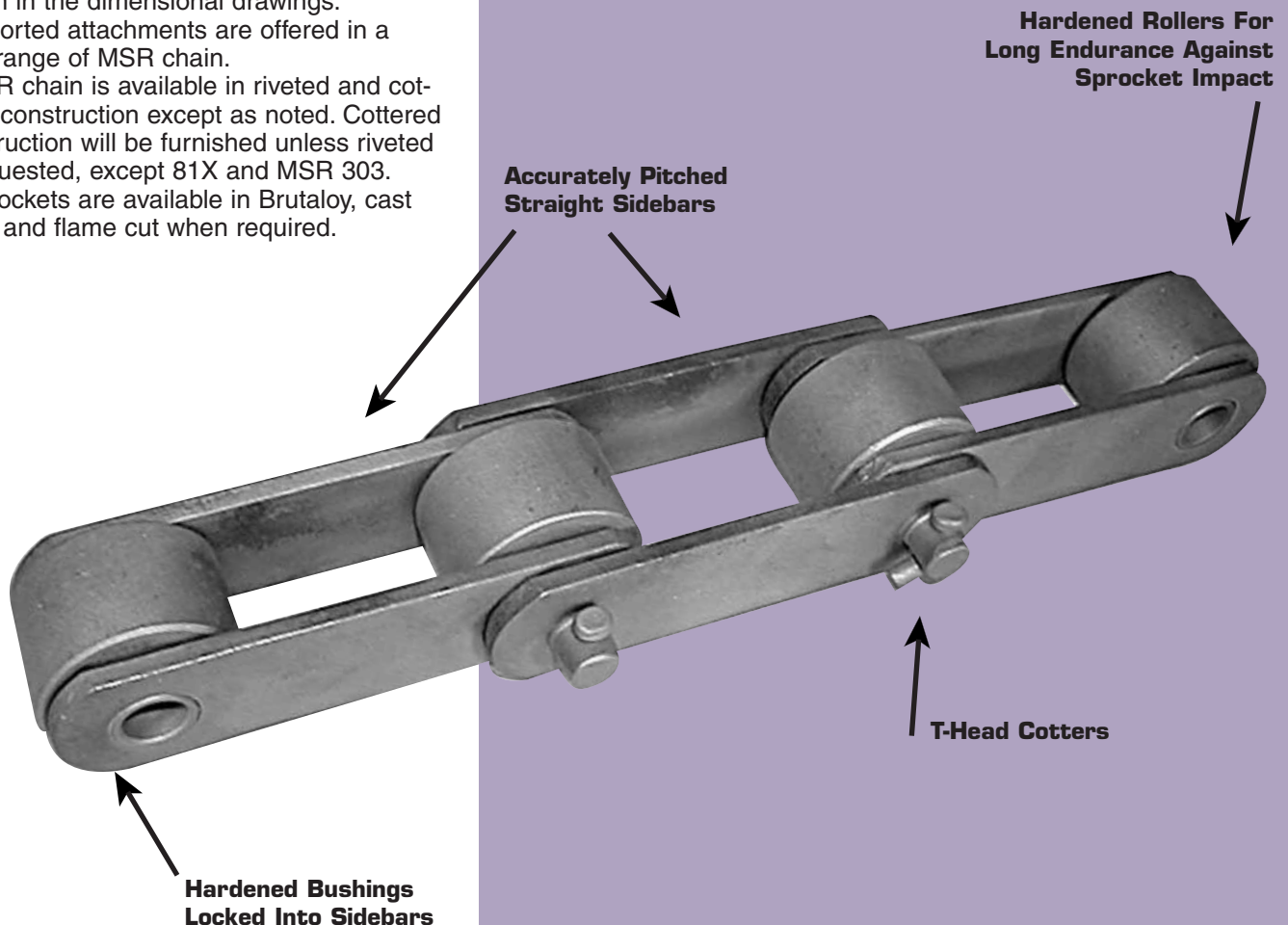
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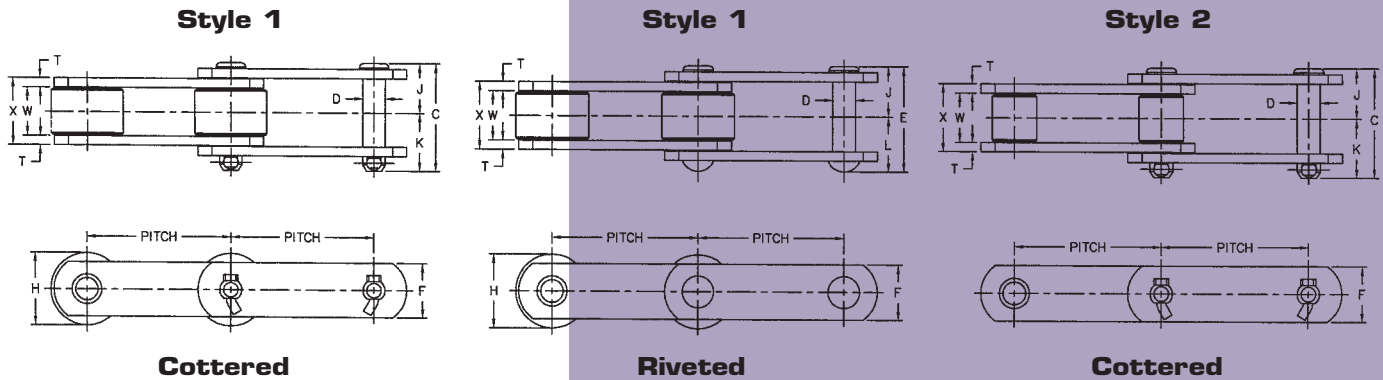
MSR CLASS BUSHED ROLLER STEEL CHAIN



MOLINE CHAIN NO.	ROLLERS	PINS	BUSHINGS	SIDEBARS
81 X	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
81 XH	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
81 XHD	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 149	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 303	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 944+	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 996	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 1114	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel
MSR 1116	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 1317	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 1539	Alloy Steel, Thru Hardened	Alloy Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 2184P	Carbon Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 2188	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel
MSR 2198	Carbon Steel, Case Hardened	Alloy Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 3013	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 4013	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 4019	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 4119	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 4216	Carbon Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 4328	Carbon Steel, Case Hardened	Alloy Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Heat Treated
MSR 6018	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 6238	Carbon Steel, Case Hardened	Carbon Steel, Thru Hardened	Carbon Steel, Case Hardened	Carbon Steel
MSR 9063	Carbon Steel, Case Hardened	Alloy Steel, Thru Hardened	Carbon Steel, Case Hardened	Alloy Steel, Heat Treated



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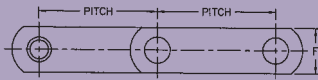
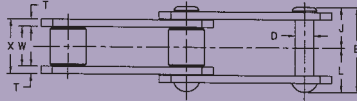


MOLINE CHAIN NO.	STYLE	PITCH IN INCHES	LINKS PER 10 FEET	AVERAGE WEIGHT PER FT. LBS.	AVERAGE ULTIMATE STRENGTH LBS.	RECOMMENDED MAXIMUM WORKING LOAD-LBS.	CHAIN AND ATTACHMENT CONSTRUCTION	ATTACHMENTS AVAILABLE
2.609" PITCH CHAIN—STRAIGHT SIDEBARS								
81 X	2	2.609	46	2.4	24,000	2,100	Cottered or Riveted	H
81 XH	2	2.609	46	4.2	42,000	2,100	Riveted	None
81 XHD	2	2.609	46	4.6	42,000	2,100	Riveted	None
3.000" PITCH CHAIN—STRAIGHT SIDEBARS								
MSR 303	2	3.000	40	1.9	10,000	1,800	Riveted Only	D5
MSR 3013	1	3.000	40	4.0	13,000	2,100	Cottered or Riveted	A1/A2, A42, D5, K1-K2
MSR 1317	4	3.000	40	4.5	13,000	2,100	Cottered or Riveted	None
3.075" PITCH CHAIN—STRAIGHT SIDEBARS								
MSR 1539	2	3.075	39	7.0	40,000	4,650	Cottered or Riveted	A2
4.000" PITCH CHAIN—STRAIGHT SIDEBARS								
MSR 149	1	4.000	30	10.2	40,000	4,500	Cottered or Riveted	G19
MSR 2188	1	4.000	30	7.0	28,000	4,200	Cottered or Riveted	A2, K2
MSR 4013	1	4.000	30	3.4	13,000	2,100	Cottered or Riveted	A1/A2, A42, K1/K2
MSR 4019	1	4.000	30	4.1	19,000	2,450	Cottered or Riveted	A1/A2, K1/K2
MSR 4119	1	4.000	30	4.5	19,000	2,450	Cottered or Riveted	D5
MSR 4216	1	4.000	30	4.9	16,000	2,300	Cottered or Riveted	A1/A2
MSR 4328	1	4.000	30	10.2	40,000	4,500	Cottered or Riveted	A1, K1
6.000" PITCH CHAIN—STRAIGHT SIDEBARS								
MSR 944+	2	6.000	20	9.3	60,000	5,900	Cottered or Riveted	None
MSR 996	1	6.000	20	11.8	70,000	5,900	Cottered or Riveted	K2
MSR 1114	1	6.000	20	6.3	28,000	4,200	Cottered or Riveted	A2, A42
MSR 1116	1	6.000	20	5.0	21,000	3,450	Cottered or Riveted	A2, A42, K2
MSR 2198	1	6.000	20	18.2	100,000	7,650	Cottered Only	K2 only ev. 1
MSR 9063	1	6.000	20	18.7	140,000	7,400	Cottered Only	K2 only ev. 1
MSR 6018	1	6.000	20	4.6	18,000	2,500	Cottered or Riveted	A1/A2, K1/K2
MSR 6238	1	6.000	20	10.9	38,000	5,600	Cottered Only	A2, K2
6.000" PITCH CHAIN—OFFSET SIDEBARS								
MSR 2184P	3	6.000	20	12.3	75,000	6,500	Cottered Only	A42

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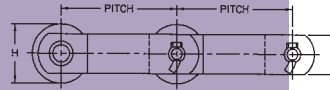
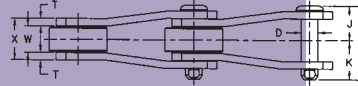


Style 2



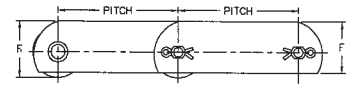
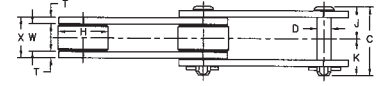
Riveted

Style 3



Cottered

Style 4



Cottered

MOLINE CHAIN NO.	DIMENSIONS IN DECIMAL INCHES												
	STYLE	PITCH IN INCHES	OVER-ALL WIDTH-COTTERED C	DIAMETER OF PIN D	OVER-ALL WIDTH-RIVETED E	HEIGHT OF SIDEBAR F	DIAMETER OF ROLLER H	HEAD OF PIN TO CENTER LINE J	COTTERED END OF PIN TO CENTER LINE K	RIVETED END OF PIN TO CENTER LINE L	THICKNESS OF SIDEBAR T	DISTANCE BETWEEN SIDEBARS W	LENGTH OF BUSHINGS X
2.609" PITCH CHAIN—STRAIGHT SIDEBARS													
81 X	2	2.609	2.08	0.438	2.00	1.12	0.91	1.00	1.08	1.00	0.16	1.07	1.38
81 XH	2	2.609	2.50	0.438	2.38	1.27	0.91	1.19	1.31	1.19	*.31/Δ.22	1.07	1.72
81 XHD	2	2.609	2.75	0.438	2.62	1.27	0.91	1.31	1.44	1.31	0.31	1.07	1.72
3.000" PITCH CHAIN—STRAIGHT SIDEBARS													
MSR 303	2	3.000	—	0.438	1.65	1.00	0.88	0.84	—	0.81	0.19	0.50	0.88
MSR 3013	1	3.000	2.25	0.438	2.16	1.12	1.50	1.03	1.22	1.12	0.19	1.00	1.38
MSR 1317	4	3.000	2.25	0.438	2.16	1.50	1.50	1.03	1.22	1.12	0.19	1.00	1.38
3.075" PITCH CHAIN—STRAIGHT SIDEBARS													
MSR 1539	2	3.075	3.50	0.625	3.28	1.50	1.25	1.59	1.91	1.69	0.31	1.50	2.12
4.000" PITCH CHAIN—STRAIGHT SIDEBARS													
MSR 149	1	4.000	3.50	0.625	3.38	1.50	2.25	1.62	1.88	1.75	0.38	1.31	2.06
MSR 2188	1	4.000	3.25	0.625	3.12	1.50	1.75	1.50	1.75	1.62	0.31	1.31	1.94
MSR 4013	1	4.000	2.25	0.438	2.16	1.12	1.50	1.03	1.22	1.12	0.19	1.00	1.38
MSR 4019	1	4.000	2.44	0.500	2.31	1.25	1.50	1.16	1.28	1.16	0.25	0.88	1.38
MSR 4119	1	4.000	2.44	0.500	2.31	1.25	1.75	1.16	1.28	1.16	0.25	0.88	1.38
MSR 4216	1	4.000	2.37	0.438	2.28	1.25	2.00	1.09	1.28	1.19	0.19	1.12	1.50
MSR 4328	1	4.000	3.50	0.625	3.38	1.50	2.25	1.62	1.88	1.75	0.38	1.31	2.06
6.000" PITCH CHAIN—STRAIGHT SIDEBARS													
MSR 944+	2	6.000	3.97	0.750	3.75	2.00	1.88	1.81	2.16	1.94	0.38	1.50	2.25
MSR 996	1	6.000	3.97	0.750	3.75	2.00	2.75	1.81	2.16	1.94	0.38	1.50	2.25
MSR 1114	1	6.000	3.25	0.625	3.12	1.50	2.00	1.50	1.75	1.62	0.31	1.31	1.94
MSR 1116	1	6.000	2.94	0.562	2.81	1.50	2.00	1.31	1.62	1.50	0.25	1.25	1.75
MSR 2198	1	6.000	4.44	0.875	—	2.25	2.75	2.06	2.38	—	0.50	1.50	2.50
MSR 6018	1	6.000	2.62	0.438	2.53	1.25	2.00	1.22	1.41	1.31	0.25	1.12	1.62
MSR 6238	1	6.000	3.75	0.750	—	2.00	2.50	1.72	2.03	—	0.38	1.38	2.12
MSR 9063	1	6.000	3.98	0.938	—	2.50	3.00	1.78	2.16	—	0.38	1.50	2.25
6.000" PITCH CHAIN—OFFSET SIDEBARS													
MSR 2184P	3	6.000	3.84	0.875	—	2.00	3.00	1.75	2.09	—	0.38	1.38	2.12

*F1 Over-All Chain Height=2.75

* inner S/B

Δ outer S/B