

Stainless Steel, Extended Pitch and Factory Standard Chains



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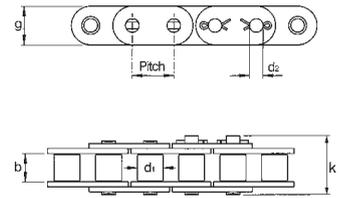
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Straight Sideplate Roller Chains to British Standard Dimensions

These provide increased bearing support for conveying applications.

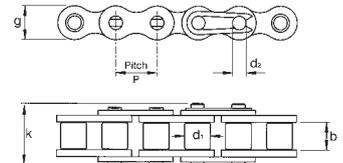
Cat. No.	Pitch P	Inside Width b min. mm	Roller ϕ d: max mm	Pin ϕ d: max mm	Plate Depth g mm	Pin Length k max mm	Bearing Area cm ²	Tensile Strength N	Weight kg/m
C12B-1	3/4 inch	11.68	12.07	5.72	16.1	27.3	0.89	29000	1.3
C16B-1	1 inch	17.02	15.88	8.28	21.0	41.5	2.10	64000	3.0
CL16B-1	1 inch	17.02	15.88	8.28	24.0	41.5	2.10	64000	3.2
C20B-1	1 1/4 inch	19.56	19.05	10.19	26.0	46.0	2.95	98000	4.1
C24B-1	1 1/2 inch	25.40	25.40	14.63	33.0	58.5	5.54	170000	7.9



Special Metric Pitch Chains

Two sizes of chains produced to metric pitch employed on a number of continental machines. M20 is a custom design whilst M30 is 16B chain extended to 30mm pitch.

Cat. No.	Pitch P	Inside Width b min. mm	Roller ϕ d: max mm	Pin ϕ d: max mm	Plate Depth g mm	Pin Length k max mm	Bearing Area cm ²	Tensile Strength N	Weight kg/m
M20	20mm	16.00	12.00	6.00	19.0	35.5	1.36	35500	2.00
M30	30mm	17.02	15.88	8.28	20.8	41.5	2.10	63000	2.33

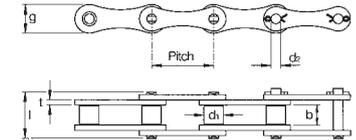


British Standard Double Pitch Chains

Double Pitch Chains use standard transmission chain pins, bushes, and rollers with link plates of double the pitch. These chains are used for both conveying and transmission on long centre distance drives, giving reduced weight and cost against the equivalent transmission chain.



Cat. No.	Pitch P	Inside Width b min.	Roller dia d:	Pin length l	Pin dia d2	Plate Depth g	Plate Thickness t	Bearing Area cm ²	Tensile Strength N	Weight kg/m
208B	1 inch	7.75	8.51	16.2	4.45	11.6	1.52	0.50	17800	0.46
210B	1 1/4 inch	9.65	10.16	19.3	5.08	14.5	1.60	0.67	22300	0.57
212B	1 1/2 inch	11.68	12.07	21.8	5.72	15.8	1.78	0.89	29000	0.75
216B	2 inch	17.02	15.88	34.0	8.28	20.5	4.06	2.10	64500	1.70
220B	2 1/2 inch	19.56	19.05	41.2	10.19	26.0	4.50	2.95	95000	2.50
224B	3 inch	25.40	25.40	53.4	14.63	33.0	6.00	5.54	160000	4.80



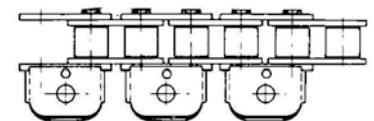
*Cat. No. equates to ISO 1275 Ref.

Special Conveying Chains

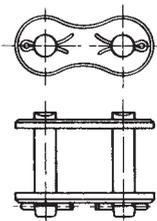
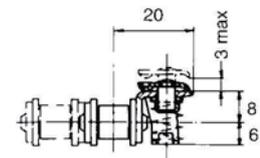
In addition to the standard attachments for roller chains, as shown on pages 16 and 17, Cross+Morse supply many special attachments for both standard pitch and extended pitch chains in standard steel and stainless steel materials. Cross+Morse have specialised in the many chains used for conveying applications in the Food, Beverage, Pharmaceutical, and Aerosol Can industries. Special production techniques enable early production of new designs, and replacement of existing obsolete products. Typical is the Foil Conveying Chain below.

Foil Conveying Chains

Foil conveying chains are based on 1/2" pitch B.S. Roller Chain type 08B1. They have been designed for the transport of foil, plastic and paper, the firm grip obtained with the chains maintaining tension in the materials when passed through heatforming or pressing operations. The base chain is electro-less nickel plated with the attachment parts all manufactured from stainless steel. In addition to simplex chain the attachments can be fitted to duplex chains enabling improved support and guidance of the assembly. The foil conveying chains operate on special design sprockets which open the clips as the chain passes around them. The material to be conveyed is fed into the open clips and retained as the clips close on leaving the sprocket. The material is discharged at the tail shaft of the conveyor by the reverse process.

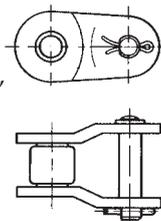


Foil Conveying Chain



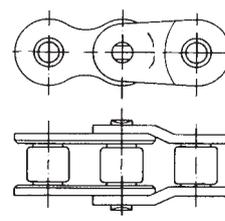
Connecting Link (Cottered Type)
For chains over 1" Pitch, for easy chain assembly

Part Ref. 75



Single Crank Link
Used to make chains of Odd Pitch Lengths - Standard on chains over 1" pitch and optional on chains up to 1".

Part Ref. 87



Double Crank Link
Preferred to Single Crank Link for small pitch chains. Available all chains to 1" pitch.

Part Ref. 86

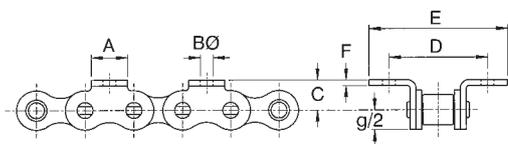
British Standard Roller Chain Attachments



The attachments below are available on 72 hour service built into the base roller chain at spacings to suit the application, K & M attachments can be fitted to only one side of the chain or both sides (as illustrated). Attachments of different types can be fitted in one chain assembly. In addition to these standard attachments, specials to suit customers' specific requirements can be supplied. Attachments can be assembled into Duplex and Triplex Chains, as well as standard Simplex. Nickel Plated chains can also be supplied to order. All Standard Attachments are made basically to ISO 606 Standard to ensure full interchangeability.

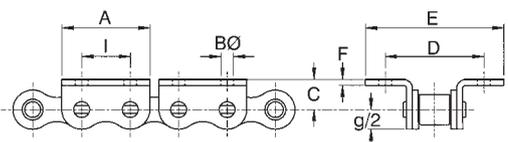
Bent Attachments

K1 - Single Hole Bent Attachment



Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Plate Height C	Transverse Pitch D	Overall Width E	Plate Thick F
08B-1	1/2"	11.5	4.2	8.9	23.8	36	1.5
10B-1	5/8"	12.8	5.3	10.3	31.8	45	1.5
12B-1	3/4"	16.6	7.1	13.5	38.1	58	1.8
16B-1	1"	20.0	6.7	15.9	50.8	73	3.2

K2 - Two Hole Bent Attachment

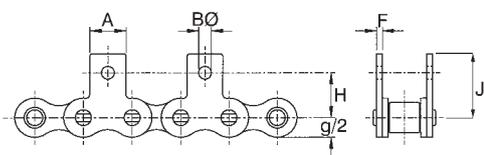


Base Chain Ref.	Pitch P	Attach Width A ₁	Hole Dia B	Plate Height C	Transverse Pitch D	Overall Width E	Plate Thick F	Hole Pitch I
08B-1	1/2"	23.4	4.9	8.9	25.4	40	1.5	12.7
10B-1	5/8"	28.6	5.3	10.3	31.8	49	1.5	15.9
12B-1	3/4"	34.0	6.5	13.5	38.1	52	1.8	19.1
16B-1	1"	46.0	6.7	15.9	50.8	73	3.2	25.4

Note:- If required plates can be supplied without holes, or with position/diameter of holes of non-standard sizes on short delivery.

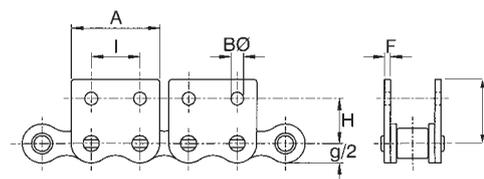
Straight Attachments

M1 - Single Hole Straight Attachment



Base Chain Ref.	Pitch P	Attach Width A	Hole Dia B	Hole Height H	Plate Height J	Plate Thick F
08B-1	1/2"	11.5	4.2	12.7	19.0	1.5
10B-1	5/8"	12.8	5.3	15.9	22.6	1.5
12B-1	3/4"	16.6	7.1	22.2	31.9	1.8
16B-1	1"	20.0	6.7	23.0	34.0	3.2

M2 - Two Hole Straight Attachment



Base Chain Ref.	Pitch P	Attach Width A ₁	Hole Dia B	Hole Height H	Hole Pitch I	Plate Height J	Plate Thick F
08B-1	1/2"	23.4	4.9	13.0	12.7	20.8	1.5
10B-1	5/8"	28.6	5.3	16.5	15.9	24.9	1.5
12B-1	3/4"	34.0	6.5	21.0	19.1	28.2	1.8
16B-1	1"	46.0	6.7	23.0	25.4	34.0	3.2

All K & M attachments can be supplied without holes, or with the holes of different diameters and positions to standard. Also special shape attachments can be provided to customers drawings.

All dimensions in mm except where stated.

British Standard Roller Chain Attachments

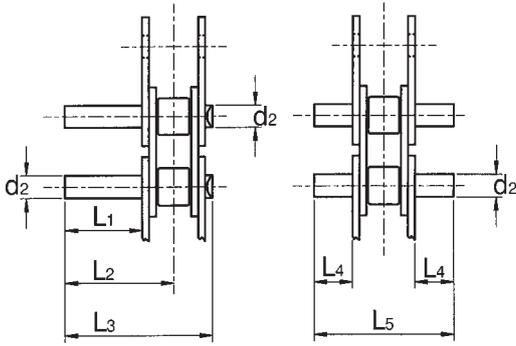


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Extended Pin Attachments

The extended pins can be assembled into the chain at positions to suit customers applications, or supplied loose as rivetting outers or connecting links. Normally used in pairs to support transverse tubes (when chain should be ordered as matched pairs) or sometimes in single strands to support or attach other attachments.

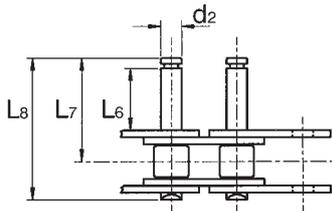
Straight Parallel Pins extended one side only E1, or equally extended both sides of chain E2. Attachments available with short or long pins.



Attachment Ref.		E1 Short			E1 Long		E2 Short		E2 Long		
Chain Ref	Pitch	Pin to Ø	Extension	Pin ϕ	Pin Length	Extension	Pin Length	Extension	Pin Length	Extension	Pin Length
	P	d ₂	L ₁	L ₂	L ₃	L ₁	L ₃	L ₄	L ₅	L ₄	L ₅
06B-1	3/8"	3.28	11.1	16.7	22.9	21.3	33.2	5.9	22.9	11.0	33.2
08B-1	1/2"	4.45	14.5	21.8	30.0	28.4	43.9	7.7	30.0	14.7	43.9
10B-1	5/8"	5.08	17.8	26.1	35.3	34.4	51.9	9.4	35.3	17.7	51.9
12B-1	3/4"	5.72	20.7	30.5	41.3	40.2	60.8	10.9	41.3	20.6	60.8
16B-1	1"	8.28	33.8	49.9	67.4	65.7	99.3	17.6	67.4	33.6	99.3
20B-1	1 1/4"	10.19	38.3	57.2	77.6	75.6	114.8	20.0	77.6	38.6	114.8
24B-1	1 1/2"	14.63	50.3	74.7	101.3	-	-	26.3	101.3	-	-
32B-1	2"	17.78	61.0	90.5	122.9	-	-	31.9	122.9	-	-

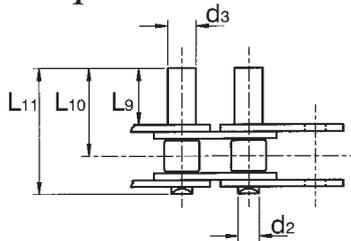
Single pin extensions can be assembled projecting on alternate sides of chain. Special length pins available on short delivery time.

Parallel Pins with grooves for circlip fixture location. Available short pins E3 attachment, or long pins - E4 attachment



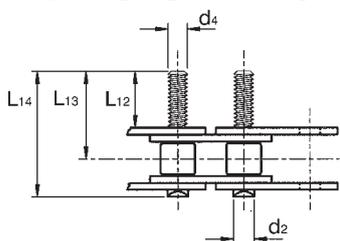
Attachment Ref.		E3 Short Groove Pin			E4 Long Groove Pin			
Chain Ref	Pitch	Pin to Ø	Attach Length	Pin ϕ	Pin Length	Attach Length	Pin ϕ	Pin Length
	P	d ₂	L ₆	L ₇	L ₈	L ₆	L ₇	L ₈
06B-1	3/8"	3.28	-	-	-	10.5	17.9	24.2
08B-1	1/2"	4.45	7.2	16.5	24.7	13.9	23.1	31.3
10B-1	5/8"	5.08	9.5	20.2	29.5	16.8	27.5	36.7
12B-1	3/4"	5.72	11.8	24.3	35.1	19.6	32.1	42.9
16B-1	1"	8.28	15.8	35.8	53.4	32.3	51.5	69.0

Stepped Pins to provide additional bearing support area, ref. E5 and (08B-1 only) E6 and E8.



Chain Size	Pitch P	Attach Ref.	Pin dia d ₂	Step Pin dia d ₃	Step Pin Length L ₉	Pin to ϕ L ₁₀	Overall Length L ₁₁
08B-1	1/2"	E8	4.45	6.00	8.0	15.3	23.8
08B-1	1/2"	E6	4.45	6.00	15.0	22.3	30.8
08B-1	1/2"	E5	4.45	6.00	34.0	41.3	49.4
10B-1	5/8"	E5	5.08	6.00	26.0	34.3	43.5
12B-1	3/4"	E5	5.72	8.00	25.0	34.8	45.5
16B-1	1"	E5	8.28	10.00	25.0	41.1	58.6

Threaded Pins for rigidly attaching carriers, ref E9, used in Gatherers in Book Binding machines

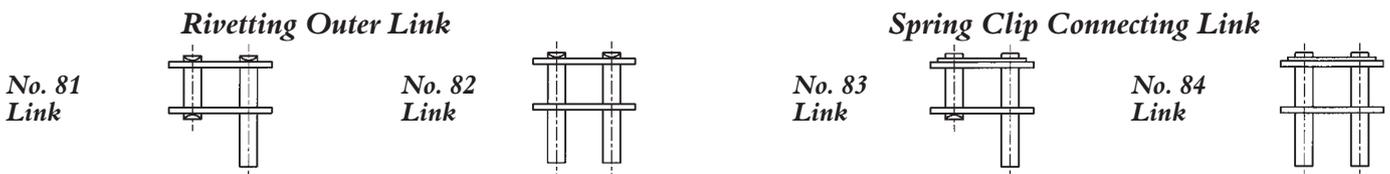


GATHERER CHAIN – 3/8" Pitch precision roller chain complete with an M4 threaded extended pin, one side every pitch. 'Gatherer Chain' is Synonymous with the book binding industry, this chain is manufactured to strict tolerances to produce a chain specifically for book binding applications.

Chain Size	Pitch P	Attach Ref.	Pin dia d ₂	Pin Thread dia d ₃	Step Pin Length L ₁₂	Pin to ϕ L ₁₃	Overall Length L ₁₄
12B-1	3/4"	E9	5.72	M4	10.0	19.8	30.8

All dimensions in mm except where stated.

Loose Link Assemblies for Standard Chain 06B to 16B Chains. Use chain size and extended pin ref. to identify.



Many designs of special extended pins are manufactured for customer specific applications. Please consult Cross+Morse Engineering with your requirements.

American Standard Roller Chains Attachments

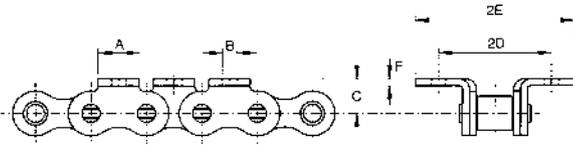


The following attachments are available built into the base roller chain at spacing to suit the application. B & S attachments can be fitted on one side only of chain or both sides (as illustrated). When fitted one side they are referred to as B1 or S1 attachments, but when fitted both sides they are referred to as B2 or S2 attachments. The attachments can also be fitted to Duplex chains, and different types of attachment can be mixed within one chain.

Bent Attachments

B1 - Single Hole Bent Attachment fitted one side chain only.

B2 - Single Hole Bent Attachments fitted both sides of chain (as illustrated).



Attachments available for both inner (roller) link and outer (pin) link. Connecting links with attachment as rivetted link, or as loose link can be supplied. All sizes available as rivetted construction, but ANSI 60 and larger can optionally be supplied as cottered construction if specified.

Chain ANSI No.	Pitches inches	Roller Ø max.	Attach Width A	Hole dia B	Plate Height C	Hole-offset D	Plate Width E	Plate Thick F	Add Wt B1 att grms
• 35	3/8"	5.08 ¹⁾	7.94	2.78	6.35	9.52	13.50	1.27	0.9
41	1/2"	7.77	9.53	3.17	7.14	11.90	17.46	1.27	1.4
40	1/2"	7.95	9.53	3.37	7.94	12.70	18.25	1.52	1.4
50	5/8"	10.16	12.70	5.16	10.32	15.87	23.02	2.03	3.6
60	3/4"	11.91	15.87	5.16	11.90	19.05	27.39	2.39	5.9
80	1	15.88	19.05	6.65	15.87	25.40	35.32	3.18	12.2
100	1 1/4"	19.05	25.40	8.33	19.84	31.75	42.86	3.96	25.0
120	1 1/2"	22.23	28.57	9.92	23.02	38.10	52.40	4.75	37.2
140	1 3/4"	25.40	34.92	11.51	28.57	44.45	57.55	5.56	64.0
160	2	28.58	38.10	13.10	31.75	50.80	68.30	6.35	90.0

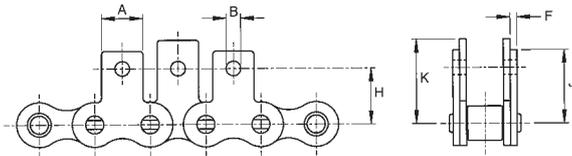
• ANSI 35 is Bush Chain
1) Bush diameter

All dimensions are in mm

Straight Attachments

S1 - Single Hole Straight Attachment fitted one side chain only.

S2 - Single Hole Straight Attachments fitted both sides of chain (as illustrated).



Attachments available for both inner (roller) link and outer (pin) link. Connecting links with attachment as rivetted link, or as loose link can be supplied. All sizes available as rivetted construction, but ANSI 60 and larger can optionally be supplied as cottered construction if specified.

Chain ANSI No.	Pitches inches	Roller Ø max.	Attach Width A	Hole dia B	Hole Height H	Outer Plate Ht. J	Inner Plate Ht. K	Plate Thick F	Add Wt S1 att grms
• 35	3/8"	5.08 ¹⁾	7.94	2.78	9.53	13.50	13.50	1.27	0.9
41	1/2"	7.77	9.53	3.17	12.30	17.85	17.85	1.27	1.4
40	1/2"	7.95	9.53	3.37	12.70	17.45	19.05	1.52	1.4
50	5/8"	10.16	12.70	5.16	15.87	22.65	24.60	2.03	3.6
60	3/4"	11.91	15.87	5.16	18.25	26.20	28.60	2.39	5.9
80	1	15.88	19.05	6.65	24.60	34.15	38.10	3.18	12.2
100	1 1/4"	19.05	25.40	8.33	31.75	42.10	46.45	3.96	25.0
120	1 1/2"	22.23	28.57	9.92	36.52	49.20	54.00	4.75	37.2
140	1 3/4"	25.40	34.92	11.51	44.45	57.95	63.50	5.56	64.0
160	2	28.58	38.10	13.10	50.80	66.30	73.00	6.35	90.0

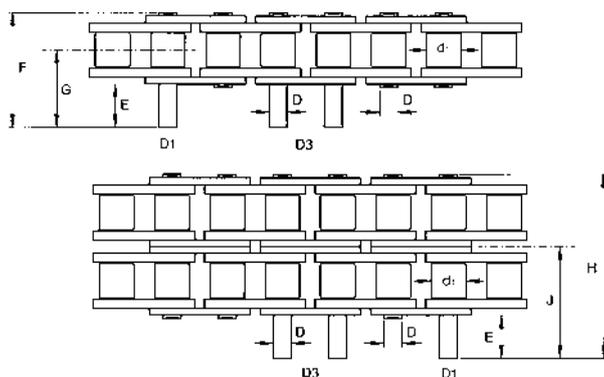
• ANSI 35 is Bush Chain
1) Bush diameter

All dimensions are in mm

Extended Pin Attachments

D1 - One Pin of outer link extended.

D3 - Both Pins of outer link extended.



Chain ANSI No.	Pitches inches	Roller Ø max.	Pin Ø D	Pin Extension E	Simplex Pin Lth. F	Simplex Pin to C/L ² G	Duplex Pin Lth. H	Duplex Pin to C/L ² J
• 35	3/8"	5.08 ¹⁾	3.58	9.53	20.64	14.72	30.95	19.95
41	1/2"	7.77	3.58	9.53	21.83	15.33	-	-
40	1/2"	7.95	3.96	9.53	24.60	16.60	38.90	23.47
50	5/8"	10.16	5.08	11.90	30.95	20.92	49.21	30.07
60	3/4"	11.91	5.94	14.30	38.10	25.53	61.12	37.08
80	1	15.88	7.92	19.05	50.00	33.82	79.37	48.48
100	1 1/4"	19.05	9.53	23.80	61.52	41.77	98.03	59.65
120	1 1/2"	22.23	11.10	28.60	76.20	51.31	121.44	73.83
140	1 3/4"	25.40	12.70	33.35	84.55	57.67	133.35	82.03
160	2	28.58	14.27	38.10	99.22	67.19	157.95	96.45

• ANSI 35 is Bush Chain

1) Bush diameter
2) Approx dimensions

All sizes available as rivetted construction, but ANSI 60 and larger can optionally be supplied as cottered construction if specified.

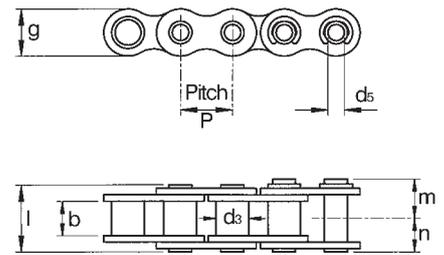
American Standard Attachment Chains and Corrosion Resistance Chains



Rollerless Hollow Pin Chains to ANSI Dimensions



Hollow Pin Chains allow unusual flexibility for conveyor applications. Because of the hollow pin design, many types of crossrods, pin and custom attachments may be inserted at any point without removing the chain from the drive system. Bushing diameters are the same as comparable chain rollers. These chains operate on standard sprockets. Standard packages contain two matched 10' lengths. When used on parallel strand conveyors, these strands should be installed directly opposite each other. A two-pitch offset section can be ordered to accommodate applications where an odd number of link is required.

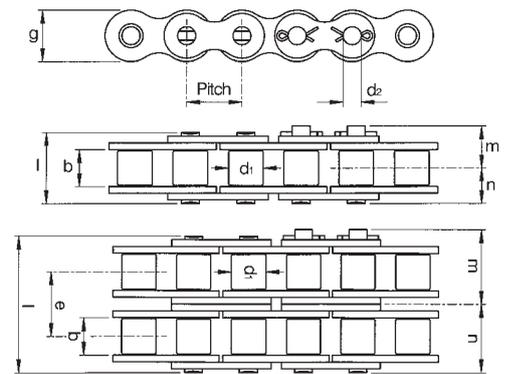


Cat. No.	Pitch P inches	Inside Width b min. mm	Bush Ø d ₃ max. mm	Bore Ø d ₅ max. mm	Plate Depth g mm	Rivet Pin Length l max. mm	Length to Cotter Pin m mm	Length to Rivet Pin n mm	Tensile Strength N	Weight Approx. kg/m
40HP	1/2	7.85	7.95	4.01	11.8	16.6	9.4	8.3	10,000	0.57
50HP	5/8	9.40	10.16	5.15	15.0	20.2	11.7	10.1	14,800	0.94
60HP	3/4	12.60	11.91	6.02	18.0	24.7	14.5	12.4	24,000	1.31
80HP	1	15.80	15.88	8.07	24.0	31.0	17.8	15.5	34,000	2.32

ANSI Stainless Steel Roller Chains

Standard chains are manufactured from 18-8 (304) stainless steel. These chains can be used in corrosive environments, and at temperatures up to 500°C. They are well suited to the high moisture, high temperature conditions found in many food preparation and packaging applications. For improved wear life chains with round parts manufactured from precipitation hardened 400 Series steels can be supplied. These chains have slightly less corrosion resistance, and can only operate up to 325°C.

Extended pin, K1 and M1 attachments in 18-8 materials can be provided assembled into chains, against specific order.

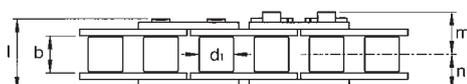
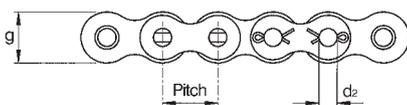


Chain No.	Pitch P inches	Inside Width mm	Roller Diameter mm	Pin Diameter mm	Plate Depth mm	Pin Lengths				Transverse Pitch mm	Bearing Area cm ²	Ultimate Tensile kN	Max Allowable kN	Approx. Weight kg/m
						l max. mm	m2 max. mm	m mm	n mm					
American Standard Simplex Chains														
ANSI 25 1)	1/4	3.18	3.30	2.29	5.9	7.8	8.8	4.9	3.9	-	0.11	2.8	0.11	0.13
ANSI 35 1)	3/8	4.78	5.08	3.58	9.0	12.2	13.7	7.6	6.1	-	0.27	5.7	0.26	0.34
ANSI 40	1/2	7.95	7.92	3.96	11.7	17.0	18.5	10.0	8.5	-	0.44	11.1	0.66	0.62
ANSI 50	5/8	9.53	10.16	5.08	14.6	20.8	22.3	11.9	10.4	-	0.70	17.6	1.02	1.01
ANSI 60	3/4	12.70	11.91	5.95	17.5	26.0	27.9	14.9	13.0	-	1.06	24.5	1.54	1.48
ANSI 80	1	15.88	15.88	7.93	23.4	32.8	35.5	19.1	16.4	-	1.79	42.3	2.65	2.52
ANSI 100	1 1/4	19.05	19.05	9.53	29.3	40.0	43.3	23.3	20.0	-	2.62	51.0	3.82	3.91
ANSI 120	1 1/2	25.40	22.23	11.10	35.1	50.4	54.2	29.0	25.2	-	3.94	68.6	4.66	5.76
ANSI 160	2	31.75	28.58	14.28	46.7	64.4	68.7	36.5	32.2	-	6.50	109.8	6.37	9.79
American Standard Duplex Chains														
ANSI 35-2 1)	3/8	4.78	5.08	3.58	9.0	22.33	23.8	12.7	11.2	10.13	0.54	10.4	0.52	0.65
ANSI 40-2	1/2	7.95	7.92	3.96	11.7	31.38	32.9	17.2	15.7	14.38	0.88	22.2	0.88	1.22
ANSI 50-2	5/8	9.53	10.16	5.08	14.6	38.91	40.4	21.0	19.5	18.11	1.40	35.2	1.36	2.00
ANSI 60-2	3/4	12.70	11.91	5.95	17.5	48.78	50.7	26.3	24.4	22.78	2.12	48.8	2.06	2.85
ANSI 80-2	1	15.88	15.88	7.93	23.4	62.09	64.8	33.7	31.0	29.29	3.58	84.5	3.55	5.00
ANSI 100-2	1 1/4	19.05	19.05	9.53	29.3	75.76	79.1	41.2	37.9	35.76	5.24	101.8	5.10	7.60

• Bush Chains. 1) Bush Diameter. **Bold Type** – Chains from Stock, other chains to order.

Nickel Plated Roller Chains to ANSI Standards

Chain components are electroless nickel plated to provide protection for mildly corrosive areas. Chain retains all physical properties of base chain. Attachments can be supplied to special order.



Aat. No.	Pitch P inches	Inside Width b min. mm	Roller Ø d ₁ max. mm	Pin Ø d ₂ max. mm	Plate Depth g mm	Length to Cotter Pin m mm	Length to Rivet Pin n mm	Bearing Area cm ²	Tensile Strength N	Weight Approx. kg/m
•35N	3/8	4.77	5.08 ¹⁾	3.58	9.0	8.7	6.0	0.27	8,400	0.31
40N	1/2	7.85	7.95	3.96	11.8	10.7	8.3	0.44	14,800	0.62
50N	5/8	9.40	10.16	5.08	15.0	14.3	10.1	0.70	24,400	1.01
60N	3/4	12.60	11.91	5.94	18.0	16.3	12.5	1.06	34,400	1.48

• Bush Chains.
1) Bush Diameter.
Chains available rivetted construction only.

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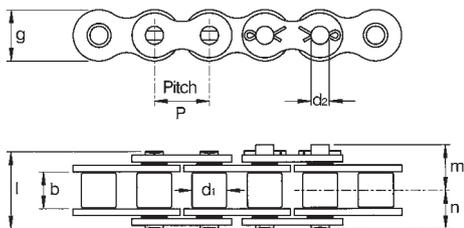
Maintenance Free American Standard Roller Chains



O-Ring Roller Chain

Morse O-Ring Chain is designed for those difficult applications where lubrication is inconvenient, impractical or expensive. The O-Rings between roller unit and pin seal in a special lubricant, so wear on internal pins and bushes is minimised. The O-Rings also keep out dust and other abrasive elements, thus protecting pins and bushes from damage. Retention of lubricant reduces friction, heat, wear and downtime.

Life of O-Ring chains can be minimised by occasional removal from drive and cleaning with paraffin or mineral spirits. After cleaning chain must be soaked in SAE 80 or 90 oil to coat 'O'-Rings and chain parts.



Cat. No.	Pitch P inches	Inside Width b min. mm	Roller Ø d: max. mm	Pin Ø d: max. mm	Plate Depth g mm	Rivet Pin Length l max. mm	Length to Cotter Pin m mm	Length to Rivet Pin n mm	Tensile Strength N	Weight Approx. kg/m
40-OR	1/2	7.85	7.95	3.96	11.8	18.00	20.60	9.00	14,600	0.66
50-OR	5/8	9.40	10.16	5.08	15.0	22.60	12.83	11.30	24,000	1.09
60-OR	3/4	12.60	11.91	5.94	18.0	28.70	16.38	14.35	34,250	1.55
80-OR	1	15.80	15.88	7.92	24.0	35.80	20.45	17.90	60,050	2.62
100-OR	1 1/4	19.00	19.05	9.53	30.0	44.20	24.38	22.10	97850	3.95

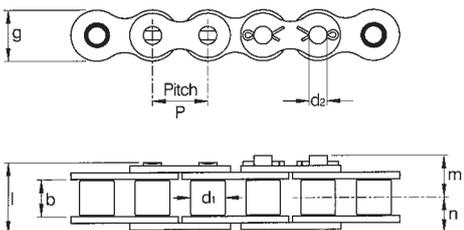
Sigma Sintered Bush Chain

Sigma Sintered Bush Chain combines the physical strength of ANSI Roller Chains with the self lubricating properties of special oil impregnated sintered metal bushes, to assure long reliable chain service where external lubrication is prohibited or extremely difficult to apply. The bush is precision formed from sintered steel, and impregnated with special lubricants. The oversize bush is press fitted into the inner link side-plates and protected by thin walled high performance roller.

Chain movement releases the oil to all bearing surfaces of bush, pin, plates and roller, minimising wear and power loss. The drive comes to rest, the lubricant is re-absorbed into the bush. Chain life extended by larger bearing areas.

Sigma SB Chain should not be used in temperatures above 100°C or at chain speeds over 5m/sec.

Sintered Bush Chain has increased breaking strength and fatigue strength compared to standard ANSI Chains.



Cat. No.	Pitch P inches	Inside Width b min. mm	Roller Ø d: max. mm	Pin Ø d: max. mm	Plate Depth g mm	Rivet Pin Length l max. mm	Length to Cotter Pin m mm	Length to Rivet Pin n mm	Tensile Strength N	Weight Approx. kg/m
SG50	5/8	9.40	10.16	6.00	15.0	21.6	12.0	10.8	33,000	1.03
SG60	3/4	12.60	11.91	6.65	18.0	26.6	17.5	13.3	45,000	1.50
SG80	1	15.80	15.88	8.52	24.0	33.8	19.9	16.9	79,500	2.55

Thermoplastic Chains

Thermoplastic Chains provide an ideal solution for light duty conveying and transmission applications operating in harsh environmental conditions, moisture or chemicals, such as photographic developing equipment.

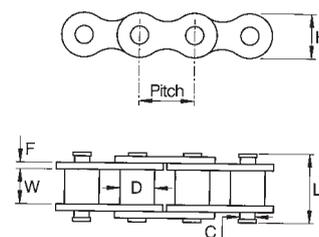
Available in four materials, Nylatron, Delrin®, Polypropylene and Kynar® in chains to ANSI 25, 35 and 40 dimensions. These chains have simple connection (the outer links snap together), lightweight (less than 20% steel), low noise level, and natural lubricity. Dependant on material, excellent chemical resistance and non conductivity can be achieved, refer to table; and all chains are non magnetic.

A wide selection of attachments for conveying applications is also available.

A range of Nylatron sprockets to suit all pitches, with tooth sizes from 9 to 45 are available, although chains can be operated on standard steel or stainless steel sprockets. For further details on sprocket sizes and chain selection consult Cross+Morse technical sales.

Material Data	Nylatron	Delrin® Acetal	Polypropylene	Kynar® PVDF
Water Absorption % 24 hrs. 1/8 thk	0.8	0.25	0.01	0.05
Resistance: Effects of				
Weak Acids	resistant	resistant	very-very resistant	very resistant
Strong Acids	attacked	some	slowly	very resistant
Weak Alkalines	very-very resistant	resistant	very-very resistant	very resistant
Strong Alkalines	resistant	resistant	very resistant	attacked
Organic Solvents	resistant	resistant	resistant below 80°C	resistant to most

Catalogue' No.	Dimensions mm							*Working Load kgs				Tensile Strength N			
	Pitch Ins	W Roller Width	D Roller Dia.	C Pin Dia.	F Plate Thick.	L Width Over Pins.	H Inside Plate Height	Material 1)				Material 1)			
								N	D	PP	K	N	D	PP	K
ANSI 25 PC	1/4	3.2	3.3	2.7	1.0	9.1	6.4	3.2	3.6	1.4	2.7	220	209	98	186
ANSI 35 PC	3/8	4.8	5.1	3.6	1.9	13.8	8.9	6.8	7.7	3.6	5.9	453	453	222	364
ANSI 40 PC	1/2	7.9	7.9	4.0	2.2	18.4	11.7	9.1	10.0	4.5	7.2	578	583	298	471



*Note: Values should only be used as a guideline. Application testing is strongly recommended. Use working loads for chain ratings. (I) N-Nylatron (GS) • D-Delrin (Acetal) • PP-Polypropylene • K-Kynar

†Total chain reference includes suffix for type of chain ie ANSI 25PC-D is Delrin.

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American Standard Double Pitch Roller Conveyor Chains



Conforming to ANSI B29.3 and B29.4

Double Pitch Roller Chains have twice the distance between rollers of corresponding standard roller chains. For example, ANSI No. 40 standard chain pitch is 1/2", ANSI No. 2040 chain pitch is 1". Since double pitch chains contain only half as many rollers, bushings and pins, they have lighter weight and greater economy than comparable standard chains. They are suited for applications with slow-to-moderate speeds, medium loads and long distances between sprockets, including a variety of conveyor systems and material handling equipment. ANSI transmission series chains feature figure-8 side plates and standard size rollers.

Transmission Series Chains to ANSI B29.3



Figure-8 contour of the transmission series side plates keeps chain weight to a minimum, and permits use of sprockets with maximum hub diameters. Link plate thickness, pins, bushes and rollers are same as corresponding standard roller chain.

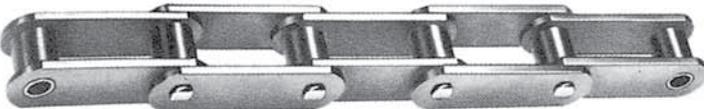
ANSI No.	Pitch P inches	Inside Width b min. mm	Roller Ø d _r max mm	Pin Ø d _p max mm	Plate Depth g mm	Plate Thickness t mm	Rivet Pin Length l max mm	Length to Cotter Pin m mm	Length to Rivet Pin n mm	Bearing Area cm ²	Tensile Strength N	Weight Approx. kg/m
2040	1	7.85	7.95	3.96	11.8	1.52	16.6	10.7	8.3	0.44	14,800	0.45
2050	1 1/4	9.40	10.16	5.08	15.0	2.04	20.2	14.3	10.1	0.70	24,400	0.67
2060	1 1/2	12.60	11.91	5.94	18.0	2.38	25.0	16.3	12.5	1.06	34,000	1.02
2080	2	15.80	15.88	7.92	24.0	3.18	32.6	18.8	16.3	1.79	64,500	1.65
2100	2 1/2	19.00	19.05	9.53	30.0	3.96	39.2	23.2	19.6	2.62	100,000	2.89

Conveyor Series Chains to ANSI B29.4 - Standard and Large Diameter Rollers

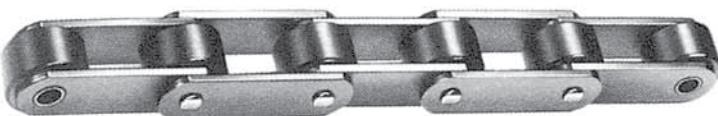
Conveyor series chains with standard size rollers have straight side plates for increased bearing area when sliding on guides or supporting products. Large size rollers support the chain and load, holding them off the track to minimise friction and

power requirements. Chains 1 1/2" pitch or greater have side plates of same thickness as corresponding ANSI heavy series roller chains.

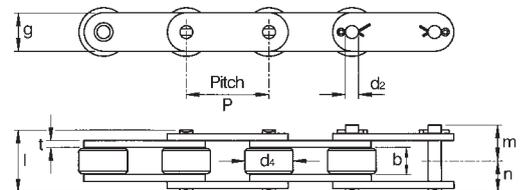
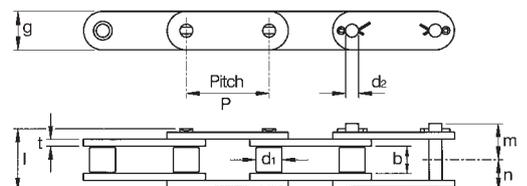
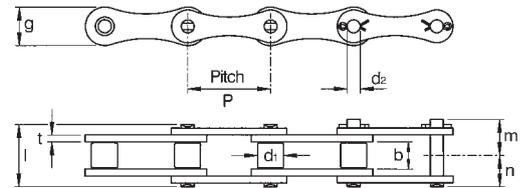
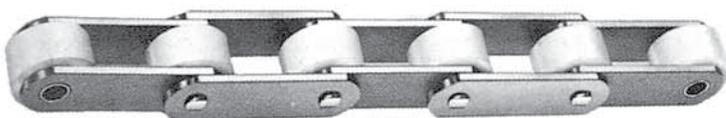
Standard Roller Series



Large Roller Series



Thermoplastic Large Roller Series



These chains are identical to large Roller Series except that the rollers are of thermoplastic material, reducing weight by approximately one third. Horsepower requirements are lower, and thermoplastic large rollers run quietly and smoothly; are tough and wear-resistant; require no lubrication and have improved resistance to corrosion. Chains with thermoplastic rollers are not recommended for operation below -17°C or above 80°C.

ANSI/CAT. Part No.			Pitch P inches	Inside Width b min.	Standard Roller dia. d _r max.	Large Roller dia. d _r max.	Side Plate		Pin dia. d _p max.	Rivet Pin Length l	Length to Conn Pin m	Length to Rivet Pin n	Tensile Strength N	Approx. Weight kg/m		
Standard Roller	Large Roller	Thermo-plastic					Height g	Thickness t						Standard Roller	Large Roller	Thermo-plastic
C2040	C2042	C2042D	1	7.85	7.95	15.88	11.7	1.52	3.96	16.6	10.7	8.3	14,800	0.48	0.82	0.49
C2050	C2052	C2052D	1 1/4	9.40	10.16	19.05	15.0	2.04	5.08	20.2	14.3	10.1	24,400	0.79	1.25	0.81
C2060H	C2062H	C2062D	1 1/2	12.60	11.91	22.23	17.6	3.18	5.94	28.3	16.6	14.1	34,000	1.37	2.10	1.40
C2080H	C2082H	C2082D	2	15.80	15.88	28.58	22.4	3.96	7.92	35.9	20.4	17.9	64,500	2.26	3.29	2.27
C2100H	C2102H	-	2 1/2	19.00	19.05	39.70	29.2	4.75	9.53	42.5	24.9	21.2	100,000	3.42	5.58	-
C2120H	C2122H	-	3	25.25	22.23	44.45	34.8	5.54	11.10	52.7	30.8	26.3	130,000	5.50	8.50	-
C2160H	C2162H	-	4	31.55	28.58	57.15	47.5	7.14	14.27	66.1	38.7	33.1	227,000	8.70	13.30	-

All dimensions in mm except as indicated.

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American Standard Double Pitch Chain Attachments

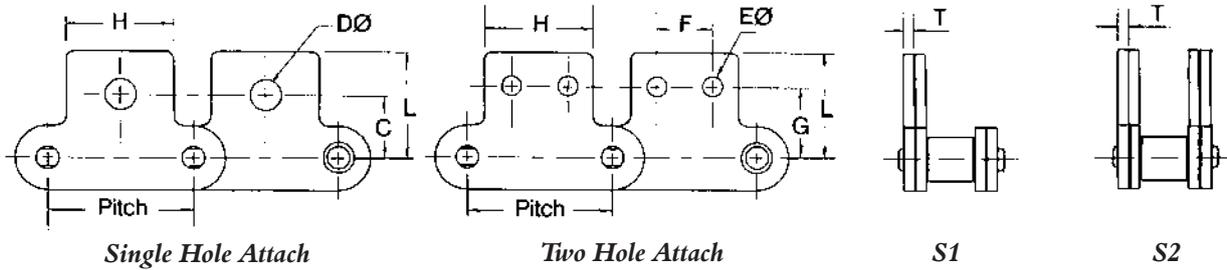


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Attachments for Double Pitch Chains are available in three basic types; straight attachments for connecting components to the side of chain, bent attachments for mounting components over chain; and extended pins for supporting hollow tubes or for use as driving dogs. All attachments can be fitted to any series of base conveyor chains illustrated on page 23, and different types of attachments may be combined within one chain assembly

Straight Attachments - S1 & S2

Available with either one or two hole attachments for both pin link and roller link. The links can be assembled into the chain on one side only - type S1, or both sides - type S2

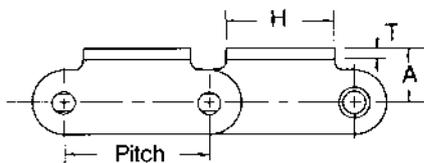
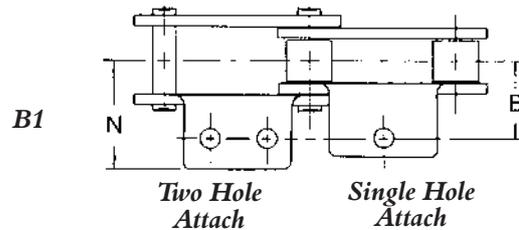


Standard Chain No.	Pitch P inches	Single Hole Attach		Two Hole Attach			Std. Attach. Length H	Attach. Height above Pin C.L. L	Plate Thickness T	Extra Weight Each Attach gms	
		C.L.Hole to C.L. Pin C	Hole Dia. D	Hole Dia. E	Hole Centres F	C.L.Hole to C.L. Pin G				S1	S2
		C	D	E	F	G				S1	S2
C2040	1	11.10	5.08	3.56	9.53	13.49	19.05	19.85	1.52	1.8	3.6
C2050	1 1/4	14.27	6.63	5.08	11.89	15.88	25.40	25.00	2.04	6.4	12.8
C2060H	1 1/2	17.48	8.20	5.08	14.27	19.05	28.58	30.00	3.18	15.9	31.8
C2080H	2	22.23	9.80	6.63	19.05	25.40	38.10	40.00	3.96	33.6	67.2
C2100H	2 1/2	28.58	13.11	8.20	23.83	31.75	47.63	50.40	4.75	60.0	120.0
C2120H	3	33.32	14.68	9.80	28.58	37.29	57.12	59.50	5.54	98.0	196.0

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Bent attachments - B1 & B2

Available with either one or two attachment holes as single tab standard width attachments available for both pin and roller links. Attachments can be assembled into chain on one side only - type B1, or both sides - type B2, at any pitch spacing to suit the application, and can be combined with 'S' attachments if required.



Standard Chain No.	Pitch P inches	Platform Height	Hole C.L. to Chain C.L.	Hole Dia.	Hole Centres	Attach. Length	Attach End to Chain C.L.	Plate Thickness	Extra Weight Each Attach gms	
		A	B	E	F	H	N	T	B1	B2
C2040	1	9.12	12.70	3.56	9.53	19.05	19.45	1.52	1.8	3.6
C2050	1 1/4	11.10	15.88	5.08	11.89	25.40	25.00	2.04	6.4	12.8
C2060H	1 1/2	14.68	21.44	5.08	14.27	28.58	30.55	3.18	15.9	31.8
C2080H	2	19.05	27.76	6.63	19.05	38.10	39.70	3.96	33.6	67.2
C2100H	2 1/2	23.42	33.32	8.20	23.83	47.63	50.00	4.75	60.0	120.0
C2120H	3	27.76	39.67	9.80	28.58	57.15	60.30	5.54	98.0	196.0

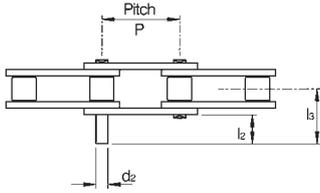
All dimensions in mm

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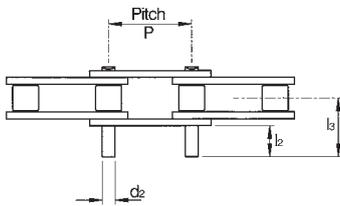
American Standard Double Pitch Chains with Modified Pins



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D-1 Single Pin One Side



D-3 Double Pin One Side

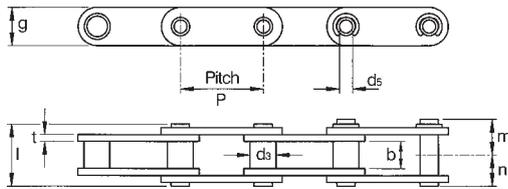
Extended Pin Chains - D Attachment

All standard conveyor chains can be supplied with rivet pin extended one side only. Either or both pins on a outer link can be extended, the spacing of extended pins within the chain assembly varied to suit application. These attachments may be combined with other attachments within one chain assembly.

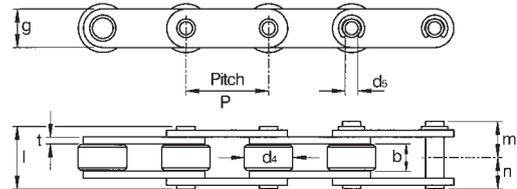
Standard Chain No.	Pitch P inches	Pin Dia. d ₂ max.	Pin Projection l ₂	End of Pin to C.L. Chain l ₃
C2040	1	3.96	9.52	16.66
C2050	1 1/4	5.08	11.89	21.03
C2060H	1 1/2	5.94	14.28	26.97
C2080H	2	7.92	19.05	34.93
C2100H	2 1/2	9.53	23.80	42.85
C2120H	3	11.10	28.57	52.37

Hollow Pin Chains - Rollerless and with Large Rollers

Hollow pin conveyor chains are used to support rods to carry wire mesh etc. The standard chain is of bush construction with bush diameter equal to the diameter of standard solid pin chain. Also available is chain fitted with conventional large diameter rollers. Note: These chains cannot be combined with other attachment.



Double Pitch Rollerless Hollow Pin Chain



Double Pitch Large Diameter Roller Hollow Pin Chain

Cat. No.		Pitch P Inches	Inside Width b min.	Bush Diameter d ₃	Large Roller Diameter d ₄ max.	Pin Bore d ₅ min.	Sideplate		Rivet Pin Length l	Length to Conn. Pin m	Length to Rivet Pin n	Tensile Strength N	Approx. Weight kg/m	
Bush Chain	Large Roller Chain						Height g	Thickness t					Bush Chain	Large Roller Chain
C2040HP	C2042HP	1	7.85	7.92	15.88	4.01	11.7	1.52	16.6	9.4	8.3	10,000	0.46	0.80
C2050HP	C2052HP	1 1/4	9.40	10.16	19.05	5.15	15.0	2.04	20.2	11.7	10.1	14,800	0.76	1.25
C2060HP	C2062HP	1 1/2	12.60	11.91	22.23	6.02	17.6	2.39	24.7	14.5	12.4	24,400	1.12	1.79
C2080HP	C2082HP	2	15.80	15.88	28.58	8.07	22.4	3.18	31.0	17.8	15.5	34,000	1.98	3.17

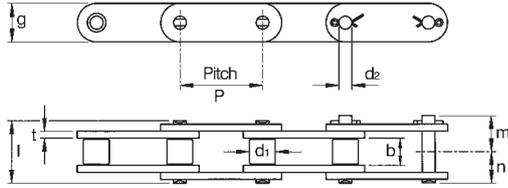
Double Pitch Stainless Steel Chains



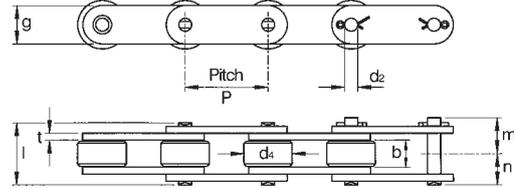
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Stainless Steel Chains

Available in standard base chain with standard or large rollers, or chain with thermoplastic large rollers. Sideplate manufactured from 18-8 stainless steel with round parts using 17-7PH or 17-4PH materials, S and B attachments are available in 18-8 material, also D1 and D3 extended pins can be provided to special order. The thermoplastic stainless chains, suffix DS, can be operated without lubrication, and provide quiet operation with high corrosion resistance. DS chains can only be used in applications within operating temperature range -17°C to 80°C.



Standard Roller Series



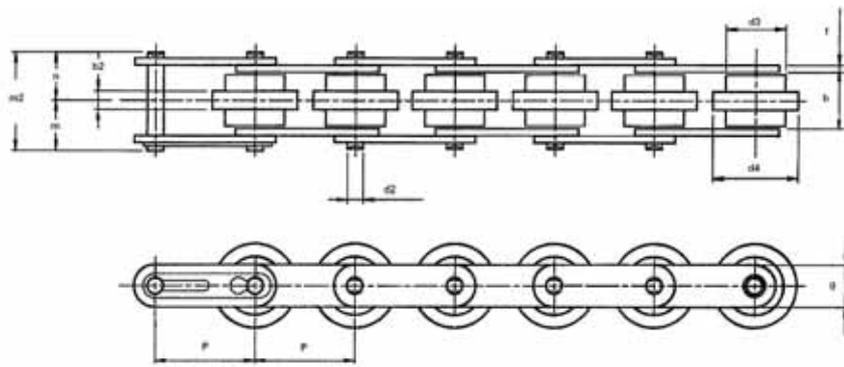
Large Roller and Thermoplastic Series

ANSI/Cat. Part No.			Pitch P Inches	Inside Width b min.	Standard Roller Dia. d: max.	Large Roller Diameter d: max.	Sideplate		Pin Bore d: min.	Rivet Pin Length l	Length to Conn. Pin m	Length to Rivet Pin n	Tensile Strength N	Approx. Weight kg/m		
Standard Roller	Large Roller	Thermo-plastic					Height g	Thickness t						Standard Roller	Large Roller	Thermo-plastic
C2040SS	C2042SS	C2042DSS	1	7.85	7.95	15.88	11.7	1.52	3.96	16.6	10.7	8.3	12,000	0.55	0.89	0.57
C2050SS	C2052SS	C2052DSS	1/4	9.40	10.16	19.05	15.0	2.04	5.08	20.2	14.3	10.2	18,800	0.91	1.37	0.92
C2060SS	C2062SS	C2062DSS	1/2	12.60	11.91	22.23	17.6	2.39	5.94	24.9	16.3	12.5	27,000	1.07	1.80	1.10
C2080SS	C2082SS	C2082DSS	2	15.80	15.88	28.58	22.4	3.18	7.92	32.5	18.8	16.3	48,000	1.46	2.49	1.46
C2100SS	C2102SS	-	2 1/2	19.00	19.05	39.70	29.2	4.75	9.53	42.5	24.9	21.2	100,000	3.42	5.58	-
C2120SS	C2122SS	-	3	25.25	22.23	44.45	34.8	5.54	11.10	52.7	30.8	26.3	130,000	5.50	8.50	-

All dimensions in mm except as indicated.

Triple Speed Conveyor Chain

Triple Speed Conveyor Chain, often referred to as "Accumulator Chain", provides a means of rapid transfer of product combined with the facility to accumulate production in the event of a line overload. The chain is frequently used in the production lines of domestic electronic products, such as televisions, computers, and HiFi equipment. Carriers containing the products being assembled are supported on the large rollers of two or more chains, whilst the chains themselves are supported on the smaller rollers. As the chain is driven forwards frictional drive between the rollers causes the product carrier to be transferred forward at up to 2.6 times the chain speed. If there is an hold-up of product on the line the large carrier rollers are able to slip within the chain, thereby allowing the product carriers to remain static. The speed increasing function of the chain allows the chain to run at slower speeds thereby reducing noise levels and running costs. Chain can be supplied with rollers manufactured in either a conductive plastic material, or alternately a non conductive plastic where insulation is required.



Chain Technical Specifications

Chain No.	Pitch P mm	Roller Material	Allowable Chain Pull N	Max Loading kg	Tensile Strength KN	Speed Ratio	Weight Approx kg/m
C2040TS Cond	25.40	Conductive Plastic	1000	17	14	2.56	0.7
C2040TS Non	25.40	Non Conductive Plastic	1000	17	14	2.56	0.7
C2050TS Cond	31.75	Conductable Plastic	1500	25	23	2.58	1.1
C2050TS Non	31.75	Non Conductive Plastic	1500	25	23	2.58	1.1
C2060TS Cond	38.10	Conductable Plastic	2250	39	32	2.60	2.2
C2060TS Non	38.10	Non Conductive Plastic	2250	39	32	2.60	2.2

Chain Dimension in mm

Chain Ref	Inside Width b	Large Roller Width b2	Pin dia d2	Small Roller dia d3	Large Roller dia d4	Plate Depth g	m	Pin Lengths n	m2	Plate thickness t
C2040TS	22.43	8.94	3.96	15.85	24.61	11.68	16.28	15.24	31.52	1.52
C2050TS	27.81	11.30	5.08	19.05	30.15	15.00	20.83	19.05	39.88	2.03
C2060TS	31.55	14.94	5.94	22.23	35.74	17.53	25.91	23.62	49.53	3.18

Note: Dimensions are applicable to both Conductive and Non Conductive types

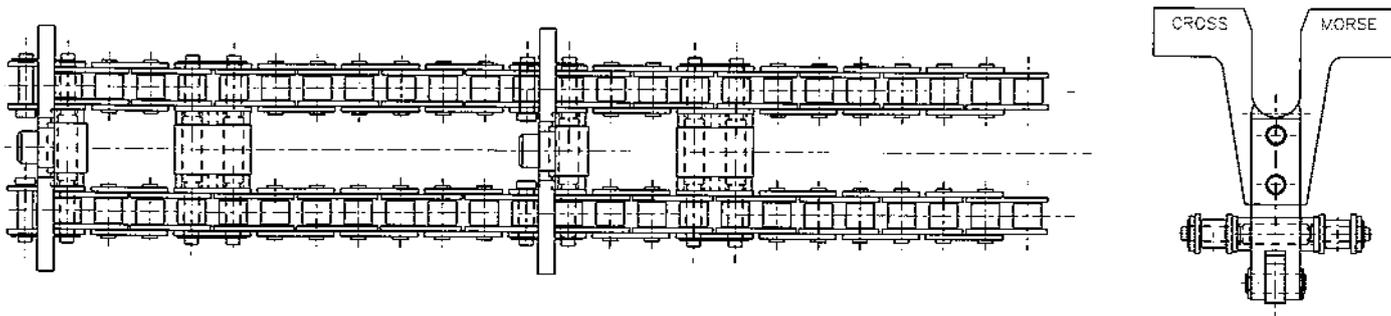
Food Processing – Attachment Chain



A range of high-performance power transmission chain has been developed by Cross + Morse to cope with the demands of the food processing industries.

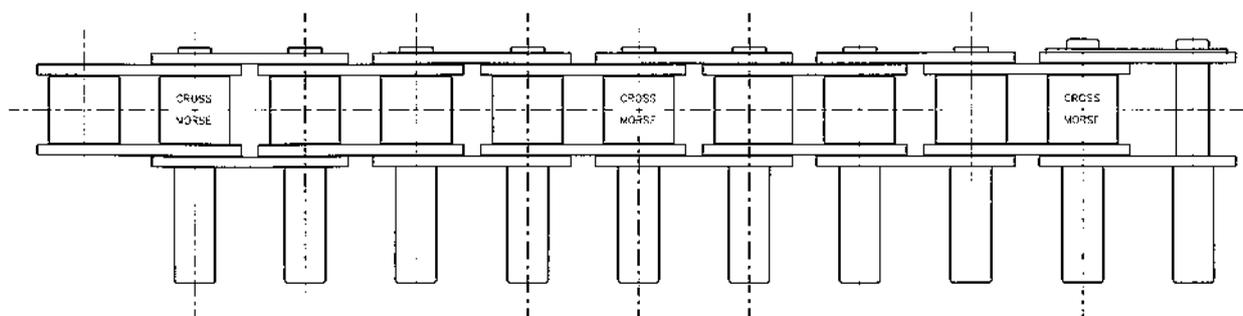
In-Feed Chains

Working with leading manufacturers of food packaging and processing machinery, the Cross + Morse chain system is developed to provide unfailing operation throughout lengthy production cycles, 24 hours a day. Suitable for new or retrofit installation, the in-feed chain system is designed to incorporate attachments, custom-manufactured by Cross + Morse, to transport the product through continuous application processes without operator interaction.



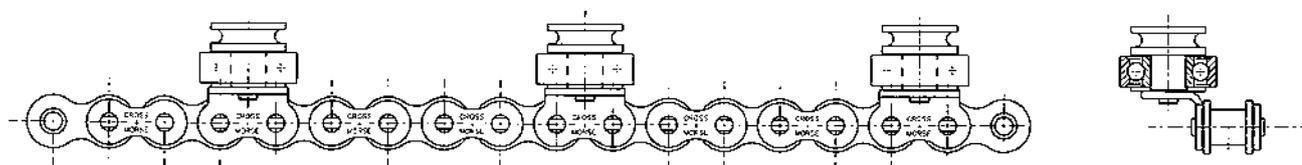
Cross Feed Chains

With its in house machining capability Cross + Morse are able to manufacture pins to suit most requirements. An example of this is the Cross Feed chains with a 7mm dia x 20mm pin every pitch seen below.



Powerbend Chains

Cross + Morse work with the leading food producers to solve their processing problems, one project resulted in our engineers creating a chain with a bearing and a specially designed pin attached to enable the conveying of product through 180°C.



Chocolate Moulding Plant Chains

Attachments and chains for Chocolate Moulding plants are notoriously difficult to replace especially the pin conveying the trays but Cross + Morse have the experience and knowledge to overcome any such problems. We have retro-fitted our chains to a number of machines of different manufacture with outstanding reductions in downtime and extended chainlife.



Tel +44(0) 121 360 0155 Fax +44(0) 121 325 1079 Email sales@crossmorse.com