



### **Renold Chain Product Range**





- British, ANSI, API, DIN, ISO and Works Standard Chains
- Adapted Chains
- Extended Pitch Chains
- Hollow Pin Chains
- Made to Order, Special Chains
- Mini Pitch Chains

- Nickel Plated Chains
- Oilfield Chains
- Plastic Bush Chains
- Power and Free Chains
- Polymer Block Chains
- Side Bow Chains
- Stainless Steel Chains



#### **Applications**

- Abattoirs Air Conditioning Aircraft Civil & Military Bakery Machines Battery Manufacturing
- Brewing Canning Carpet Machines Chart Tables/Marine Chocolate Manufacturing
- Concrete Moulding Equipment Copying Machines Dairy Machinery Drying Machinery
- Earth Moving Equipment Extrusion Machines Filtration Plants Food & Drink Manufacture
- Glass Manufacture Health Care Equipment Hydraulic Components Ice-Cream Manufacture
- In-flight Refueling Ingot Casting & Scrap Metal Processing Latex Machinery Laundry Machinery
- Lawnmower Manufacture Mill Machinery Mining MOT Brake Testing Machinery Nuclear Power
- Off Road Vehicles Oil Industry Packaging Machines Paper & Card Making Paper Shredders
- Plastic Machinery Potato Grading Machinery Power Generation Printing Machines Quarry Plant • Road Making & Plant Machinery • Robotic Systems • Roof Tile Manufacture • Ship's Engines
- Silkscreen Machinery Ski-Lifts Soot Blowers Steel Making Straddle Carriers Sugar Beet Machines Sun-Blinds • Telecommunications • Textile Machinery • Timber and Woodworking Machines
- Tin Printer Ovens Tobacco/Cigarette Machinery Tunnelling Machines T.V. and Audio Equipment
- Tyre Manufacture Waste Handling X-Ray Equipment



### **Conveyor Chain**

- British, ISO and Works **Standard Chains**
- Adapted Chains
- Agricultural Chains
- Bakery Chains
- Deep Link Chains

- Escalator Chains
- Made to Order, Specials
- Stainless Steel Chains
- Sugar Cane Chains
- Zinc Plated Chains





- Abattoirs Agricultural Machines Bakery Machines Bottle Washing Plants
- Brick & Tile Machinery OEM Car Plants Cement Plants Chemical Plants Chicken Process Equipment
- Cigarette/Tobacco Machinery Dust Filters Egg Sorting Conveyors Electrical Switchgears Escalators
- Extrusion Machines Feed Mill Machines Feed Silo Equipment Fibreglass Industry Filtration Plants • Fish Conveyor • Food Sterilisation • Food Processing • Freezing Equipment • Freezing Tunnels • Glass
- Manufacturing Grain Conveyor Harvesting Machines Ice Cream Machines Induction Furnaces Ingot Casting & Scrap Metal Processing Mfr • Latex Machinery • Leisure Rides • Luggage & Parcel Handling • Machine Tools • Mail Sorting • Metal Casting • Mushroom Compost Machinery • Nuclear • Ovens/Provers • Potato Grading Machinery • Potting Machinery • Quarries • Radio Astronomy • Roof Tile Manufacture
- Rope Machinery Saw Mill Equipment Sewage Plants Shaker Conveyors Ski-Lifts Sluice Gates
- Steel Making Sugar Factories Swarf Conveyors Textile Machinery Timber & Woodworking Machines
- Tool Changer Tunnelling Machines Tyre Manufacture Washing & Sterilising Machines
- Water Treatment Wire Belts



#### **Lifting Chain**

• LH(BL), AL, LL and Works Standard Chains

#### **Applications**

- Bottle Washing Plants Cement Plants Chemical Counterbalance Sets Cranes
- Dust/Swarf Conveyors Elevators Food Processing Food Sterilisation Fork Lift Trucks
- Pipe Line Valves/Taps Printing Machines Rock Drilling Straddle Carriers Sun-Blinds Tail Lifts

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### **Section 3 - Industrial Applications**

### and Special Engineered Chain

Examples of some specialist industries that benefit from Renold Conveyor Chain

Pitch/Inside width chart

This simple guide is designed to help quickly locate your chain in the catalogue. By measuring the pitch and the inside width of the chain, the page number can be found. This chart covers all the popular sizes, for further info please consult Renold.

			Inside width - dimensions in mm								mm																	
Pitch Inch	Pitch mm	11.70	12.70	15.00	15.90	19.00	19.10	19.81	20.00	22.23	24.00	25.40	28.00	28.60	32.00	37.00	38.10	43.00	48.00	56.00	63.50	66.00	76.20	78.00	94.456	94.463	95.25	101.60
1.000		8																										
1.150					44																Insi	de Widt	h				=	
1.375							44														Lici	ne wen	>=		eq			
1.500			8	8,11,36						44											=	-					=	
1.630								44		44											_			3		$Q_{-}$	-	
1.650												44										_	@		$\overline{}$	Pitcl	`	
2.000						8,11,36															_					Teilu	ng	
2.297										44																		
	63								23,39		23,39																	
2.609														44														
	80										23		23,39		23,39													
3.500												8,11,36																
	100														23	23,39												
	125																	23,39										
5.000																	8,36											
6.000																	8,36				35		35		35	35		
	160																	23	23,39									
7.000																										35	35	35
	200																			23,39								
	250																					23,39		23,39				

## Section 1

Conveyor **Products & Dimensions** 

### **Conveyor Chain**

#### **Renold Ultimate Performance**

#### **Renold Ultimate Performance**

- The performance of Renold Conveyor Chain is ensured by a programme of continuous testing and quality control of component dimensions, fits and material properties.
- Specially formulated lubricants reduce initial wear, provide corrosion protection and long storage life.
- Breaking loads exceed the minimum international standards.
- Correct chain selection is essential for optimum performance. Renold's experienced design team are always available to freely advise on particular products and applications.

#### **Renold Ultimate Specification**

The Renold specification has taken many years in design and development to achieve the optimum product. In order to ensure this is translated into product performance, we strictly control:

- Materials
- Heat Treatment
- Processes
- Fits
- Attachment Assembly
- Lubrication



#### **Renold Ultimate Reliability**

- The key to Renold chain reliability is consistency in design and manufacture.
- Maximum chain strength and resistance to wear are achieved by strict control of the material specification and by using state of the art heat treatment processes.
- The consistent overall tolerances of Renold chain make it ideal for conveying systems requiring precise alignment on multistrand chain layouts.

### **Conveyor Chain Details**

### **Conveyor Chain Types**

Precision conveyor chain, like transmission chain, consists of a series of journal bearings held in precise relationship to each other by constraining link plates.

Each bearing consists of a bearing pin and bush on which the chain roller revolves. The bearing pin and bush are case-hardened to allow articulation under high pressures, and to contend with the load carrying pressure and gearing action imparted via the chain rollers.

There is, for each strength of conveyor chain, a range of pitches; the minimum pitch being governed by the need for adequate wheel tooth strength; the maximum pitch being normally dictated by plate and general chain rigidity. When required, the normal maximum pitch can be exceeded by the use of strengthening bushes between the link plates, and suitable gaps to clear the bushes must be provided in the wheel teeth.

#### INTERNATIONAL STANDARDS

Conveyor chain, like transmission chain, can be manufactured to a number of different international standards. The main standards available are:

#### **BRITISH STANDARD - BS**

This standard covers chain manufactured to suit the British market and markets where a strong British presence has dominated engineering design and purchasing. The standard is based on the original Renold Conveyor Chain design.

#### **ISO STANDARD**

Chain manufactured to ISO Standard is not interchangeable with BS or DIN Standard Chain. This standard has a wide acceptance in the European market, except in Germany. Chain manufactured to this standard is becoming more popular and is used extensively in the Scandinavian region.

#### **HOLLOW BEARING PIN CHAIN**

Hollow bearing pin type chain affords ready facility for fixing attachments to outer links by bolting through the hollow bearing pins and is suitable for use in all normal conditions.

The attachments may be bolted up tight or held in the hollow bearing pin in a "free" manner. Bolted attachments should only span the outer link, as a bolted attachment spanning the inner link would impair the free articulation of the chain.

#### **DEEP LINK CHAIN**

Deep Link chain has sideplates with a greater depth than the normal chain plates; thus providing a continuous carrying edge above the roller periphery. When lateral flexing of the chain is required to negotiate horizontal bend radii, coned bearing pins are employed.

Available in Hollow or Solid Pin versions.

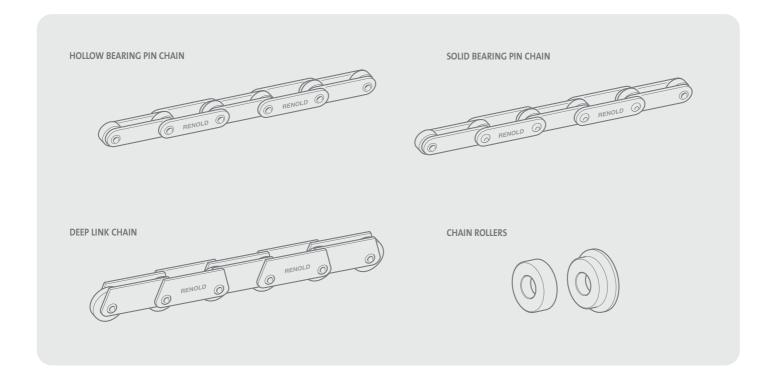
#### **SOLID BEARING PIN CHAIN**

Solid bearing pin chain, while having exactly the same gearing dimensions, i.e. pitch, inside width and roller diameter as the equivalent hollow bearing pin chain, is more robust and is recommended for use where arduous conditions may be encountered.

#### **CHAIN ROLLERS**

In general, the use of chain incorporating rollers is recommended, but bush chain, i.e. chain without rollers, can be used on certain applications.

Rollers of the plain or flanged type, with a choice of size and material, are listed for most chain series - size and material being dependent upon the type of application.



### **Standard Attachments**

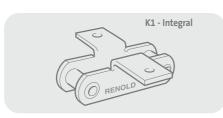
Standard attachments are parts fitted to a base chain to adapt it for a particular purpose as a conveying medium. Attachments may form an integral part of the link plate or may be built into the chain as a replacement of the normal link. Other attachments (according to type) are fixed to the chain plates by projection or fillet welding, to either one or both sides of

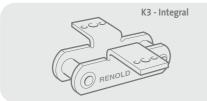
Standard attachments are described below:

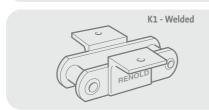
- The letter stands for the attachment type.
- The figure stands for the number of holes within each attachment type.

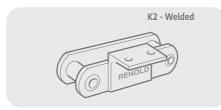
Special attachments can be manufactured, but wherever possible, standard attachments used on our preferred range of chains shown earlier will give price and delivery advantages. Consult Renold Chain for details.

#### **K Attachments Outer or Inner Links**



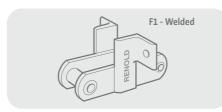


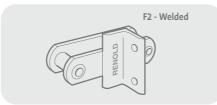




K Attachments provide a platform parallel to the chain line and bearing pin axis. They are used for securing slats, scrapers, buckets etc. to the chain.

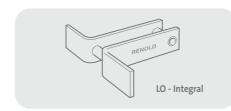
#### **F Attachments Outer or Inner Links**

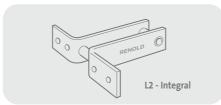




F Attachments provide a flat surface at right angles to the chain plate. They are used for securing pushers, scraper bars, etc.

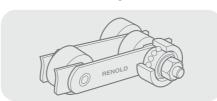
#### **L Attachments**





L Attachments are integral with the chain outer plates. Normally they have one or two holes (L2 preferred), but for use on scraper applications they can be supplied without holes and with various box widths (LO Type).

#### **Outboard Rollers** For use on Hollow Bearing Pin Chain



Outboard rollers have two principal advantages; as direct load carriers they enable the chain rollers to be used solely for gearing purposes and in the event of outboard roller wear, they can be replaced easily without recourse to chain replacement. They are particularly useful when attachments prevent the gearing rollers running on support tracks on the return run or where the roller loading is high.

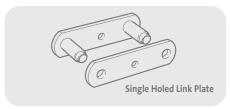
#### **Spigot Pins**

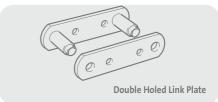




Spigot pins may be assembled either through hollow bearing pins or link plates and are secured by a nut and spring washer.

#### **Holed Link Plates**





Single holing is primarily for use with spigot pins and is required on both sides of the chain. Double holing is provided for the assembly of special attachments on one or both sides of the chain. The holes in the inner plates are countersunk on the inside face to prevent the bolt heads fouling the sprocket teeth.

#### **Standard Sprockets**

A modified rim section is required when G or inverted F2 attachments are fitted to inner links.

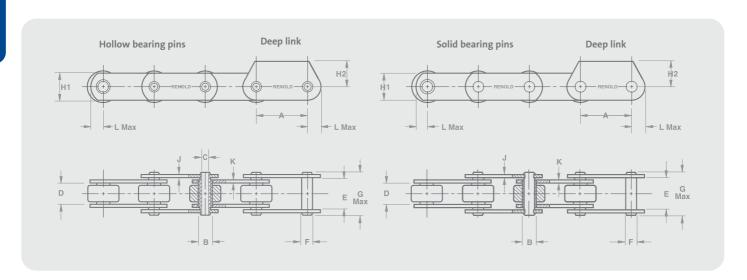
#### **Extended Bearing Pins**

Extended bearing pins, one side of the chain, can be supplied hard, soft, solid or drilled and are similar to the spigot pin arrangement.

FOR ATTACHMENT SIZES AND ATTACHMENTS OTHER THAN THOSE SHOWN, CONSULT RENOLD CHAIN.

## **Standard Conveyor Chain**

BS 4116 Part 4



Chain F	Ref.	Technic	cal Details	(mm)													
Breaking L	oad	B.S Series Ref	Pitch Inch	Pitch Inch	Pitch mm	Pitch mm	Bush Diam	Hollow Bearing Pin Bore Diam	Inside Width Inner	Inside Width Outer	Pin Diam	Pin Length	Plate Height	Height	Width Outer		Head
Ib/f MIN	(Newtons) MIN		MIN	MAX	MIN	MAX	MIN	MIN	MIN	MIN	MAX	MAX					MAX
Hollow	Bearing P	in															
			A	A	A	A	В	С	D	E	F	G	H1	H2	J	K	L
4500 6000 12000 24000 36000	20000 27000 54000 107000 160000	2H020 3H027 4H054 5H107 6H160	1.5 1.5 2.0 3.5 5.0	3.0 6.0 9.0 12.0 18.0	38.1 38.1 50.8 88.9 127.0	76.2 152.4 228.6 304.8 457.2	12.1 18.0 23.6 33.2 38.1	6.6 10.1 13.2 20.1 23.1	12.7 15.0 19.0 25.4 38.1	17.8 25.4 32.5 43.0 59.0	9.5 14.0 19.0 26.9 31.8	24.6 36.5 44.0 57.0 79.5	19.1 25.4 38.1 51.0 61.0	26.0 32.0 45.0	1.8 3.8 3.8 5.1 7.6	2.3 3.8 5.1 7.1 8.9	11.4 15.0 22.1 29.7 34.8
Solid Be	earing Pin																
			A	A	A	A	В	С	D	E	F	G	H1	H2	J	K	L
3000 7500 15000 30000 45000 60000	13000 33000 67000 134000 200000 267000	15013 35033 45067 55134 65200 75267	1.0 1.5 2.0 3.5 5.0 6.0	4.5 6.0 9.0 12.0 18.0 18.0	25.4 38.1 50.8 88.9 127.0 152.4	114.3 152.4 228.6 304.8 457.2 457.2	8.6 18.0 23.6 33.2 38.1 38.1		11.7 15.0 19.0 25.4 38.1 38.1	16.0 25.4 32.5 43.0 59.0 59.0	5.7 14.0 19.0 26.9 31.8 23.0	21.8 38.0 46.0 60.0 82.0 80.0	18.0 25.4 38.1 51.0 61.0 61.0	16.0 26.0 32.0 45.0	1.8 3.8 3.8 5.1 7.6 7.6	1.8 3.8 5.1 7.1 8.9 8.9	11.4 15.0 22.1 29.7 34.8 34.8
90000	400000	85400	6.0	24.0	152.4	609.6	38.1		38.1	66.3	29.4	94.0	63.5	-	10.0	13.0	35.8

The dimensions listed will not vary with pitch size for each given breaking load. For the details of individual pitch sizes, rollers, and spare links, see pages 9 and 10. For attachments see pages 14 - 22.

## **Standard and Deep Link Chain**

**BS4116 Part 4** 

Pitch	Pitch	Roller	Mass	Roller	Mass
Inch	mm	Chain No Standard		Chain No Deep link	
			kg/m		kg/m
3000 lbf, 1	3000 Newto	ns Breaking	Load - Solid	Pin	
1.0	25.4	140048/12	1.33	167048/12	1.62
1.5	38.1	140068/56	1.77	167068/56	2.03
2.0	50.8	140088/56	1.46	167088/56	1.70
2.5 3.0	63.5 76.2	140108/56	1.28	167108/56	1.52
3.5	88.9	140128/56 140148/56	1.15 1.06	167128/56 167148/56	1.37 1.28
4.0	101.6	140168/56	1.00	167168/56	1.22
4.5	114.3	140188/56	0.95	167188/56	1.18
4500 lbf, 20	0000 Newto	ns Breaking	Load - Hollo	w Pin	
1.5	38.1	198028**	2.00		
2.0	50.8	198030**	1.65	NOT	
2.5	63.5	198033**	1.46	AVAILABLE	
3.0	76.2	198039**	1.34		
6000 lbf, 2	7000 Newto	ns Breaking	Load - Hollo	w Pin	
1.5	38.1	105060/03*	2.94	107060/03	4.02
2.0	50.8	105080/12**	3.50	107080/12	4.52
2.5	63.5	105100/12	3.13	107100/12	4.10
3.0	76.2	105120/12**	2.88	107120/12	3.83
3.5 4.0	88.9 101.6	105140/12 105160/12**	2.71 2.58	107140/12 107160/12	3.63 3.49
4.5	114.3	105180/12	2.36	107180/12	3.49
5.0	127.0	105200/12	2.39	107200/12	3.27
6.0	152.4	105240/12**	2.27	107240/12	3.14
7500 lbf, 3	3000 Newto	ns Breaking	Load - Solid	Pin	
1.5	38.1	145060/03*	3.54	167060/03	4.62
2.0	50.8	145080/12**	3.95	167080/12	4.97
2.5	63.5	145100/12	3.49	167100/12	4.46
3.0 3.5	76.2	145120/12** 145140/12	3.19	167120/12 167140/12	4.14
4.0	88.9 101.6	145140/12	2.97 2.80	167140/12	3.89 3.71
4.5	114.3	145180/12	2.67	167180/12	3.56
5.0	127.0	145200/12	2.57	167200/12	3.45
6.0	152.4	145240/12*	2.42	167240/12	3.29
12000 lbf,	54000 Newt	ons Breaking	g Load - Holl	ow Pin	
2.0	50.8	105081/03*	5.23	107081/03	6.25
3.0	76.2	105121/12**	6.93	107121/12	7.90
3.5	88.9	105141/12	6.35	107141/12	7.30
4.0	101.6	105161/12**	5.91	107161/12	6.85
4.5	114.3	105181/12	5.57	107181/12	6.50
5.0	127.0	105201/12	5.30	107201/12	6.22
6.0 7.0	152.4 177.8	105241/12** 105281/12	4.89 4.60	107241/12 107281/12	5.80 5.50
8.0	203.2	105281/12	4.39	107281/12	5.28
9.0	228.6	105361/12	4.21	107361/12	5.10
15000 lbf,	67000 Newt	ons Breaking	g Load - Soli	d Pin	
2.0	50.8	145081/03*	6.28	167081/03	7.31
3.0	76.2	145081/03	7.62	167121/12	8.59
3.5	88.9	145141/12	6.95	167141/12	7.90
4.0	101.6	145161/12**	6.43	167161/12	7.37
4.5	114.3	145181/12	6.03	167181/12	6.96
5.0	127.0	145201/12	5.72	167201/12	6.64
6.0	152.4	145241/12**	5.24	167241/12	6.15
7.0	177.8	145281/12	4.90	167271/12	5.80
8.0 9.0	203.2 228.6	145321/12 145361/12	4.65 4.44	167321/12 167361/12	5.54 5.33
3.0	220.3	1.5502/12	1111	20.002/22	5.55

Pitch Inch	Pitch mm	Roller Chain No Standard	Mass	Roller Chain No Deep link	Mass
24000 lbf 1	07000 Nove	taua Duanki	kg/m	II and Dia	kg/m
24000 lbf, 1	07000 New	tons Breakii	ig Load - He	DIIOW PIN	
4.0	101.6	105162/12**	12.74	107162/12	14.86
5.0	127.0	105202/12	11.21	107202/12	13.26
6.0	152.4	105242/12**	10.91	107242/12	12.91
7.0 8.0	177.8 203.2	105282/12 105322/12	9.46 8.92	107282/12 107322/12	11.42 10.86
9.0	228.6	105362/12	8.50	107362/12	10.42
12.0	304.8	105482/12	7.65	107482/12	9.52
30000 lbf, 1	34000 New	tons Breaki	ng Load - Sc	olid Pin	
4.0	101.6	145162/12**	14.22	167162/12	16.34
5.0	127.0	145202/12	12.40	167202/12	14.45
6.0	152.4	145242/12**	11.18	167242/12	13.18
7.0	177.8	145282/12	10.31	167282/12	12.27
8.0 9.0	203.2 228.6	145322/12 145362/12	9.66 9.16	167322/12 167362/12	11.60 11.08
12.0	304.8	145362/12	8.14	167482/12	10.01
36000 lbf, 1	60000 New	tons Breakir	ng Load - Ho	ollow Pin	
5.0	127.0	105203/12	24.97		
6.0	152.4	105243/12	22.18		
7.0 7.5	177.8 190.5	105283/12 105303/12	20.18 19.40	AVAILABLE	
8.0	203.2	105303/12	18.68	ON	
9.0	228.6	105363/12	17.52	REQUEST	
12.0	304.8	105483/12	15.19		
15.0 18.0	381.0 457.2	105603/12 105723/12	13.79 12.86		
45000 lbf, 2	00000 New		ng Load - Sc	olid Pin	
			.6 -0		
5.0	127.0	145203/12	27.34		
6.0	152.4	145243/12	24.15		
7.0 7.5	177.8 190.5	145283/12 145303/12	21.87 20.98	AVAILABLE	
8.0	203.2	145303/12	20.35	ON	
9.0	228.6	145363/12	18.83	REQUEST	
12.0	304.8	145483/12	16.17	_	
15.0 18.0	381.0 457.2	145603/12 145723/12	14.58 13.52		
60000 lbf, 2		*		olid Pin	
6.0	152.4	145245/12	23.38		
7.0 8.0	177.8 203.2	145285/12 145325/12	21.64 19.96	AVAILABLE	
9.0	203.2	145325/12	18.66	ON	
12.0	304.8	145485/12	16.04	REQUEST	
15.0	381.0	145605/12	14.47		
18.0	457.2	145725/12	13.43		
90000 lbf, 4	00000 New	tons Breakir	ng Load - So	olid Pin	
6.0	152.4	145247/12	29.09		
9.0	228.6	145367/12	23.36		
12.0	304.8	145487/12	20.50	AVAILABLE	
15.0	381.0	145607/12 145727/12	18.78	ON REOUEST	
18.0	457.2	143/2//12	17.63	KEUUESI	

609.6

18.0

24.0

145727/12

145967/12

REQUEST

16.19

<sup>\*</sup> Bush chain only.

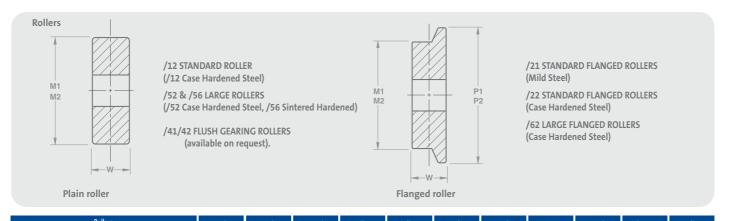
\*\* Preferred sizes of chain with standard sprockets and attachments available.

This table indicates standard roller chain configurations. Where alternative rollers are required, amend the roller suffix for identification

purposes when ordering - see page 10. For Roller Selection procedure, consult Conveyor Chain Designer Guide

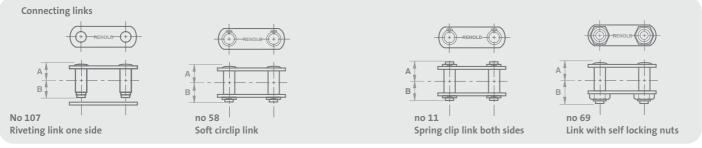
### **Conveyor Chain**

### Rollers and Connecting Links



	KOI	iers		Pitch	Pitch	Tread	Roller	Rollers	Pitch	Pitch	Diam	Tread	Flange Width	Roller
Hollo	w Pin	Soli	d Pin	Inch	mm	Diam	Width	Available	Inch	mm		Diam	Width	Available
lbf	Newtons	lbf	Newtons	MIN	MIN				MIN	MIN				
Standard	roller brea	king load		Standard	plain				Standard	flanged				
						M1	W				M1	P1	W	
		3000	13000	1.0	25.4	12.1	11.4	/12				-		
6000 12000	27000 54000	7500 15000	33000 67000	2.0 3.0	50.8 76.2	31.8 47.6	14.0 17.8	/12 /12	2.5 3.5	63.5 88.9	31.8 47.6	41.3 60.3	14.0 17.8	/21 /22 /21 /22
24000	107000	30000	134000	4.0	101.6	66.7	24.0	/12	4.5	114.3	66.7	85.7	24.0	/21 /22
36000	160000	45000 60000	200000 267000	5.0 5.0	127.0 127.0	88.9 88.9	36.8 36.8	/12 /12	6.0 6.0	152.4 152.4	88.9 88.9	114.3 114.3	36.8 36.8	/22 /22
-	-	90000	400000	6.0	152.4	88.9	36.8	/12	6.5	165.1	88.9	114.3	36.8	/22
Large roll	er			Plain					Flanged					
						M2	W				M2	P2	W	
-		3000	13000	1.5	38.1	25.4	11.4	/56						_
4500	20000		•	1.5	38.1	25.4	11.4	-	-					-
36000	160000	45000 60000	200000 267000	8.0 8.0	203.2 203.2	127.0 127.0	36.8 36.8	/52 /52	9.0 9.0	228.6 228.6	127.0 127.0	152.4 152.4	36.8 36.8	/62 /62
-		90000	400000	8.0	203.2	127.0	36.8	/52	9.0	228.6	127.0	152.4	36.8	/62

Roller selection details - see page 73.



#### Chain

	Breaking Loa	d		No	107	No 58 Chai	in Centre to	No 11 Chai	n Centre to	No 69 Chain Centre to		
Hollo	ow Pin	Solid	d Pin	Hollow Pin Solid Pin		Plain	Fastener	Plain	Fastener	Plain	Fastener	
lbf	Newtons	lbf	Newtons	Both	Both	Side	Side	Side	Side	Side	Side	
				A&B	A&B	A	В	A	В	A	В	
- 4500	- 20000	3000	13000	- 12.3	11.0	11.0	13.0	13.8	- 13.8	11.0	17.0	
6000	27000	7500	33000	18.3	19.0	19.0	22.0			19.0	30.0	
12000	54000	15000	67000	22.0	23.0	23.0	25.0		-	23.0	36.0	
24000	107000	30000	134000	28.5	30.0	-			-	30.0	46.0	
36000	160000	45000	200000	39.8	41.0	-	-	-	-	41.0	62.0	
-		60000	267000	-	40.0	-			-	40.0	56.0	
-	-	90000	400000		47.0	-	-	-	-	47.0	68.0	

### **Extra Strength Standard Conveyor Chain**

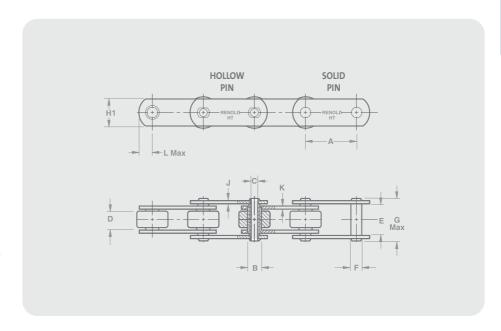
### BS 4116 Part 4

#### **Product Description**

To complement our standard range of British Standard Conveyor Chain, this extra strength chain is more suitable for conveyor applications selected on ultimate tensile strength (breaking load). Each chain is the same dimensionally as its normal counterpart, for example an extra strength 24000 lbs chain has basically the same dimensions as a normal 12000 lbs series chain.

This chain is used extensively in the conveying of animal feed and bulk food stuffs such as grain, maize, wheat and raw food mixtures. Most of these applications use scraper type conveyor systems that normally have long centre distances between sprockets. Such systems are sometimes slow moving with little or no shock loading.

Contact our technical sales staff for selection and applicational details.



Chain Re	ef.	Technica	al Details (m	ım)											
Breaking Loa lb/f MIN	(Newtons) MIN	Pitch Inch MIN	Pitch Inch MAX	Pitch mm MIN	Pitch mm MAX	Bush Diam MIN	Hollow Bearing Pin Bore Diam	Inside Width Inner MIN	Inside Width Outer MIN	Pin Diam MAX	Pin Length MAX	Plate Height	Width	Width Outer	Head Inner MAX
Hollow Bearing Pin - Extra Strength									H1		К				
12000	54000 107000	1.5 2.0	6.0	38.1 50.8	152.4 228.6	18.0 23.6	10.1 13.2	15.0 19.0	25.4 32.5	14.0 19.0	36.5 44.0	25.4 38.1	3.8	4.0	15.0 22.1

#### Solid Bearing Pin - Extra Strength

		A	A	A	A	В	С	D	E	F	G	H1	1	K	L
15000	67000	1.5	6.0	38.1	152.4	18.0		15.0	25.4	14.0	38.0	25.4	3.8	4.0	15.0
30000	134000	2.0	9.0	50.8	228.6	23.6		19.0	32.5	19.0	46.0	38.1	3.8	5.1	22.1
60000	267000	3.5	12.0	88.9	304.8	33.2		25.4	43.0	26.9	60.0	51.0	5.1	7.1	29.7

The dimensions listed will not vary with pitch size for each given breaking load. For the details of individual pitch sizes, rollers, and spare links, see pages 12 and 13. Extra strength chains are based on the standard chain shown on page 8. For attachments see pages 14 - 22.

### **Extra Strength Conveyor Chain**

Standard Range - B.S.

Pitch Inch	Pitch mm	Roller Chain No Extra Strength	Mass
			kg/m

12000 lbf, 54000 Newtons Breaking Load - Hollow Pin (Extra strength version of 6000 lbf series)

1.5	38.1	102060/03*	2.94
2.0	50.8	102080/12**	3.50
2.5	63.5	102100/12	3.13
3.0	76.2	102120/12**	2.88
3.5	88.9	102140/12	2.71
4.0	101.6	102160/12**	2.58
4.5	114.3	102180/12	2.47
5.0	127.0	102200/12	2.39
6.0	152.4	102240/12**	2.27

15000 lbf, 67000 Newtons Breaking Load - Solid Pin (Extra strength version of 7500 lbf series)

1.5	38.1	162060/03	3.54
2.0	50.8	162080/12**	3.95
2.5	63.5	162100/12	3.49
3.0	76.2	162120/12**	3.19
3.5	88.9	162140/12	2.97
4.0	101.6	162160/12**	2.80
4.5	114.3	162180/12	2.67
5.0	127.0	162200/12	2.57
6.0	152.4	162240/12**	2.42

24000 lbf, 107000 Newtons Breaking Load - Hollow Pin (Extra strength version of 12000 lbf series)

2.0	50.8	102081/03	5.23
3.0	76.2	102121/12**	6.93
3.5	88.9	102141/12	6.35
4.0	101.6	102161/12**	5.91
4.5	114.3	102181/12	5.57
5.0	127.0	102201/12	5.30
6.0	152.4	102241/12**	4.89
7.0	177.8	102281/12	4.60
8.0	203.2	102321/12	4.39
9.0	228.6	102361/12	4.21

30000 lbf, 134000 Newtons Breaking Load - Solid Pin (Extra strength version of 15000 lbf series)

2.0	50.8	162081/03	6.28
3.0	76.2	162121/12**	7.62
3.5	88.9	162141/12	6.95
4.0	101.6	162161/12**	6.43
4.5	114.3	162181/12	6.03
5.0	127.0	162201/12	5.72
6.0	152.4	162241/12**	5.24
7.0	177.8	162281/12	4.90
8.0	203.2	162321/12	4.65
9.0	228.6	162361/12	4.44

<sup>\*</sup> Bush chain only.

Pitch Inch	Pitch mm	Roller Chain No Extra Strength	Mass
			kg/m

48000 lbf, 2135000 Newtons Breaking Load - Hollow Pin (Extra strength version of 24000 lbf series)

3.5	88.9	102142/03	8.20
4.0	101.6	102162/12**	12.74
5.0	127.0	102202/12	11.21
6.0	152.4	102242/12**	10.91
7.0	177.8	102282/12	9.46
8.0	203.2	102322/12	8.92
9.0	228.6	102362/12	8.50
12.0	304.8	102482/12	7.65
		•	

60000 lbf, 267000 Newtons Breaking Load - Solid Pin (Extra strength version of 30000 lbf series)

3.5 88.9	162142/12	9.90
4.0 101.6	162162/12**	14.22
5.0 127.0	162202/12	12.40
6.0 152.4	162242/12**	11.18
7.0 177.8	162282/12	10.31
8.0 203.2	162322/12	9.66
9.0 228.6	162362/12	9.16
12.0 204.8	162482/12	8.14

This table indicates standard roller chain configurations.

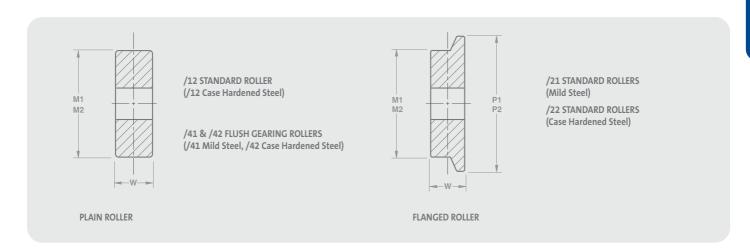
Where alternative rollers are required, amend the roller suffix for identification purposes when ordering - see page 13.

For Roller Selection procedure, consult Conveyor Chain Designer Guide.

<sup>\*\*</sup> Preferred sizes of chain, with standard sprockets and attachments available.

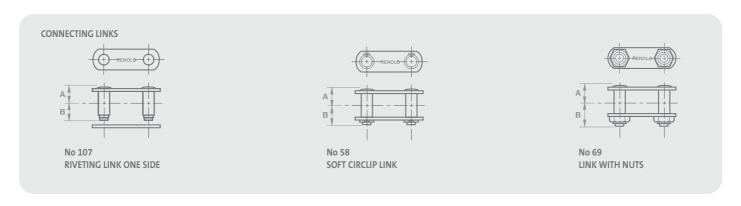
### **Extra Strength Conveyor Chain**

### **Rollers and Connecting Links**



	Ro	lers		Pitch	Pitch	Tread	Roller	Rollers	Pitch	Pitch	Diam	Tread	Flange Width	Roller
Holl	low Pin	Solid	d Pin	Inch	mm	Diam	Width	Available	Inch	mm		Diam	Width	Available
lbf	Newtons	lbf	Newtons	MIN	MIN				MIN	MIN				
Standard	l roller brea	king load		Standard	plain				Standard	flanged				
						M1	W				M1	P1	W	
12000 24000 48000	54000 107000 213500	15000 30000 60000	67000 84000 200000	2.0 3.0 4.0	50.8 76.2 101.6	31.8 47.6 66.7	14.0 17.8 24.0	/12 /12 /12	2.5 3.5 4.5	63.5 88.9 114.3	31.8 47.6 66.7	41.3 60.3 85.7	14.0 17.8 24.0	/21 /22 /21 /22 /21 /22

For Roller Selection procedure, consult Conveyor Chain Designer Guide.

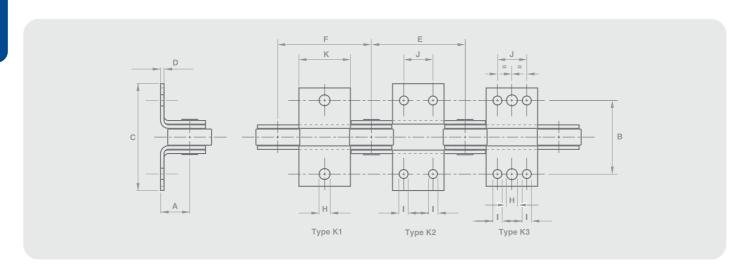


#### Chain

	Breaking Loa	d		No	107	No 58 Chai	n Centre to	No 11 Chai	n Centre to	No 69 Chai	in Centre to
Hollo	w Pin	Soli	d Pin	Hollow Pin	Solid Pin	Plain	Fastener	Plain	Fastener	Plain	Fastener
lbf	Newtons	lbf	Newtons	Both	Both	Side	Side	Side	Side	Side	Side
				A&B	A&B	A	В	A	В	A	В
12000* 24000* 45000*	54000 107000 213500	15000* 30000* 60000*	67000 134000 267000	18.3 22.0 28.5	19.0 23.0 30.0	19.0 23.0 -	22.0 25.0		:	19.0 23.0 30.0	30.0 36.0 46.0

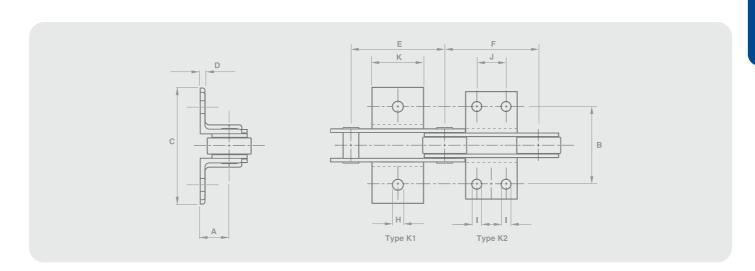
Dimensions A & B are maximum sizes. For standard versions of these chains see page 8. Small rollers - available on request.

# Conveyor Chain BS K Attachments (Integral)



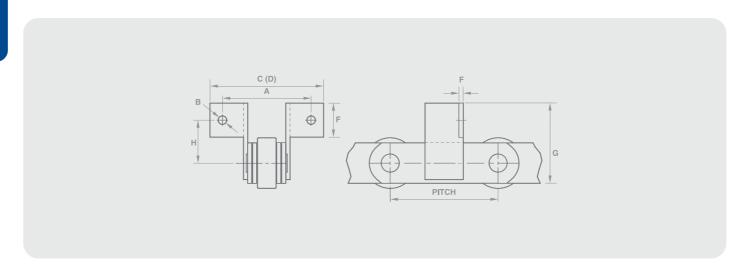
	tails (mm)											
Breaking Load	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Centre Hole Dia	Outer Holes Dia	Attachment Hole Pitch	Platform Length	Mass
lbf												(kg/Att)
onveyor ch	ain - BS K a	attachments	(integral)									
	A	В	C	D		E	F	Н	1	J	K	
3000	16.5	44.5	66 / 70	1.8 / 1.8	K1	38.1	38.1	9.2			19.0	0.009
					K3	50.8	50.8	9.2	7.4	25.4	44.5	0.018
					K3	76.2	76.2	9.2	7.4	25.4	44.5	0.018
					К3	101.6	101.6	9.2	7.4	25.4	70.0	0.027
6000 /7500	19.0	76.2	106 / 115	3.8 / 3.8	К3	76.2	76.2	10.5	9.2	22.2	43.0	0.045
					К3	101.6	101.6	10.5	9.2	31.8	63.5	0.077
					K3	127.0	127.0	10.5	9.2	57.2	89.0	0.109
					K3	152.4	152.4	10.5	9.2	57.2	114.5	0.141
12000/15000	31.8	89.0	130 / 136	5.1 / 3.8	К3	76.2	76.2	13.7	10.5	31.8	63.5	0.127
					К3	101.6	101.6	13.7	10.5	31.8	63.5	0.127
					K3	152.4	152.4	13.7	10.5	57.2	114.5	0.240
24000/30000	38.0	108.0	146 / 157	7.1 / 5.1	K1	101.6	101.6	15.3			56.0	0.172
,		200.0	,	,	K2	101.6	101.6	-	12.2	31.8	56.0	0.172
					К3	152.4	152.4	15.3	12.2	57.2	107.0	0.318
36000/45000	50.8	146.0	198 / 198	8.9 / 7.6	К2	152.4	152.4		13.7	31.8	74.0	0.310
30000/ 43000	50.0	140.0	150/150	0.5 / 1.0	K2	203.2	203.2		13.7	88.9	125.0	0.420

## Conveyor Chain BS K Attachments (Welded)



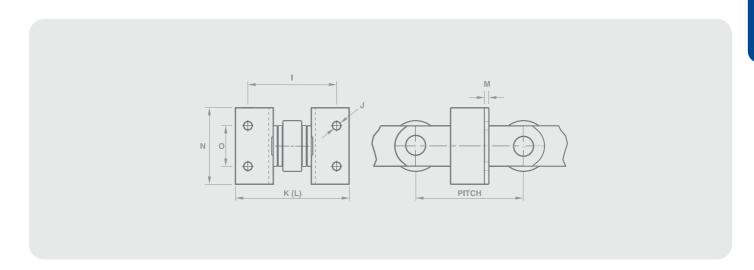
echnical De	talis (mm)											
Breaking Load	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Centre Hole Dia	Outer Holes Dia	Attachment Hole Pitch	Platform Length	Mass
lbf			MAX									(kg/Att
nveyor ch	ain - BS K a	attachments	(welded)									
	A	В	С	D		E	F	Н	1	J	K	
3000	16.5	44.5	68 / 72	3.0	K1	38.1	50.8	8.2			19.0	0.027
					K1	50.8	63.5	8.2	-		38.0	0.059
					K2	50.8	63.5	-	7.4	22.2	38.0	0.059
					K2	76.2	76.2	-	7.4	25.4	44.5	0.06
000 / 7500	19.0	76.2	106 / 116	4.0	K1	50.8	63.5	10.6			19.0	0.02
					K1	63.5	76.2	10.6			28.0	0.05
					K1	88.9	101.6	10.6	-		56.0	0.10
					K2	88.9	101.6	-	9.2	31.8	56.0	0.10
					K2	114.3	127.0	-	9.2	57.2	84.0	0.16
000 / 15000	31.8	88.9	122 / 133	5.0	K1	76.2	88.9	13.7	-		35.0	0.11
,	52.0	00.5		5.0	K1	88.9	101.6	13.7			56.0	0.19
					K2	88.9	101.6	-	10.5	31.8	56.0	0.19
					K2	114.3	152.4	-	10.5	57.2	84.0	0.289
					K2	152.4	177.8	-	10.5	88.9	127.0	0.443
1000 / 30000	38.0	108.0	146 / 159	6.0	K1	127.0	127.0	15.3	-		56.0	0.299
, , , , , , , , , , , , , , , , , , , ,	20.0	200.0	2.07.200	0.0	K2	127.0	127.0	-	12.2	31.8	56.0	0.299
					K2	152.4	152.4		12.2	57.2	84.0	0.44
					K2	177.8	177.8	-	12.2	69.9	108.0	0.583
					K2	203.2	203.2	-	12.2	88.9	127.0	0.68
					K2	228.6	228.6	-	12.2	133.4	168.0	0.90
5000 / 45000	50.8	146.0	202 / 200	8.0	K1	152.4	152.4	16.9			70.0	0.583
/60000				0.0	K2	152.4	152.4	-	13.7	38.1	70.0	0.58
,					K2	203.2	203.2		13.7	76.2	112.0	0.93
					K2	228.6	228.6	-	13.7	88.9	152.0	1.27
					K2	304.8	304.8		13.7	165.1	229.0	1.90
90000	57.0	171.5	229 / 252	10.0	K1	228.6	228.6	19.7			89.0	1.050
3000	37.0	1/1.5	227   232	10.0	K2	228.6	228.6	-	19.7	44.5	89.0	1.05
					K2	228.6	228.6		19.7	88.9	152.0	1.810
					K2	304.8	304.8		19.7	165.1	229.0	2.71

## Conveyor Chain BS F1 Attachments (Welded)



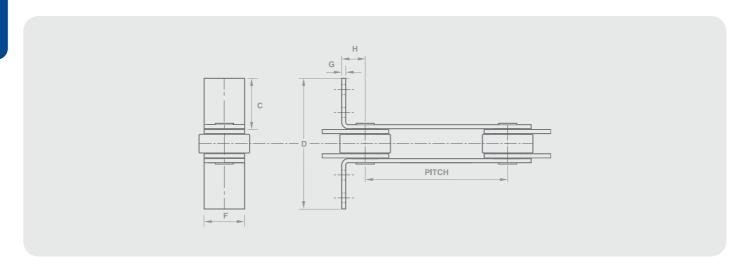
Breaking Load	Pitch Inner Plate	Pitch Outer Plate	Transverse Pitch	Attachment Hole Size	Width Over Attachment Outer Plate	Width Over Attachment Inner Plate	Attachment Thickness	Attachment Face Height	Total Height of Attachment	Attachment Hole Distance From Chain Centreline	Mass
lbf	MIN	MIN									(kg)
nyevor ch	oin DC F1 of										
Jiiveyor Cir	ain - B2 FT at	tachments (	welded)								
niveyor cir	ain - BS F1 at	tacnments (	welded) A	В	C (Max)	D (Max)	E	F	G	Н	
3000	50.8	38.1		B 7.4	C (Max)	D (Max)	E 3.0	F 19.0	G 44.5	H 26.0	0.054
3000		,	A				3.0 4.0	19.0 25.4			0.054 0.082
3000 6000 / 7500	50.8	38.1	A 44.5	7.4	72.0	68.0			44.5	26.0	0.082
3000 6000 / 7500 12000 / 15000	50.8 69.9	38.1 57.2	A 44.5 76.2	7.4 9.2	72.0 116.0	68.0 106.0	4.0	25.4	44.5 56.0	26.0 32.4	
3000 6000 / 7500 12000 / 15000 24000 / 30000	50.8 69.9 101.6	38.1 57.2 82.6	44.5 76.2 88.9	7.4 9.2 10.5	72.0 116.0 133.0	68.0 106.0 122.0	4.0 5.0	25.4 31.8	44.5 56.0 84.0	26.0 32.4 51.4	0.082 0.163
	50.8 69.9 101.6 139.7	38.1 57.2 82.6 114.3	44.5 76.2 88.9 108.0	7.4 9.2 10.5 12.2	72.0 116.0 133.0 159.0	68.0 106.0 122.0 146.0	4.0 5.0 6.0	25.4 31.8 44.5	44.5 56.0 84.0 108.0	26.0 32.4 51.4 63.5	0.082 0.163 0.435

## Conveyor Chain BS F2 Attachments (Welded)



Breaking Load	Pitch Inner Plate	Pitch Outer Plate	Transverse Pitch	Attachment Hole Size	Width Over Attachment Outer Plate	Width Over Attachment Inner Plate	Attachment Thickness	Attachment Face Height	Pitch of Attachment Holes	Mass
lbf	MIN	MIN								(kg)
nuovar cha	DC FD 11		1 15							
niveyor cha	ın - BS F2 atta	achments (wel	ded)		V /84av)	I /May)	M	M	0	
nveyor cha	in - BS F2 atta	ichments (wel	ded)	J	K (Max)	L (Max)	M	N	0	
3000	50.8	38.1	ded)	J 7.4	K (Max)	L (Max)	M 3.0	N 44.5	25.4	0.068
3000 6000 / 7500	50.8 69.9	38.1 57.2	44.5 76.2	9.2	72.0 116.0	68.0 106.0	3.0 4.0	44.5 56.0	25.4 31.8	0.104
3000 6000 / 7500 12000 / 15000	50.8 69.9 101.6	38.1 57.2 82.6	44.5 76.2 88.9	9.2 10.5	72.0 116.0 133.0	68.0 106.0 122.0	3.0 4.0 5.0	44.5 56.0 84.0	25.4 31.8 57.2	0.10 0.23
3000 6000 / 7500 12000 / 15000 24000 / 30000	50.8 69.9 101.6 139.7	38.1 57.2 82.6 114.3	44.5 76.2 88.9 108.0	9.2 10.5 12.2	72.0 116.0 133.0 159.0	68.0 106.0 122.0 146.0	3.0 4.0 5.0 6.0	44.5 56.0 84.0 108.0	25.4 31.8 57.2 69.9	(
3000 6000 / 7500 12000 / 15000	50.8 69.9 101.6	38.1 57.2 82.6	44.5 76.2 88.9	9.2 10.5	72.0 116.0 133.0	68.0 106.0 122.0	3.0 4.0 5.0	44.5 56.0 84.0	25.4 31.8 57.2	0.10

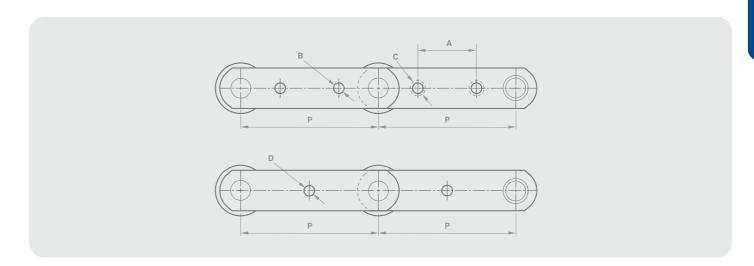
# Conveyor Chain BS L Attachments (Integral)



Technical De	tails (mm)										
Breaking Load	Туре	Transverse Pitch	Pitch of Attachment Holes	Attachment Face Length	Width Over Attachment Outer	Attachment Hole Diameter	Total Height of Attachment	Attachment Thickness	Distance of Pitch point to Attachment Face	Box Width*	Mass
lbf											(kg)
Conveyor ch	ain - BS L att	achments (ir	ntegral)								
		A	В	C	D	E	F	G	Н		
3000	LO			28.7	74.2	_	18.0	1.8	16.0	76.2	0.007
3000	LO			41.4	99.6		18.0	1.8	16.0	101.6	0.010
	LO			54.1	125.0		18.0	1.8	16.0	127.0	0.013
	LO			66.8	150.4		18.0	1.8	16.0	152.4	0.016
	L1	41.4	_	25.4	67.6	7.4	18.0	1.8	16.0	-	0.007
	L2	41.4	19.0	41.4	100.0	7.4	18.0	1.8	16.0	-	0.009
6000 / 7500	LO	-	-	48.3	123.5	-	25.4	3.8	19.0	127.0	0.041
	LO	-	-	61.0	148.9	-	25.4	3.8	19.0	152.4	0.051
	LO	-	-	86.4	199.7	-	25.4	3.8	19.0	203.2	0.071
	LO	-	-	111.8	250.5	-	25.4	3.8	19.0	254.0	0.091
	LO	-	-	137.2	301.3	-	25.4	3.8	19.0	304.8	0.111
	L1	58.9	-	31.8	107.0	9.2	25.4	3.8	19.0	-	0.025
	L2	58.9	21.6	48.3	123.0	9.2	25.4	3.8	19.0	•	0.041
12000 / 15000	LO			44.5	122.0		38.1	3.8	25.4	127.0	0.058
, , , , , , , , , , , , , , , , , , , ,	LO	-	-	57.2	147.4		38.1	3.8	25.4	152.4	0.072
	LO	-		82.6	198.2		38.1	3.8	25.4	203.2	0.101
	LO	-	-	108.0	249.0	-	38.1	3.8	25.4	254.0	0.130
	LO	-	-	133.4	299.8	-	38.1	3.8	25.4	304.8	0.160
	L1	73.4	-	36.8	106.8	10.5	38.1	3.8	25.4	-	0.045
	L2	73.4	24.0	57.2	148.6	10.5	38.1	3.8	25.4	-	0.073
24000 / 30000	LO	-		128.5	300.0	-	51.0	5.1	35.0	320.0	0.267
36000 / 45000	LO			135.2	330.0		61.0	7.6	42.0	350.0	0.479
30000 / 43000	LU	-		133.2	330.0		01.0	7.0	72.0	330.0	0.473
60000	LO	-		135.2	330.0	-	61.0	7.6	42.0	350.0	0.479

<sup>\*</sup> Alternative width available. Please enquire.

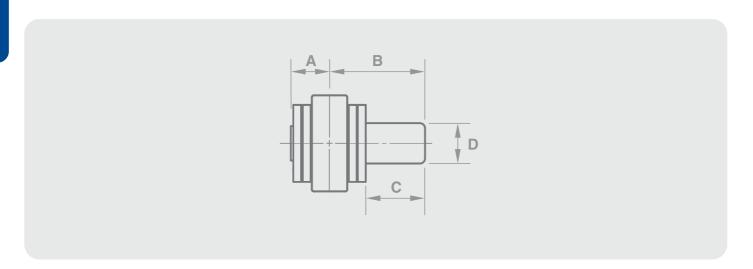
## Conveyor Chain BS Attachments Holes in Link Plates



Breaking Load Ibf	Pitch Bush Chain	Pitch Small Roller	Pitch Large Roller	Hole Diameter	Pitch*	Attachment Hole Pitch	Hole Diameter	Cone Diameter
lbf	MIN	MIN	MIN		MIN			
e hole					Two holes			
	P	P	P	D	P	A	В	C
3000	50.8	50.8	76.20	6.65				
6000 7500		95.3 95.3	:	9.9 9.9	95.3 127.0	38.1 63.5	8.3 8.3	14.7 14.7
12000/15000			133.35	13.1	101.6 108.0 139.7 177.8	25.4 34.9 60.3 101.6	9.9 9.9 9.9 9.9	17.8 17.8 17.8 17.8
24000/30000			190.50	19.4	127.0 152.4 171.5 190.5 228.6	34.9 60.3 82.6 101.6 139.7	9.9 9.9 9.9 9.9 9.9	17.8 17.8 17.8 17.8 17.8
36000/45000	241.3	241.3	317.50	22.6	152.4 190.5 228.6 304.8	44.5 82.6 114.3 190.5	11.5 11.5 11.5 11.5	20.8 20.8 20.8 20.8
60000	241.3	241.3	317.50	22.6	152.4 190.5 222.3 298.5	44.5 82.6 114.3 190.5	11.5 11.5 11.5 11.5	20.8 20.8 20.8 20.8
90000	279.4	279.4	330.20	29.0	177.8 228.6	50.8 108.0	16.7 16.7	30.5 30.5

 $<sup>\</sup>ensuremath{^*}$  Based on small plain roller - will be increased pro rata for other types.

## Conveyor Chain BS Extended Bearing Pins



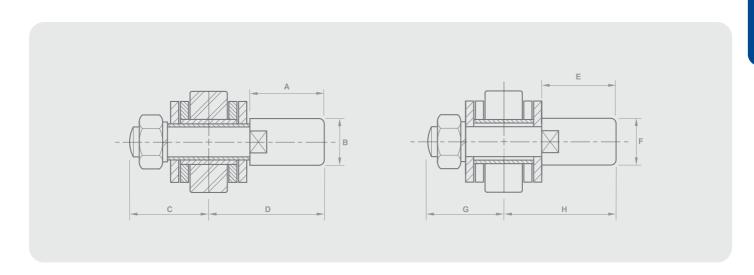
Technical Details (mm)	echnical Details (mm)							
Breaking Load <b>Ibf</b>	Centre Distance To rivet End	Centre Distance To pin End	Extension Length	Extension Diameter	Mass			
SS Extended bearing pine	5							
A	В	C	D					
3000 7500 15000 30000 45000 60000 90000	11.0 19.0 23.0 30.0 41.2 40.0 47.0	35.0 55.0 65.0 84.0 107.2 107.2 113.3	25.4 38.0 44.5 57.2 70.0 70.0	11.0 16.0 22.2 28.6 35.0 35.0 38.0	0.020 0.059 0.132 0.286 0.522 0.522 0.620			

N.B Extended bearing pins are an integral part of the chain assembly and cannot be removed without dismantling the chain .

Extended bearing pins can be specified at any pitch point of the chain.

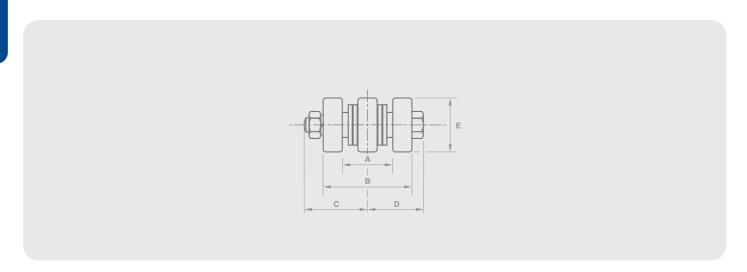
Extensions are case - hardened or can remain soft to suit customers requirements.

# Conveyor Chain BS Spigot Pins



Technical Deta	ils (mm)								
Breaking Load <b>Ibf</b>	Extended Length	Extension Diameter	Centre Distance To nut End	Centre Distance To Pin End	Extended Length	Extension Diameter	Centre Distance To nut End	Centre Distance To pin End	
Spigot pins-Th	rough hollow	pin type 1			Spigot pins-M	lid pitch on ou	ter link type 2		
	A	В	C	D	E	F	G	Н	
3000				-	25.4	11.0	17.0	35.0	
6000 7500	38.1	16.0	31.0	57.0 -	38.1 38.1	16.0 16.0	29.2 29.2	56.0 56.0	
12000 15000	44.5	19.0	36.30 -	66.3	44.5 44.5	19.0 19.0	34.3 34.3	64.8 64.8	(
24000 30000	57.2 -	28.6	48.0	85.3 -	57.2 57.2	28.6 28.6	45.7 45.7	83.8 83.8	(
36000 45000	70.0 -	31.8	61.0	109.0	70.0 70.0	31.8 31.8	58.5 58.5	107.0 107.0	(
60000					70.0	31.8	58.5	107.0	(
90000					70.0	38.0	71.0	113.0	

## Conveyor Chain BS Outboard Rollers

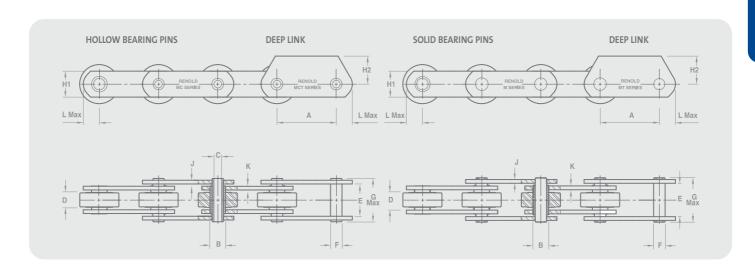


Technical Details (n	nm)						
Breaking Load <b>lb</b> f	Distance Between Outboard Rollers	Distance Over Outboard Rollers	Centre Distance To nut End	Centre Distance To bolt End	Roller Diameter	Mass (kg)	Roller Load Per Pitch Point (kg)
BS Outboard rolle	rs						
	A	В	С	D	E		
6000	44.45	75.0	55.6	46.5	33.3	0.26	165
12000	50.80	88.9	68.5	57.0	50.8	0.73	290
24000	66.00	118.0	86.6	75.7	69.9	1.94	545
36000	94.00	171.5	113.5	106.0	92.1	4.74	725

Ball bearing outboard rollers Bolted through hollow bearing pins

## **Conveyor Chain**

### ISO 1977 Specification



Chain	Technical	Details (m	m)											
Chain No	Breaking Load	Pitch	Pitch	Bush Diam.	Hollow Bearing Pin Bore Diam.	Inside Width Inner	Inside Width Outer	Pin Diam.	Pin Length	Plate Height	Plate Height	Plate Width Outer	Plate Width Inner	Head
	(Newtons) MIN	MIN	MAX	MAX	MIN	MIN	MIN	MAX	MAX					MAX
Hollow Be	earing Pin													
		A	A	В	C	D	E	F	G	H1	H2	J	K	L
MC56	56000	80	250	21.0	10.2	24.0	33.7	15.5	46.5	35.0	32.5	4.0	4.0	19.4
MC112 MC224	112000 224000	100 160	315 500	29.0 41.0	14.3 20.3	32.0 43.0	45.7 60.8	22.0 31.0	63.0 83.0	50.0 70.0	45.0 65.0	6.0 8.0	6.0 8.0	27.3 37.8
Solid Bear	ring Pin													
		A	A	В	С	D	E	F	G	H1	H2	J	K	L
M40	40000	63	250	12.5	-	20.0	28.3	8.5	41.0	25.0	22.5	3.5	3.5	15.0
M56 M80 M112	56000 80000 112000	63 80 80	250 315 400	15.0 18.0 21.0		24.0 28.0 32.0	33.3 39.4 45.5	10.0 12.0 15.0	47.0 54.6 60.6	30.0 35.0 40.0	30.0 32.5 40.0	4.0 5.0 5.0	4.0 5.0 6.0	17.5 20.2 23.0
M160 M224 M315	160000 224000 315000	100 125 160	500 630 630	25.0 30.0 36.0		37.0 43.0 48.0	52.5 60.6 70.7	18.0 21.0 25.0	72.6 84.0 97.0	50.0 60.0 70.0	45.0 60.0 65.0	6.0 6.0 8.0	7.0 8.0 10.0	29.0 35.0 38.1
M450 M630 M900	450000 630000 900000	200 250 250	800 1000 1000	42.0 50.0 60.0	• •	56.0 66.0 78.0	82.8 97.0 113.0	30.0 36.0 44.0	114.0 133.0 153.0	80.0 100.0 120.0	80.0 90.0 120.0	10.0 14.0 16.0	12.0 14.0 16.0	43.4 54.1 64.7

Dimensions listed above will not vary with pitch size in each given breaking load. Stainless and zinc plated chains are available to order. For the details of individual pitch sizes, rollers, and spare links, see pages 24 - 29.

For attachments see pages 30 - 34.

## Conveyor Chain ISO Standard – Bush

Pitch <b>mm</b>	Chain No. (Bush)	kg/m
M40 Solid Pin		
63 80 100 125 160 200 250	M40B63 M40B80 M40B100 M40B125 M40B160 M40B200 M40B250	2.29 2.11 1.97 1.86 1.76 1.70
M56 Solid Pin		
63 80 100 125 160 200 250	M56B63 M56B80 M56B100 M56B125 M56B160 M56B200 M56B250	3.50 3.20 2.90 2.70 2.50 2.40 2.30
MC56 Hollow	Pin	
80 100 125 160 200 250	MC56B80 MC56B100 MC56B125 MC56B160 MC56B200 MC56B250	3.67 3.38 3.15 2.95 2.81 2.69
M80 Solid Pin		
80 100 125 160 200 250 315	M80B80 M80B100 M80B125 M80B160 M80B200 M80B250 M80B315	4.51 4.13 3.83 3.57 3.38 3.32 3.20
M112 Solid Pi	n	
80 100 125 160 200 250 315 400	M112B80 M112B100 M112B125 M112B160 M112B200 M112B250 M112B315 M112B400	6.30 5.60 5.80 5.37 4.63 4.43 4.10 3.90

Pitch mm	Chain No. (Bush)	kg/m
MC112 Hollov	v Pin	
100 125 160 200 250 315	MC112B100 MC112B125 MC112B160 MC112B200 MC112B250 MC112B315	7.60 6.96 6.40 6.00 5.68 5.42
M160 Solid Pi	n	
100 125 160 200 250 315 400 500	M160B100 M160B125 M160B160 M160B200 M160B250 M160B315 M160B400 M160B500	9.80 8.50 7.80 7.30 6.90 6.57 6.30 6.08
M224 Solid Pi	n	
125 160 200 250 315 400 500 630	M224B125 M224B160 M224B200 M224B250 M224B315 M224B400 M224B500 M224B630	12.30 11.10 10.20 9.60 8.98 8.50 8.10 7.80
MC224 Hollov	v Pin	
160 200 250 315 400 500	MC224B160 MC224B200 MC224B250 MC224B315 MC224B400 MC224B500	12.45 10.77 9.94 9.30 8.62 8.15
M315 Solid Pi	n	
160 200 250 315 400 500 630	M315B160 M315B250 M315B250 M315B315 M315B400 M315B500 M315B630	19.20 16.70 15.60 14.70 13.80 13.20 12.80
M450 Solid Pi	n	
200 250 315 400 500 630 800	M450B200 M450B250 M450B315 M450B400 M450B500 M450B630 M450B800	23.90 22.12 20.65 19.45 18.56 17.83 17.22
M630 Solid Pi	n	
250 315 400 500 630 800 1000	M630B250 M630B315 M630B400 M630B500 M630B630 M630B800 M630B1000	35.28 32.53 30.30 28.64 27.27 26.15 25.32
M900 Solid Pi	n	
250 315 400 500 630 800 1000	M900B250 M900B315 M900B400 M900B500 M900B630 M900B800 M900B1000	53.20 48.20 44.50 41.60 39.20 37.25 35.80

<sup>\*</sup> Add an F to the end of the part number if a product with flatted round parts (Pin and Bush) is required.

## Conveyor Chain ISO Standard – Small Roller

Pitch <b>mm</b>	Chain No. (Small)	kg/m						
M40 Solid Pin	M40 Solid Pin							
63 80 100 125 160 200 250	M40563 M40580 M405100 M405125 M405160 M405200 M405250	2.59 2.34 2.15 2.00 1.87 1.78 1.70						
M56 Solid Pin								
63 80 100 125 160 200 250	M56563 M56580 M565100 M565125 M565160 M565200 M565250	3.98 3.50 3.20 2.90 2.70 2.50 2.40						
MC56 Hollow	Pin							
80 100 125 160 200 250	MC56580 MC565100 MC565125 MC565160 MC565200 MC565250	4.65 4.16 3.77 3.44 3.20 3.00						
M80 Solid Pin								
80 100 125 160 200 250 315	M80580 M805100 M805125 M805160 M805200 M805250 M805315	5.45 4.90 4.46 4.07 3.80 3.58 3.40						
M112 Solid Pi	n							
80 100 125 160 200 250 315 400	M112580 M1125100 M1125125 M1125160 M1125200 M1125250 M1125315 M1125400	7.20 6.00 5.80 5.37 5.00 4.75 4.60 4.45						

Pitch mm	Chain No. (Small)	kg/m
MC112 Hollov	v Pin	
100 125 160 200 250 315	MC1125100 MC1125125 MC1125160 MC1125200 MC1125250 MC1125315	9.34 8.35 7.45 6.87 6.38 5.97
M160 Solid Pi	n	
100 125 160 200 250 315 400 500	M160S100 M160S125 M160S160 M160S200 M160S250 M160S315 M160S400 M160S500	11.20 10.00 9.00 8.35 7.78 7.31 6.92 6.64
M224 Solid Pi	n	
125 160 200 250 315 400 500 630	M2245125 M2245160 M2245200 M2245250 M2245315 M2245400 M2245500 M2245630	14.05 12.40 11.28 10.40 9.60 8.90 8.50 8.00
MC224 Hollov	v Pin	
160 200 250 315 400 500	MC224S160 MC224S200 MC224S250 MC224S315 MC224S400 MC224S500	15.51 13.22 11.90 10.86 9.65 9.13
M315 Solid Pi	n	
160 200 250 315 400 500 630	M3155160 M3155200 M3155250 M3155315 M3155400 M3155500 M3155630	21.16 18.40 16.90 15.70 14.70 13.90 13.30
M450 Solid Pi	n	
200 250 315 400 500 630 800	M4505200 M4505250 M4505315 M4505400 M4505500 M4505630 M4505800	26.90 24.52 22.55 20.95 19.76 18.78 17.97
M630 Solid Pi	n	
250 315 400 500 630 800 1000	M630S250 M630S315 M630S400 M630S500 M630S630 M630S800 M630S1000	38.80 25.32 32.50 30.40 28.66 27.25 26.20
M900 Solid Pi	n	
250 315 400 500 630 800 1000	M9005250 M9005315 M9005400 M9005500 M9005630 M9005800 M90051000	55.80 50.48 46.12 42.90 40.24 38.00 36.45

<sup>\*</sup> Add an F to the end of the part number if a product with flatted round parts (Pin and Bush) is required.

## Conveyor Chain ISO Standard – Flanged Roller

Pitch <b>mm</b>	Chain No. (Flanged)	kg/m
M40 Solid Pin		
63 80 100 125 160 200 250	M40F63 M40F80 M40F100 M40F125 M40F160 M40F200 M40F250	4.57 3.90 3.40 3.00 2.65 2.40 2.20
M56 Solid Pin		
63 80 100 125 160 200 250	M56F80 M56F100 M56F125 M56F160 M56F200 M56F250	6.20 4.80 4.22 3.95 3.60 3.22
MC56 Hollow	Pin	
80 100 125 160 200 250	MC56F80 MC56F100 MC56F125 MC56F160 MC56F200 MC56F250	7.54 6.48 5.63 4.89 4.36 3.93
M80 Solid Pin		
80 100 125 160 200 250 315	M80F80 M80F100 M80F125 M80F160 M80F200 M80F250 M80F315	9.88 8.45 7.30 6.30 5.57 5.00 4.52
M112 Solid Pi	n	
80 100 125 160 200 250 315 400	M112F100 M112F125 M112F160 M112F200 M112F250 M112F315 M112F400	12.25 10.58 9.05 7.95 7.10 6.40 5.85

Pitch mm	Chain No. (Flanged)	kg/m					
MC112 Hollow Pin							
100 125 160 200 250 315	MC112F100 MC112F125 MC112F160 MC112F200 MC112F250 MC112F315	16.20 13.84 11.78 10.30 9.12 8.15					
M160 Solid Pi	n						
100 125 160 200 250 315 400 500	M160F125 M160F160 M160F200 M160F250 M160F315 M160F400 M160F500	16.50 14.08 12.30 10.90 9.74 8.80 8.10					
M224 Solid Pi	n						
125 160 200 250 315 400 500 630	M224F160 M224F200 M224F250 M224F315 M224F400 M224F500 M224F630	22.30 19.10 16.65 14.70 13.00 11.70					
MC224 Hollov	w Pin						
160 200 250 315 400 500	MC224F160 MC224F200 MC224F250 MC224F315 MC224F400 MC224F500	22.87 19.84 17.18 14.85 13.10 11.70					
M315 Solid Pi	n						
160 200 250 315 400 500 630	M315F200 M315F250 M315F315 M315F400 M315F500 M315F630	31.00 27.00 23.60 21.00 19.00 17.20					
M450 Solid Pi	n						
200 250 315 400 500 630 800	M450F200 M450F250 M450F315 M450F400 M450F500 M450F630 M450F800	47.56 41.05 35.67 31.28 28.02 25.34 25.13					
M630 Solid Pi	n						
250 315 400 500 630 800 1000	M630F250 M630F315 M630F400 M630F500 M630F630 M630F800 M630F1000	71.28 61.10 52.75 46.64 41.55 37.40 34.32					
M900 Solid Pi	n						
250 315 400 500 630 800 1000	M900F315 M900F400 M900F500 M900F630 M900F800 M900F1000	88.41 76.00 66.80 59.20 53.00 48.40					

<sup>\*</sup> Add an F to the end of the part number if a product with flatted round parts (Pin and Bush) is required.

## **Conveyor Chain**

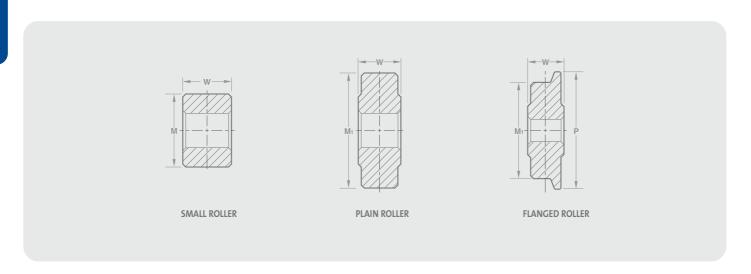
### ISO Standard – Plain Roller

Pitch <b>mm</b>	Chain No. (Plain)	kg/m						
M40 Solid Pin								
63 80 100 125 160 200 250	M40P63 M40P80 M40P100 M40P125 M40P160 M40P200 M40P250	4.33 3.70 3.25 2.88 2.56 2.32 2.14						
M56 Solid Pin								
80 100 125 160 200 250	M56P80 M56P100 M56P125 M56P160 M56P200 M56P250	5.53 4.80 4.22 3.70 3.35 3.06						
MC56 Hollow Pin								
80 100 125 160 200 250	MC56P80 MC56P100 MC56P125 MC56P160 MC56P200 MC56P250	6.68 5.78 - 4.43 3.98 3.62						
M80 Solid Pin								
80 100 125 160 200 250 315	M80P80 M80P100 M80P125 M80P160 M80P200 M80P250 M80P315	9.26 7.95 6.90 5.98 5.32 4.80 4.36						
M112 Solid Pi	n							
100 125 160 200 250 315 400	M112P100 M112P125 M112P160 M112P200 M112P250 M112P315 M112P400	11.30 9.80 8.48 7.55 6.80 6.18 5.67						

Pitch mm	Chain No. (Plain)	kg/m					
MC112 Hollow Pin							
100 125 160 200 250 315	MC112P100 MC112P125 MC112P160 MC112P200 MC112P250 MC112P315	14.90 12.80 10.96 9.65 8.60 7.73					
M160 Solid Pi	n						
125 160 200 250 315 400 500	M160P125 M160P160 M160P200 M160P250 M160P315 M160P400 M160P500	15.46 13.24 11.65 10.38 9.33 8.48 7.83					
M224 Solid Pi	n						
160 200 250 315 400 500 630	M224P160 M224P200 M224P250 M224P315 M224P400 M224P500 M224P630	20.00 17.50 15.50 13.84 12.50 11.50					
MC224 Hollow Pin							
160 200 250 315 400 500	MC224P160 MC224P200 MC224P250 MC224P315 MC224P400 MC224P500	21.75 18.65 16.17 14.12 12.45 11.21					
M315 Solid Pi	n						
200 250 315 400 500 630	M315P200 M315P250 M315P315 M315P400 M315P500 M315P630	29.00 25.40 22.43 20.00 18.20 16.70					
M450 Solid Pi	n						
200 250 315 400 500 630 800	M450P200 M450P250 M450P315 M450P400 M450P500 M450P630 M450P800	44.50 38.60 33.73 29.75 26.80 24.37 22.37					
M630 Solid Pi	n						
250 315 400 500 630 800 1000	M630P250 M630P315 M630P400 M630P500 M630P630 M630P800 M630P1000	60.40 52.47 46.00 41.20 37.24 34.00 31.60					
M900 Solid Pi	n						
315 400 500 630 800 1000	M900P315 M900P400 M900P500 M900P630 M900P800 M900P1000	83.33 72.00 63.60 56.67 51.00 46.80					

<sup>\*</sup> Add an F to the end of the part number if a product with flatted round parts (Pin and Bush) is required.

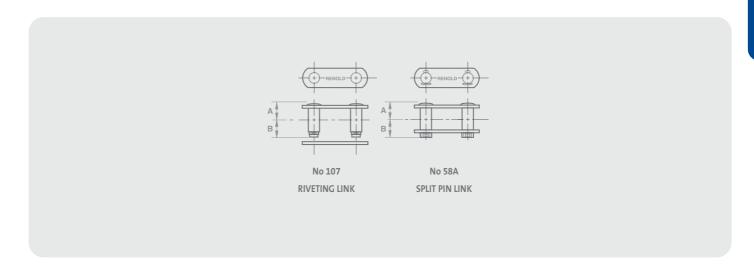
# Conveyor Chain ISO Rollers



hain Ref	Technical Deta	ils (mm)						
Chain No	Breaking Load (Newtons)	Small Tread Diam.	Roller Width	Plain Tread Diam.	Roller Width	Flanged Tread Diam.	Flange Diam.	Roller Width
ollow Bearing	Pin Rollers							
		M	W	M1	W	M1	P	W
MC56 MC112 MC224	56000 112000 224000	30.0 42.0 60.0	23.0 31.0 42.0	50.0 70.0 100.0	23.0 31.0 42.0	50.0 70.0 100.0	60.0 85.0 120.0	23.0 31.0 42.0
ona bearing i		М	W	M1	W	M1	P	W
M40 M56 M80 M112 M160 M224 M315 M450 M630	40000 56000 80000 112000 160000 224000 315000 450000 630000	18.0 21.0 25.0 30.0 36.0 42.0 50.0 60.0 70.0	19.0 23.0 27.0 31.0 36.0 42.0 47.0 55.0 65.0	36.0 42.0 50.0 60.0 70.0 85.0 100.0 120.0	19.0 23.0 27.0 31.0 36.0 42.0 47.0 55.0 65.0	36.0 42.0 50.0 60.0 70.0 85.0 100.0 120.0	42.0 50.0 60.0 70.0 85.0 100.0 120.0 140.0 170.0	19.0 23.0 27.0 31.0 36.0 42.0 47.0 55.0 65.0

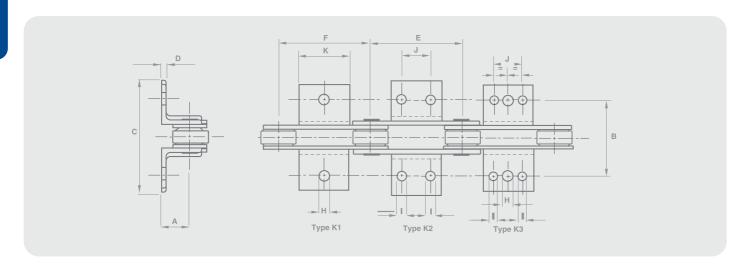
For Roller Selection procedure, consult Conveyor Chain Designer Guide.

# Conveyor Chain ISO Connecting Links



ain Ref	Technical Details (mm)				
Chain No	Breaking Load Newtons	No 107 Chain Plain Side	Centre to Fastener Side	No 58A# Chain Chain Side	Centre to Fastener Side
llow Bearing Pin Rolle	rs - connecting links				
		A	В	A	В
MC56 MC112 MC224	56000 112000 224000	22.9 31.2 41.2	22.9 31.2 41.2	22.9 31.2 41.2	29.1 38.7 50.9
id Bearing Pin Rollers	- connecting links			•	
		A	В	A	В
M40 M56 M80 M112 M160 M224 M315 M450 M630 M900	40000 56000 80000 112000 160000 224000 315000 450000 630000	20.2 23.1 27.3 31.4 36.6 41.7 48.4 56.6 65.9	20.2 23.1 27.3 31.4 36.6 41.7 48.4 56.6 65.9 76.1	20.2 23.1 27.3 31.4 36.6 41.7 48.4 56.6 65.9 76.1	24.2 29.2 33.4 38.9 44.6 51.4 58.6 70.0 79.1 93.5

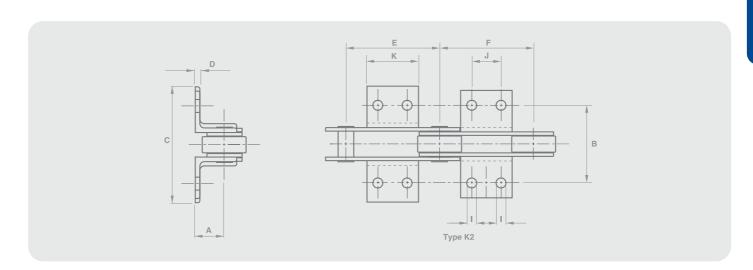
# Conveyor Chain - Solid Pin Type ISO K Attachments



Chain No	Breaking Load	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness Inner/Outer	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Centre Hole Diam.	Outer Holes Diam.	Hole Pitch	Platform Length	Mass
	(Newtons)			MAX									(kg/Att)
lid Bear	ing Pin			MAX									
		A	В	С	D		E	F	Н	1	J	K	
M40	40000	25	70	101 / 110	3.5	K1 K2 K3 K3	63 80 100 125	63 80 100 125	9.0 - 9.0 9.0	9.0 9.0 9.0	- 20 40 65	20 40 60 85	0.04 0.07 0.11 0.15
M56	56000	30	88	116 / 126	5.0	K1 K2 K3 K3	63 100 125 160	63 100 125 160	11.0 - 11.0 11.0	11.0 11.0 11.0	- 25 50 85	25 50 75 110	0.04 0.07 0.11 0.15
M80	80000	35	96	132 / 135	5.0	K1 K3 K3 K3	80 125 160 200	80 125 160 200	11.0 11.0 11.0 11.0	11.0 11.0 11.0	50 85 125	25 75 110 150	0.10 0.25 0.37 0.50
M112	112000	40	110	150 / 164	6.0	K1 K2 K3 K3	80 125 160 200	80 125 160 200	14.0 - 14.0 14.0	14.0 14.0 14.0	- 35 65 100	30 65 95 130	0.20 0.35 0.50 0.75
M160	160000	45	124	178 / 193	6.0	K1 K2 K3 K3	100 160 200 250	100 160 200 250	14.0 - 14.0 14.0	14.0 14.0 14.0	- 50 85 145	30 80 115 175	0.20 0.45 0.65 0.95
M224	224000	55	140	206 /224	8.0	K1 K2 K3 K3	125 200 250 315	125 200 250 315	18.0 18.0 18.0	18.0 18.0 18.0	- 65 125 190	40 105 165 230	0.30 0.80 1.20 1.65
M315	315000	65	160	216 / 240	10.0	K1 K2 K2 K2	160 200 250 315	160 200 250 315	18.0 - - -	18.0 18.0 18.0	50 100 155	35 85 135 190	0.50 0.85 1.40 1.85
M450	450000	75	180	228 / 255	10.0	K1 K2 K2 K2	200 250 315 400	200 250 315 400	18.0 - - -	18.0 18.0 18.0	- 85 155 240	40 125 195 280	0.60 1.40 2.40 3.50
M630	630000	90	230	302 / 333	12.0	K1 K2 K2 K2	250 315 400 500	250 315 400 500	24.0 - - -	24.0 24.0 24.0	100 190 300	50 150 240 350	1.30 3.70 5.60 7.50
M900	900000	110	280	358 / 393	15.0	K1 K2 K2 K2	250 315 400 500	250 315 400 500	30.0 - -	30.0 30.0 30.0	- 65 155 240	60 125 215 300	1.70 4.80 7.50 9.80

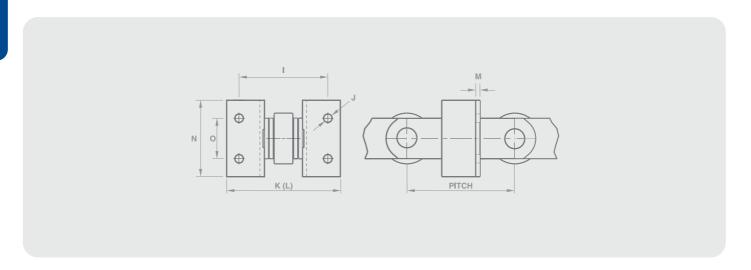
## **Conveyor Chain - Hollow Pin Type**

ISO K Attachments (Welded)



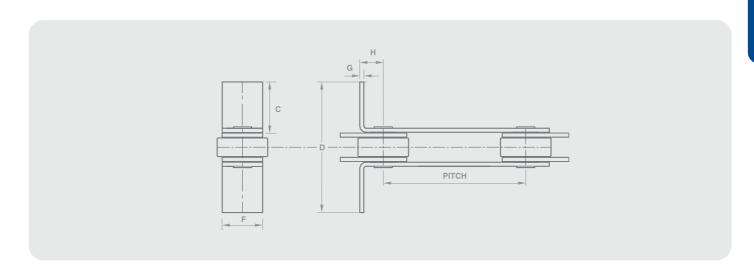
Chain Ref	Technical Details (mm)											
Chain No	Breaking Load (Newtons)	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness Inner/Outer	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Outer Holes Diam.	Hole Pitch	Platform Length	Mass (kg/Att)
Hollow Bea	ollow Bearing Pin											
		A	В	C (max)	D		E	F	1	J	K	
MC56	56000	35	88	126 / 137	5.0	K2 K2 K2	125 160 200	125 160 200	11 11 11	50 85 125	75 110 150	0.25 0.36 0.50
MC112	112000	45	110	171 / 186	6.0	K2 K2 K2	160 200 250	160 200 250	14 14 14	50 85 145	80 115 175	0.45 0.60 0.90
MC224	224000	65	140	206 / 220	8.0	K2 K2	200 250	200 250	18 18	50 100	85 135	0.85 1.35

## Conveyor Chain ISO F Attachments (Welded)



Chain Ref	Technical Details (mm)										
Chain No	Breaking Load	Minimum Pitch Inner Plate	Minimum Pitch Outer Plate	Transverse Pitch	Attachment Hole Size	Width Over Att Outer Plate	Width Over Att Inner Plate	Attachment Thickness	Attachment Face Height	Pitch of Attachment	Mass Holes
	(Newtons)										Kg
O F Attach	ttachments (Welded)										
				1	J	K	L	M	N	0	
M40	40000	80.0	80.0	70.0	9.0	110.0	101.0	3.5	40.0	20.0	0.085
M56	56000	100.0	100.0	88.0	11.0	126.0	116.0	5.0	50.0	25.0	0.204
MC56	56000	100.0	100.0	88.0	11.0	137.0	126.0	5.0	75.0	50.0	0.283
M80	80000	100.0	100.0	96.0	11.0	135.0	132.0	5.0	75.0	50.0	0.283
M112	112000	125.0	125.0	110.0	14.0	164.0	150.0	6.0	65.0	35.0	0.324
MC112	112000	125.0	125.0	110.0	14.0	186.0	171.0	6.0	80.0	50.0	0.629
M160	160000	125.0	125.0	124.0	14.0	193.0	178.0	6.0	80.0	50.0	8.629
M224	224000	160.0	160.0	140.0	18.0	224.0	206.0	8.0	105.0	65.0	1.078
MC224	244000	200.0	200.0	140.0	18.0	220.0	206.0	8.0	85.0	50.0	0.873
M315	315000	200.0	200.0	160.0	18.0	240.0	216.0	10.0	85.0	50.0	0.873
M450	450000	200.0	200.0	180.0	18.0	255.0	228.0	10.0	125.0	85.0	1.283
M630	630000	250.0	250.0	230.0	24.0	333.0	302.0	12.0	150.0	100.0	2.906
M900	900000	315.0	315.0	280.0	30.0	393.0	358.0	15.0	125.0	65.0	3.617

# Conveyor Chain ISO L Attachments (Integral)

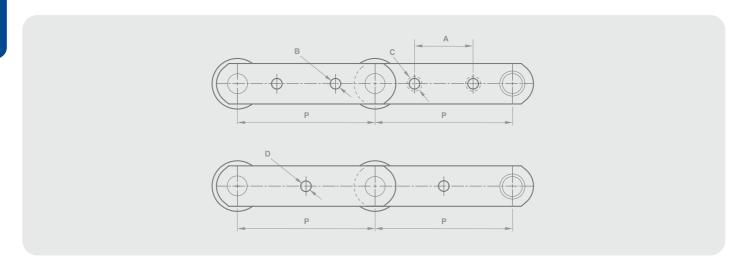


ain Ref	Technical Detai	ls (mm)							
Chain No	Breaking Load (Newtons) Ibf	Туре	Attachment Face Length	Width Over Attachment Outer	Total Height of Attachment	Attachment Thickness	Distance of Pitch point to Attachment Face	Box Width*	Mass (kg)
L Attachm	ents (Integral)								
			C	D	F	G	Н		
M40	40000	LO	75.85	180.0	25.0	3.5	30.0	200.0	0.054
M56	56000	LO	98.35	230.0	30.0	4.0	30.0	250.0	0.089
M80	80000	LO	95.30	230.0	35.0	5.0	30.0	250.0	0.124
M112	11200	LO	104.75	255.0	40.0	6.0	30.0	275.0	0.157
M160	160000	LO	113.75	280.0	50.0	7.0	35.0	300.0	0.254
M224	224000	LO	134.70	330.0	60.0	8.0	40.0	350.0	0.364
M315	315000	LO	154.65	380.0	70.0	10.0	50.0	400.0	0.645
M450	450000	LO	173.60	430.0	80.0	12.0	60.0	450.0	1.027
	450000	LO	275.00	430.0	100.0	14.0	70.0	450.0	1.676

<sup>\*</sup> Alternative width available. Please enquire.

## **Conveyor Chain - Holes in Link Plates**

ISO Attachments



Technical Details Two Holes

Chain Ref	Technical Det	ails (mm)	
Chain No.	Breaking Load (Newtons)	Pitch Bush Chain	Pitch Hole Diameter
		MIN	
One hole			
		P	D
M40	40000	100.0	11.0
M56	56000	100.0	11.0
MC56	56000	100.0	11.0
M80	80000	100.0	15.0
M112	112000	125.0	15.0
MC112	112000	125.0	15.0
M160	160000	160.0	21.0
M224	224000	160.0	21.0
MC224	224000	160.0	21.0
M315	315000	200.0	25.0
M450	450000	200.0	30.0
M630	630000	250.0	36.0
M900	900000	315.0	45.0

* Based on smal	l plain roller - wil	l be increased	pro rata for ot	her types.

Technical Details (mm)								
Attachment Hole	Hole Diameter							
Two holes								
А	В							
	Attachment							

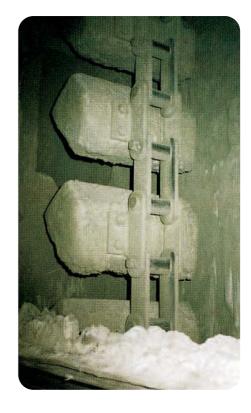
P	A	В
160.0	63.0	9.0
	42.4	
160.0	63.0	11.0
160.0	80.0	11.0
200.0	80.0	11.0
200.0	80.0	14.0
200.0	100.0	14.0
250.0	100.0	14.0
250.0	100.0	18.0
315.0	125.0	18.0
315.0	125.0	18.0
315.0	125.0	18.0
400.0	160.0	24.0
500.0	200.0	30.0

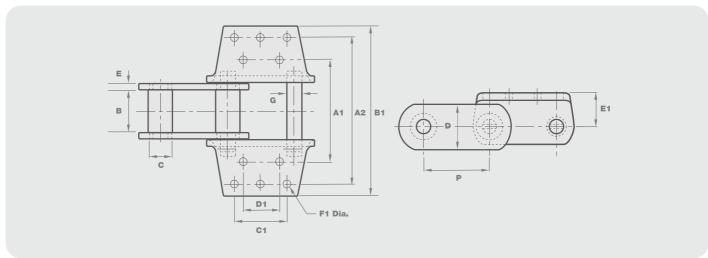
### **Elevator Chain**

Renold has been used successfully in elevator applications for many years and it has been found by experience that for most applications, chains that have been derived from the standard range of products are more than adequate. The inclusion of fillet welded K attachments to provide extra attachment strength and smaller than standard gearing rollers to reduce weight, are all that is required to produce a hard wearing and long lasting chain.

Where chains are to be used in abrasive and/or corrosive conditions then special heavy duty chains can be produced, a few examples of which are shown on the following pages.

Chain is fitted with fillet welded K attachments for the dynamic discharge (centrifugal) elevator and G attachments for positive discharge elevator. The details of the design of each of these types of elevator can be found in the Designer Guide section. It is sometimes necessary to modify the design, materials, or heat treatment of chain when certain aggressive materials are handled, and in these cases we suggest Renold Applications Engineers are consulted before a chain is specified.

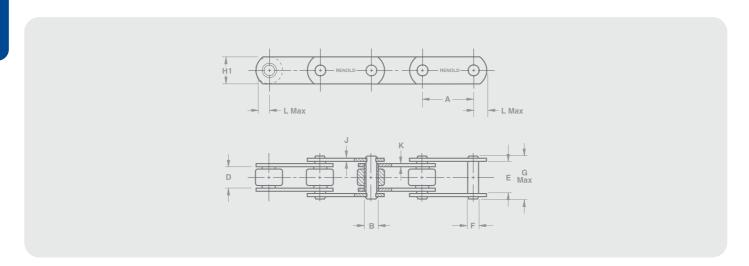




Chain	Technic	al Details	(mm)												
Chain No	Pitch	Inside Width	Plate Thickness	Plate Height	Roller Diam	Pin Diam								Type of Attachment No. of holes	Ultimate Strength (Newtons
ucket El	evator C	hain													
	P	В	E	D	С	G	A1	A2	B1	C1	D1	E1	F1		
6956-PB	6.0	76.200	12.700	76.200	44.450	25.400		184.150	242.888			47.625	17.463	K-24-4 holes	71174
6956-PB 6867-R	6.0 6.0	76.200 76.200	12.700 12.700	76.200 82.550	44.450 44.450	25.400 25.400	- 177.800	184.150 304.801	242.888 355.601	- 88.900	- 88.900	47.625 63.500	17.463 14.288	K-24-4 holes K-44-8 holes	71174 62278
										- 88.900 -	- 88.900 -				
6867-R	6.0	76.200	12.700	82.550	44.450	25.400	177.800	304.801	355.601	88.900 - 114.300	- 88.900 - 69.850	63.500	14.288	K-44-8 holes	62278
6867-R 6866-R	6.0 6.0	76.200 63.500	12.700 12.700	82.550 76.200	44.450 60.325	25.400 31.750	177.800 -	304.801 160.338	355.601 249.238	-		63.500 60.325	14.288 17.475	K-44-8 holes K-2-4 holes	62278 77402
6867-R 6866-R 6869-R	6.0 6.0 6.0	76.200 63.500 94.456	12.700 12.700 15.875	82.550 76.200 101.600	44.450 60.325 60.325	25.400 31.750 31.750	177.800 - 228.600	304.801 160.338 330.201	355.601 249.238 381.001	- 114.300	- 69.850	63.500 60.325 76.200	14.288 17.475 17.475	K-44-8 holes K-2-4 holes K-44-8 holes	62278 77402 97865
6867-R 6866-R 6869-R 6969-R	6.0 6.0 6.0 6.0	76.200 63.500 94.456 94.463	12.700 12.700 15.875 15.875	82.550 76.200 101.600 101.600	44.450 60.325 60.325 63.500	25.400 31.750 31.750 38.100	177.800 - 228.600 228.600	304.801 160.338 330.201 330.201	355.601 249.238 381.001 381.001	114.300 114.300	69.850 69.850	63.500 60.325 76.200 76.200	14.288 17.475 17.475 17.475	K-44-8 holes K-2-4 holes K-44-8 holes K-44-8 holes	62278 77402 97865 133452

## **Elevator Chain**

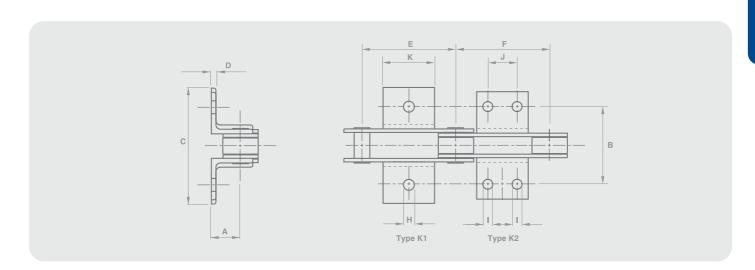
BS 4116 Part 4



Chain	Technica	al Details (m	ım)												
B.S. Series Ref	Breaking Load <b>lbf</b>	Breaking Load (Newtons)	Pitch Inch MIN	Pitch Inch MAX	Pitch mm MIN	Pitch mm MAX	Bush Dia MAX	Inside Width Inner MIN	Inside Width Outer MIN	Pin Diam MAX	Pin Length MAX	Plate Height	Width Outer	Width Inner	Head MAX
S Elevat	or Chain-	Solid Bear	ring Pin	A	A	A	В	D	E	F	G	H1	J	К	ı

The dimensions listed will not vary with pitch size for each given breaking load. Stainless steel and zinc plated chains are available to order. For mass of chains see page 9.

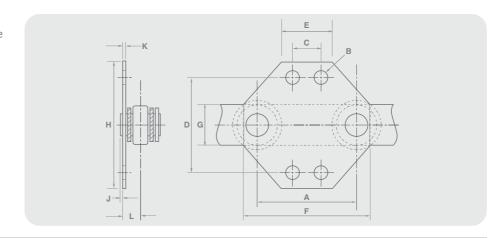
## **BS K Attachments**



lechnical L	Details (mm)												
Breaking Load	Breaking Load	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness Inner/Outer	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Centre Hole Diam	Outer Holes Diam	Attachment Hole Pitch	Platform Length	Mass
lbf	(Newtons)												(kg/Att
K Attac	hments (W	elded)											
		A	В	C	D		E	F	Н	1	J	K	
7500	33000	19.0	76.2	102/118	4	K1 K1 K2 K2	63.5 88.9 88.9 114.3	76.2 101.6 101.6 127.0	10.5 10.6 -	9.2 9.2	- - 31.8 57.2	28 56 56 84	0.054 0.104 0.104 0.163
15000	67000	31.8	88.9	125/136	5	K1 K2 K2 K2	88.9 88.9 114.3 152.4	101.6 101.6 152.4 177.8	13.7 - -	10.5 10.5 10.5	31.8 57.2 88.9	56 56 84 127	0.193 0.193 0.289 0.443
30000	134000	38.0	108.0	145/159	6	K2 K2 K2 K2 K2	127.0 152.4 177.8 203.2 228.6	127.0 152.4 177.8 203.2 228.6	:	12.2 12.2 12.2 12.2 12.2	31.8 57.2 69.9 88.9 133.4	56 84 108 127 168	0.299 0.449 0.581 0.685 0.907
45000 60000	200000 267000	51.0	146.0	182/200	8	K2 K2 K2 K2	152.4 203.2 228.6 304.8	152.4 203.2 228.6 304.8	:	13.7 13.7 13.7 13.7	38.1 76.2 88.9 165.1	70 112 152 229	0.581 0.930 1.220 1.905
90000	400000	57.0	171.5	229/252	10	K1 K2 K2 K2	228.6 228.6 228.6 304.8	228.6 228.6 228.6 304.8	19.5 - - -	19.5 19.5 19.5	- 44.5 88.9 165.1	89 89 152 229	1.050 1.050 1.810 2.710

#### **G2** Attachments

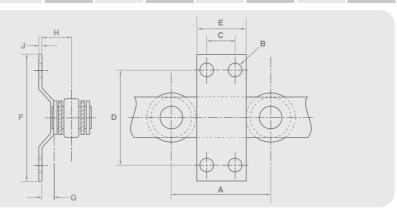
Produced to order; modifications to design and dimensions can be made to suit customer's own requirements.



Technical	Details (mm)												
Breaking Load	Breaking Load	Pitch	Hole* Diam	Horizontal Centres	Vertical Centres	Flat at top of Attachment	Overall Width	Chain Plate Depth	Overall Depth	Pin Projection	Plate Thickness	Face to Chain Centre Line	Mass Each
lbf	(Newtons)												kg
BS G2 Atta	achments (	Internal)											
		A	В	С	D	E	F	G	Н	J	K	L	
		76.2	9.35	22.23	57.15	44.45	105.41	25.40	82.55	1.91	3.80	16.76	0.12
7,500	33,000	101.6	9.35	38.10	57.15	69.85	130.81	25.40	82.55	1.91	3.80	16.76	0.16
		152.4	9.35	38.10	57.15	69.85	181.61	25.40	82.55	1.91	3.80	16.76	0.20
		101.6	10.69	31.75	76.20	57.15	143.51	38.10	101.6	2.29	3.80	20.32	0.19
15,000	67,000	152.4	10.69	63.50	76.20	107.95	194.31	38.10	101.6	2.29	3.80	20.32	0.29
		152.4	12.30	50.80	101.6	88.9	208.28	50.80	139.7	3.05	5.08	26.67	0.50
30,000	134,000	203.2	12.30	76.20	114.3	114.3	259.10	50.80	152.4	3.05	5.08	26.67	0.80
		203.2	13.87	88.90	127.0	127.0	269.20	60.96	165.1	3.30	7.60	37.34	1.23
45,000	200,000	304.8	13.87	88.90	127.0	127.0	370.80	60.96	165.1	3.30	7.60	37.34	1.55

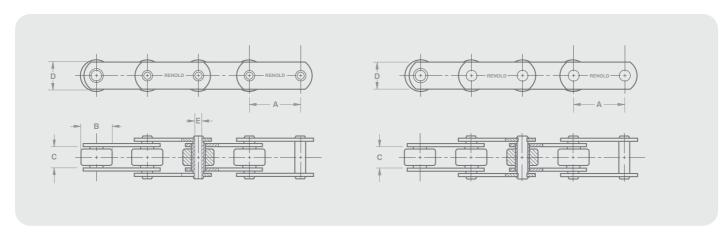
<sup>\*</sup> Alternatively, square holes can be provided Wheels to have shroud removed on one side.

Produced to order; modifications to design and dimensions can be made to suit customer's own requirements.



lechnical D	1	27.1	11 L D:		W 10 1			5	5 : " (		
Breaking Load	Breaking Load	Pitch	Hole Diam	Horizontal Centres	Vertical Centres	Attachment Width	Attachment Depth	Projection from chain plate	Projection from chain centre	Attachment Thickness	Mass each
lbf	(Newtons)										kg
S G2 Attac	hments (Wel	ded)									
		A	В	C	D	E	F	G	Н	J	
		76.2	9.35	22.23	57.15	44.45	82.55	14.99	31.75	3.80	0.12
7,500	33,000	101.6	9.35	38.10	57.15	69.85	82.55	14.99	31.75	3.80	0.19
		152.4	9.35	38.10	57.15	69.85	82.55	14.99	31.75	3.80	0.19
		101.6	10.69	31.75	76.2	57.15	101.60	17.78	38.10	4.75	0.24
15,000	67,000	152.4	10.69	63.50	76.2	107.95	101.60	17.78	38.10	4.75	0.45
		152.4	12.30	50.80	101.6	88.9	139.70	24.13	50.80	6.35	0.67
30,000	134,000	203.2	12.30	76.20	114.3	114.3	152.40	24.13	50.80	6.35	0.94
		203.2	12.30	76.20	114.3	114.3	152.40	24.13	50.80	6.35	0.94
45,000	200,000	304.8	13.87	88.90	127.0	127.0	165.10	26.16	63.50	7.92	1.41

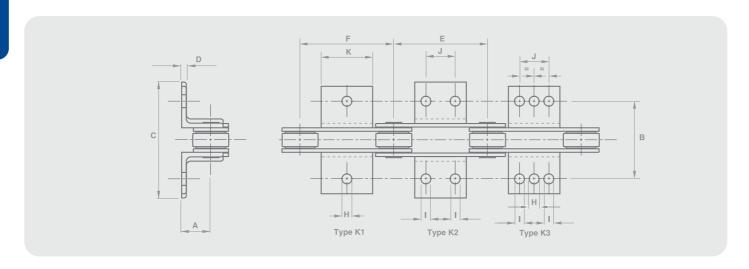
ISO - 1977, DIN8167, BS4116



Chain Ref.	Technical [	Details (mm)										
Chain No	Breaking Load (Newtons)	Pitch	Pitch	Roller Dia	Inside Width Inner	Inside Width Outer	Pin Dia	Pin Length	Plate Height	Width Outer	Width Inner	Head
	MIN	MIN	MAX	MAX	MIN	MIN	MAX	MAX				MAX
ISO Elevato	r Chain - So	lid Bearing I	Pin									
		A	A	В	D	E	F	G	H1	J	K	L
M40	40000	63	250	12.5	20.0	28.3	6.5	41.0	25.0	3.5	3.5	15.0
M56 M80 M112	56000 80000 112000	63 80 80	250 315 400	15.0 18.0 21.0	24.0 28.0 32.0	33.3 39.4 45.5	10.0 12.0 15.0	46.5 55.0 63.5	30.0 35.0 40.0	4.0 5.0 6.0	4.0 5.0 6.0	17.5 20.2 23.0
M160 M224 M315	160000 224000 315000	100 125 160	500 630 630	25.0 30.0 36.0	37.0 43.0 48.0	52.5 60.6 70.7	18.0 21.0 25.0	73.5 84.0 97.0	50.0 60.0 70.0	7.0 8.0 10.0	7.0 8.0 10.0	29.0 35.0 38.1
M450 M630 M900	450000 630000 900000	200 250 250	800 1000 1000	42.0 50.0 60.0	56.0 66.0 78.0	82.8 97.0 113.0	30.0 36.0 44.0	114.0 133.0 153.0	80.0 100.0 120.0	12.0 14.0 16.0	12.0 14.0 16.0	43.4 54.1 64.7

Dimensions listed above will not vary with pitch size in each given breaking load. Stainless and zinc plated chains are available to order. For mass of chains see page 24.

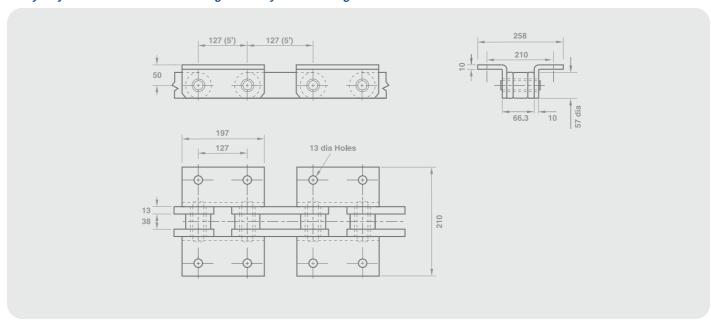
## ISO K Attachments



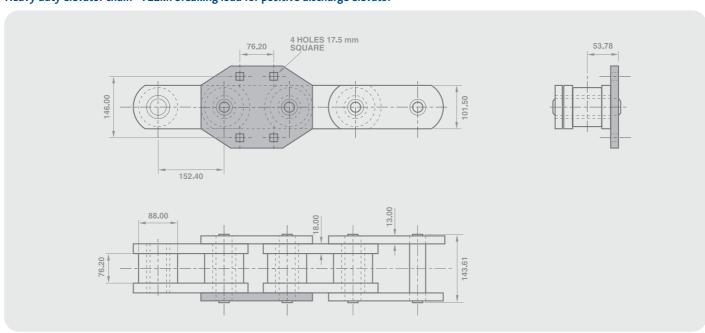
Chain Ref.	Technical D	etails (mm)											
Chain No	Breaking Load (Newtons)	Platform Height	Transverse Pitch	Width Over Attachment Inner/Outer	Attachment Thickness Inner/Outer	Attachment Type	Attachment Minimum Outer Pitch	Attachment Minimum Inner Pitch	Centre Hole Diam	Outer Holes Diam	Attachment Hole Pitch	Platform Length	Mass (kg/Att)
ISO K Atta	chments (\	Welded)											
		A	В	С	D		E	F	Н	1	1	K	
M40	40000	25	70	104/112	3.5	K1 K2 K3 K3	63 80 100 125	63 80 100 125	9 - 9 9	- 9 9 9	20 40 65	20 40 60 85	0.04 0.07 0.11 0.15
M56	56000	30	88	119/129	5.0	K1 K2 K3 K3	63 100 125 160	63 100 125 160	11 - 11 11	11 11 11	- 25 50 85	25 50 75 110	0.04 0.07 0.11 0.15
M80	80000	35	96	135/147	5.0	K1 K3 K3 K3	80 125 160 200	80 125 160 200	11 11 11 11	11 11 11	50 85 125	25 75 110 150	0.10 0.25 0.37 0.50
M112	112000	40	110	151/165	6.0	K1 K2 K3 K3	80 125 160 200	80 125 160 200	14 - 14 14	14 14 14	- 35 65 100	30 65 95 130	0.20 0.35 0.50 0.75
M160	160000	45	124	178/195	6.0	K1 K2 K3 K3	100 160 200 250	100 160 200 250	14 - 14 14	14 14 14	50 85 145	30 80 115 175	0.20 0.45 0.65 0.95
M224	224000	55	140	206/224	8.0	K1 K2 K3 K3	125 200 250 315	125 200 250 315	18 - 18 18	18 18 18	- 65 125 190	40 105 165 230	0.30 0.80 1.20 1.65
M315	315000	65	160	216/240	10.0	K1 K2 K2 K2	160 200 250 315	160 200 250 315	18 - -	18 18 18	50 100 155	35 85 135 190	0.50 0.85 1.40 1.85
M450	450000	75	180	228/255	10.0	K1 K2 K2 K2	200 250 315 400	200 250 315 400	18 - -	18 18 18	- 85 155 240	40 125 195 280	0.60 1.40 2.40 3.50
M630	630000	90	230	302/333	12.0	K1 K2 K2 K2	250 315 400 500	250 315 400 500	24 - -	24 24 24 24	100 190 300	50 150 240 350	1.30 3.70 5.60 7.50
M900	900000	110	280	358/393	15.0	K1 K2 K2 K2	250 315 400 500	250 315 400 500	30 - - -	30 30 30	- 65 155 240	60 125 215 300	1.70 4.80 7.50 9.80

## **Heavy Duty Elevator Chain**

#### Heavy duty elevator chain - 378kn breaking load for dynamic discharge elevator

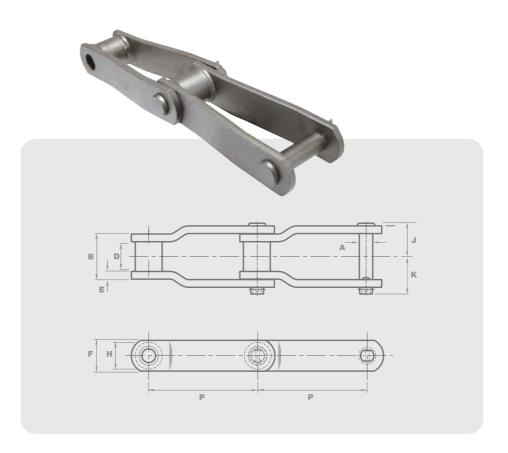


#### Heavy duty elevator chain - 711kn breaking load for positive discharge elevator



## **Welded Steel Chain** Type W

Permaweld chains are normally of cranked link construction. The pins have a press fit into the side plates, thus eliminating unnecessary wear due to pin movement. Accurate punching of the plate, automated machine welding and assembly of the bushes to side plates ensures high quality and dimensional control. Steels of medium carbon grades are used for pin and plates and may be heat treated to produce greater strength and wear resistance. Bushes are of carburizing grades of carbon steel which may be case hardened.



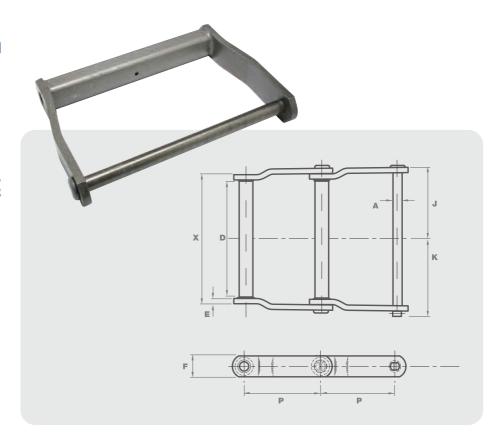
Chain Ref.	Technical D	Details (mm)										
Chain No	Pitch mm	Pitch inch	Mass kg/m	Average Ultimate Strength (Newtons)	Pin Diameter	Sprocket Thickness	Plate Thickness	Plate Height	Bush Diameter	CL to Pin Head	CL to Pin End	Outside Widt at Inner Plate
						MAX						
Permaweld	W											
	P	P			A	D	E	F	Н	J	K	В
W-78	66,269	2.609	6.251	106762	12.700	28.575	6.350	28.575	22.225	36.116	40.084	50,800
W-78P	66,269	2,609	6.251	133452	12.700	28.575	6.350	28.575	22.225	36.116	40.081	50.800
W-82	78.105	3.075	7.442	115658	14.288	31.750	6.350	31.750	26.988	38.497	43.259	57.150
W-82P	78.105	3.075	7.442	155694	14.288	31.750	6.350	31.750	26.988	38.506	43.256	57.150
W-82XHD	78.105	3.075	13.097	204626	19.050	31.750	9.525	38.100	34.925	45.641	53.578	63.500
W-106	152,400	6.000	9.972	164591	19.050	41.275	9.525	38.100	34.925	49.609	56.753	71.438
W-106P	152,400	6.000	9.972	260231	19.050	41.275	9.525	38.100	34.925	49.606	56,744	71.450
W-106HD	152,400	6.000	12.204	222420	19.050	41.275	12.700	38.100	31.750	56.356	63.500	77.788
W-110	152,400	6.000	9.674	204626	19.050	47.625	9.525	38.100	31.750	51.991	59.134	76.200
W-110P	152,400	6.000	9.674	266904	19.050	47.625	9.525	38.100	36.513	51.994	59.131	76.200
W-111	120,900	4.760	12.204	204626	19.050	57.150	9.525	38.100	36.513	56.753	63.897	85.725
W-111P	120.900	4.760	12.204	266904	19.050	57.150	9.525	38.100	41.275	56.744	63.907	85.725
W-124	101.600	4.000	12.353	204626	19.050	41.275	9.525	38.100	41.275	49.606	56.744	71.438
W-124P	101.600	4.000	12.353	266904	19.050	41.275	9.525	38.100	41.275	49.606	56.744	71.450
W-124HD	103,200	4.063	20.241	373665	22.225	41.275	12.700	50.800	41.275	55.959	62.706	76.200
W-124HDP	103.200	4.063	20.241	400356	22.225	41.275	12.700	50.800	41.275	55.956	62.713	76.200
W-132	153.670	6.050	19.497	373665	25.400	73.025	12.700	50.800	41.275	74.216	82.550	111.125
W-132P	153.670	6.050	19.497	444840	25.400	73.025	12.700	50.800	41.275	74.219	82.550	111.125
W-132HD	153.670	6.050	22.920	467082	25.400	73.025	15.875	50.800	41.275	80.566	88.900	117.475
W-132HDP	153.670	6.050	22.920	533808	25.400	73.025	15.875	50.800	41.275	80.569	88.900	117.475
W-134	103.200	4.063	24.855	458185	25.400	41.275	12.700	63.500	41.275	56.744	62.706	76.200
W-134P	103.200	4.063	24.855	498221	25.400	41.275	12.700	63.500	41.275	56.744	62.713	76.200
WS-150	153.670	6.050	23.515	373665	25.400	73.025	12.700	63.500	44.450	74.219	82.550	111.125
WS-150P	153.670	6.050	23.515	444840	25.400	73.025	12.700	63.500	44.450	74.219	82.550	111.125
WS-157	153.670	6.050	29.022	556050	28.575	69.850	15.875	63.500	44.450	80.963	92.075	117.475
WS-157P	153.670	6.050	29.022	622776	28.575	69.850	15.875	63.500	44.450	80.975	92.075	117.475
W-182	78.105	3.075	12.353	204626	19.050	28.575	9.525	38.100	34.925	42.466	50.403	57.150
WS-784	101.600	4.000	4.911	106762	12.700	28.575	6.350	28.575	22.225	36.119	40.081	50.800
WS-784P	101.600	4.000	4.911	133452	12.700	28.575	6.350	28.575	22.225	36.119	40.081	50.800
WS-855PB	153.670	6.050	27.534	667260	28.575	69.850	14.288	63.500	44.450	76.994	89.694	112.713

## **Welded Steel Chain**

## Type WD

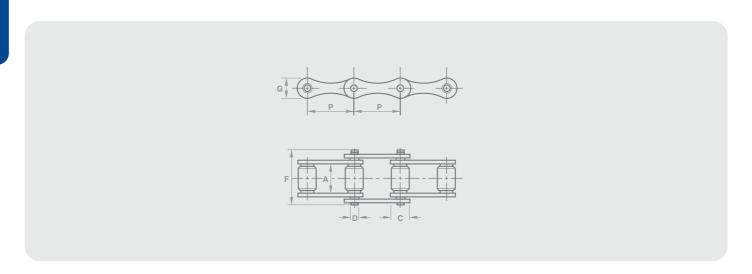
Type WD Permaweld drag chains are furnished with heat treated pins and formed steel bushes. The bushes are shaped to provide maximum conveying capacity, shock resistance, toughness and higher yield strength in bending than many comparable cast and other welded links. Precise press fits of the pins in the side plates and single flats milled on the pin ends prevent unnecessary wear due to pin

Pins and side plates are made of medium carbon steels. Bushes are of carburizing grade steels which are case hardened on the heat treated chains. Accurately punched holes and assembly procedures ensure dimensional control. The flexibility of welded construction provides a wider range of attachment links than is normally offered for similar cast chains.



Chain Ref.	Technical De	tails (mm)									
Chain No	Pitch mm	Pitch inch	Mass kg/m	Average Ultimate Strength (Newtons)	Pin Diameter	Sprocket Thickness MAX	Plate Thickness	Plate Height	CL to Pin Head	CL to Pin End	Outside Width at Inner Plate
Permaweld	WD										
	P	P			A	D	E	F	J	K	X
WD-102	127.0	5.0	15.478	226868	19.050	161.925	9.525	38.100	113.903	121.047	196.850
WD-102P	127.0	5.0	15.478	266904	19.050	161.925	9.525	38.100	113.894	121.057	196.850
WD-104	76.2	3.0	11.758	226868	19.050	104.775	9.525	38.100	83.741	90.885	136.525
WD-104P	76.2	3.0	11.758	266904	19.050	104.775	9.525	38.100	83.744	90.881	136.525
WD-110	76.2	3.0	16.074	226868	19.050	228.600	9.525	38.100	147.241	154.385	263.526
WD-110P	76.2	3.0	16.074	266904	19.050	228.600	9.525	38.100	147.244	154.382	263.526
WD-112	203.2	8.0	13.544	226868	19.050	228.600	9.525	38.100	147.241	154.385	263.526
WD-112P	203.2	8.0	13.544	266904	19.050	228.600	9.525	38.100	147.244	154.382	263.526
WD-116	203.2	8.0	20.985	226868	19.050	330.201	9.525	44.450	194.866	202.010	358.776
WD-116P	203.2	8.0	20.985	306940	19.050	330.201	9.525	44.450	194.869	202.007	358.776
WD-120	152.4	6.0	26.939	311388	22.225	222.250	12.700	50.800	150.019	156.369	260.351
WD-120P	152.4	6.0	26.939	400356	22.225	222.250	12.700	50.800	150.013	156.363	260.351
WD-122	203.2	8.0	22.771	311388	22.225	222.250	12.700	50.800	150.013	156.369	260.351
WD-122P	203.2	8.0	22.771	400356	22.225	222.250	12.700	50.800	150.013	156.363	260.351
WD-480	203.2	8.0	25.450	311388	22.225	282.576	12.700	50.800	181.769	188.119	323.851
WD-480P	203.2	8.0	25.450	400356	22.225	282.576	12.700	50.800	181.763	188.113	323.851
WD-480HP	203.2	8.0	27.980	449288	25.400	282.576	12.700	50.800	181.763	188.113	323.851
WD-480XHD	203.2	8.0	31.255	378114	25.400	282.576	15.875	50.800	188.119	194.469	330.201
WD-480XDHP	203.2	8.0	31.255	542705	25.400	282.576	15.875	50.800	188.113	194.463	330.201

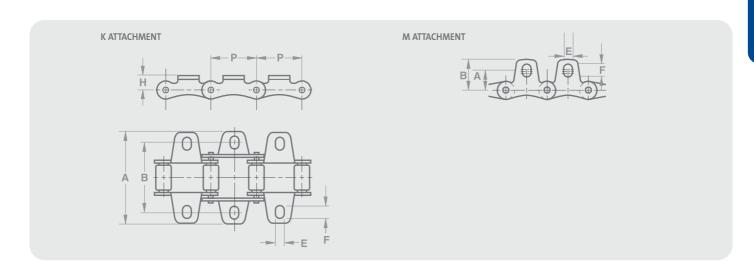
# Agricultural Chain Range



Chain Ref.	Technical Deta	ils (mm)					
Chain Number	Pitch Inch	Inside Width	Roller Dia	Pin Dia	Over Pin	Plate Height	Breaking Load <b>kN</b>
ISO 487 Chain							
	P	A	С	D	F	G	
\$32 \$42 \$45 \$52 \$55 \$62 \$77 \$88 \$CA550	1.15 1.375 1.63 1.50 1.63 1.65 2.297 2.609 1.63	15.90 19.10 22.23 22.23 22.23 25.40 22.23 28.60 19.81	11.40 14.27 15.20 15.20 17.80 19.10 18.30 22.90 16.70	4.47 7.01 5.74 5.74 5.74 5.74 8.92 8.92 7.19	26.70 34.30 38.10 38.10 40.60 43.20 50.80 36.00	13.50 19.80 17.30 17.30 17.30 17.30 26.20 26.20 19.30	20.0 42.3 32.9 32.9 32.9 34.7 56.1 56.1 45.0

All chains are electroless nickel plated

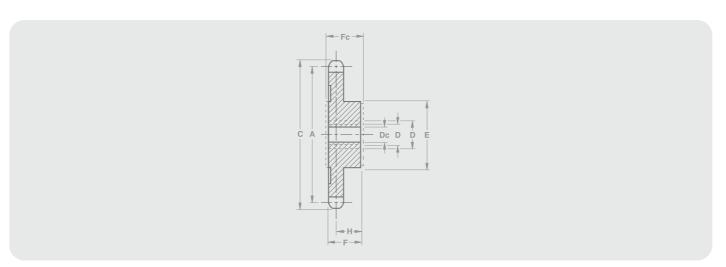
# Agricultural Chain Range K Attachment and M Attachment



Chain Ref.	Technical Details (mm)				
Chain No	Transverse Pitch	Overall Width	Platform Height	Hole Width	Hole Length
C Attachments					
	В	A	Н	E	F
S32	42.9	60.0	8.6	6.5	8.1
S42	54.0	74.0	14.0	8.3	12.5
\$45	54.0	74.0	11.4	8.3	11.5
S52	58.8	77.2	11.4	8.5	10.0
\$55	54.0	74.0	11.4	8.3	11.5
S62	66.6	95.0	11.4	8.5	14.8
\$77	76.2	101.0	20.8	8.5	11.5
\$88	96.8	119.0	20.8	8.5	10.0
CA550	54.0	71.4	12.7	8.35	11.5

Chain Ref.	Technical Det	tails (mm)		
Chain No	Attachment Height	Hole Centre	Hole Width	Hole Length
M Attachme	nts			
	В	A	E	F
\$32 \$42 \$45 \$52 \$55 \$62 \$77 \$88	26.0 34.1 30.0 31.6 30.0 38.1 49.8 55.4	17.3 23.6 19.8 22.1 19.8 24.6 36.3 43.7	6.5 8.3 8.3 8.5 8.3 8.5 8.5 8.5	6.9 11.5 11.5 10.0 11.5 14.7 11.5

# Agricultural Chain Standard Sprockets

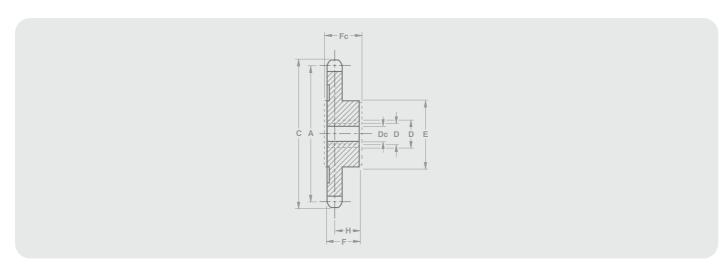


No. of Teeth	Part No .										
		P.C.D.	Top Diam	Bore Stock Cast	Bore Machined	Bore Machined	Boss Diam	Boss Length Cast	Boss Length Machined	Chain ⊈ from Boss Face when Machined	Weight (Cast Bore)
					MIN	MAX					kg
For Chain No.	. 532										
		A	С	Dc	D	D	E	Fc	F	Н	
9 10	281063* 281064*	85.39 94.51	94 103	-	•	38 38	64 70	41 41	38 38	31.0 31.0	1.13 1.36
11	281065*	103.68	113			38	70	41	38	31.0	1.47
12	281066*	112.85	122			38	70	41	38	31.0	1.59
14	281068*	131.27	140	-		45	76	41	38	31.0	2.15
15	281069*	140.49	149	-	-	45	76	41	38	31.0	2.38
16	281070*	149.73	159	-	-	45	76	41	38	31.0	2.49
18	281072	168.22	177	-	-	45	76	41	38	31.0	2.61
27	281078	251.61	261	19	24	50	89	51	44	32.0	4.54
30	281080	279.45	288	19	24	50	89	51	44	32.0	4.99
34	281082	316.59	325	19	24	50	89	51	44	32.0	5.44
For Chain No	o. S52										
	A	C	Dc	D	D	E	Fc	F	Н		
9	281123*	111.40	125			48	83	54	51	41.0	2.38
10	281124*	123.39	136	-		50	89	54	51	41.0	2.84
11	281125*	135.23	148	-	-	50	89	54	51	41.0	3.29
12	281126*	147.22	161	-	•	50	89	54	51	41.0	3.63
13	281127*	159.21	172	-	-	50	89	54	51	41.0	4.08
14 15	281128* 281129*	171.22 183.26	184 197			60 60	102 102	54 54	51 51	41.0 41.0	4.99 5.44
16	281129	195.30	209	19	24	60	102	57	51	41.0	5.44
17	281131	207.34	220	19	24	60	102	57	51	41.0	5.67
18	281132	219.41	233	19	24	60	102	57	51	41.0	5.90
27	281138	328.19	341	24	28	65	108	64	57	41.5	9.07
30	281140	364.49	378	24	28	65	108	64	57	41.5	9.98
34	281142	412.93	426	24	28	70	121	64	57	41.5	13.15
For Chain No	o. S45										
	A	C	Dc	D	D	E	Fc	F	Н		
9	281093*	121.06	134	-		50	89	54	51	41.0	2.95
10	281094*	133.99	147			50	89	54	51	41.0	3.29
12	281096*	159.97	173	-		50	89	54	51	41.0	4.08
15	281099	199.14	212	19	24	60	102	57	51	41.0	5.44
18	281102	238.43	252	19	24	60	102	57	51	41.0	6.58
27	281108	356.62	370	24	28	65	108	64	57	41.5	9.98
30	281110	396.09	409	24	28	65	108	64	57	41.5	10.89
34	281112	448.72	462	24	28	70	121	70	64	48.0	14.51

 $<sup>\</sup>ensuremath{^*}$  Small solid sprockets. Other sprockets available on request.

## **Agricultural Chain**

## Standard Sprockets



Chain Ref.		Technical D	etails (mm)								
No. of Teeth	Part No .	P.C.D.	Top Diam	Bore Stock Cast	Bore Machined	Bore Machined	Boss Diam	Boss Length Cast	Boss Length Machined	Chain from Boss Face when Machined	Weight (Cast Bore) ⊈ kg
					MIN	MAX					
For Chain No	o. S62										
		A	С	Dc	D	D	E	Fc	F	Н	
9 10 11 12 13	281153* 281154* 281155* 281156* 281157*	122.53 135.64 148.77 161.93 175.13	135 149 162 175 188	: : :	:	50 60 60 60	89 102 102 102 102	60 60 60 60	57 57 57 57 57	46.0 46.0 46.0 46.0	3.29 4.31 4.99 5.44 6.12
14 15 16 17	281158* 281159 281160 281161	188.34 201.57 214.83 228.09	201 215 228 241	19 19 19	24 24 24 24	65 65 65 65	108 108 108 108	60 64 64 64	57 57 57 57	46.0 46.0 46.0 46.0	6.58 7.03 7.26 7.71
18 27 30 34	281162 281168 281170 281172	241.35 361.01 400.94 454.23	254 374 414 467	19 24 24 24	24 28 28 28	65 70 70 75	108 121 121 133	64 70 70 76	57 64 64 70	46.0 46.5 46.5 53.0	8.16 12.70 14.06 19.05

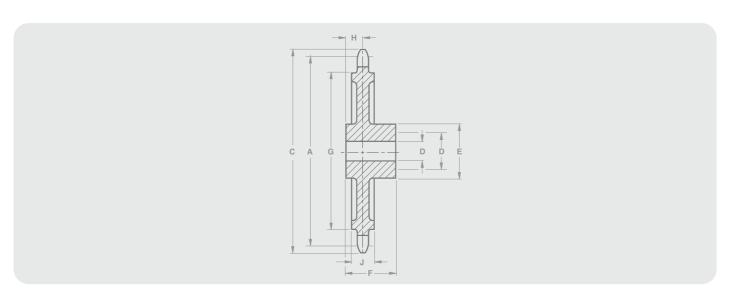
<sup>\*</sup> Small solid sprockets. Other sprockets available on request.

Sprockets can be modified on request. When keyways are requested, large sprockets are faced both sides of the boss - small solid sprockets are faced on boss side only. Sprockets for other sizes of chain - details on request.

# Section 2 **Conveyor Sprocket Details**

## **Standard Conveyor Sprockets**

To Suit BS4116 Part 4



#### 3000 lbf, 13000 Newtons Breaking Load

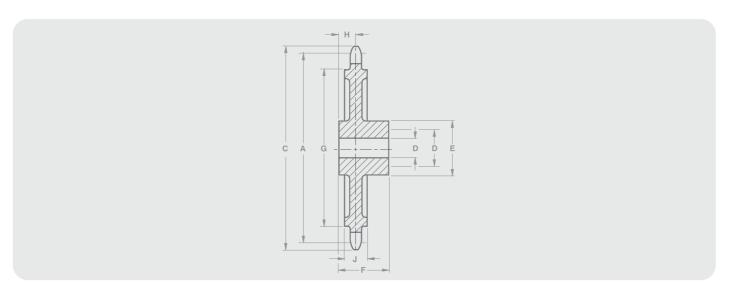
Sprocket F	Ref.			Technica	l Details (mr	n)							
Pitch Inch	Pitch mm	No. of Teeth	Renold Part No.	PCD	Top Diam.	Shroud Diam.	Shroud Width	Bore Diam.	Bore Diam.	Boss Diam.	€ of Tooth to End Face*	Distance Through*	Weight Approx <b>kg</b>
								MIN	MAX				
2.1mm	Diameter Ro	oller											
				A	C	G	J	D	D	E	Н	F	
1.5	38.1	8	208121#	99.57	109			16	32	57	9.5	38	0.9
		12	208125#	147.22	157	-		16	38	76	9.5	45	2.0
2.0	50.8	8	208212#	132.74	142	-		24	38	76	9.5	45	1.8
		12	208216#	196.27	207	156	19	24	45	89	9.5	51	3.9
3.0	76.2	8	208391#	199.11	208	150	19	24	45	89	9.5	51	3.7
		12	208395#	294.41	305	250	19	24	45	89	9.5	51	7.9
5.4mm	Diameter Ro	oller											
				A	С	G	J	D	D	E	Н	F	
1.5	38.1	8	208151##	99.57	105			16	32	57	9.5	38	0.9
		12	208155##	147.22	157	-		16	38	76	9.5	45	2.0
2.0	50.8	8	208241##	132.74	142	-		24	38	76	9.5	45	1.8
		12	208245##	196.27	207	156	19	24	45	89	9.5	51	3.9
3.0	76.2	8	208422##	199.11	208	150	19	24	45	89	9.5	51	3.7
		12	208426##	294.41	306	250	19	24	45	89	9.5	51	7.9
4.0	101.6	8	208501##	265.51	274	212	19	24	45	89	9.5	51	7.0
4.0	101.0	12	208505##	392.56	404	345	19	24	_	102	9.5		12.2

# Sprockets with cut teeth ## sprockets with cast teeth.

\* After machine facing the boss.
Boss and Distance Through dimensions may vary, please call to discuss your requirements.

## **Standard Conveyor Sprockets**

To Suit BS4116 Part 4



#### 4500 lbf, 20000 Newtons Breaking Load

			8 =0										
Sprocket Ro	ef.			Technical	l Details (mn	1)							
Pitch Inch	Pitch mm	No. of Teeth	Renold Part No.	PCD	Top Diam.	Shroud Diam.	Shroud Width	Bore Diam.  MIN	Bore Diam.  MAX	Boss Diam.	⊈ of Tooth to End Face*	Distance Through*	Weight Approx <b>kg</b>
25.4mm D	Diameter Ro	oller											
				A	С	G	J	D	D	E	Н	F	
1.5	38.1	8 12	208151## 208155##	99.57 147.22	105 157	:	:	16 16	32 38	57 76	9.5 9.5	38 45	0.9 2.0
2.0	50.8	8 12	208241## 208245##	132.74 196.27	142 207	- 156	- 19	24 24	38 45	76 89	9.5 9.5	45 51	1.8 3.9
3.0	76.2	8 12	208422##	199.11 294.41	208	150 250	19 19	24 24	45 45	89 89	9.5 9.5	51 51	3.7 7.9

#### 6000 lbf, 27000 Newtons and 7500 lbf, 33000 Newtons Breaking Load

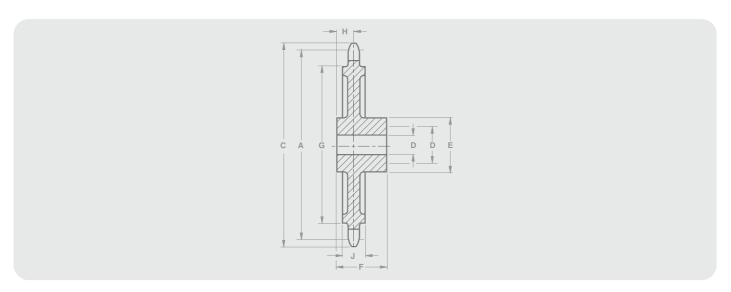
Sprocket R	ef.			Technical	Details (mn								
Pitch Inch	Pitch mm	No. of Teeth	Renold Part No.	PCD	Top Diam.	Shroud Diam.	Shroud Width	Bore Diam.	Bore Diam.	Boss Diam.	⊈ of Tooth to End Face*	Distance Through*	Weight Approx kg
								MIN	MAX				<b>^</b> 6
				A	С	G	J	D	D	E	Н	F	
2.0	50.8	8	200121##	132.74	144			24	38	76	12.5	51	2.3
3.0	76.2	12 8	200125## 200302##	196.27 199.11	212 215			24 24	50 50	102 102	12.5 12.5	51 51	5.4 5.4
4.0	101.6	10 12	200304##	246.58 294.41	264 314	193 243	25 25	28 28	65 65	114 114	12.5 12.5	64 64	8.6 10.0
4.0	101.6	8 10	200392##	265.51 328.78	281 347	204 272	25 25	35 35	65 65	114 114	12.5 12.5	64 64	8.6 13.8
6.0	152.4	12 8	200396##	392.56 398.25	411 414	338 326	25 25	38 38	70 70	127 127	12.5 12.5	70 70	16.1 19.7
		12	200575##	588.82	608	527	25	38	75	133	12.5	76	34.2

## Sprockets with cast teeth.

\* After machine facing the boss.
Boss and Distance Through dimensions may vary, please call to discuss your requirements.

## **Standard Conveyor Sprockets**

To Suit BS4116 Part 4



#### 12000 lbf, 54000 Newtons and 15000 lbf, 67000 Newtons Breaking Load

Sprocket R	ef.			Technical	Details (mn	n)							
Pitch Inch	Pitch mm	No. of Teeth	Renold Part No.	PCD	Top Diam.	Shroud Diam.	Shroud Width	Bore Diam.	Bore Diam.	Boss Diam.	⊈ of Tooth to End Face*	Distance Through*	Weight Approx <b>kg</b>
				A	С	G	J	D	D	E	Н	F	
3.0	76.2	8 12	201211##	199.11 294.41	218 318	230	- 32	38 38	70 75	114 133	16 16	70 76	8.4 15.0
4.0	101.6	8 12	201301## 201305##	265.51 392.56	286 415	192 325	32 32	38 48	70 80	127 140	16 16	70 76	10.9 20.2
6.0	152.4	8 12	201481## 201485##	398.25 588.82	418 612	314 514	32 32	48 48	80 90	140 165	16 16	76 89	21.5 41.3

#### 24000 lbf, 107000 Newtons and 30000 lbf, 134000 Newtons Breaking Load

Sprocket R	ef.			Technical	Details (mn	1)							
Pitch Inch	Pitch mm	No. of Teeth	Renold Part No.	PCD	Top Diam.	Shroud Diam.	Shroud Width	Bore Diam.	Bore Diam.	Boss Diam.	⊈ of Tooth to End Face*	Distance Through*	Weight Approx <b>kg</b>
								MIN	MAX				
				A	С	G	J	D	D	E	Н	F	
4.0	101.6	8 12	202121##	265.51 392.56	290 420	312	- 38	48 55	85 95	152 165	19 19	83 95	16.6 31.3
6.0	152.4	8 12	202301## 202305##	398.25 588.82	423 617	301 502	38 38	55 60	95 110	165 196	19 19	95 130	32.2 63.0

## Sprockets with cast teeth.

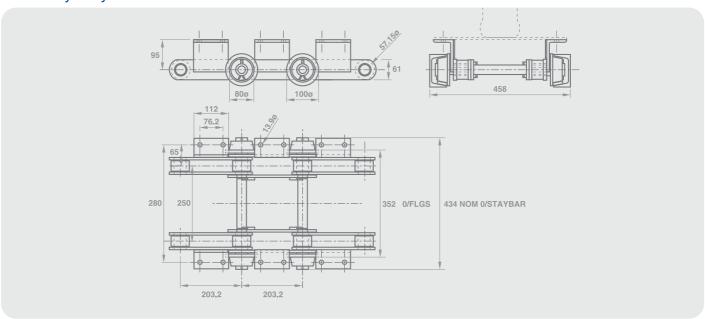
\* After machine facing the boss.
Boss and Distance Through dimensions may vary, please call to discuss your requirements.

# **Section 3**

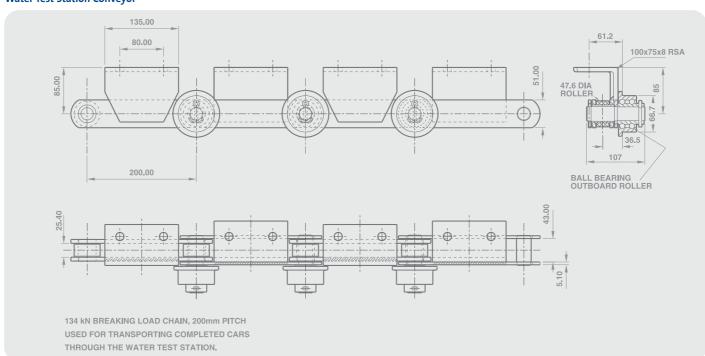
## **Industrial Applications** & Special Engineered Chain

## **Automotive Manufacturing Industry**

#### **Final Assembly Conveyor**



#### **Water Test Station Conveyor**

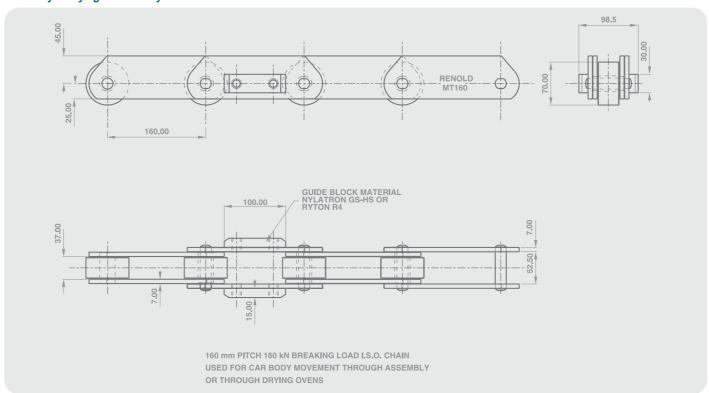


Renold currently manufacture a range of chains that have been tailored for the specific needs of the automative manufacturing industry. The chains used range from the British Standard and ISO Standards, adapted standard chains and in some cases chains specifically designed for particular applications.

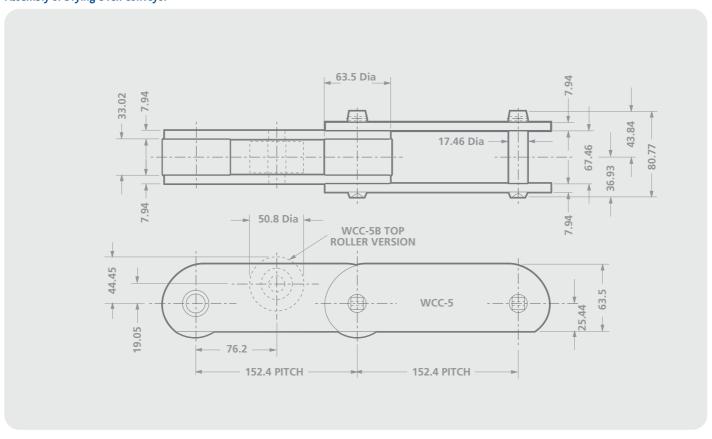
The special environments range from assembly conveyors - some incorporating assembly jigs to water test and oven chains for the drying of body coatings.

## **Automotive Manufacturing Industry**

#### **Assembly or Drying Oven Conveyor**



#### **Assembly or Drying Oven Conveyor**

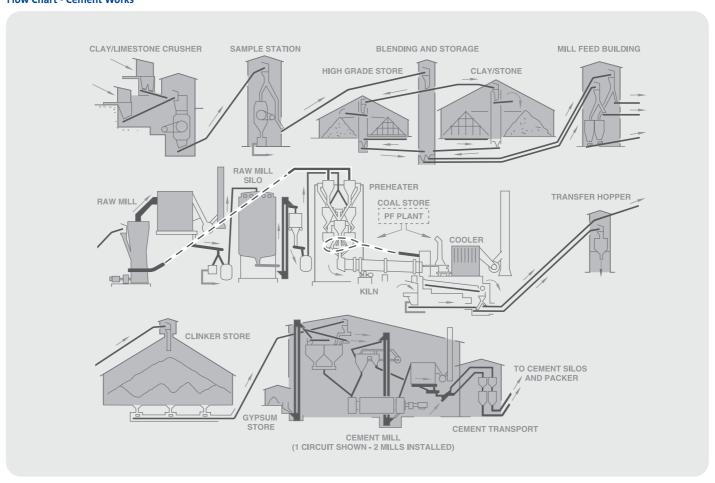


## **Cement Industry**



Special Double Strand Conveyor Chain is designed to give an enhanced chain life in the hot and dusty conditions of a Cement Clinker.

**Flow Chart - Cement Works** 



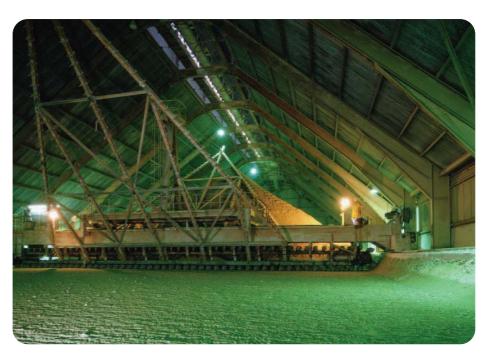
## **Cement Industry**

#### **Raw Material Reclaim Conveyors**

These are situated in the raw material store. Their function is to move the raw material to a distribution conveyor, which is usually a belt conveyor.

The raw material stores are either circular buildings around which the material is piled, or long rectangular areas down which piles of material are kept.

The reclaimer conveyor is usually a twin strand scraper conveyor with the bottom strand used to scrape the raw material from the pile to a collection point. Because of the arduous duty these chains are usually quite high breaking load (i.e. 500 KN +). The chains used are either to ISO or German DIN standards.



Clay/Limestone Store showing stacker and reclaimer. Max. capacity 43000 tonnes, rail dia. 88m.

#### **Apron Feeder Conveyors**





These conveyors are usually situated under hoppers, and are used to control feed material from the hopper for process i.e. to a crusher.

Apron feeders are frequently called on to handle heavy bulk material in large pieces, often abrasive in character, such as limestone rock. Material can be loaded into the bunker from an appreciable height straight onto the conveyor, i.e. from a 60 ton dumper truck, and

in large pieces up to 5 tons. In these circumstances all components, particularly the chains, have to be of extremely robust construction.

Usually a layer of material is left on the conveyor so that when a further load is dropped, the original material acts as a cushion for the conveyor.

The conveyor consists of two or more strands of solid bearing pin chain bolted to heavy cast or fabricated apron slats. They are driven at a very slow speed intermittently to ensure regulation of material flow.

### **Escalator Chain**

Renold has manufactured and supplied several hundred thousand metres of escalator chain to manufacturers and end users of this precision product. With over 40 years' experience of supplying the industry, product quality monitored to ISO9002 / BS5750 standards and statistical process control (SPC), Renold is recognised as one of the world's leading manufacturers of escalator chain.

#### **Chain Life**

With safety factors that meet or exceed the standard, Renold step chain is designed for extended trouble-free life to meet the demands of the industry.

#### Chain Performance

The optimum combination of materials, heat treatment and maximum bearing surfaces is used to produce a durable and reliable chain for most operating environments.

#### **Step Pitch Accuracy**

Renold escalator step chains are manufactured to exact specifications. Computer controlled matching and pairing ensures better gearing, lower friction, reduced wear and low levels of noise, resulting in a longer chain life.

#### Lubrication

All step chains are lubricated and protected against corrosion, ready for assembly into new or existing escalators. Specific customer requirements for factory lubrication, both grease and oil, can be included in the chain specification.

#### **Packaging**

Whether for on-site replacement or factory assembly, all step chains can be packaged to allow for special storage or unusual transport arrangements, with the chains clearly identified in paired handling lengths ready for installation.

#### **Product Range**

The extensive Renold step chain product range covers low rise stores types, medium to high rise public service escalators and moving walkways. For specific design details on new or existing applications, contact our technical sales staff.

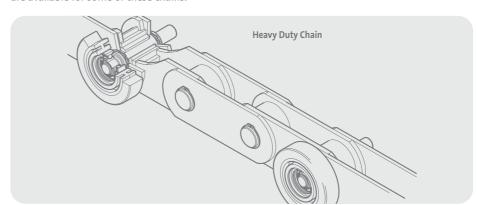
Shown here are some examples of Renold step chains.

#### **Transmission Chain**

Renold transmission chains, fitted as original equipment on many escalators, also available to both British or American standards.

#### **Product Development**

Escalators in airports, train stations, metro links, bus terminals and ferry ports are conveying an ever increasing number of people. The introduction of large shopping malls, ever larger office blocks and leisure complexes set new standards for the escalator manufacturer with reduced opportunities for maintenance. Renold escalator chains have been designed using advanced CAD techniques to meet these new demands. Reduced maintenance options are available for some of these chains.



BS 5750/ISO 9002 approved

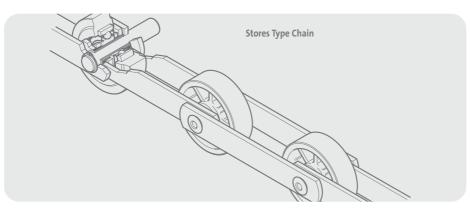
Supplier to major European escalator manufacturers

Proven performance

Technical innovation and product development

Applicational back-up

Worldwide distribution



## **Renolube - Escalator Step Chain**

Renolube Escalator Chain has been developed as a result of extensive prototype testing in arduous applications to exceed the industry's ever increasing demand for lower service costs and longer lifetime operation. Renold is recognised, with over 40 years' experience, as one of the world's leading manufacturers of escalator chains. The Renolube composite polymer bush, in conjunction with a specially designed bearing pin, has been formulated to ensure maximum lifetime operation. The principle advantages are:-

- Substantially lower life cycle costs with development and field tests indicating a life in excess of 40 years.
- Cleaner environment because of reduced free grease lubrication.
- Significantly lower service costs in that periodic grease lubrication is not required.
- Stable and predictable wear rates are a particular feature of Renolube when compared to conventionally greased chains which are prone to random failure.

#### **Economy**

Renolube offers a fully cost effective solution when replacing grease lubrication systems by considerably reducing expensive maintenance and life cycle costs.

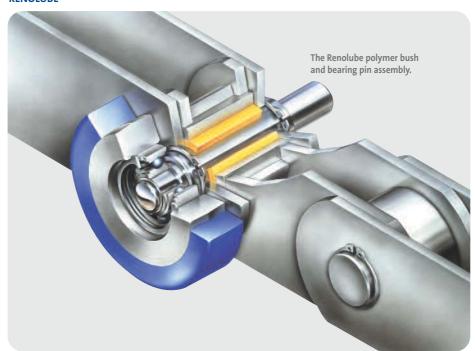
#### **Endurance**

Renolube Escalator Chain in the public service environment has proven to be extremely wear resistant. Installation of the Renolube Escalator Chain provides lifetime confidence with a chain design life of over 40 years.

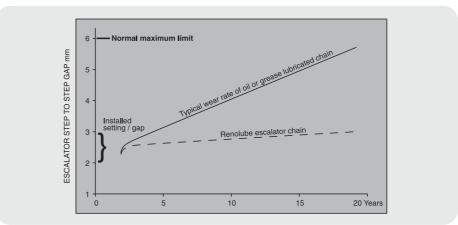
#### **Environment and Safety**

The elimination of copious amounts of lubricating oils and grease creates a cleaner and safer environment, thereby reducing fire risk.

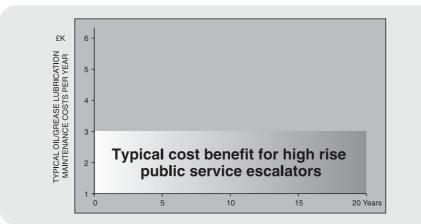
#### **RENOLUBE**



#### **TYPICAL WEAR/LIFE**



#### **REDUCED MAINTENANCE - WHOLE LIFE COST BENEFIT**



## **Palm Oil Industry**

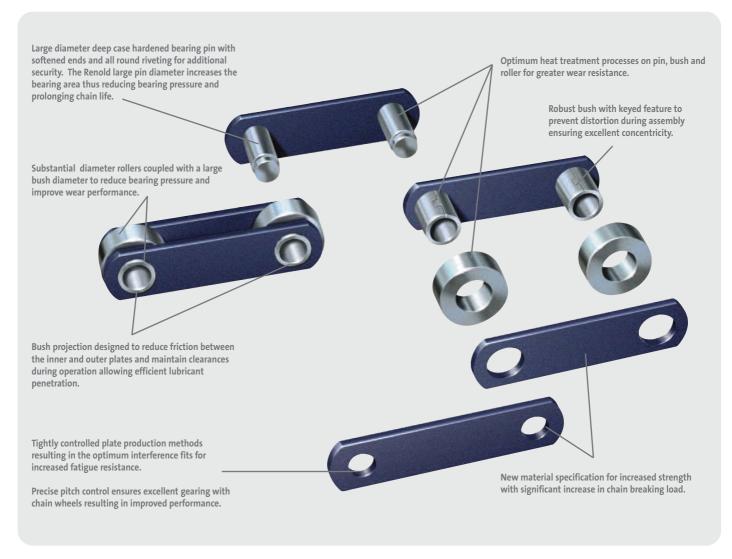
#### Renold - ultimate design

Renold have enhanced the specifications of its new range of chain to surpass the increasing demands of today and tomorrow. When reliability is paramount, choose Renold.

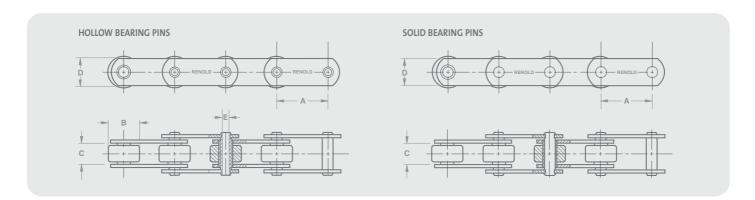
#### **Special Design Features**

Correct chain selection is essential for optimum performance. Renold's experienced sales, production and design staff are always available to advise on particular products and applications.





## Palm Oil Industry



#### Standard

Chain	Pit	tch	Breaki	ng Load	Rolle	er Dia	Inside	Width	Plate	Depth	Hollow Pi	n Bore Dia	Pin/Bush B	earing Area	Mass
Ref.	inch	mm	lbf	Newtons	inch	mm	inch	mm	inch	mm	inch	mm	sq inch	sq mm	kg/m
	A	A			В	В	С	С	D	D	E	E			
Solid Bear	ing Pin														
S45161	4.0	101.6	18000	80000	1.875	47.6	0.75	19.0	1.50	38.1			0.94	603	6.43
S45241	6.0	152.4	18000	80000	1.875	47.6	0.75	19.0	1.50	38.1	-	-	0.94	603	5.24
S45162	4.0	101.6	32000	142000	2.625	66.7	1.00	25.4	2.00	50.8	-	-	1.75	1128	14.22
S45242	6.0	152.4	32000	142000	2.625	66.7	1.00	25.4	2.00	50.8	-	-	1.75	1128	11.18
S45243	6.0	152.4	50000	222000	3.50	88.9	1.50	38.1	2.40	61.0	•	•	2.88	1856	24.15
Hollow Be	aring Pin														
S05161	4.0	101.6	15000	67000	1.875	47.6	0.75	19.0	1.50	38.1	0.52	13.2	0.94	603	5.91
S05162	4.0	101.6	26000	116000	2.625	66.7	1.00	25.4	2.00	50.8	0.79	20.1	1.75	1128	12.74
S05242	6.0	152.4	26000	116000	2.625	66.7	1.00	25.4	2.00	50.8	0.79	20.1	1.75	1128	10.91
S05243	6.0	152.4	44000	196000	3.500	88.9	1.50	38.1	2.40	61.0	0.91	23.1	2.88	1856	22.18

#### Premier

Chain	Pit	tch	Breaki	ng Load	Rolle	r Dia	Inside	Width	Plate	Depth	Hollow Pi	n Bore Dia	Pin/Bush B	earing Area	Mass
Ref.	inch	mm	lbf	Newtons	inch	mm	inch	mm	inch	mm	inch	mm	sq inch	sq mm	kg/m
	A	A			В	В	С	С	D	D	E	E			
Solid Bear	ing Pin														
E45161	4.0	101.6	26000	116000	1.875	47.6	0.75	19.0	1.50	38.1	-		0.94	603	6.43
E45241	6.0	152.4	26000	116000	1.875	47.6	0.75	19.0	1.50	38.1	-	-	0.94	603	5.24
E45162	4.0	101.6	50000	222000	2.625	66.7	1.00	25.4	2.00	50.8	-		1.75	1128	14.22
E45242	6.0	152.4	50000	222000	2.625	66.7	1.00	25.4	2.00	50.8	-	-	1.75	1128	11.18
Hollow Be	aring Pin														
E05161	4.0	101.6	17000	76000	1.875	47.6	0.75	19.0	1.50	38.1	0.52	13.2	0.94	603	5.91
E05162	4.0	101.6	36000	160000	2.625	66.7	1.00	25.4	2.00	50.8	0.79	20.1	1.75	1128	12.74
E05242	6.0	152.4	36000	160000	2.625	66.7	1.00	25.4	2.00	50.8	0.79	20.1	1.75	1128	10.91

#### **Premier Extra**

Chain	Pit	ch	Breakir	ng Load	Rolle	r Dia	Inside	Width	Plate I	Depth	Hollow Pi	n Bore Dia	Pin/Bush B	earing Area	Mass
Ref.	inch	mm	lbf	Newtons	inch	mm	inch	mm	inch	mm	inch	mm	sq inch	sq mm	kg/m
	A	A			В	В	С	C	D	D	E	E			
Solid Bear	ing Pin														
X62161	4.0	101.6	30000	134000	1.875	47.6	0.75	19.0	1.50	38.1	-	-	0.94	603	6.43
X62241	6.0	152.4	30000	134000	1.875	47.6	0.75	19.0	1.50	38.1	-		0.94	603	5.24
X62162	4.0	101.6	60000	267000	2.625	66.7	1.00	25.4	2.00	50.8			1.75	1128	14.22
X62242	6.0	152.4	60000	267000	2.625	66.7	1.00	25.4	2.00	50.8	-	•	1.75	1128	11.18
Hollow Be	aring Pin														
X02161 X02242	4.0 6.0	101.6 152.4	24000 50000	107000 222000	2.625 2.625	66.7 66.7	1.00 1.00	25.4 25.4	2.00 2.00	50.8 50.8	0.79 0.79	20.1 20.1	1.75 1.75	1128 1128	12.74 10.91

## **Steel Industry**



#### **Tube Manufacture**

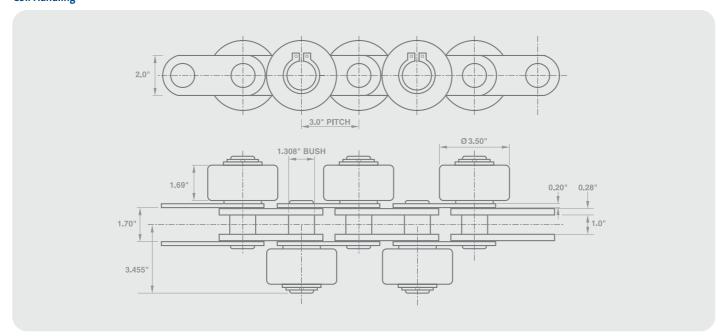
- A conveyor for delivering spun cast iron pipes after normalising bore grinding and inspecting. Two strands of conveyor chain fitted with combination cradle and pusher attachments are used.
- 6.0" pitch, 45,000 lbf, breaking load conveyor chains.
- Tube bore sizes from 80 300mm can be accommodated.
- Earlier in the system a similar chain handles the tubes as they pass through the bore grinding process.

#### **Raw Material Processing**

- PRODUCT No. 179936
- A bucket elevator type bush chain 7.0" pitch, 200,000 lbf breaking load integral K3 attachment plates. Headed pin design to enable detachability flatted pins and bushes for security.
- Conveys raw material.

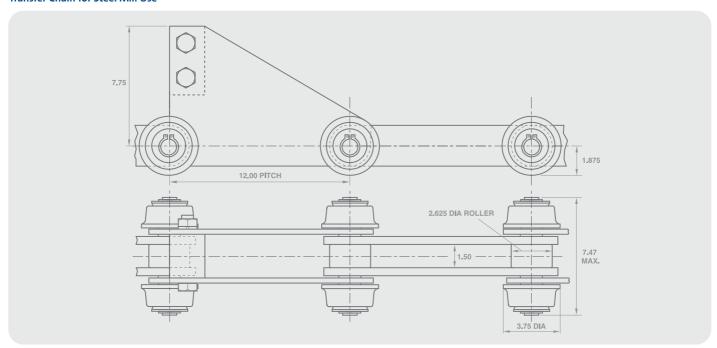
## **Steel Industry**

#### **Coil Handling**



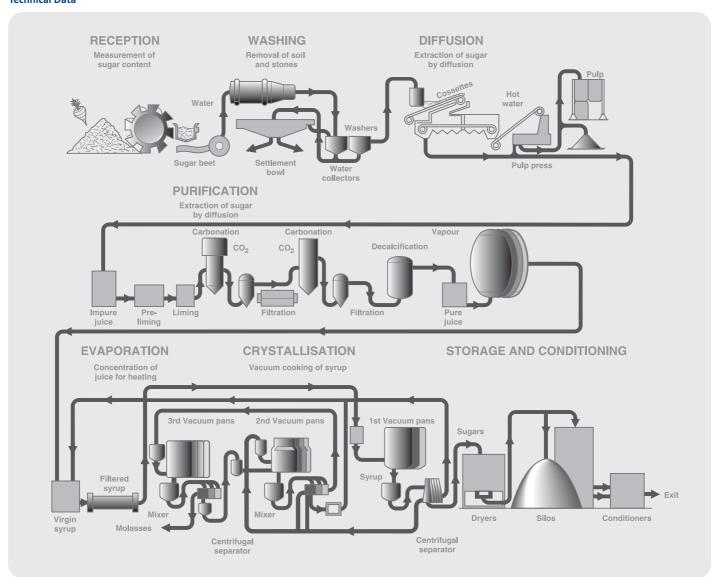
- PRODUCT NO. 178289
- Base chain 3" pitch, 30,000 lbf breaking load bush chain fitted with large diameter plain outboard rollers on alternate sides.
- Steel coils on skids are handled on a twin strand system moving on the outboard rollers at twice the speed of chain.

#### **Transfer Chain for Steel Mill Use**



- CHAIN NO: 179 701/90
- PITCH: 12.0 IN
- BREAKING LOAD: 90,000 LBF (400000 N)
- Chain equipped with flanged outboard rollers both sides at every pitch to run in channel support rails. Special pusher attachment plates at suitable spacings to push steel sections along skidder bars or plates.

#### **Technical Data**



#### **Chains for the Sugar Beet Industry**

The sugar beet industry, like the more widely known sugar cane industry, uses many different chains in the manufacture of crystallised sugar used in most households around the world. Chain is found in reception, washing and diffuser processes within a sugar beet plant. Within these areas there are around eight different conveyor chains currently in use and these are detailed later. When visiting a sugar beet plant, drives of different sizes are also found driving these conveyors. Renold have supplied large volumes of 3/4" pitch standard transmission chain for sugar beet harvesting machine OEMs following intensive field trials. Due to the arduous nature of the application they are changed after every season.

#### **Product Description**

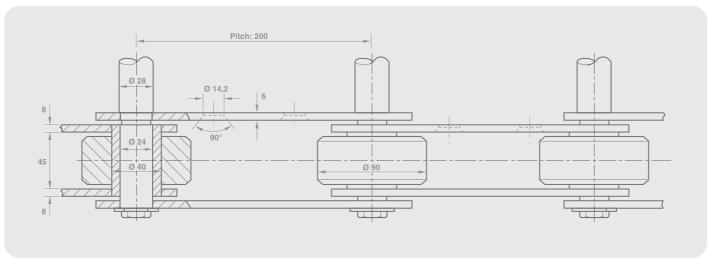
Chain for this industry are specially engineered to suit the conveyor application within each manufacturing process. The pitch size is normally in millimetres and the chains incorporate a number of different attachments, fixing holes and special pins.

Renold manufacture a wide range of special conveyor chains for this industry.

Our technical staff can help with the identification or advise on the interchangeability of a Renold chain within a sugar plant.

A typical sugar beet processing plant is shown above.

#### **Beet Conveyor**

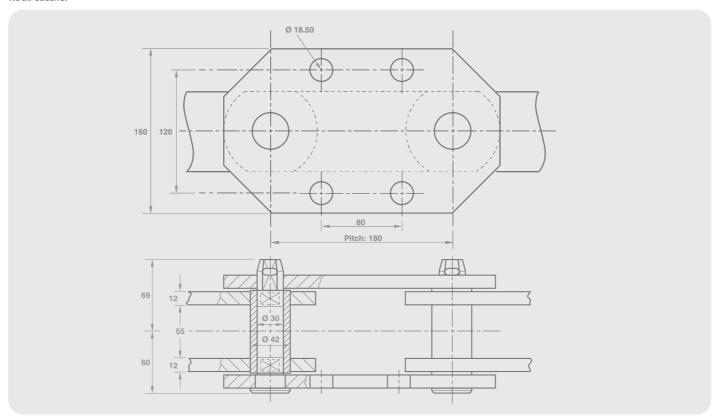


#### Reception area:

An inclined conveyor which carries the beet from the beet slab to the beet washer.

The chain is an integral component within conveyor.

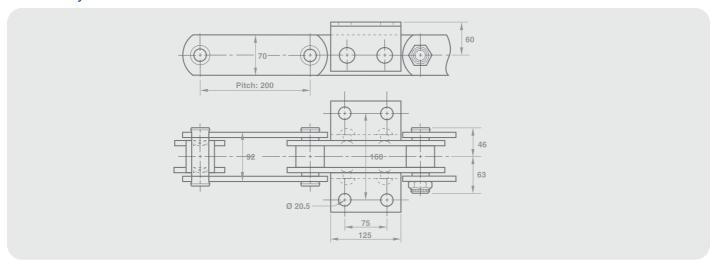
#### **Rock Catcher**



#### Washing area:

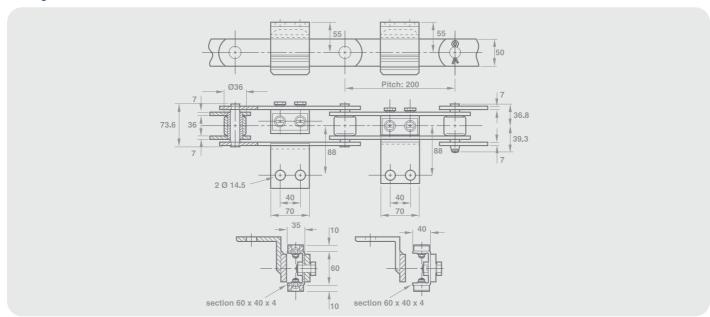
This chain is used to carry away stones removed during the washing of the sugar beet.

#### **Cossette Conveyor**



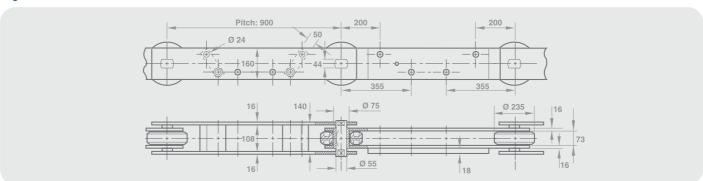
Diffuser area: These chains are fitted with rakes and run in inclined conveyors, scraping the beet pulp to the scalding tub.

#### **Scalding Tub**



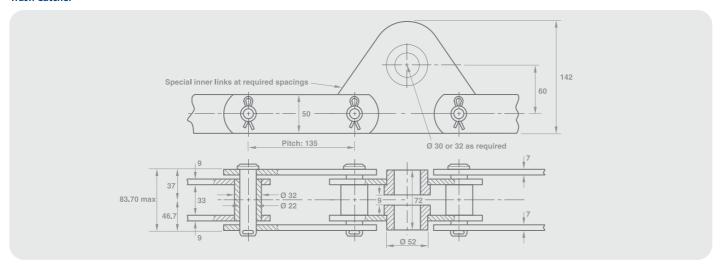
Diffuser area

#### **Sugar Beet Diffuser**



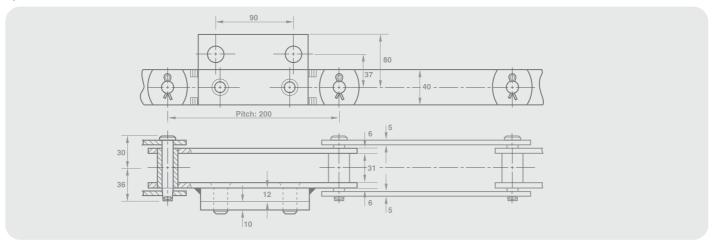
Diffuser area: Used on a continuous sugar beet diffuser. Two chains run in parallel connected by perforated steel slats forming a continuous apron.

#### **Trash Catcher**



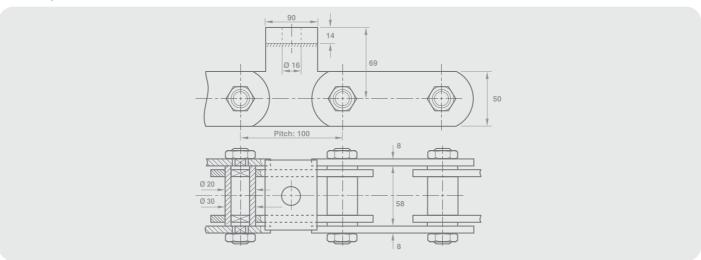
Washing area: Within the washer a water flume carries away grass washed from the sugar beet. The chain, fitted with rakes, removes this trash from the water and the washer.

#### **Hydro Trash Catcher**



Washing area: This chain is used to convey the beet through a washer.

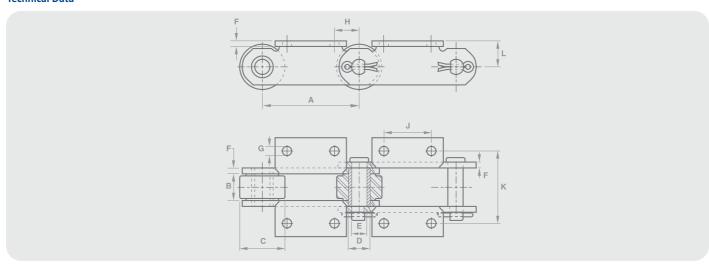
#### **Feed Conveyor**



**Diffusion area:** This chain carries beet pulp to the drying kilns.

## **Sugar Cane Industry**

#### **Technical Data**



#### **Cane Carrier Chains**

Cane Carrier Chain is used in the second operation within a sugar mill. The cane is fed onto the conveyor which is usually sized to match the mill roller width and operates as a corrugated overlapping slat conveyor.

Two or three strands of chain are normal in such conveyors with the corrugated slats bolted on to the K attachments with angle cleats at intervals to prevent cane slippage.

The chopping of the cane on these conveyors can cause problems, in that juice and chopped cane, together with contamination from sand etc, attack the chain by corrosion and abrasion.

#### **Product Description**

This chain is interchangeable in all respects with corresponding products supplied to the Cane Sugar Industry by other established manufacturers. It is estimated that this range covers up to 80% of main and auxiliary carriers worldwide. Breaking loads range from 31,800 kgf to 63,500 kgf (70,000-140,000 lbf).

The advantage Renold has over all other competitors is experience. As the originators of the bush roller chain in 1879 and being the first company to incorporate these features for cane carrier applications during the 1920's, we are uniquely placed to offer the finest products for carrying cane from the yard to the first mill.

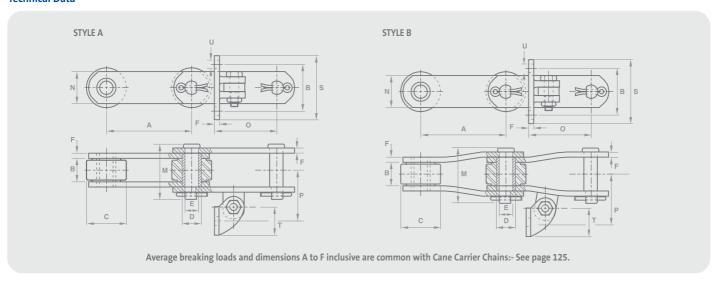
Materials, heat treatment and design have been developed to ensure optimum chain life and maximum value for modest cost.

Grease gun lubrication through the chain pin is available on request and heat treated stainless steel pins, bushes and rollers can be supplied.

Renold Chain No. Metric	Average breaking Ioad Newtons	Pitch mm.	Width between inner plates mm.	Roller dia. mm.	Bush dia. mm.	Connecting pin dia. mm.	Plate thickness mm.	Attachment hole dia. mm.	Distance from pitch point mm.	Hole centres mm.	Hole transverse centres mm.	Platform height mm.	Approx. mass (weight) kg/m.
		A	В	С	D	E	F	G	Н	J	K	L	
R.9060	312000	152.4	38.1	69.85	28.58	19.05	9.53	13.87	38.1	76.2	111.13	41.28	24.7
R.9061	379000	152.4	38.1	69.85	28.58	19.05	9.53	13.87	38.1	76.2	111.13	41.28	25.3
R.1796	445000	152.4	38.1	69.85	31.75	22.23	9.53	13.87	38.1	76.2	111.13	41.28	26.2
R.9063	623000	152.4	38.1	76.20	31.75	23.83	10.31	13.87	38.1	76.2	111.13	44.45	27.5

## **Sugar Cane Industry**

#### **Technical Data**



#### **Bagasse Carrier Chain**

Bagasse (the residue of milled cane) has a small amount of sugar left in it, contains approximately 50% moisture and is a substance that will easily burn. This residue is used as a fuel for the sugar mill boilers to make steam to drive turbines producing the mill's electricity.

The Bagasse conveyors are usually of a scraper construction carrying away the bagasse directly to the boiler input chutes or into a separate bagasse store. In some cases the conveyor will also double up as a bagasse return conveyor. If not, a separate return conveyor will have been installed.

#### **Product Description**

Using the same round components as the cane carrier range, these chains provide the capacity to meet the majority of bagasse conveying requirements. They are available with straight plates, STYLE A, or cranked plates, STYLE B, EXCEPT R.9063 which is produced in STYLE A

Although two standard roller sizes are available, other diameters are available on request. Additionally, stainless pins, bushes and rollers can be supplied. The lug and flight attachments are spaced according to individual requirements.

All the chain components are replaceable.

Renold Chain No. Metric	Average Breaking Load Newtons	Pitch mm.	Connecting pin length mm.	Plate depth mm.	Flight face from pitch point mm.	Flight hole centre to chain centre mm.	Flight hole vertical centres mm.	Flight depth (nominal) mm.	Flight width (nominal) mm.	Bolt dia. mm.	Approx. mass (weight) plain chain kg/m.
		A	M	N	0	P	R	S	T	U	
R.9060	312000	152.4	95.25	50.80	111.12	88.90	82.55	114.30	50.80	12.70	16.7
R.9061	379000	152.4	95.25	57.15	111.12	88.90	82.55	114.30	50.80	12.70	16.7
R.1796	445000	152.4	100.08	57.15	111.12	88.90	82.55	114.30	50.80	12.70	18.2
R.9063#	623000	152.4	101.60	63.50	111.12	89.66	82.55	114.30	50.80	12.70	20.2

Weight of lug, fulcrum bolt and flight complete - 1.36kg. (3.0lb.) # STYLE A ONLY

## **Sugar Industry Conveyor Sprocket Details**

#### **Sugar Industry Sprockets**

#### **General Description**

The normal function of a chain sprocket is not only to drive or be driven by the chain, but also to guide and support it in its intended path.

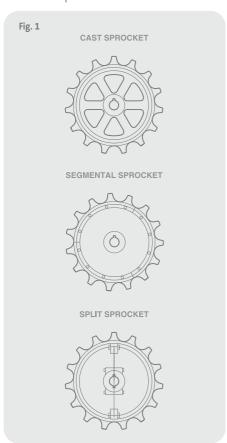
Sprockets can be manufactured from good quality cast iron or fabricated steel. For arduous duty, it may be necessary to use steel sprockets having a 0.4% carbon content. For extremely arduous duty the tooth flanks should be flame hardened. There are other materials which may be specified for particular requirements. Stainless steel for example is used in high temperature or corrosive conditions.

Table 1 gives a guide to the material required.

Table 1

Normal Conditions	Moderate Shock Loading	Heavy Shock Loading	Abrasion, No Shock Loading	Abrasion and Heavy Shock Loading
Cast Iron or	Cast Iron or	0.4%	Cast Iron	0.4% Carbon
Fabricated	Fabricated	Carbon		Steel with
Steel	Steel	Steel		hardened teeth

The vast majority of sprockets in use are of the one piece cast iron or fabricated steel design and are usually parallel or taper keyed to a through shaft. In this case it is necessary to remove the complete shaft to be able to remove the sprockets.



If quick detachability is necessary without dismantling shafts or bearings, then sprockets may be of the split type. These are made in two half sections and the mating faces machined to allow accurate assembly with the shaft in

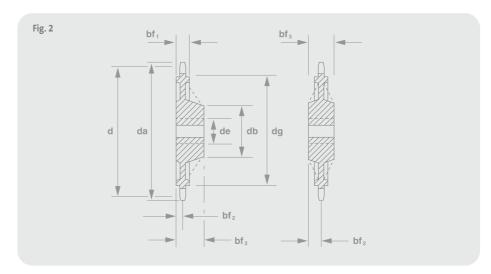
This type of sprocket is particularly useful on multi-strand conveyors where long throughshafts are used. Considerable expense can be saved in sprocket replacement time.

Sprockets with removable tooth segments are particularly useful where sprocket tooth wear is much more rapid than chain wear. With this type of sprocket, segments of teeth can be replaced one at a time without having to disconnect or remove the chain, thus considerable expense and downtime can be saved.

Shafts, whether they are through shafts or of the stub type, should be of such proportions and strength that sprocket alignment remains unimpaired under load. Shaft sizes should be selected taking into account combined bending and torsional moments.

#### **Sprocket dimensions**

Salient sprocket dimensions are shown in fig. 2.



Pitch circle diameter d

da Top diameter

**Boss diameter** db

Bore diameter de

**Shroud diameter** dg

Shroud width bf1

bf2 Face to sprocket centreline

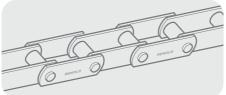
bf3 Distance through boss

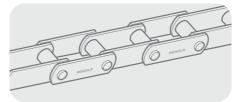
Note: Please consult Renold for details on standard sprockets or designs to meet individual requirements.

## **Theme Park**

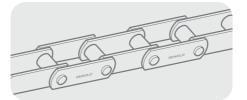
#### **Renold Roller Coaster Chain**



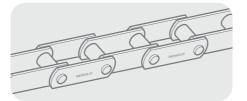




4.063" pitch 100,000 lbf (446 KN) Solid pin. Replaces WH126 4.063" pitch Welded Bush Chain.



4.063" pitch 100,000 lbf (446 KN) Solid pin. Replaces WH124 4.063" pitch Welded Bush Chain.



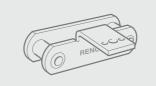
## **Theme Park**

#### **Renold Water Ride Chain**

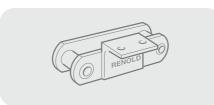


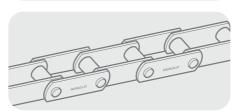


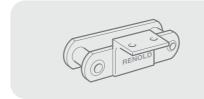
To protect chain like the one seen above, Renold has developed corrosion resistance treatments for water ride applications giving increased service life and reducing maintenance costs.











■ 176499. Bush chain.

Solid Bearing Pin Chain with K3 attachments one side every outer. Zinc plated throughout plus a special lubricant.

178388. Bush chain.

Description: 4" pitch 30000 lbf (134000 N) Solid Bearing Pin Chain with K2 attachments one side every outer. Zinc plated throughout plus a special lubricant.

plated throughout plus a special lubricant.

171749. Bush chain.

No attachments. Hydro - Service plus special lubricant.

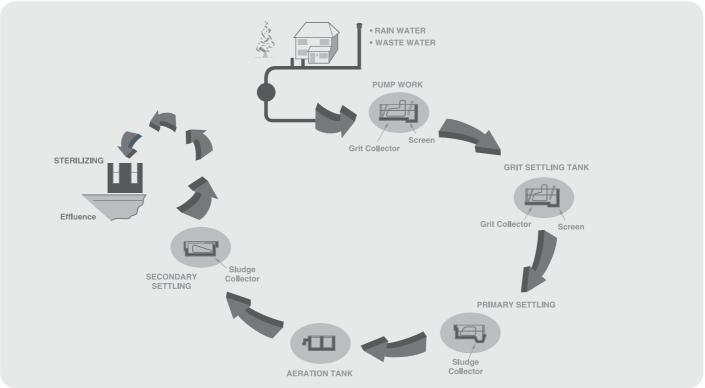
■ 179840. Bush chain.

6" pitch 90000 lbf (400000 N) with K2 attachments one side every outer. Zinc plated plus special lubricant.

Please consult Renold for other special engineered designs.

## **Water Treatment Chain**





Renold manufacture a wide range of Water Treatment Chain for use in sewage and industrial waste water treatment plants.

Renold has been developed to withstand the hostile environments associated with the water industry.

Typical applications are in environments which are corrosive, such as primary settlement tanks, or abrasive such as sludge collector tanks.

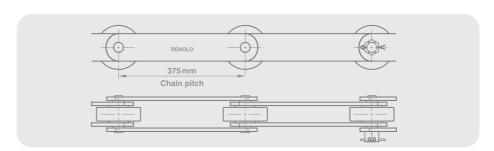
Several specifications of chain are available including special alloy chain, stainless steel chain and special engineered chain.

## **Water Treatment Chain**

#### **Scraper Chain for Primary Settlement Tank**

Renold chain fitted to primary settlement tanks is designed to operate fully immersed with the minimum of attention and lubrication.

Product No: 797000. Galvanised Plates with Stainless Steel round parts and Cast Iron rollers







#### Fresh Water Screening Chain

These chains run as pairs and drive mesh screens acting as filters to remove river and sewage debris.

Chain and sprocket life are optimised by the rigid control of pitch accuracy, resulting in excellent gearing, lower friction, reduced wear and a reduction in noise levels during operation.

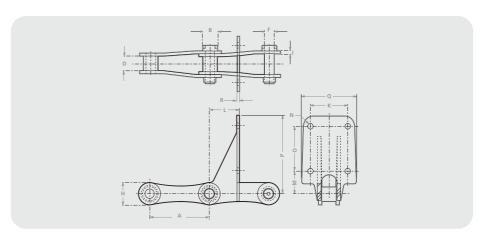
Maximum chain strength and resistance to wear are achieved by strict control of the material specification and by using state of the art heat treatment processes.

# Chain: 179 701/90 Pitch: 381mm Breaking load: 160kN

#### **Non-Metallic Chain**







Renold Chain No.	Attachment No.	Mass kg/m								
			A	В	С	D	E	Н	5	T
JCCNCS 720S JCCNCS 720S	F22-6 F22-8	2.084 2.232	95.250 95.250	76.2000 76.200	85.725 85.725	14.288 14.288	66.675 114.300	157.163 200.025	139.700 139.700	6.350 6.350

## **Lumber industry**

#### 81X-81XH Lumber Chain

#### Part Number:

171306 (81X) 171312 (81XH) 171770 (81XHH)

#### Application:

These roller chains are specially designed for the rugged and hostile environment found in the lumber industry. These chains are used as an integral part of lumber conveyors for such applications as board ovens, veneer dryers, sorters, unscramblers, trimmer saws, stackers and transfer conveyors.

As well as the lumber industry, these chains can now be found in such applications as grainhandling, plaster and fibre board manufacture. The chain has excellent conveying properties suitable for other hostile applications such as quarrying or the manufacture of concrete products.

#### **Product Description**

Renold 81X series chains have identical gearing dimensions and will run on the same sprocket within a given application. The 81XH and 81XHH chains are used on heavy duty conveyor applications where space is limited. Both chains are designed with maximum chain life as the prime objective. Renold standard specification

- Very accurate pitch control that lowers friction resulting in reduced wear.
- Heat-treated side plates for increased wear and fatigue life.
- Rollers designed to cope with this hostile application.
- All chains are pre-lubricated to enhance initial chain life and or protection whilst in
- A material with excellent weldable properties, the standard method of fixing attachments within the industry.

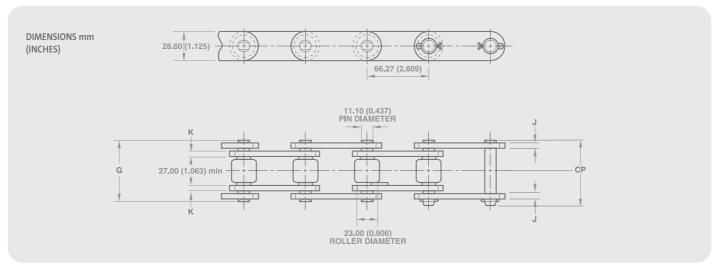
#### Lubrication

Chains should be protected against dirt/moisture and be lubricated with good quality, non-detergent, petroleum based oil. Renold chains are pre-lubricated before despatch, but like all chains, need regular relubrication during their working life.

Specialist advice should be sought for each application to ensure that the lubricant used does not degrade or contaminate the timber product carried.

If you require further information, please consult your local Renold representative or consult the Installation and Maintenance

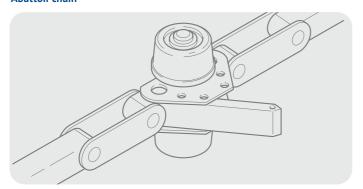
#### **Technical Data**



Chain Number	Renold Chain Number	Pin Length (max)	Con Pin Length (max)	Height	Link Plates Thickness (Inner)	Thickness (Outer)	Minimum Breaking Load kN	Minimum Breaking Load (lbf)	Number of Links (3.05 m)	Average Chain Weight kg/m
		G	CP	Н	K	J				
81X	171306	49.30 (1.94)	53.65 (2.11)	28.60 (1.125)	4.00 (0.157)	4.00 (0.157)	107	(24000)	46	3.56
81XH	171312	60.25 (2.37)	64.85 (2.55)	32.15 (1.266)	8.00 (0.315)	5.60 (0.22)	196	(44000)	46	5.22
81XHH	171770	65.18 (2.57)	69.65 (2.74)	32.15 (1.266)	8.00 (0.315)	8.00 (0.315)	205	(46000)	46	6.86

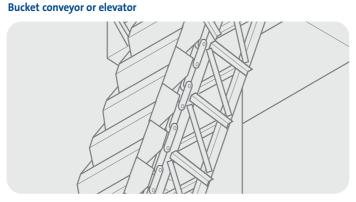
## **Special Engineered Chain**

#### **Abattoir chain**



• Chain: 176 493 • Pitch: 254mm • Breaking load: 67kN.

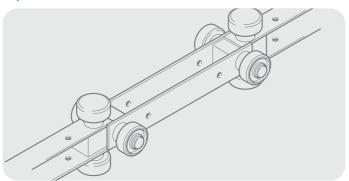
Zinc plated bi-planar chain used to carry carcasses through a slaughter house.



• Chains selected to suit each application.

These have buckets fixed to one or two strands of chain. The buckets are so shaped that when passing over the headwheel, the back of each bucket acts as a chute for the material discharged from the following bucket. Feeding of the elevator is achieved by a loading leg or chute. Such elevators are suitable for handling lumpy, friable or abrasive materials.

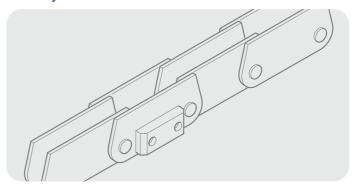
#### Bi-planar chain



• Chain: 171 044 • Pitch: 280mm • Breaking load: 96kN.

Overhead chain fitted with outboard rollers typically used in the packaging industry.

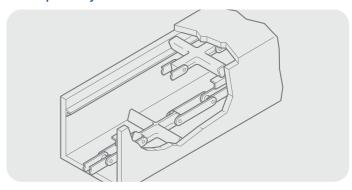
#### Car conveyor chain



• Chain: 795 034 • Pitch: 152.4mm • Breaking load: 160kN.

Deep link chain fitted with Nylatron wear pads, carries car bodies through assembly and paint spray lines.

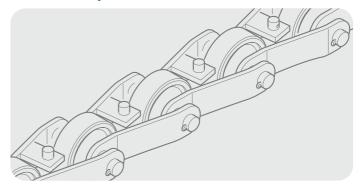
#### Box scraper conveyor



• Chains selected to suit each application.

Carrying bulk non-abrasive materials, horizontally or up a small incline, these conveyors feature a closed box. The chains scrape the floor of the box and return on guide rails at the top of the box. With a single chain, scraper flights of integral malleable steel or in the form of L attachments protrude on each side to span the box. With two strands of chain, the scraper flight is carried between strands.

#### Cranked link bakery chain

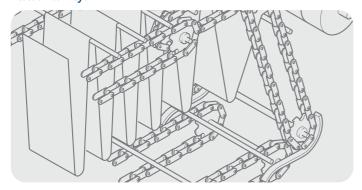


• Chain: 171260/90 • Pitch: 177.8mm • Breaking load: 285kN.

Matched in pairs, all round parts coated in manganese phosphate for conveying bread through provers, ovens and coolers.

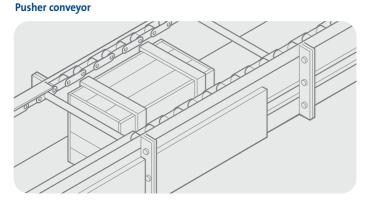
## **Special Engineered Chain**

#### Festoon conveyor



• Chains selected to suit each application.

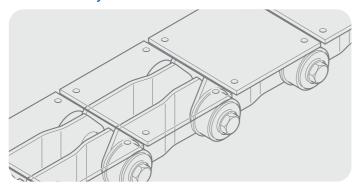
Generally used to convey paper or linoleum between manufacturing processes when the material must hang for drying without touching. The bars which support the material may be fixed staybars or rollers which are free to rotate. Alternatively, loose crossbars may be used, as shown.



• Chains selected to suit each application.

Used to convey rigid packages or unit loads having an even base by pushing them over a fixed bedplate. The pushers, positioned above the bedplate and spaced at appropriate intervals, are often staybars or angles bolted across a pair of chains. These conveyors operate horizontally or on inclines up to 40°.

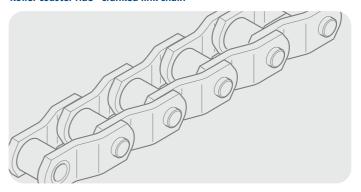
#### Cranked link conveyor chain



• Chains selected to suit each application.

Commonly known as gull wing chain. Its heavy duty characteristics allow it to cope with the arduous operating conditions encountered in aluminium processing.

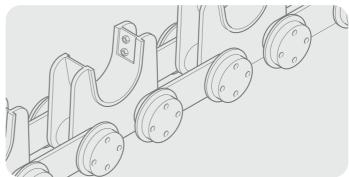
#### Roller coaster ride - cranked link chain



• 588 506 • 103.2mm pitch • Breaking load 667kN.

New design of cranked link chain for roller coaster rides. Pulls carriages up incline, releasing them onto the ride.

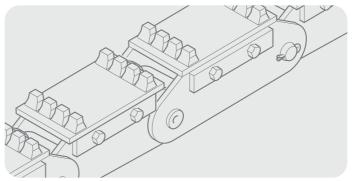
#### Pipe curing conveyor chain



• 199232/90 • 190 mm pitch • Breaking load 712kN.

These chains cradle newly spun concrete pipes through curing ovens.

#### Slab conveyor chain

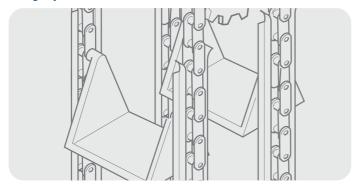


• 600mm pitch • Breaking load 3924kN.

Seven chains running parallel. Steel slabs are carried across the chains.

## **Special Engineered Chain**

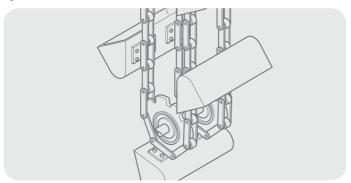
#### Swing tray elevator



#### • Chains selected to suit each application.

Swing tray elevators are suitable for elevating any type of package, box or sack. A pair of chains fitted with spigot pins allows the trays to pivot freely, the centre of gravity of the tray and load must be below the spigot pin to eliminate risk of tipping. By fitting finger-type trays, loading and unloading can be automatic.

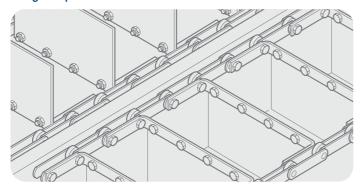
#### Spaced bucket elevator



#### • Chains selected to suit each application.

Buckets are fixed at intervals to one or more chains. Bulk materials are fed into the elevator boot and pick-up is by the buckets scooping or dredging. Discharge of material relies on the speed of the bucket around the headwheel to impart a centrifugal force to the material so that it is thrown clear of the preceding bucket.

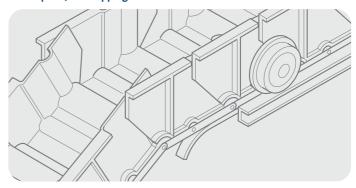
#### **Trough scrapers**



#### • Chains selected to suit each application.

Trough scraper conveyors are designed to move bulk materials along a trough by means of scraper plates fixed at intervals between a pair of conveyor chains, by F or L attachments. The material is normally fed into the trough by a gravity feed and discharged through an opening in the floor of the trough.

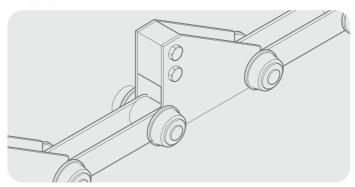
#### Steel apron / overlapping slats



#### • Chains selected to suit each application.

A continuous slat conveyor with a series of flat or formed steel slats carried between a pair of conveyor chains on K attachments. Slats may incorporate upturned ends or may run between skirt boards to prevent spillage. This type of conveyor may be used on inclines.

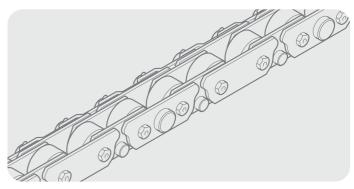
#### **Transfer chain**



• 179701/90 • 304.8 mm pitch • Breaking load 400kN.

Pusher attachments drives steel sections in steel mills.

#### Steriliser chain



• 171 320/90 • 88.9mm pitch • Breaking load 178kN.

Chains are matched to run in pairs within canned food steriliser systems.

## Notes

#### **Safety warning**

Outer Link: for high speed drives or drives operating in arduous conditions a properly riveted outer link (No 107) must always be used for optimum security, in preference to any other form of chain joint. The use of other connectors and cranked links (No 12 and No 30) must always be restricted to light duty, noncritical applications, in drives where an odd number of pitches is absolutely unavoidable. Wherever possible, drives should have sufficient overall adjustment to ensure the use of an even number of pitches throughout the useful life of the chain. A cranked link joint should only be used as a last resort.

#### Health and Safety at work

In the interests of safety, customers are reminded that when purchasing any technical product for use at work (or otherwise), any additional or up-to-date information and guidance, which it has not been possible to include in the publication, should be obtained by you from your local sales office in relation to the suitability and the safe and proper use of the product. All relevant information and guidance must be passed on by you to the person engaged in, or likely to be affected by or responsible for the use of the product.

#### **Chain performance**

The performance levels and tolerances of our product stated in this catalogue (including without limitation, serviceability, wear life, resistance to fatigue, corrosion protection) have been verified in a programme of testing and quality control in accordance with Renold, independent and/or international standard recommendations.

No representations or warranties are given that our product shall meet the stated performance levels or tolerances for any given application outside the performance levels and tolerances for the product's own specific application and environment.

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