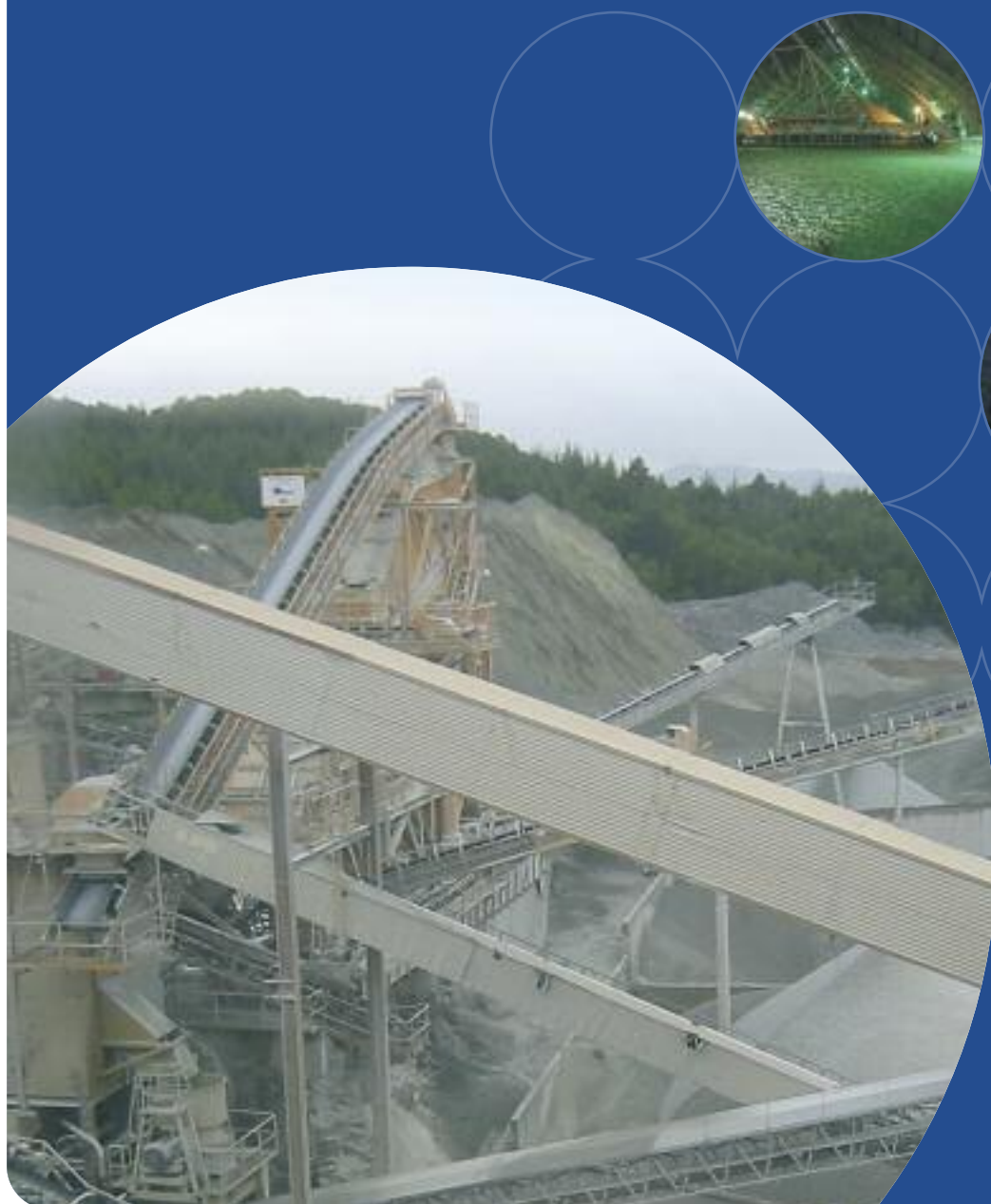


Cement Industry Chain

Conveying quality



RENOLD

Superior Chain Technology

Cement industry

Conveyor chain value through quality

Renold cement chain

- Supreme performance under high and shock loads
- Major suppliers to many original equipment manufacturers
- All Renold Chain's manufacturing and assembly processes are monitored by Statistical Process Control (SPC) in conformance with ISO 9000 (BS 5750) Quality Systems
- Renold chain has proven reliability in cement works around the world
- Excellent value for money

Product description

As applications are often specific, Renold offers a full bespoke design to customers' requirements.

As standard, Renold provides:

- Excellent fatigue life
- Consistent reliability
- Full technical service

Options available on request include:

- Lubrication options
- Wide range of attachments
- Wide range of pin fixing methods

Key features

- Consistent overall tolerances make it ideal for conveying systems requiring precise alignment
- 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
- Special materials selected for the unique combination of demands from the cement industry
- Fatigue life is improved by maintaining precise fits and tolerances between the pins, bushes and side plates
- Chain and sprocket life are optimised by the rigid control of pitch accuracy, resulting in excellent gearing, lower friction and reduced wear
- Bush and roller life are maximised by controlling the concentricity of these components and careful selection and control of the heat treatment process
- Breaking loads exceed the minimum international standards
- Strict control of inner and outer plate clearances ensures effective lubricant penetration

Function

Renold cement chains are used on:

- Bucket elevators
- Reclaim conveyors
- Apron feeders
- Hot clinker conveyors
- Scrapers
- Crusher feeders
- Drying kilns

In fact, wherever chains are required in cement works.

This range of products represents a broad overview of the solutions we can supply into the Cement industry.

Your Renold sales team can provide more details for any enquiry you may have.

Chain types

Bucket elevator



Reclaimer



Hot clinker conveyor



Apron feeder

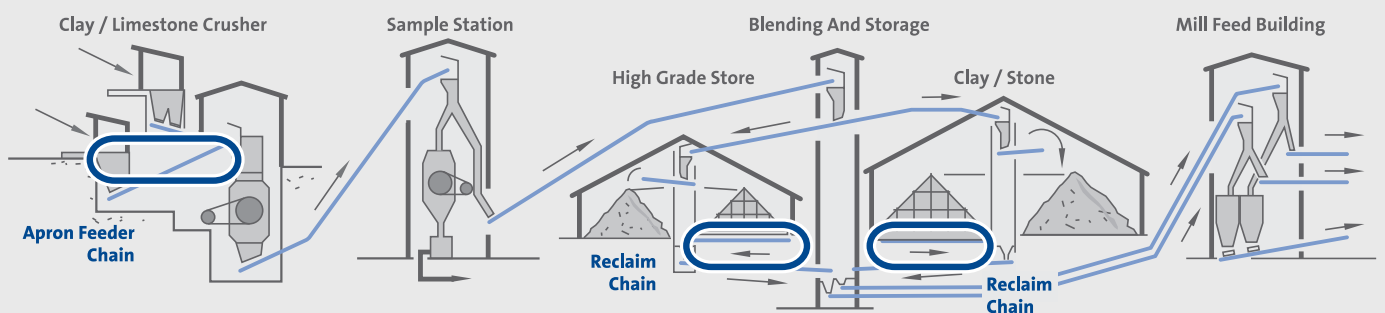
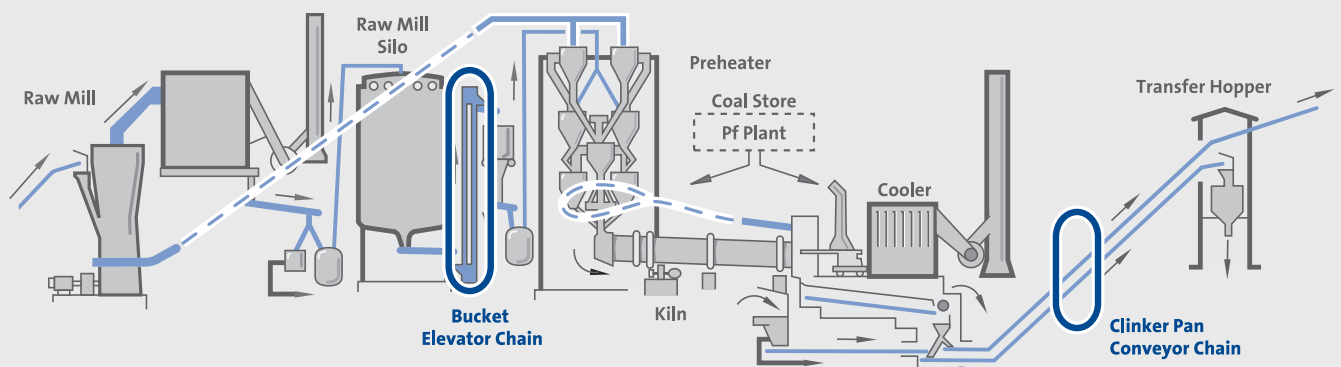
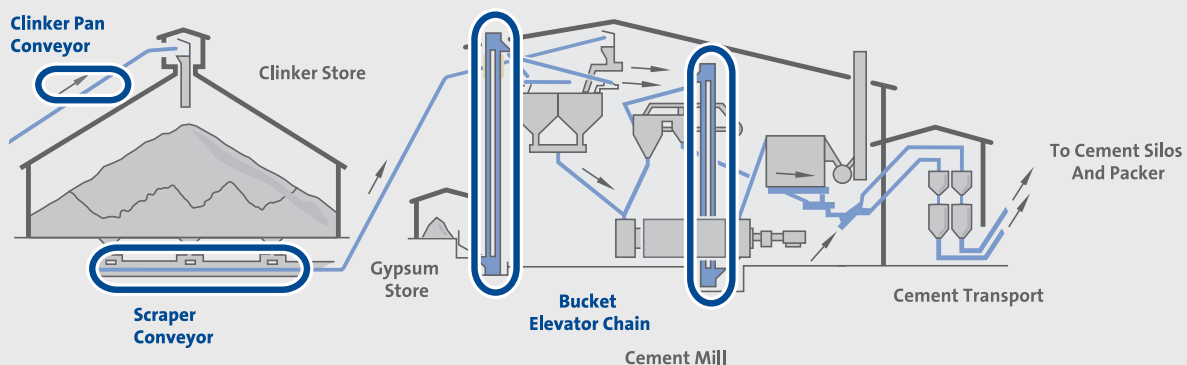


Cement industry

Manufacturing process

Renold heavy-duty chains, aprons, buckets, and sprockets keep cement mills running longer.

Count on Renold for the longest-lasting and most reliable products for your facility.



Cement industry

Cement mill bucket elevators

Experience

With over 100 years experience in designing and manufacturing chain products for tough industrial applications, you can be assured that Renold chains have optimum design features.

Wear resistance

Pins and bushes (knuckles) are made from alloy steel for maximum wear life and toughness. Pins are through hardened and induction hardened to provide maximum wear resistance. The pins and bushes are also centerless ground to improve wear life and provide ideal fit between mating parts.

Fatigue life

Plates are through-hardened for maximum strength. The full round pin and bush design maximises fatigue life and plate hole accuracy ensures optimum press fit.



Bucket elevator chain



Sealed Joint
bucket elevator chain

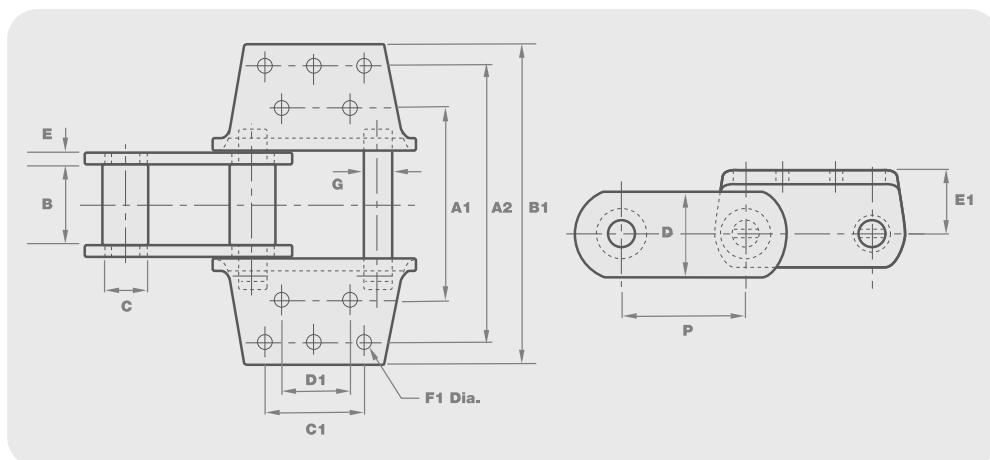
Cement industry

Bucket elevator chain

Bucket elevator chains

Chains assembled with pins staggered in pairs.

- Pins and bushes induction hardened and ground
- High specification alloy steels
- Closely controlled tolerances



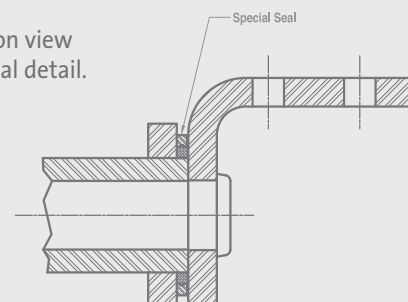
Bucket elevator chain

Chain Ref.	Technical Details (mm)														Type Att. No. of Holes	Tensile Strength Avg. kN
Renold Chain No	Pitch (inch)	Inside Width	Plate Thickness inner/outer	Plate Height	Bush/ Roller Diam.	Pin Diam.										
	P	B	E	D	C	G	A1	A2	B1	C1	D1	E1	F1			
B.43201/90	3.940	19.050	5.000/4.000	40.000	31.800	-	76.000	-	102.000	60.000	-	32.000	10.500	K-2 - 4 holes	68	
B.43252/90	4.920	25.400	7.000/5.000	55.000	47.600	-	105.000	-	174.000	90.000	-	31.000	14.500	K-2 - 4 holes	136	
B.69002	4.920	44.000	7.000/6.000	50.000	42.000	19.000	140.000	-	182.000	85.000	-	45.000	18.000	K-2 - 4 holes	220	
B.69003	5.320	55.000	12.000/10.000	70.000	60.000	25.000	180.000	-	245.000	100.000	-	55.000	19.000	K-2 - 4 holes	590	
6956-PB	6.000	76.200	12.700	76.200	44.450	25.400	-	184.150	242.888	63.500	-	47.625	17.463	K-24 - 4 holes	642	
6867-R	6.000	76.200	12.700	82.550	44.450	25.400	177.800	304.801	355.601	88.900	88.900	63.500	14.288	K-44 - 8 holes	756	
6866-R	6.000	63.500	12.700	76.200	60.325	31.750	-	160.338	249.238	57.150	-	60.325	17.475	K-2 - 4 holes	742	
6869-R	6.000	94.456	15.875	101.600	60.325	31.750	228.600	330.201	381.001	114.300	69.850	76.200	17.475	K-44 - 8 holes	1045	
6969-R	6.000	94.463	15.875	101.600	63.500	38.100	228.600	330.201	381.001	114.300	69.850	76.200	17.475	K-44 - 8 holes	1223	
B.43325/95	6.300	50.500	10.000/8.000	60.000	50.000	-	138.000	-	215.000	120.000	-	40.000	18.500	K-2 - 4 holes	272	
6864-R	7.000	94.463	15.875	101.600	60.325	31.750	228.600	330.201	381.001	139.700	95.250	76.200	17.475	K-443 - 10 holes	1045	
6874	7.000	101.600	15.875	114.300	69.850	44.450	241.300	342.901	393.701	139.700	95.250	79.375	17.475	K-443/K-44 - 10 holes	1734	
6875-R	7.000	95.250	15.875	101.600	63.500	38.100	228.600	330.201	381.001	139.700	95.250	76.200	17.475	K-443/K-44 - 10 holes	1223	
B.43405/95	7.800	50.500	10.000/8.000	60.000	50.000	-	138.000	-	195.000	160.000	-	50.000	18.500	K-2 - 4 holes	272	
B.43207/95	7.800	30.100	10.000/12.000	70.000	50.000	-	160.000	-	207.000	160.000	-	50.000	18.500	K-2 - 4 holes	385	
B.69001	9.840	58.000	14.000/12.000	80.000	63.300	-	240.000	-	330.000	147.000	-	60.000	24.700	K-2 - 4 holes	600	
B.60602	9.840	76.000	16.000/16.000	120.000	85.000	-	240.000	-	300.000	147.000	-	95.000	22.000	K-2 - 4 holes	1000	
B.60904	9.840	76.000	16.000	120.000	85.000	44.000	210.000	-	270.000	180.000	-	95.000	22.000	K-3 - 3 holes	883	
B.98055	9.840	58.000	14.000/12.000	80.000	63.500	32.860	240.000	-	330.000	147.000	-	60.000	22.000	K2 - 4 holes	590	

Seal joint bucket elevator chain

- The majority of elevator chains are available with the sealed joint feature
- The sealing method both seals in lubricant and seals out debris
- Wear life can be increased dramatically through use of this chain type

Cross section view showing seal detail.



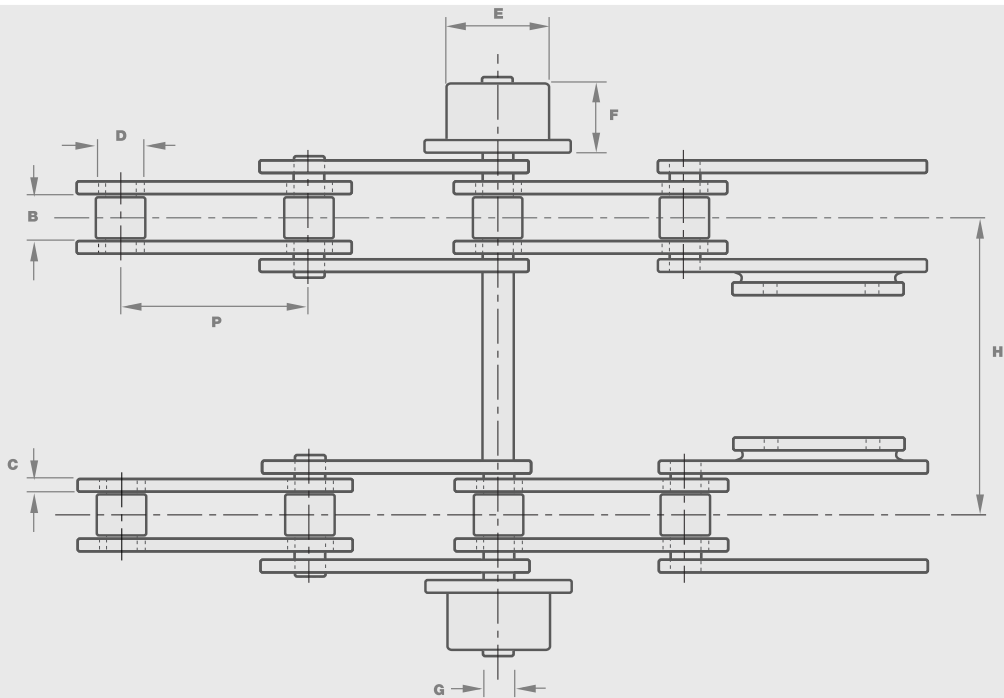
Sealed joint bucket elevator chain

Chain Ref.	Technical Details (mm)														Type Att.	Tensile
Renold Chain No	Pitch (inch)	Inside Width	Plate Thickness inner/outer	Plate Height	Bush/ Roller Diam.	Pin Diam.								No. of Holes	Strength Avg. kN	
	P	B	E	D	C	G	A1	A2	B1	C1	D1	E1	F1			
6956-SJ-PB	6.000	76.200	12.700	76.200	44.450	25.400	-	184.150	242.890	63.500	-	47.630	17.460	K-24 - 4 holes	642	
6875-R-SJ	7.000	95.250	15.880	101.600	63.500	38.100	228.600	330.200	391.320	139.700	95.250	76.200	17.480	K-443/K-44 - 10 holes	1223	

Hot clinker conveyor chain

Hot clinker conveyor chain

- Grease gun lubrication option
- Sealed bearings
- Fully heat treated components
- Optimum interference fits



Chain Ref.	Technical Details (mm)									
Ref No.	Pitch	Inside Width	Plate Depth	Plate Thickness	Bush Diam.	OB Roller Diam.	OB Roller Width	Bearing Pin Diam.	Breaking Load kN per strand	Chain Centres
	P	B		C	D	E	F	G		H
171045*	250.000	59.700	100.000	12.000	53.980	139.700	96.520	35.920	600	1280
171209**	250.000	87.800	120.000	16.000	60.000	136.000	82.000	40.900	1200	1123
6982PB**	250.000	76.200	114.300	12.700	60.000	125.000	79.000	34.950	915	965
2373-5	304.800	104.780	88.900	15.880	82.550†	152.400	90.000	41.280	955	1473

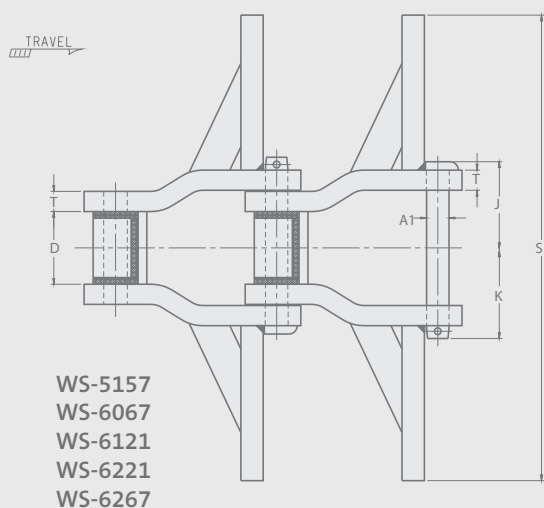
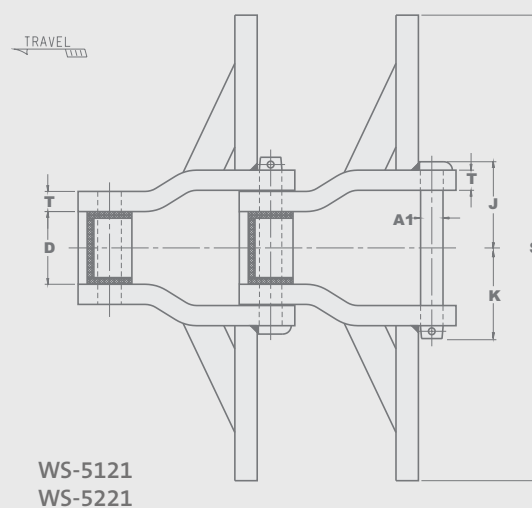
* Staybars at 2 pitch spacing
** Staybars at 4 pitch spacing
† Gearing roller

Cement industry

Heavy duty welded steel drag chain

Heavy duty welded steel drag chain

- All chains are designed with press fit pins to allow greater pin loading and to prevent movement
- All chain parts are heat treated
- All chains supplied with coupling pin and cotter assembled
- HF suffix indicates hardfacing of plates, face plates and wings. Hardfacing is recommended
- Maximum recommended operating temperature is 530°C
- All chains have induction hardened pins



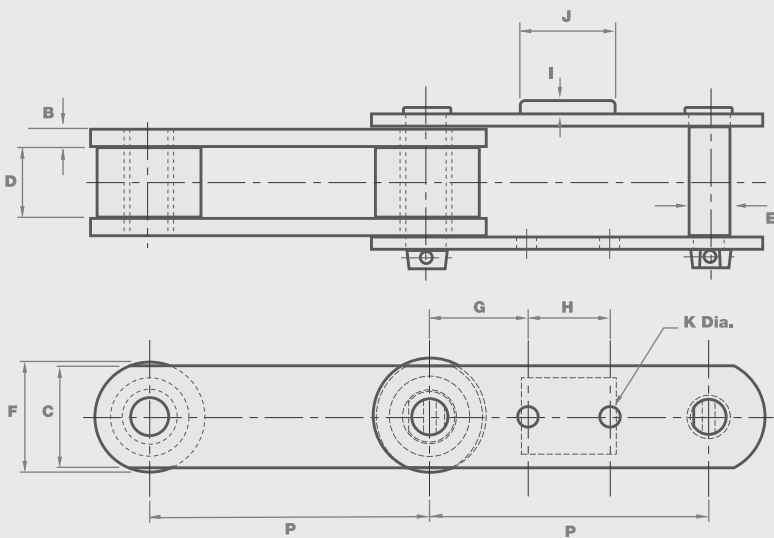
Chain Ref.	Technical Details (mm)											
Renold Chain No	Pitch	Base Chain Mass Avg. (kg/m)	Tensile Strength Avg. kN	Pin Diam.	Sprocket Width	Plate Thickness	Plate Height	Bush Diam.	CL to Pin Head	CL to Pin End	Outside Width	Flight Width
	P			A1	D	T	F	H	J	K	X	S
W S-5157-H	6.050	33.934	801	28.575	76.200	15.875	63.500	44.450	80.963	93.663	117.475	203-356
W S-6067-HHF	9.000	40.185	1023	31.750	92.075	19.050	63.500	63.500	96.441	107.156	141.288	254-508
W S-6267-HHF	9.000	40.333	934	34.925	92.075	19.050	63.500	63.500	97.631	107.163	141.300	254-508
W S-5121-HHF	9.000	52.686	1397	31.750	92.075	28.575	63.500	63.500	122.238	127.000	160.338	254-762
W S-5221-HHF	9.000	52.984	1357	34.925	92.075	28.575	63.500	63.500	122.250	127.000	160.351	254-762
W S-6121-HHF	9.000	53.579	1397	31.750	92.075	28.575	63.500	63.500	121.444	127.000	160.351	254-762
W S-6221-HHF	9.000	53.877	1357	34.925	92.075	28.575	63.500	63.500	122.250	127.000	160.351	254-762

Cement industry

Reclaimer system chain

Reclaimer system chain

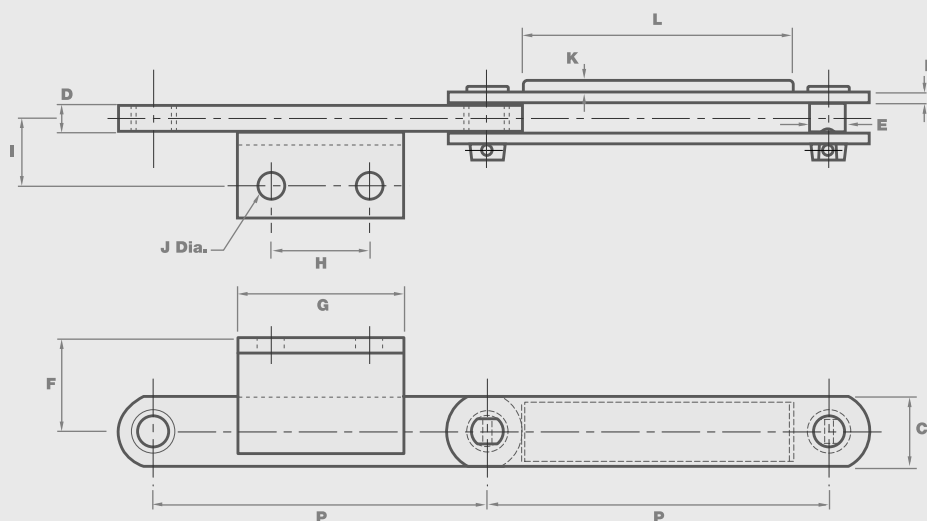
- High specification materials
- Optimum heat treatment processes
- Precision machined components
- Controlled dimension accuracy



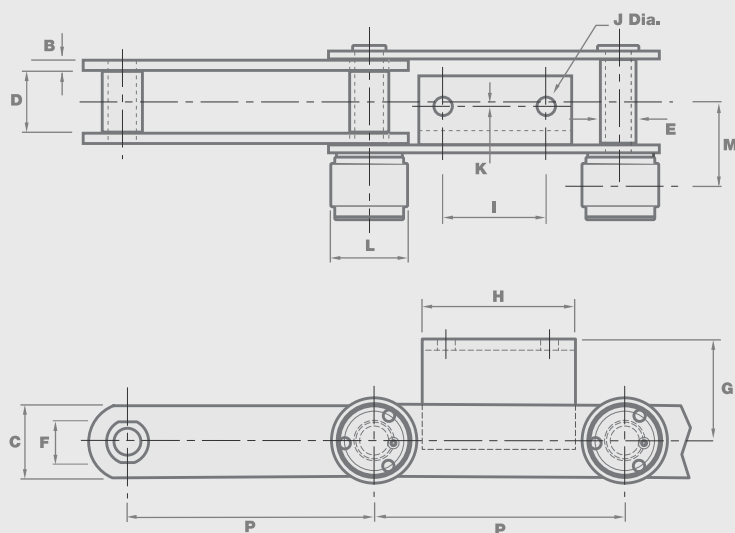
Chain Ref.		Technical Details (mm)										
Chain No.	Pitch	Plate Thickness	Plate Height	Inside Width	Pin Diam.	Roller/Bush Diam.						Tensile Strength Avg. kN
	P	B	C	D	E	F	G	H	I	J	K	
4248-PB Steel Block	254.001	19.050	76.200	38.100	38.100	-	76.200	101.600	12.700	127.000	26.988	1012
3965-R STR	304.801	15.875	101.600	69.850	38.100	114.300	107.950	44.45 & 44.45 3 Holes	12.700	101.600	22.225	1254
6863-A Steel Knuckle	304.801	15.875	88.900	69.850	31.750	50.800	109.538	101.600	-	-	11.113	1025

Cement industry

Reclaimer system chain



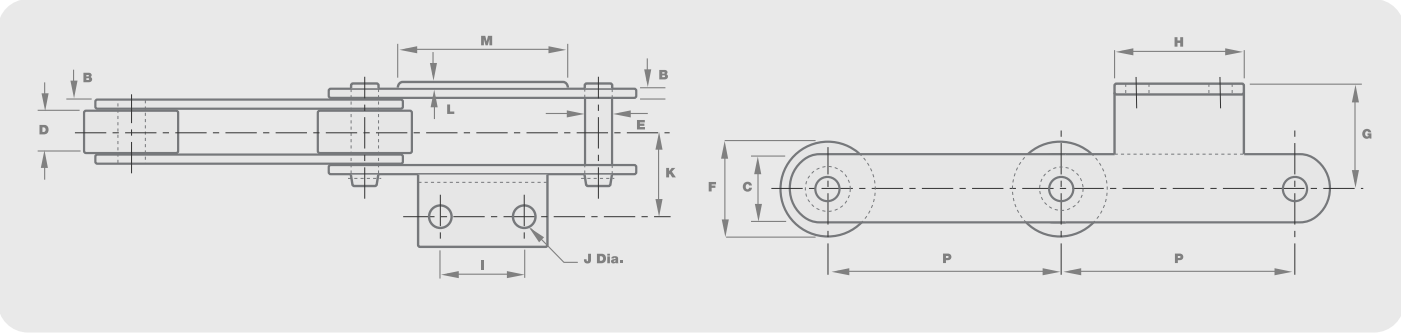
Chain Ref.	Technical Details (mm)												
Chain No.	Pitch	Plate Thickness	Plate Height	Plate Width	Pin Diam.	Platform Height	Platform Length	Hole Centres	Transverse Pitch	Hole Diameter	Wear Pad Thickness	Wear Pad Width	Tensile Strength Avg. kN
	P	B	C	D	E	F	G	H	I	J	K	L	
4207-PB	203.200	9.525	50.800	19.050	19.050	98.425	127.000	76.200	64.294	17.463	9.525	152.400	301
4984-PB	250.000	9.525	69.850	41.275	34.925	109.538	150.813	90.488	70.644	21.431	9.525	196.850	519
4209-PB	304.801	9.525	63.500	25.400	31.750	82.550	152.400	88.900	60.325	23.813	9.525	241.300	475
4211-PB	304.801	12.700	76.200	38.100	38.100	82.550	152.400	88.900	60.325	23.813	9.525	241.300	748
4200	315.000	12.700	82.550	38.100	41.275	109.935	190.500	130.175	75.010	20.638	12.700	234.950	990
B.69004	315.000	12.000	80.000	66.000	36.000	50.000	122.000	200.000	150.000	22.000	11.000	100.000	590



Chain Ref.	Technical Details (mm)												
Chain No	Pitch	Plate Thickness	Plate Height	Inside Width	Pin Diam.	Roller/Bush Diam.	Platform Height	Platform length	Hole Centres	Hole Diam.	Transverse Centres	OB Roller Diam.	Tensile Strength Avg. kN
	P	B	C	D	E	F	G	H	I	J	K	L	
6196-PB	250.000	9.530	63.500	54.770	28.550	40.000	100.000	177.800	119.860	21.030	17.860	90.000	352
3241-PB	315.000	12.700	82.550	65.090	34.930	50.000	119.860	190.500	130.180	21.830	5.160	100.000	690
3240-PB	315.000	12.700	69.850	45.240	31.750	44.450	119.860	190.500	130.180	20.640	7.940	100.000	470

Cement industry

Reclaimer system chain



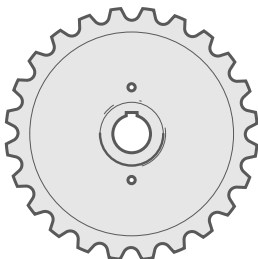
Chain No.	Pitch	Plate Thickness	Plate Height	Inside Width	Pin Diam.	Roller/Bush Diam.	Platform Height	Platform Length	Hole Centres	Hole Diameter	Transverse Pitch	Wear Pad Thickness	Wear Pad Width	Tensile Strength Avg. kN
	P	B	C	D	E	F	G	H	I	J	K	L	M	
3252	228.600	12.700	63.500	66.675	25.400	76.200	95.250	342.901	6 & 6 K-3 att	20.638	98.425	-	-	510
6854-A	250.000	12.700	76.200	76.200	28.575	47.625	103.188	101.600	50.800	17.463	Special Inverted K-4	12.700	101.600	770
5300-P	250.000	9.525	69.850	49.213	25.400	100.013	109.935	139.700	90.091	22.225	3.563	-	-	475
B.60635	250.000	14.000	100.000	65.000	36.000	140.000	190.000	190.000	130.000	21.000	100.000	-	-	630
B.69003	250.000	12.000	80.000	62.000	33.000	120.000	65.000	360.000	250.000	25.000	95.000	12.000	-	490
6853-PB	304.801	15.875	88.900	57.150	34.925	50.800	139.700	177.800	2.25 & 2.25 K-3 att	17.463	Special Inverted K-4	15.875	158.750	946
6862	304.801	15.875	76.200	50.800	34.925	50.800	139.700	177.800	2.25 & 2.25 K-3 att	17.463	Special Inverted K-4	15.875	177.800	440
6843-PB	304.801	15.875	88.900	57.150	31.750	50.800	139.700	177.800	2.25 & 2.25 K-3 att	20.638	Special Inverted K-4	15.875	177.800	1027
2440-P	304.801	12.700	69.850	63.500	25.400	127.000	76.200	177.800	63.500	16.669	88.900	-	-	-
4213-PB	315.000	12.700	69.850	36.513	25.400	35.966	113.506	190.500	130.175	20.638	95.250	12.700	260.351	636
2388-C	315.000	12.700	82.550	49.213	36.513	120.650	158.750	190.500	130.175	25.400	103.188	15.875	50.800	757
4213-PB	315.000	12.700	69.850	36.513	25.400	35.966	127.000	190.500	130.175	20.638	95.250	12.700	260.351	658

Cement industry

Sprockets

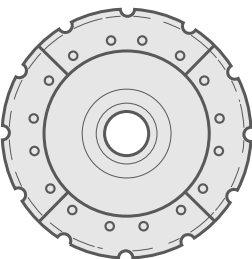
Plate sprocket

Tooth: 23
Pitch: 105mm
Finish: machine cut and induction hardened teeth



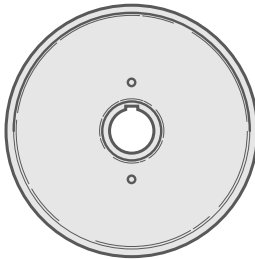
Segmental sprocket

Tooth: 12
Pitch: 200mm
Finish: machine cut and induction hardened teeth
- four segments



Drum

Dia: 680mm
Width: 200mm
Pitch: 105mm
Finish: welded hoop



Split sprocket

Tooth: 6
Pitch: 250mm
Finish: flame cut and flame hardened teeth

