



**JOHN KING**

Conveyor Chains & Sprockets Worldwide

# Cement and Aggregate Industries Chains.



## Material Processing Solutions Since 1926.



**Get in Touch With Us**

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ENGLAND

**or Call Us by Phone**

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Rev15.08.2023  
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# Mission statement and values.

Our mission is to produce high-performing products and solutions, in a safe, efficient and consistent manner that is aimed at surpassing the expectations of our global customers. We will support our products by providing superior customer care.

Our care extends to the environment, employees, their families and the wider community. We endeavour to provide a safe, rewarding work environment that recognises individual achievement and fosters the skills of teamwork and communication.

The challenges of competing in a global market are changing all the time, so it is essential to our continued success that everyone who works at John King has the same positive attitude.

What will never change is the commitment to a high degree of professionalism conducted with a high level of courtesy.

## There are six-elements to the John King Group positive attitude:



### The manufacturers 'Mentality'



### A total commitment to 'Quality'



### With a primary focus on 'Safety'



### With a high level of 'Integrity'

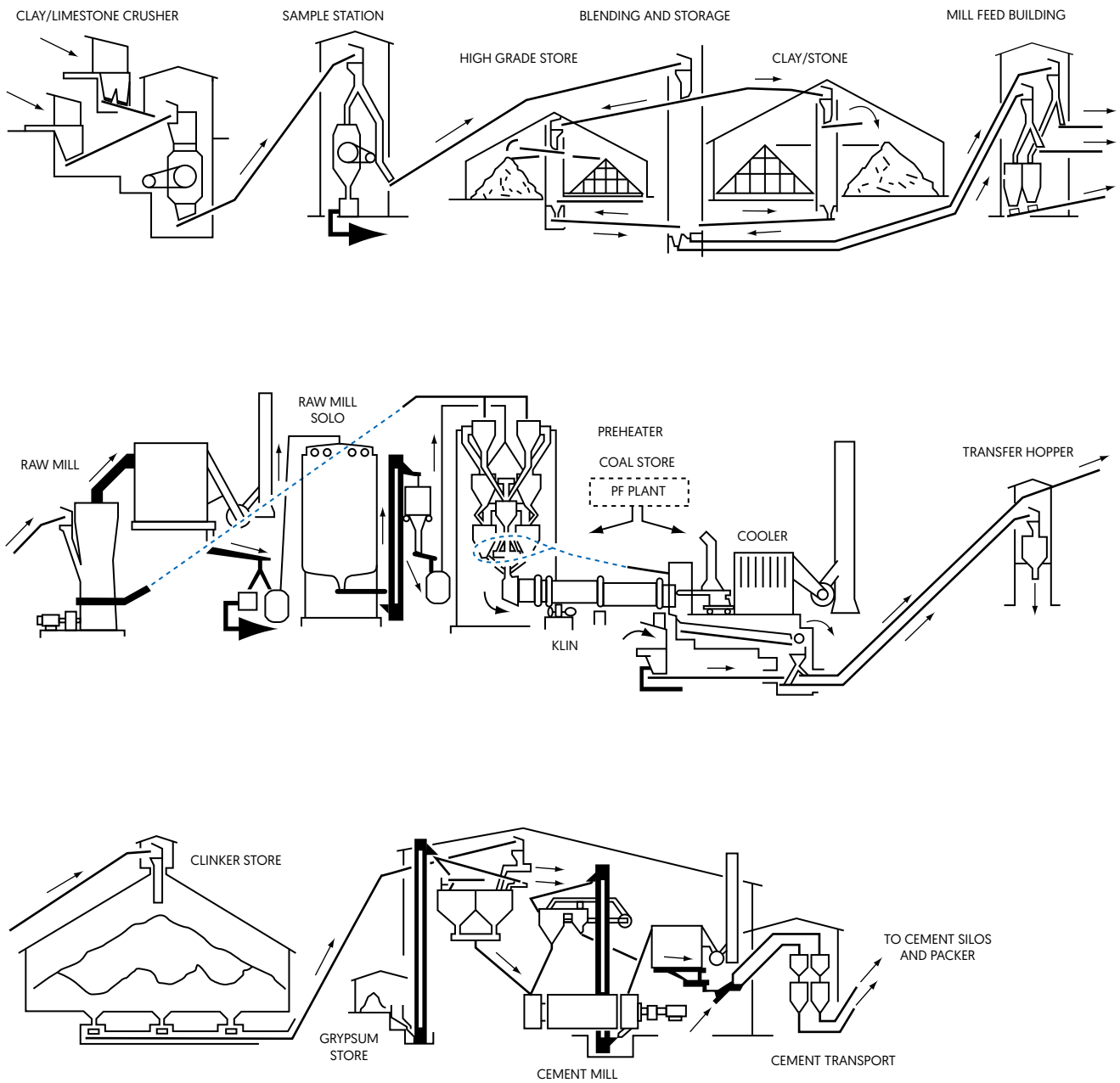


### With an objective to 'Innovate'



### Always remembering to 'Enjoy' life in the Kingdom!

# Typical Process Layout for Cement Production.





# From Survey to Drawing to Production to Installation

**Your integrated supply partner.**

Within the aggressive environments encountered in Cement and Aggregates there is an ongoing requirement for refurbishment and replacement of plants and equipment in all areas of the process. John King Group is a combined business uniquely equipped to serve the industries with a full spectrum of essential engineering services to ensure customers' equipment is in the best condition to maintain essential processes.



## Inspection, Survey and Consultation.

As part of the supply package, qualified engineers will come to site and inspect items of plant and equipment to establish and report on the condition. Subsequent consultation generally includes means for improvement such as: materials employed, design, construction, implementation, additional operation and maintenance advice.



## Industry Leading Steel Processors.

With decades of in-house experience in metal processing and fabrication, we use the latest technology and techniques to deliver quality, bespoke solutions for our clients. From laser cutting to punching, bending and welding our skilled team will deliver a high-quality solution that is both on time and within budget.





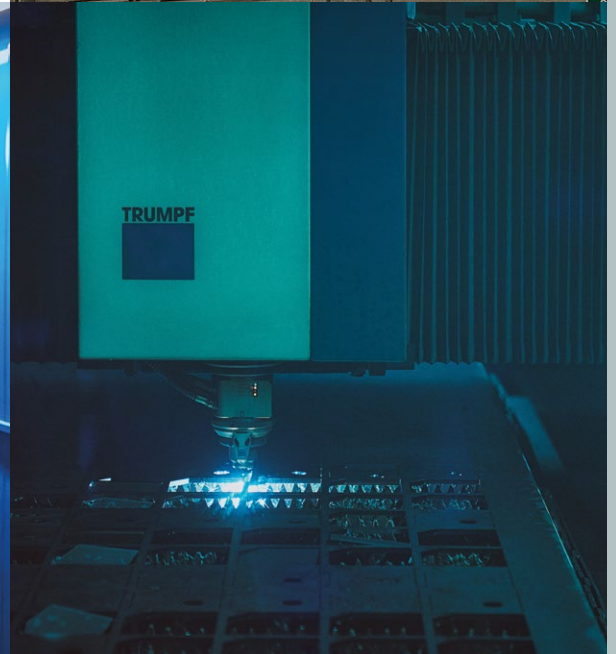
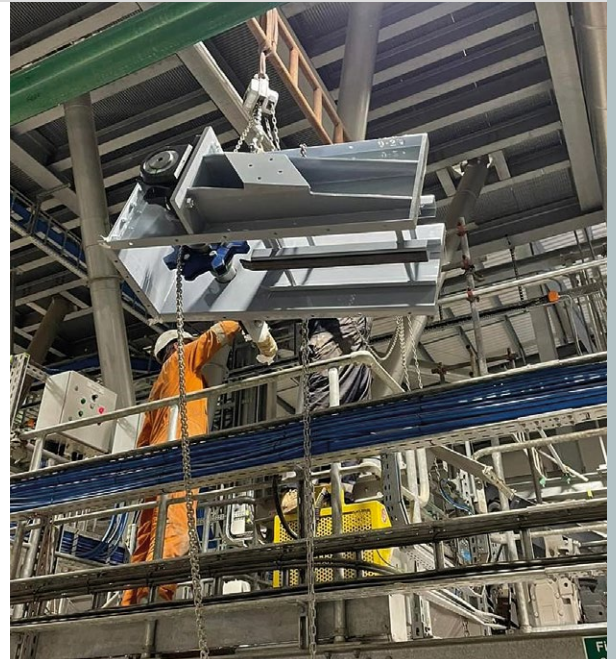
## Design and Drawing Service.

Design and technical drawing are part of our service. We create the technical drawing directly from our site survey or work with you to create a complete design brief to meet your fabrication needs. We will support you in developing and improving the plant and equipment.



## Fully Integrated Installation.

Our site service team, comprising experienced mechanical fitters and fabricators will install all types of mechanical handling equipment, metal fabrications and equipment at your premises in the agreed timescale with a high degree of competence while operating under strict safety protocols.







# The Undisputed Kings of Laser Profiling and Fabrication.

## FROM SURVEY TO DRAWING TO PRODUCTION – THE ONE-STOP SHOP

**John King Laser** was established in 2007 primarily to service the mechanical handling division. It was well understood that the available capacity surpassed that of in-house requirements and the business model from the outset was to sell laser-cut, formed and fabricated parts to a wide variety of customers, producing a wide range of machinery and equipment.

More recently, John King Laser has been able to support the groups' site service division, where bespoke fabrications have been required.

The laser division has remained autonomous from the start while critically benefitting as part of the Group structure in investing in new technology to give the division a distinct advantage in product efficiency and quality. The recent installation of the latest and probably best laser capacity in the country is a testament to this.

## Manufacturing Capabilities.

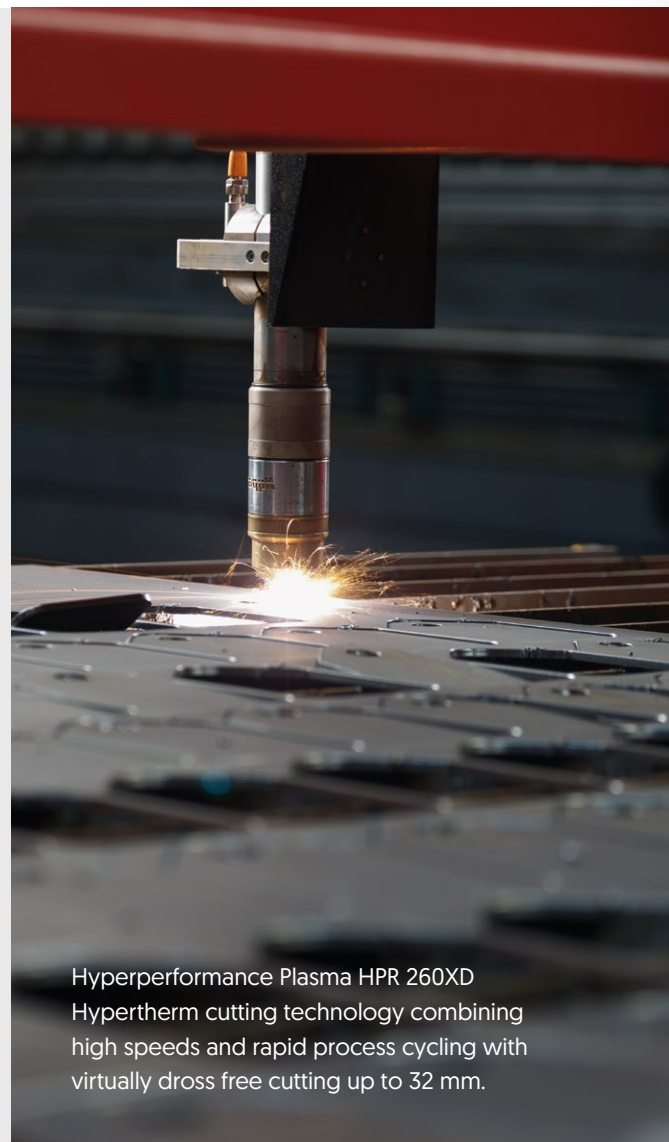
The 2020s business is a lean enterprise working from a modern manufacturing facility employing the best production techniques including fiber laser technology, plasma for thicker material sections, CNC machining and robotics. Group structure provides the internal resources to implement production management systems that ensure the highest quality, consistent and competitive products produced in a safe environment. All manufacturing is conducted within the dictates of ISO 9001 to the latest 2015 standard to ensure quality objectives are monitored and maintained.

### LASER CUTTING CAPABILITIES

- Mild and carbon steel up to 25 mm.
- Stainless steel up to 15 mm.
- Aluminium up to 12 mm.

### FLAME CUTTING AND PLASMA CUTTING CAPABILITIES

- Machine bed size of 4 m x 2.5 m.
- Flame cutting up to 110 mm.
- Plasma cutting up to 30 mm.



Hyperperformance Plasma HPR 260XD  
Hypertherm cutting technology combining high speeds and rapid process cycling with virtually dross free cutting up to 32 mm.



## Press Technology.

In support of our impressive range of flatbed processing capabilities, we operate CNC Synchro press brake machines capable of pressing parts with capacities up to and including 220 tons and 4000 mm in length. With smaller machines with 2000 mm gap and 100 mm stroke for smaller parts in higher volume production.



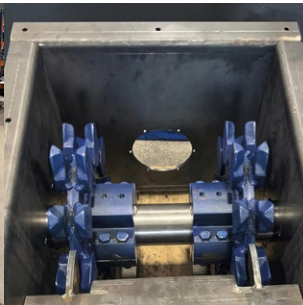
## Welding and Fabrication.

Our welding and fabrication capacity includes a high level of skill in both internal and external projects. This enables John King's laser and fabrication division to offer an all-encompassing manufacturing service. The site service division will thereafter take charge of the installation as required.

Ash hopper during fabrication as a direct replacement to an existing unit.



Replacement conveyor sections reproduced on a like for like basis.



A new precipitator dust conveyor during manufacture and prior to entering the paint shop.



Chute sections to make up a full arrangement ready for site service installation.







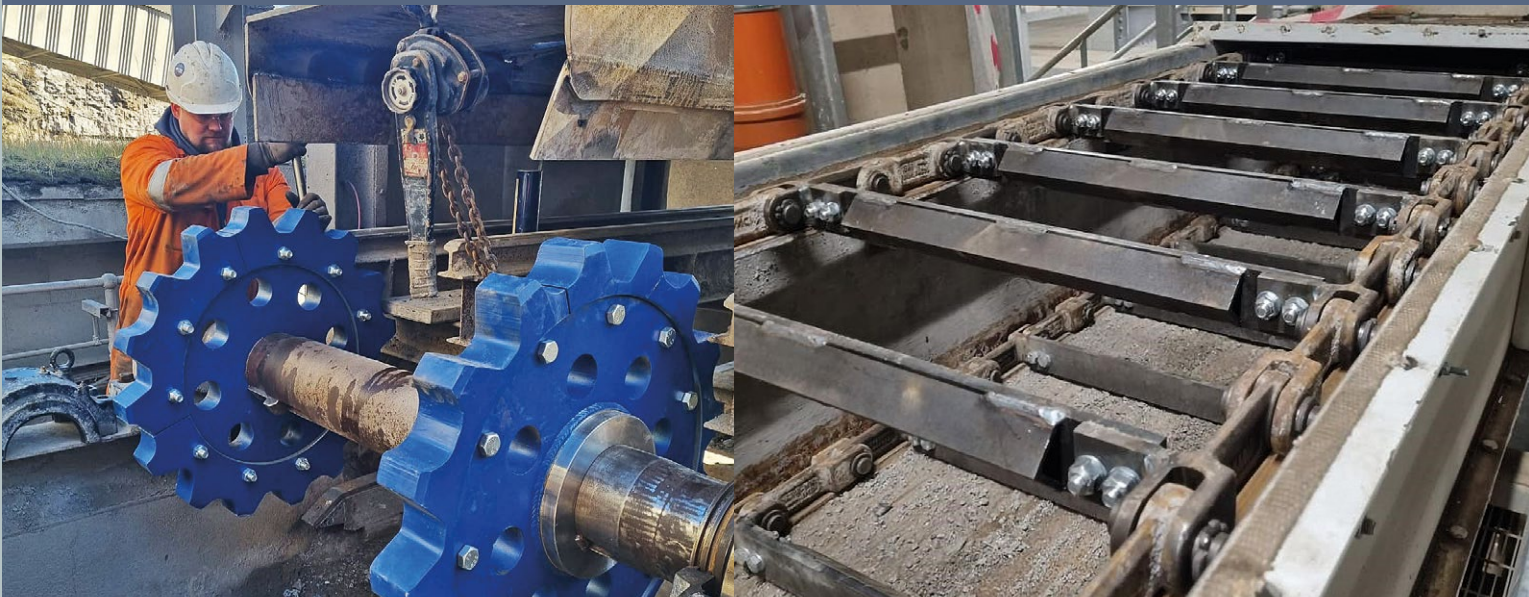
# Site Services The Complete Supply Package.

## Bulk handling experts you can rely on.

The John King Site Service Division employs a highly skilled team of engineers solely dedicated to the **service and maintenance of bulk material handling equipment**, which includes – installing, servicing and maintaining all aspects of mechanical handling equipment and related plant and machinery.

The market demands **high-quality chains** and **expert installation**. John King Chains uniquely **offers both**. Make the most of it.

- **Secure optimum equipment reliability** through **best-quality chains** and **conveyor component** spares.
- Take advantage of **the quickest deliveries of conveyor spares** of any manufacturer in the market.
- Let **the conveyor specialist** look after your equipment to ensure **optimum performance** and **service life**.
- Allow us to highlight technical improvements **to enhance the performance of your existing equipment**.
- Enter into **a professional partnership** to develop a service strategy tailored to your needs.







## Site Services Scope of Supply.

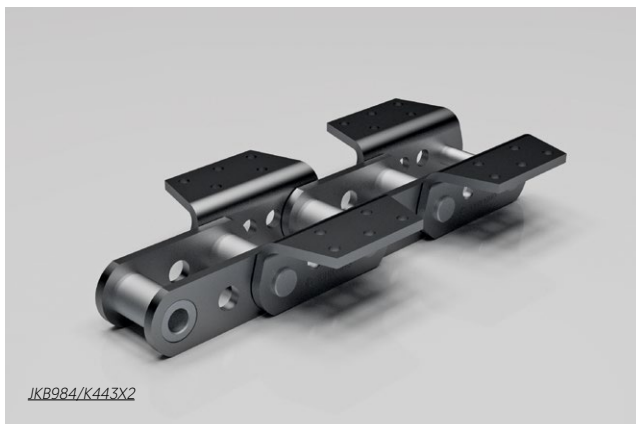
- **Inspection and maintenance** of all mechanical handling equipment by specialist engineers
- **Troubleshooting** and problem-solving within mechanical handling equipment.
- **Supply of high-quality conveyor chains** and related conveyor spares.
- **Specialist in the supply of heat resistant components.**
- **In-house laboratory** for material and heat treatment analysis with full metallurgical support.
- **Manufacture and installation of all types of fabrications** from pre-hardened plate, stainless steels or standard materials.
- **Replacement of sections or complete conveyors and elevators** including manufacture and installation.
- **Design and construction of complete bulk handling equipment** including installation service.
- **Repair and maintenance** of all related plant and equipment.

## Safety at Work.

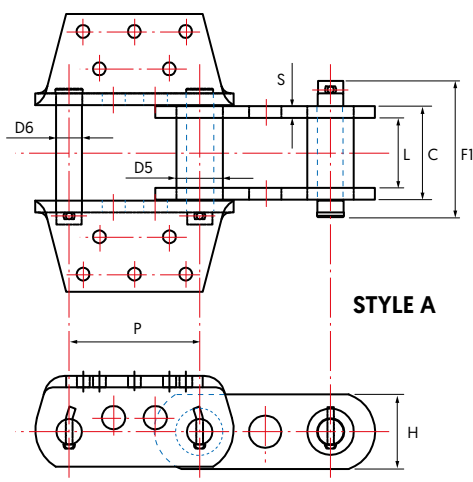
We are committed to providing and maintaining a healthy and safe environment for all employees and protecting the safety of contractors, customers, visitors and all other persons affected by our operations.

This is achieved by assessing all significant risks, designing safe work systems and eliminating hazards where reasonably practicable. **This is encapsulated within the company HSE policy and enshrined in the everyday culture of our business.**

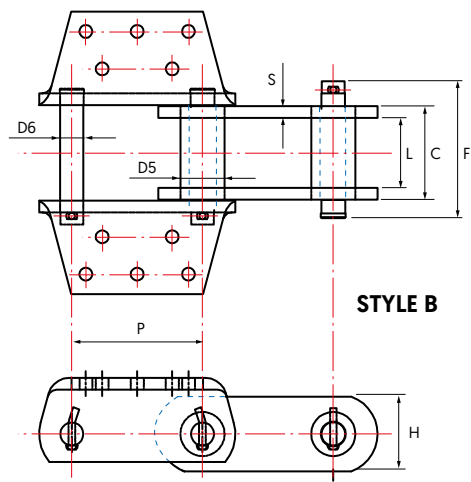
# American Standard without Rollers.



The smooth and stable flow of material through a process depends on the performance of the conveyor chain installed within the equipment. Bush class chains or steel knuckle chain are of the same construction as roller conveyor chain, but with the roller excluded. This series, with a reduced number of components, has proved to be particularly successful in high duty, high abrasion applications where lubrication is not possible. For many years KING steel bush chains have been proving performance in mill duty centrifugal discharge elevators within the more difficult applications encountered in the Cement Industry.



STYLE A



STYLE B

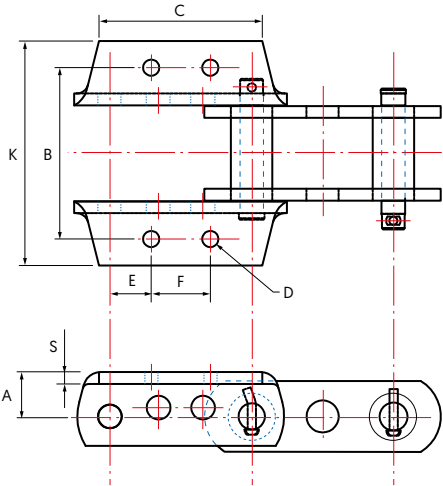
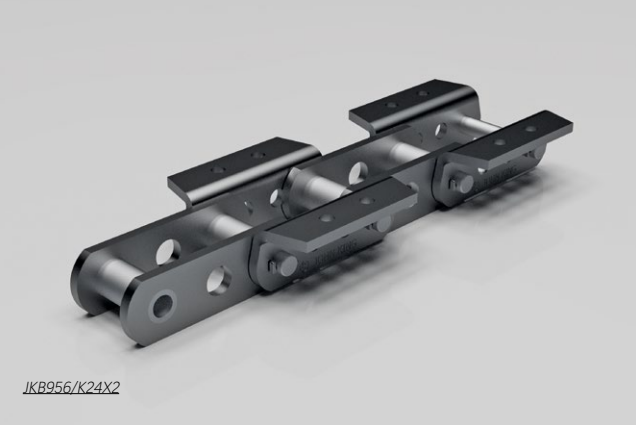
## American Standard – Engineered Steel – without Rollers B29-12

Chain Number	Pitch	Style	Bushings			Pins		Over-All Pin & Cotter	Between Sidebars	Sidebars			Sprocket Number
			Outside Diameter	Width	Heat Treat	Diameter	Heat Treat			Thickness	Height	Heat Treat	
	D5		C	D6		F1		L	S	H			
	inches		inches			inches		inches					
JKB102B	4.00	A	1.00	2.89	CH	0.63	CH	4.37	2.13	0.38	1.50	TH	102B
JKB111	4.76	A	1.44	3.39	CH	0.75	CH	4.97	2.63	0.38	2.00	TH	111
JKB110	6.00	A	1.25	2.89	CH	0.63	CIH	4.37	2.13	0.38	1.50	TH	110
JKB856	6.00	B	1.75	4.00	CH	1.00	CIH	6.44	3.00	0.50	2.50	TH	856
JKB956	6.00	A	1.75	4.00	CH	1.00	CIH	6.44	3.00	0.50	3.00	TH	856
JKB857	6.00	B	1.75	4.00	CH	1.00	CIH	6.44	3.00	0.50	3.25	TH	856
JKB958	6.00	A	2.00	4.13	CH	1.13	CIH	6.44	3.00	0.56	3.25	TH	958
JKB859	6.00	B	2.38	5.00	CH	1.25	CIH	7.74	3.75	0.62	4.00	TH	859
JKB864	7.00	B	2.38	5.00	CH	1.25	CIH	7.74	3.75	0.62	4.00	TH	864
JKB984	7.00	A	2.50	5.00	CH	1.38	CIH	7.74	3.75	0.62	4.00	TH	984
JKB1084	7.00	C	2.85	6.00	CH	1.62	CIH	8.60	4.43	0.75	4.50	TH	1084

TH: Through-hardened, CH: Deep Case Hardened, CIH: Circumferential Induction Hardened after through-hardening.

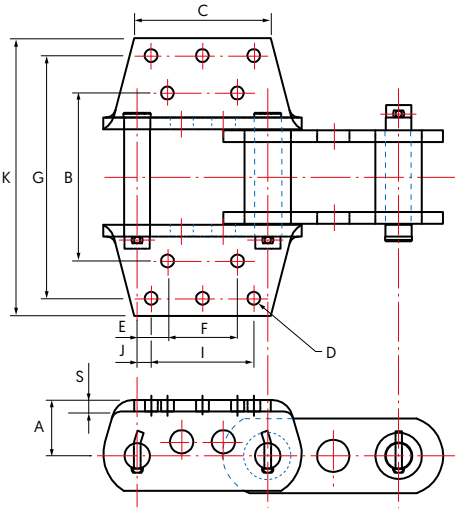
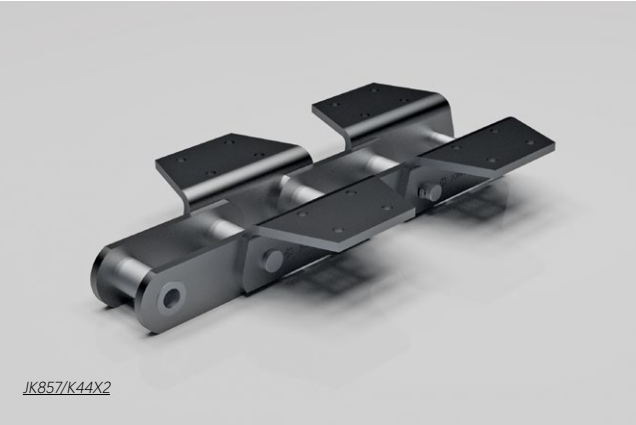


## American Standard without Rollers with K24 attachment



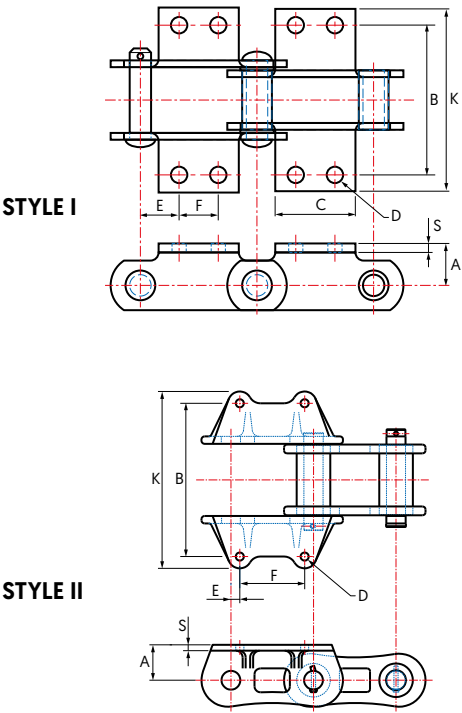
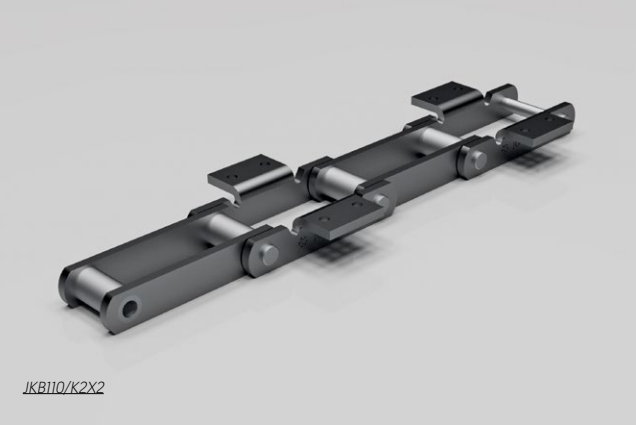
American Standard without Rollers with K24 attachment									
Chain Number	A	B	C	D	E	F	K	S	Weight
	inches								
JB8856	1.88	7.25	6.91	0.69	1.75	2.50	9.38	0.50	27.5
JB956	1.88	7.25	6.91	0.69	1.75	2.50	9.38	0.50	29

## American Standard without Rollers with K44/443 attachment



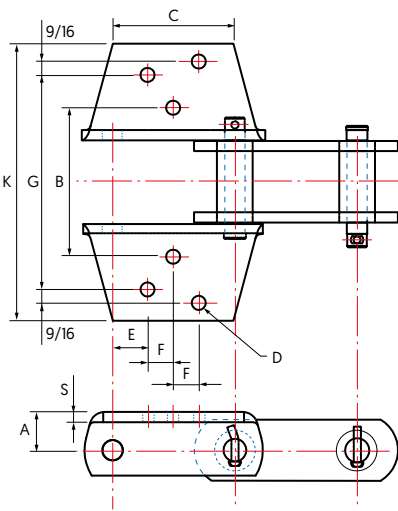
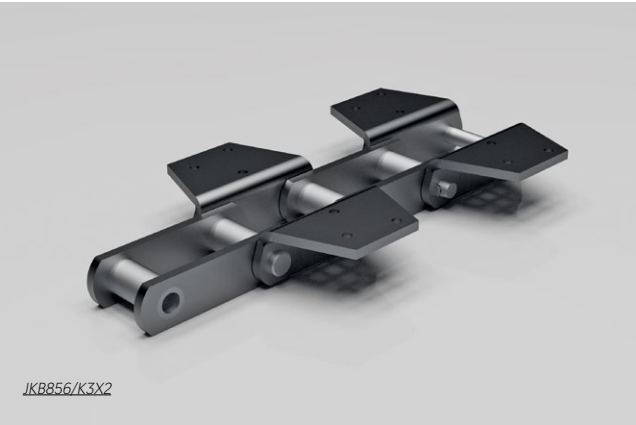
American Standard without Rollers with K44/443 attachment													
Chain Number	Attachment Style	A	B	C	D	E	F	G	I	J	K	S	Weight
		inches											
JB857	K44	2.50	7.00	5.50	0.56	1.25	3.50	12.00	3.50	1.25	14.00	0.50	38
JB859	K44	3.00	9.00	5.92	0.69	1.62	2.75	13.00	4.50	0.75	15.00	0.62	59
JB958	K44	2.50	7.00	5.75	0.56	1.25	3.50	12.00	3.50	1.25	13.68	0.50	40
JB864	K443	3.00	9.00	7.00	0.69	1.62	3.75	13.00	5.50	0.75	15.00	0.62	55
JB984	K443	3.00	9.00	7.32	0.69	1.62	3.75	13.00	5.50	0.75	14.88	0.62	58

## American Standard without Rollers with K2 attachment



American Standard without Rollers with K2 attachment										
Chain Number	Style	A	B	C	D	E	F	K	S	Weight
		inches								lbs/ft
JB102B	I	1.00	5.32	2.85	0.41	1.13	1.75	6.76	0.38	9.0
JB110	I	1.00	5.32	2.88	0.41	2.13	1.75	7.07	0.38	8.6
JB1084	II	3.00	13.00	—	0.69	0.75	5.50	15.00	0.50	51.5

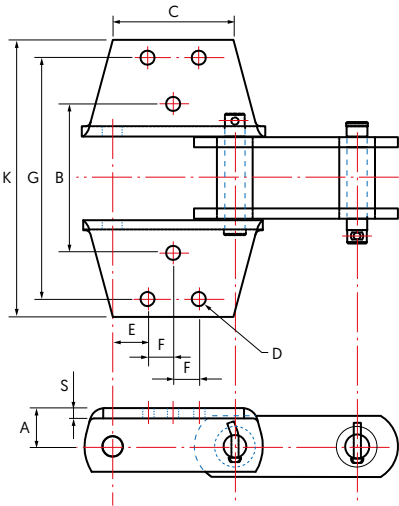
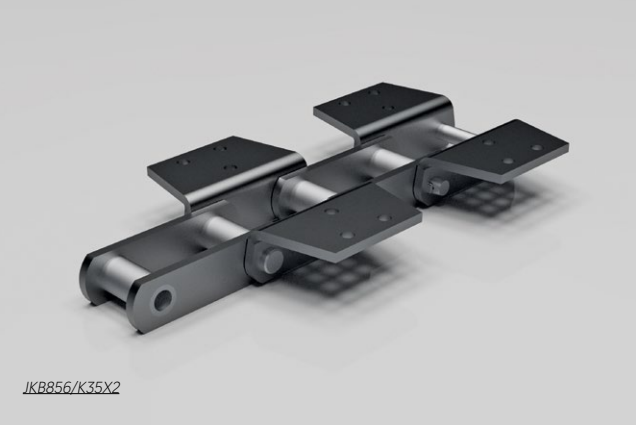
## American Standard without Rollers with K3 attachment



American Standard without Rollers with K3 attachment										
Chain Number	A	B	C	D	E	F	G	K	S	Weight
	inches									lbs/ft
JB856	1.88	6.56	4.25	0.50	1.63	1.38	10.94	13.56	0.50	26.9



# American Standard without Rollers with K35 attachment



American Standard without Rollers with K35 attachment										
Chain Number	A	B	C	D	E	F	G	K	S	Weight
	inches									lbs/ft
JKB856	1.88	7.25	5.88	0.69	1.75	1.25	11.75	13.50	0.50	26.9

Key features of a World class product.

Pins manufactured from a high alloy steel to BS970 709M40 [AISI 4140] initially hardened and tempered to average 40Hrc in the core to give this tension component high tensile strength and toughness. Thereafter the pin is selectively induction hardened to create an armour plating to 58-62Hrc at typically 10% of the diameter.

Bushings are produced from a high alloy carburising steel to BS970 805M20 [AISI 8620] subject to deep case carburising on all wearing surfaces both internal and external. An extended exposure to the carbon rich atmosphere of the furnace ensures that the best combination of high hardness [58-62Hrc] and maximised case depth is achieved.

Sidebars are uniquely uprated from traditionally carbon steels to alloy steel to BS970 530M40 [AISI 5140] These are supplied in a hardened and tempered condition average 40Hrc to offer increased tensile strength as compared to alternatives.

Although of fundamental importance Quality is not exclusively about materials and heat treatment. Controlled high interference fits are employed in relation to pins and bushings and relative side plates. By pre-stressing the sidebar pitch holes the fatigue life of the chain is extended.

The chains are produced within the dictates of the Company's management quality system ISO9000 to ensure a high and consistent quality standard.

# Continuous Discharge Double Strand 4000 Series Elevator Chains.

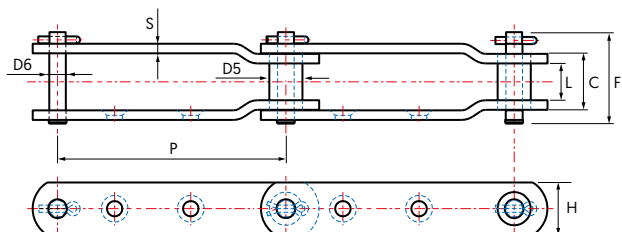


## JKR4000 series chain.

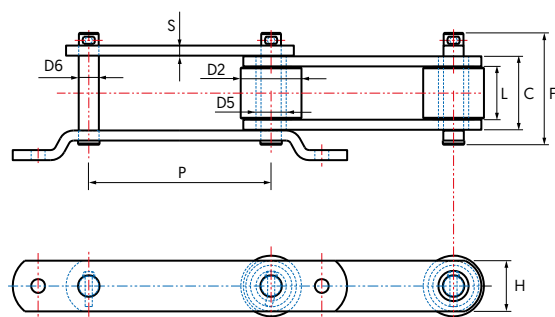
4000 9" pitch series roller chains duplicate the high performance specifications employed in the 4200 series chains. The chains are style A straight sidebar style with buckets fixed every second link on the outer. The pitch is reduced to 9" which allows for higher speeds and therefore increased capacities. The G5 and G6 attachments fix the buckets between the strands necessitating pre-calibration.

## JKR4200 series chain.

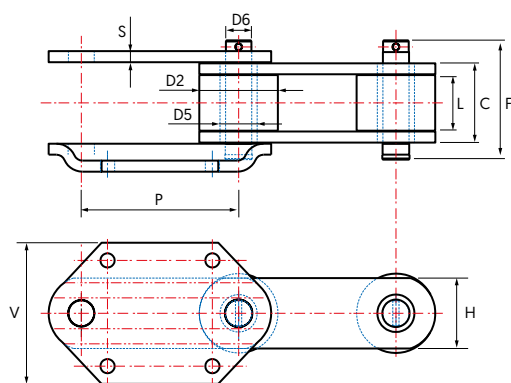
4200 series roller chains are specifically designed for twin strand operation. These 12" pitch style C crank link chains utilise one pitch per bucket. The chain is produced to a materials and heat treatment specification which is specific to high duty and abrasive environments. Buckets are side mounted with fixed G117 attachments. This necessitates accuracy in matching of the strands as a final manufacturing requirement.



**G117 ATTACHMENT STYLE**



**G5 ATTACHMENT STYLE**



**G6 ATTACHMENT STYLE**

**Continuous Discharge Double Strand 4000 Series Elevator Chains**

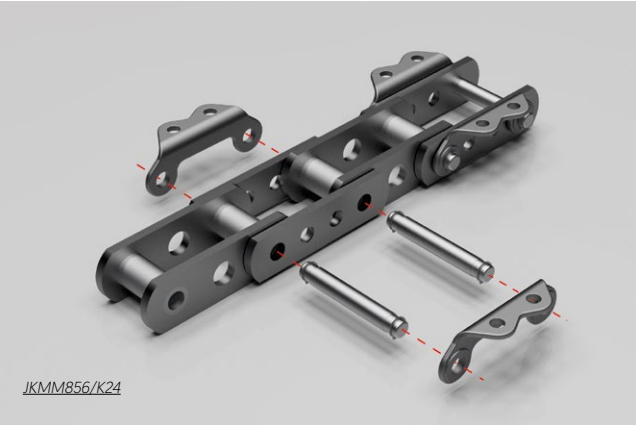
Chain Number	Unit	Pitch	Rollers		Bushings			Pins		Over-All Pin & Cotter	Between Sidebars	Sidebars				Rated Working Load
			Outside Diameter	Heat Treat	Outside Diameter	C	Heat Treat	Diameter	Heat Treat			Thickness	Height	V	Heat Treat	
JKR4251-G117	in	12.00	1.75	CH	1.25	2.94	CH	0.88	CH	4.63	1.94	0.50	2.00	—	TH	9,000 lb
	mm	305.00	44.50	CH	31.80	74.70	CH	22.40	CH	118.00	49.20	12.70	50.80	—	TH	4,000 kg
JKR4004-G5	in	9.00	3.00	CH	1.50	3.63	CH	1.00	CIH	5.69	2.63	0.50	2.50	—	TH	12,700 lb
	mm	229.00	78.20	CH	38.10	92.20	CH	25.40	CIH	145.00	66.80	12.70	63.50	—	TH	5,700 kg
JKR4065-G5	in	9.00	4.25	CH	2.00	4.31	CH	1.25	CIH	6.16	3.06	0.63	3.50	—	TH	18,900 lb
	mm	229.00	108.00	CH	50.80	109.00	CH	31.80	CIH	156.00	77.70	16.00	88.90	—	TH	8,500 kg
JKR4037-G6	in	9.00	4.50	CH	2.12	3.25	CH	1.50	CIH	6.79	3.25	0.62	4.00	8.00	TH	29,500 lb
	mm	229.00	114.30	CH	53.85	82.55	CH	38.10	CIH	172.50	82.55	17.75	101.60	203.20	TH	13,300 kg

TH: Thru-hardened.  
CIH: Circumferential Induction Hardened after thru-hardening.  
CH: Carburized.



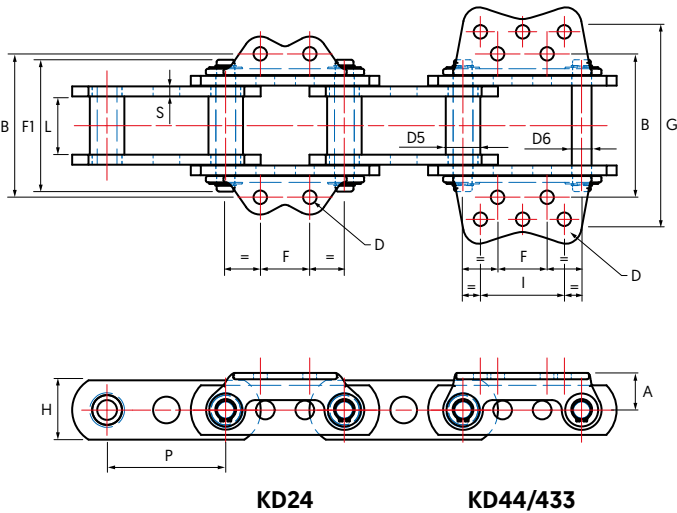
# Millmaster Chains

## High Duty Central Chains for Centrifugal Discharge Elevators with Unique Double Life Construction.



The new generation mill master chains are designed for the highest duty cement and aggregate industries applications. The chain combines the proven performance of the US central strand bush chains, but incorporates a high alloy heat treated K style dismountable attachment (KD) which mounts on an extended pin retained with a heavy duty circlip. It is the bucket location that secures the KD attachment. The design allows for quick replacement in the event of damage and the potential to turn the attachment to utilise the unworn diameter of the bushing. Clearly **the revolutionary double life chains** have a positive impact on the cost of ownership.

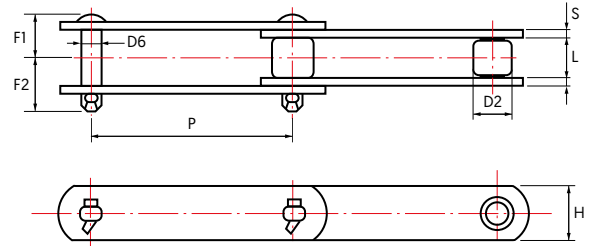
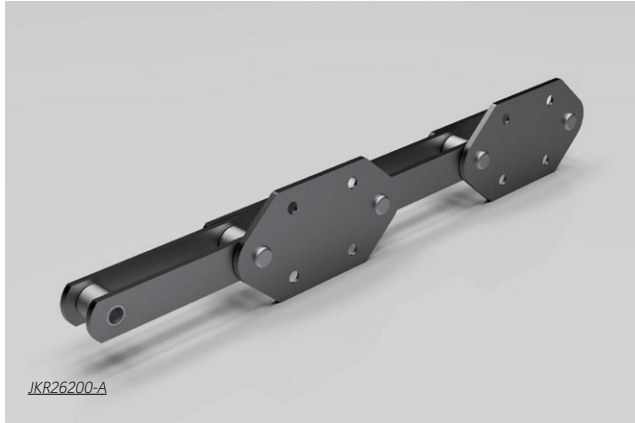
Refer to John King Millmaster catalogue for our range of high capacity bucket elevators manufactured by John King in the UK since the 1950s.



KD attachment							
Chain Number	Attach-ment Style	A	B	D	F	G	I
		inches					
JKMM856	KD24	1.88	7.25	0.69	2.50	–	–
JKMM956	KD24	1.88	7.25	0.69	2.50	–	–
JKMM857	KD44	2.50	7.00	0.56	3.50	12.00	3.50
JKMM958	KD44	2.50	7.00	0.56	3.50	12.00	3.50
JKMM859	KD44	3.00	9.00	0.69	2.75	13.00	4.50
JKMM864	KD443	3.00	9.00	0.69	3.75	13.00	5.50
JKMM984	KD443	3.00	9.00	0.69	3.75	13.00	5.50

Millmaster Chains – High Duty Central Chains for Centrifugal Discharge Elevators												
Chain Number	Pitch	Bushings		Pins			Over-All Pin & Cotter	Between Sidebars	Sidebars			Sprocket Number
		Outside Diameter	Width	Heat Treat	Diameter	Heat Treat			Thickness	Height	Heat Treat	
		D5	C		D6		FI	L	S	H		
	inches				inches	inches						
JKMM856	6.00	1.75	4.00		CH	1.00	CIH	6.44	3.00	0.50	2.50	TH
JKMM956	6.00	1.75	4.00	CH	1.00	CIH	6.44	3.00	0.50	3.00	TH	856
JKMM857	6.00	1.75	4.00	CH	1.00	CIH	6.44	3.00	0.50	3.25	TH	856
JKMM958	6.00	2.00	4.13	CH	1.13	CIH	6.44	3.00	0.56	3.25	TH	958
JKMM859	6.00	2.38	5.00	CH	1.25	CIH	7.74	3.75	0.62	4.00	TH	859
JKMM864	7.00	2.38	5.00	CH	1.25	CIH	7.74	3.75	0.62	4.00	TH	864
JKMM984	7.00	2.50	5.00	CH	1.38	CIH	7.74	3.75	0.62	4.00	TH	984

# King Double Strand Bucket Elevator with Side Mounted Bucket.

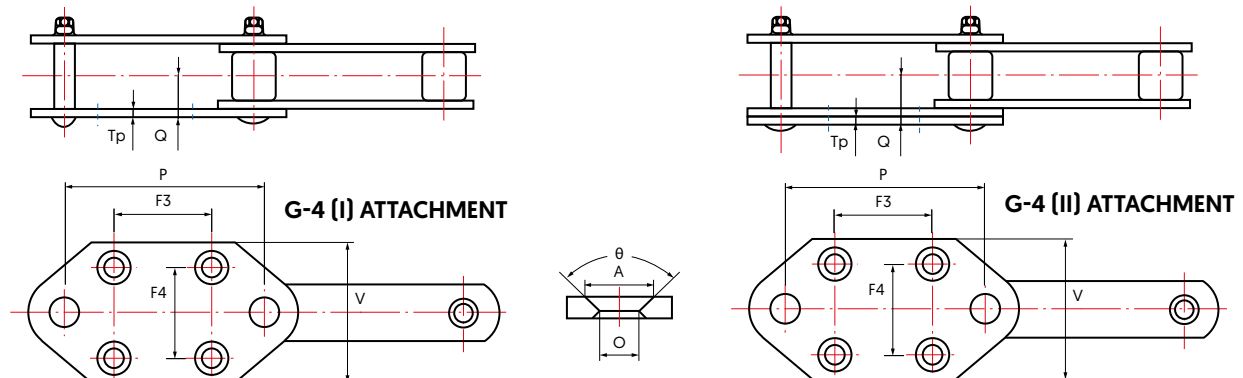


King Double Strand Bucket Elevator with Side Mounted Bucket

Chain Number	Pitch	Rollers	Pins	Over-All Pin & Cotter		Between Sidebars	Sidebars		Average Ultimate Strength
		Outside Diameter	Diameter				Thickness	Height	
	P	D2	D6	F1	F2	L	S	H	
	mm								kg
JKR26200	200	50.8	22.2	56	61	57.2	9.5	63.5	57,500
JKR26250	250	50.8	22.2	56	61	57.2	9.5	63.5	57,500
JKR26300	300	50.8	22.2	68.5	61	57.2	9.5	63.5	57,500
JKR36250	350	57.2	25.4	69	78	66.7	12.7	76.2	88,500
JKR36300	300	57.2	25.4	81	78	66.7	12.7	76.2	88,500
JKR36350	350	57.2	25.4	81	78	66.7	12.7	76.2	88,500
JKR60300	300	70	35.0	88	84	77	12.7	90	106,000
JKR60350	350	70	35.0	88	84	77	12.7	90	106,000
JKR60400	400	70	35.0	88	84	77	12.7	90	106,000
JKR90350	350	85	42.0	101.5	95.5	88	16	110	166,000
JKR90400	400	85	42.0	101.5	95.5	88	16	110	166,000
JKR120400	400	100	50.0	119.5	108	100	19	130	225,000

## G Attachment

For Double Strand Elevators Kings propose their JKR series with fixed G attachments for side mounting on the buckets.

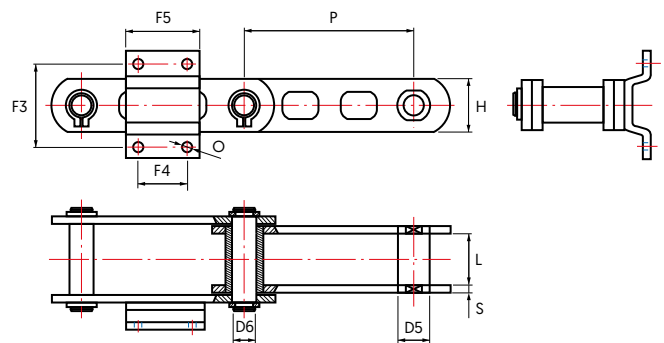
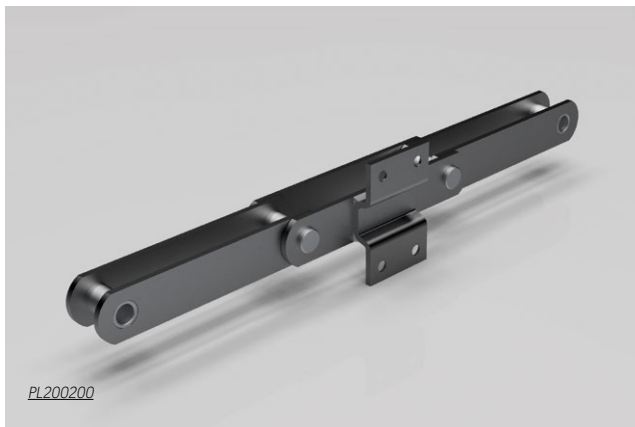




## King Double Strand Bucket Elevator with Side Mounted Bucket with G Attachment

Chain Number	Pitch	V	F3	F4	Tp	Q	A	O	Bolt Diameter
	P								
	mm								
JKR26200-A	200	120	100	80	9.5	48	26	15	M12
JKR26200-B	200	120	100	80	9.5	48	26	15	M14
JKR26250-A	250	150	140	100	9.5	48	26	15	M12
JKR26250-B	250	150	140	100	9.5	48	32	19	M16
JKR26300-A	300	150	180	100	9.5	48	26	15	M12
JKR26300-B	300	200	170	140	12	60	38	24	M20
JKR36250-A	250	150	140	100	12.7	60	32	19	M16
JKR36250-B	250	150	140	100	12.7	60	32	19	M16
JKR36300-A	300	150	180	100	12.7	60	32	19	M16
JKR36300-B	300	200	170	140	12	72	38	24	M20
JKR60300-B	300	200	170	140	12	77	38	24	M20
JKR36350-B	350	240	200	170	12	72	40	28	M24
JKR60350-B	350	240	200	170	12	77	40	28	M24
JKR60400-B	400	280	230	200	16	81	50	35	M30
JKR90350-B	350	240	200	170	12	89.5	40	28	M24
JKR90400-B	400	280	230	200	16	93.5	50	35	M30
JKR120400-B	400	280	230	200	16	105.5	50	35	M30

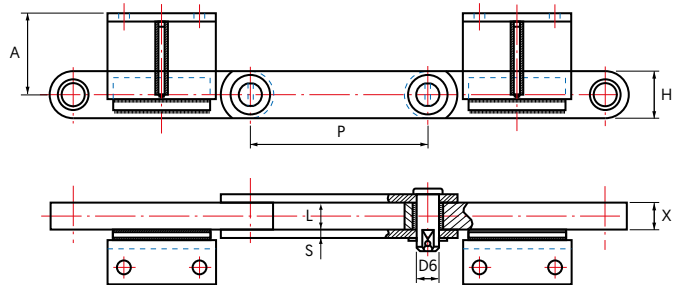
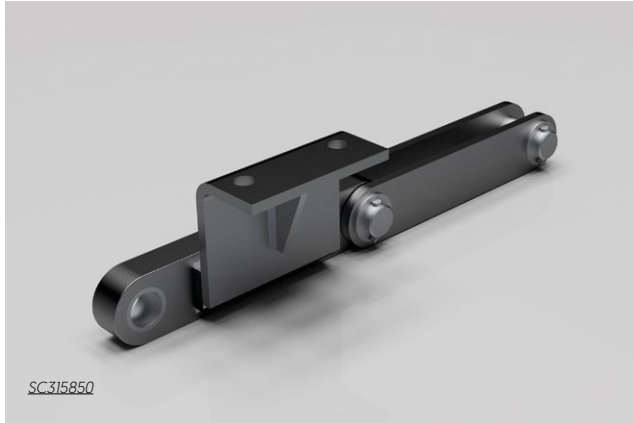
# King Deep Bucket Pan Conveyor PL Series.



## King Deep Bucket Pan Conveyor PL Series

Chain Number	Pitch	Bushings	Pins	Between Sidebars	Sidebars		F3	F4	F5	O	Flanged Roller	Axle Diameter	Average Ultimate Strength
		Outside Diameter	Diameter		Thickness	Height							
	P	D5	D6	L	S	H							
	mm												
PL200200	200	32	22	45	8	50	110	60	100	14	50	22-28	250
PL250320	250	45	32	65	10	70	150	80	120	18	60	32-40	400
PL250480	250	50	35	67	12	80	150	80	120	18	70	35-45	630

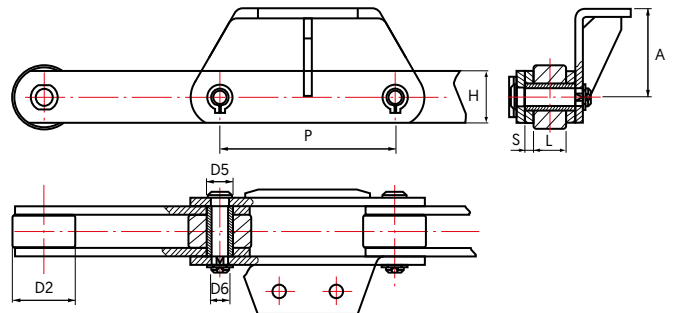
# King Scraper Reclaimer SC Series.



King Scraper Reclaimer SC Series

Chain Number	Pitch	Pins	Between Sidebars	Sidebars		A	X	Average Ultimate Strength
		Diameter		Thickness	Height			
	P	D6	L	S	H			
	mm							kg
SC250620	250	36	41	12	70	125	40	550
SC315850	315	42	51	15	80	135	50	800

# King Scraper Reclaimer PH Series.



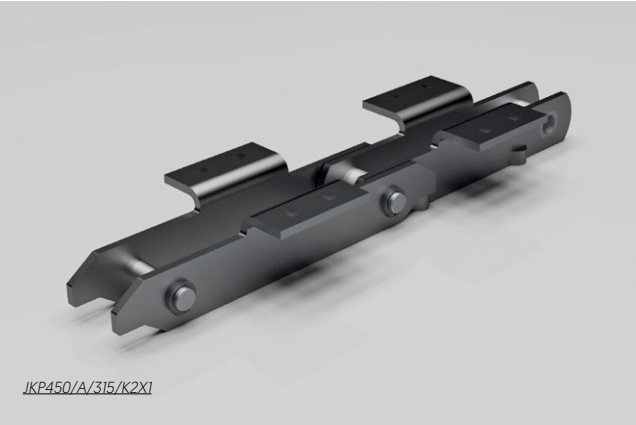
King Scraper Reclaimer PH Series

Chain Number	Pitch	Rollers	Bushings	Pins	Between Sidebars	Sidebars		A	Average Ultimate Strength
		Outside Diameter		Diameter		Thickness	Height		
	P	D2	D5	D6	L	S	H		
	mm								
PH2501000	250	130	50	42	58	15	100	135	1250
PH3151100	315	130	54	36	60	15	100	—	1050
PH4001100	400	130	54	36	70	15	100	—	1050

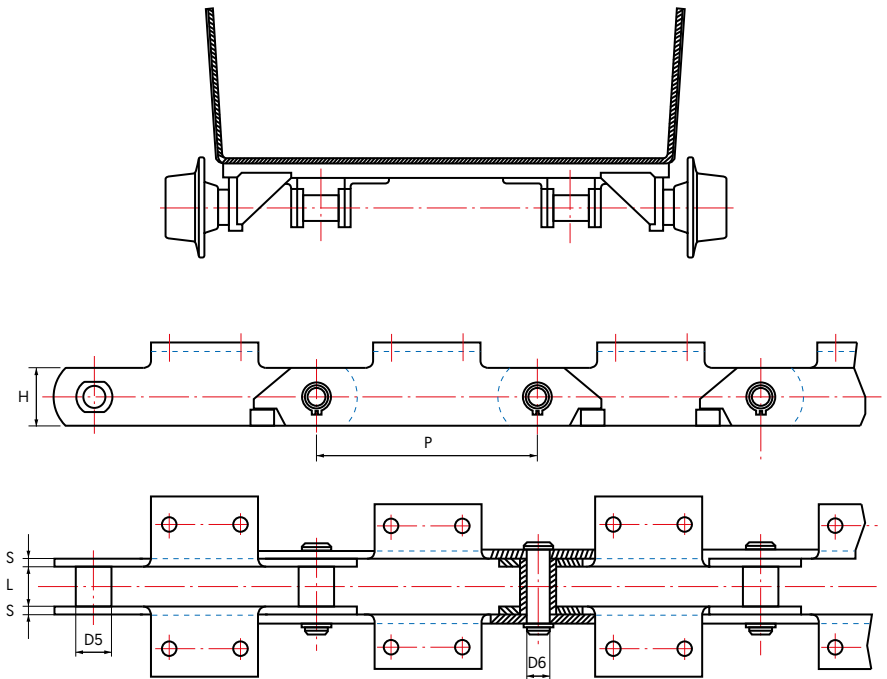
SC and PH elevator chains are typical standards employed in portal reclaimers. The purpose is to draw material from stockpiles in a controlled manner. The chains operate in double strand format made common with a plough. Typical materials conveyed include such as Limestone, Shale and Coal.



# King Pan Conveyor JKP Series.



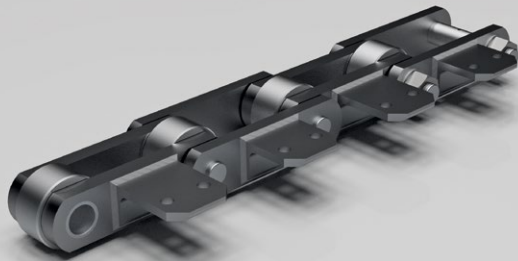
A typical means of transporting clinker is with a pan or bucket. The PL Series featured on page 17 shows a G style attachment for side mounted deep bucket location. The JKP series employs an integral K attachment for underside fixing to the pan. For the former it is typical to see guide rollers mounted on the chain pin or axle whilst for the latter the guide roller is generally a separate unit fixed to the pan. Clearly the chain is not directly exposed to the material which offers advantage. All variations of chains within this category can be manufactured.



King Pan Conveyor JKP Series							
Chain Number	Pitch	Bushings	Pins	Between Sidebars	Sidebars		Average Ultimate Strength
		Outside Diameter	Diameter		Thickness	Height	
	P	D5	D6	L	S	H	
mm							kN
JKP250/290/K2	250	32	20	32	8	45/55	290
JKP250/510/K2	250	40	26	45	10	65/75	510
JKP250/700/K2	250	44	30	55	12	70/85	700
JKP250/900/K2	250	52	34	60	12	85/100	900
JKP250/1200/K2	250	60	40	60	10	100/90	1200
JKP250/1500/K2	250	85	42	70	10	105/85	1500
JKP250/1900/K2	250	85	50	80	12	115/95	1900
JKP250/2300/K2	250	85	55	90	12	130/110	2300
JKP250/3000/K2	250	90	60	100	12/16	140/110	3000

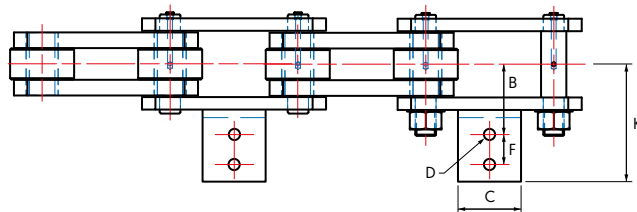
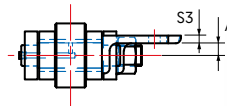
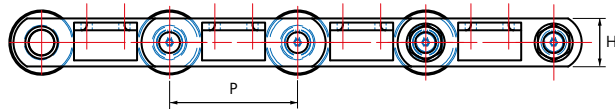


# B series Bulk Reception Chains.

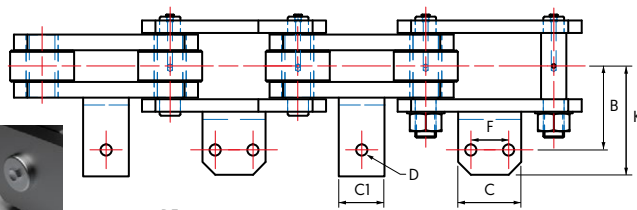


B32/1600/A2X1

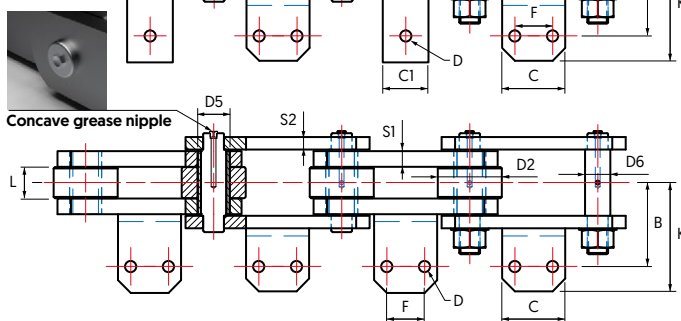
In cement and Quarry operations reception feeder chains are employed in bulk delivery of materials from trucks, railway wagons or front end loaders. Chains all conform to British Standard BS4116 and are a speciality production for Group company Precision Chains. Surge delivery demands chains of robust construction and specifications suitable for this uniquely demanding application. Precision have the expertise to produce best quality chains with proven performance.



**B16/390/A2X2**



**B20/450/A2X2**



**B24/450/A2X1**  
**B24/800/A2X1**  
**B32/1600/A2X1**

Grease lubrication is included as standard unless otherwise advised. Note recommended lubricant JKG1436M.



More information on the website.



Conveyor Chains & Sprockets Worldwide

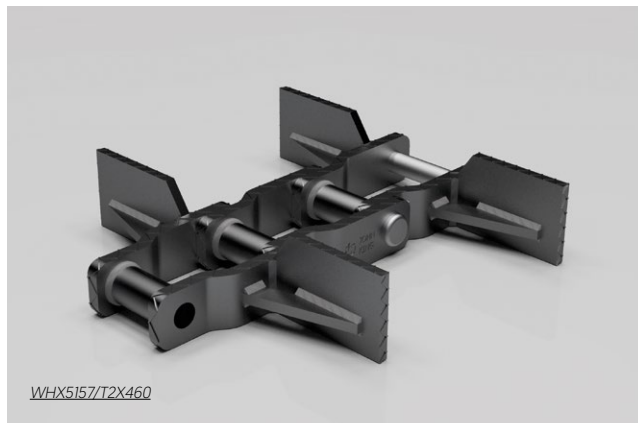


Rollers with ball races available as an optional extra.

## Bulk Reception Chains B Series

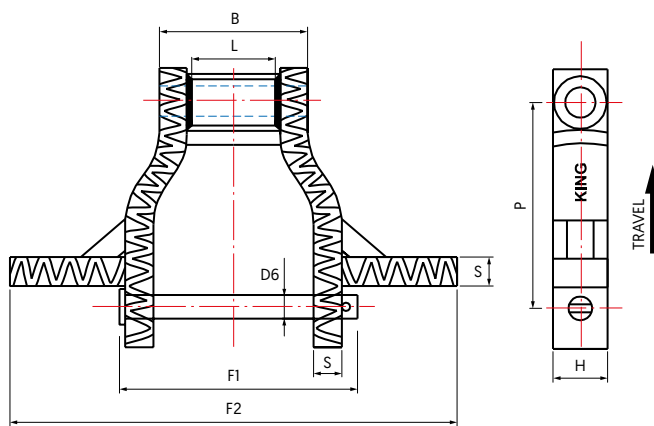
Chain Number	Pitch	Rollers	Bushings	Pins	Between	Sidebars			A	S3	B	K	F	C	C1	Average Ultimate Strength
		Outside	Diameter	Diameter	Sidebars	Thickness	Height									
	P	D2	D5	D6	L	S1	S2	H								
	mm															
B16/390/A2X2	101.6	66.68	33.02	26.92	25.4	10.0	10.0	50.8	13.0	6	54.76	94.26	25	50	–	390
B20/450/A2X2	127.0	76.20	38.10	28.60	38.1	12.7	10.0	65.4	14.0	12	83.75	131.75	40	70	40.6	450
B24/450/A2X1	152.4	88.90	30.10	23.00	38.1	12.7	10.0	65.4	14.0	12	83.75	133.96	40	65	–	450
B24/800/A2X1	152.4	88.90	37.95	28.58	38.1	12.7	12.7	76.2	21.0	12	94.5	146.5	40	65	–	800
B32/1600/A2X1	203.2	101.60	50.80	40.00	50.0	25.0	20.0	76.2	19.5	12	133	175	60	100	–	1600

# Crusader Heavy Duty Steel Drag Chains (WHX)



This welded steel option can be considered in place of cast S series drags and is ideal where conditions of high abrasion and heat prevail.

- Fabricated construction with material options in flat and round section for each component allows the construction of CRUSADER to have greater consistency and integrity.
- The crusader series employs optimum materials and heat treatment conditions to ensure good resistance to shock loading and extended service life. Square edged wing and link plate section creates increased conveying efficiency and transport of a deeper bed of material.
- Hard face welding on all sliding and wear surfaces is standard. A typical weld surface of 60 HRC and with heavy weld bead gives CRUSADER excellent sliding wear resistance in cold and hot clinker applications.

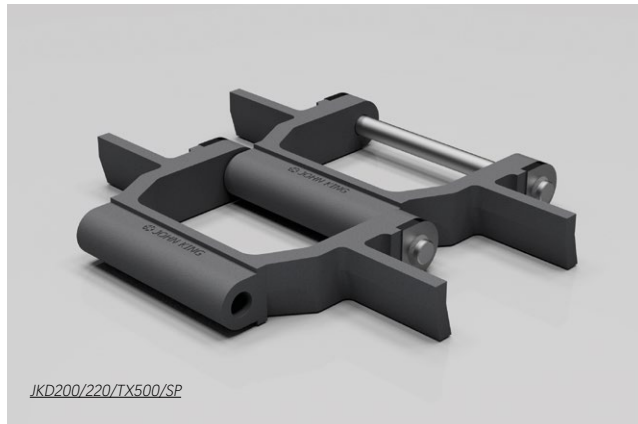


Crusader Heavy Duty Welded Steel Drag Chains

Chain Number	Pitch	Rivets	Over-All Pin & Cotter	Width Over-All	Between Sidebars	Length of Bearing	Sidebars		Average Ultimate Strength	Average Weight
		Diameter					Thickness	Height		
	P	D6	F1	F2*	L	B	S	H		
	inches									
WHX5157	6.05	1.13	6.94	8 to 14	2.75	4.63	0.63	2.50	175,000	4.63
WHX6067	9.00	1.25	8.19	10 to 26	3.63	5.50	0.75	2.50	225,000	5.50
WHX5121	9.00	1.25	9.75	10 to 30	3.63	6.31	1.13	2.50	275,000	6.31
WHX6121	9.00	1.25	9.75	10 to 30	3.63	6.31	1.13	2.50	275,000	6.31

\* In increments of 2".  
**Note:** Breaking loads based on standard specification. For elevated temperatures this specification may change and with it the breaking load. Please consult John King technical. The types illustrated are typical but many other versions which are variations on those illustrated are available.

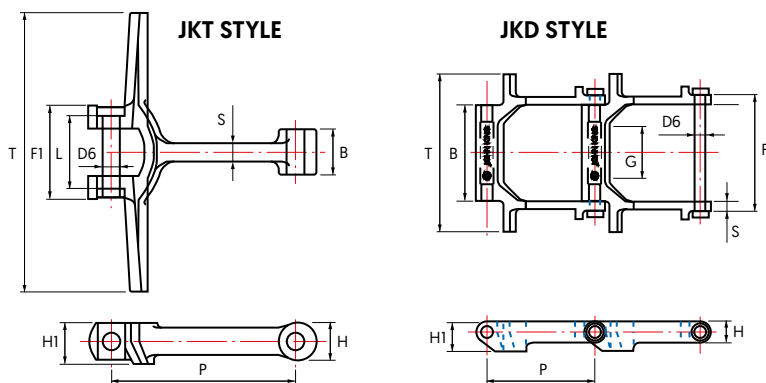
# European Standard Cast Link Drag Chain (JKD).



John King's tradition is in manufacture of Cast Link Chains in irons and steels. This was the chain construction originally employed in the John King product in the early days of the business. Although other standards have become predominant cast link drag chains remain an important part of the programme in the present day production.



For further information on material options visit the website Material specifications 18.6 Cast Link Chains – John King irons and steels.

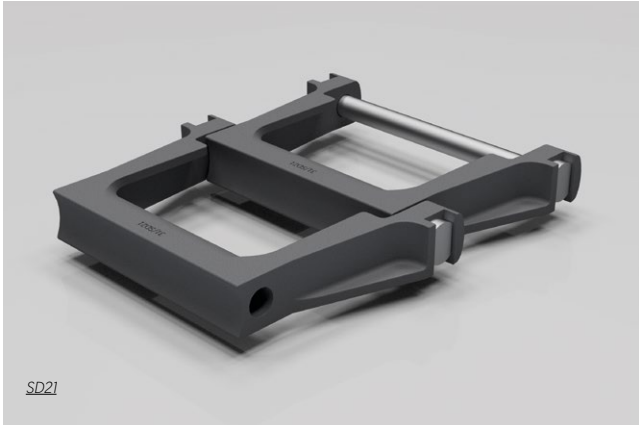


European Standard Cast Link Drag Chain (JKD)

Chain Number	Style	Pitch	Pins	Width	Width over flight	Bearing Length	Gearing width	Sidebars		Overall Height	Average Ultimate Strength	Approximate Average Weight
			Diameter					Thickness	Height			
		P	D6	F1	T	B	G	S	H	H1		
		mm										
JKT150/40/T125	T	150	18	86	125	40	64	15	40	50	250	13.2
JKT200/50/T200	T	200	18	100	200	49	76	20	40	44	250	13.3
JKT200/50/T300	T	200	18	100	300	49	76	20	40	44	250	18.3
JKT225/50/T250	T	225	25	122	250	50	87	25	60	60	550	35.8
JKD200/180/T250	D	200	19	222	250	180	96	15	40	55	250	22.0
JKD200/180/T300	D	200	18	222	300	180	96	20	40	55	250	23.5
JKD200/180/T315	D	200	18	225	315	180	106	16	40	53	250	26.5
JKD200/180/T600	D	200	19	232	600	180	110	15	40	55	250	37.0
JKD200/220/T450	D	200	25	285	450	220	154	20	50	60	550	51.0
JKD200/220/T500	D	203.2	25.4	290	504	222	163	21	48	61	550	59.0
JKD200/285/T650	D	203.2	30	375	650	285	410	26	60	80	750	82.0
JKD200/200/T350	D	215	25	254	345	196	123	18	42	42	550	30.0
JKD203.2/180/T302	D	203.2	20	222	302	180	127	20	40	52	275	24.5
JKD203.2/222/T504	D	203.2	25.4	290	504	222	163	31	48	61	550	59.0
JKD203.2/285/T500	D	203.2	30	375	500	285	163	40	60	80	620	72.5
JKD203.2/285/T600	D	203.2	30	375	600	285	163	40	60	80	620	78.0
JKD215/200/T302	D	215	25	254	345	200	125	18	42	–	550	32.0
JKD230/220/T320	D	230	28	320	320	216	156	30	60	60	700	36.0
JKD230/220/T450	D	230	25	290	450	220	165	32.5	50	60	400	44.5
JKD250/230/T450	D	250	36	312	450	228	152	22	90	90	1250	78.0
JKD270/380/T650	D	271	50	506	650	380	290	37	90	105	1500	146.5
JKD280/180/T300	D	280	20	215	300	180	110	15	40	55	250	20.0
JKD300/380/T450	D	300	35	465	450	380	310	40	70	85	1200	120
JKD300/380/T600	D	300	35	465	600	380	310	40	70	85	1200	135
JKD400/580/T800	D	400	45	690	800	580	578	55	105	135	1400	145



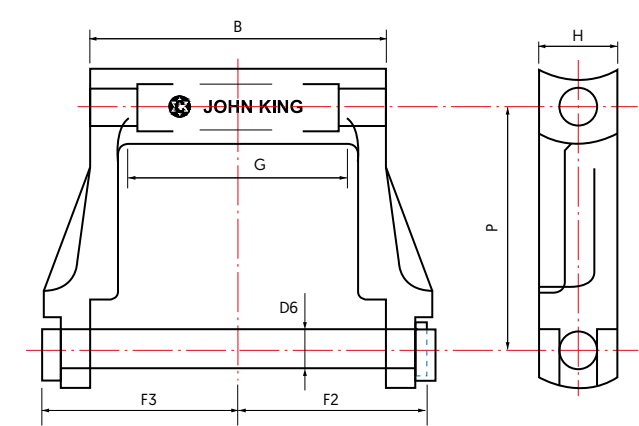
# American Standard SD type Cast Link Drag Chain (SD).



The John King SD chain is a long established option in clinker transport and other hot handling applications within cement, lime, ash and similar high duty applications.

The chain series is predominant in North and South America. Traditional material employed in the casting process is Hadfield steel or high manganese steel as BS3100 BW10 [AISI/SAE A128]. This abrasion resistant material developed by Hadfield steels in Sheffield England offers improvements in mechanical properties notably hardness and strength as it works and the tougher the work the greater the benefit. This style of chain has demonstrated good performance over an extended period and the material is a first choice in cement applications.

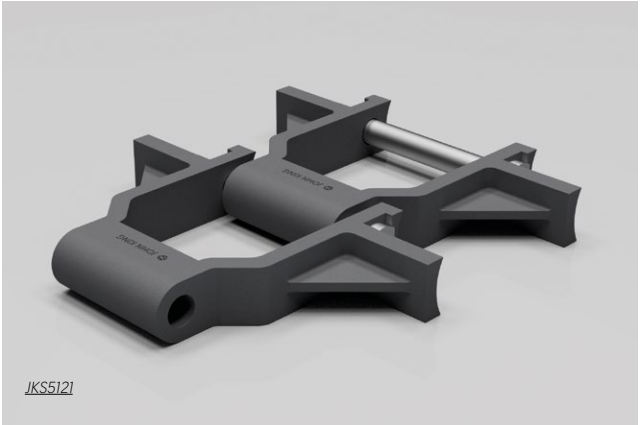
John King's Mangalloy							
JK Code	Equivalent Specification	Nominal chemical composition (Wt. %)					Applications
		C	Mn	Cr	Mo	Ni	
JKMN	ASTM A128 Gr A & B2 & B3 BS 3100 Gr BW10 SABS 407 Type 1 & 2	1.2	13.0	2.0	–	–	Drag links Conveyors / Elevator drive wheel rims Liner plates Wear rails Crusher parts



John Kings long experience in casting production and associated metallurgy has allowed the company to enhance the material quality with the addition of a percentage of Chrome. This enhances its as cast quality and eventual operational characteristics.

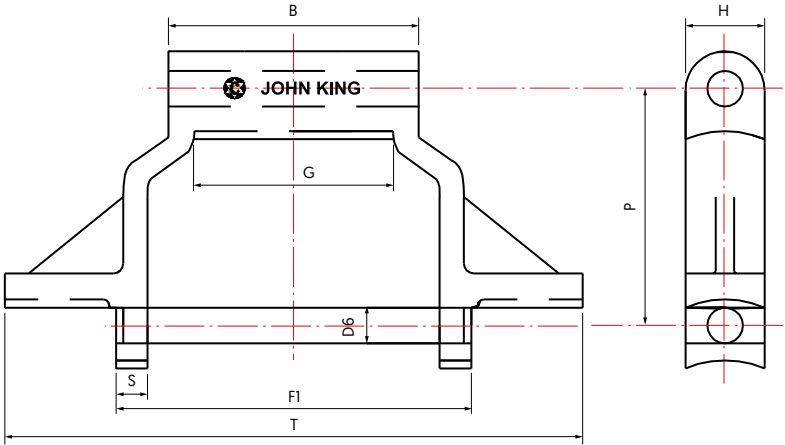
American Standard SD type Cast Link Drag Chain (SD)										
Chain Number	Pitch	Pins	End Pin to C/L	Head Pin to C/L	Bearing Length	Gearing Width	Sidebars	Average Ultimate Strength	Working Load	Average Weight Per Foot
		Diameter					Height			
	P	D6	F2	F3	B	G	H			
	inches							lbs		
SD21	9.00	1.25	8.31	8.06	12.44	9.50	3.50	182.30	23.400	46.80
SD23	9.00	1.25	6.00	6.00	8.44	5.75	2.50	172.80	23.400	41.80
SD27	9.00	1.13	5.06	4.81	6.87	4.25	2.50	160.50	20.100	30.70
SD28	9.00	0.88	8.13	8.00	12.81	10.13	2.13	139.40	17.600	26.00
SD29	9.00	0.88	6.13	6.00	8.81	6.75	2.13	139.40	17.600	20.80

# The American S type Series Drags (John King JKS).



American standard JKS cast link drags are a variation on a theme when compared alongside SD cast chains. The applications in which John Kings JKS are encountered are generally the same with hot clinker transport at the forefront. Traditional material employed in the casting process is as SD so high manganese steel as BS3100 BW10 [AISI/SAE A128] with the John King secret ingredient of a Chrome addition to enhance the performance of the product as compared to the competition.

John King were original steel and iron founders to the UK mining Industry developed during mechanisation of the industry during the 1930S. This soon developed into the Cement and related process industries where the Company established an enviable reputation for high quality high value cast link chain production.

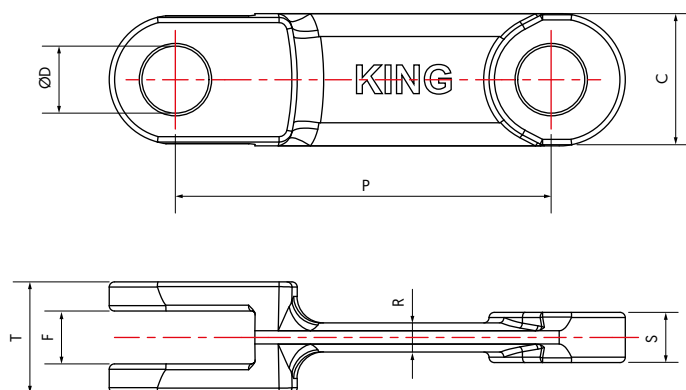


American Standard S type Cast Link Drag Chain (JKS)											
Chain Number	Pitch	Pins	Width	Overall Flight	Bearing Length	Gearing Width	Sidebars		Average Ultimate Strength	Working Load	Average Weight Per Foot
		Diameter					Thickness	Height			
	P	D6	F1	T	B	G	S	H			
	inches								lbs		
JKS5157	6.06	1.13	6.81	8.14	4.63	2.25	0.63	2.50	144.60	18,200	25.31
JKS5121	9.00	1.25	9.75	10.30	6.31	3.63	1.13	2.50	218.45	27,600	40.47
JKS6121	9.00	1.25	9.75	10.31	6.31	3.63	1.13	2.50	218.45	27,600	40.47
JKS6067	9.00	1.25	8.50	10.26	5.56	3.63	1.13	2.50	178.80	24,320	29.43

# Forged Link Standard Series.



This series represents the leading product within the John King programme. Forged fork link chain has proven to be one of the most reliable conveying mediums offering a combination of versatility, strength and abrasion resistance. These chains, originally of European origin, are now established worldwide. With a wide variety of materials, heat treatments and flight formats the chain is proven in both drag and enmasse handling.



Forged Link Standard Series											
Chain Number	P	T	C	S	F	R	Bolt Hole Diameter	Breaking Loads			Weight
							D	TN*	CN*	CD*	
	mm							kN			kg/m
JKF 10160	101.6	24	36	9	10	6	14	110	120	210	3.50
JKF 10160R	101.6	30	36	13	14	9	14	180	195	330	4.80
JKF 12514	125	30	36	13	14	10	16	163	175	290	4.40
JKF 14214	142	32	41	14	15	9	18	180	195	330	4.90
JKF 14218	142	42	50	19	20	12	25	290	320	550	9.40
JKF 14222	142	54	50	25	27	16	25	370	400	655	12.20
JKF 14226	142	62	50	28	30	16	25	440	470	790	13.60
JKF 16018	160	46	46	22	24	15	22	320	342	560	9.30
JKF 16025	160	50	53	23	25	13	25	370	400	655	10.80
JKF 20025	200	60	50	25	27	18	25	380	410	670	11.30
JKF 20028	200	66	60	30	32	20	30	500	540	900	16.70
JKF 21640	216	64	72	26	28	20	35	585	630	1035	20.10
JKF 22040	220	64	72	26	28	20	35	585	630	1035	20.30
JKF 22050	220	58	75	28	30	25	32	710	760	1260	19.10
JKF 22060	220	71	75	31	33	21	35	735	790	1300	22.90
JKF 25040	250	70	75	32	34	18	32	735	860	1430	18.80
JKF 26035	260	65	75	31	33	20	32	840	900	1480	19.80
JKF 26040	260	70	75	31	33	20	32	840	900	1480	21.00
JKF 26045	260	78	75	35	37	20	32	930	1000	1650	21.80

\* For further information on materials refer pages 28.

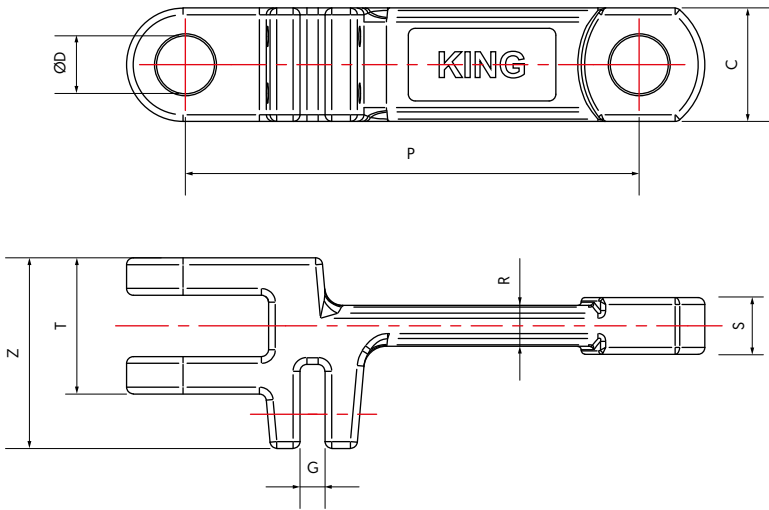




# Forged Link Double Series.



For double strand assemblies John King have a range of links following the standard format but with a forged “double clevis” into which a scraper can be mounted. The flight blade can be retained by either a U bolt or standard fasteners. The chain allows for some built in clearance between strands which obviates any potential problems that may be associated with mismatch. Double strand allows for improved discharge particularly relevant in conveying sticky materials.



Forged Link Double Series											
Chain Number	P	T	C	S	Z	G	Bolt Hole Diameter	Breaking Loads			Weight
							D	TN*	CN*	CD*	
	mm							kN			kg/m
JKF 142182	142	42	50	19	70	13	25	290	320	550	11.80
JKF 142262	142	62	50	28	87	13	25	440	470	790	16.70
JKF 160252	160	50	53	23	82	13	25	370	400	655	13.60
JKF 175402	175	72	60	30	95	16	30	540	580	955	20.30
JKF 200252	200	60	50	25	81	12	25	380	410	670	13.00
JKF 200402	200	70	60	30	95	13	30	540	580	955	19.30
JKF 250252	250	60	50	25	81	12	25	380	410	670	12.00
JKF 250402	250	70	60	30	95	13	30	540	580	955	17.70
JKF 250602	250	100	70	45	140	21	35	975	1050	1720	35.20

Attachment hole positions and sizes can be varied to meet customer requirements.  
\* For further information on materials refer pages 28.

# Forged conveyor chain.

King manufacture an unrivalled range of high quality forged chains. The standard is for an alloy steel forging and pin case hardened for wear resistance. Specifications can be varied dependent on the operating environment.

Drop forged chain links							
Material reference	JK Reference	Material No		Standard Hardening	JK Heat Treatment Designation	Standard hardening value	Standard hardening depth
		DIN	AISI				
STANDARD QUALITIES							
20CrMnTn	TN	1.8401	A29/A29M	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
42CrMo4	CD	1.7225	4140	HARDENING AND TEMPERING	TH	1100-1300 N/mm²	
ALTERNATIVES ON REQUEST							
18MnCrB5	BN	1.7168	–	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
20MnCr5	MN	1.7147	5120	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
21NiCrMo4	CN	1.6523	8620H	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
C45	C	1.0503	1045	HARDENING AND TEMPERING	TH	800-900 N/mm²	
CORROSION AND ACID RESISTANT MATERIAL							
X5CrNi 18-10 [V 2 A]	SS304	1.4301	304				
X6CrNiMoTi 17-12 2 [V 4 A]	SS316	1.4571	316				
X46Cr13	SS 420	1.4034	420	HARDENING AND TEMPERING	TH	50-52 HRC	
HEAT – RESISTANT MATERIAL							
				HEAT RESISTANCE IN AIR			
X10CrAlSi7	JK HK	1.4713		800° C MAX		420-620 N/mm²	
X15CrNiSi 20-12	JK HH	1.4828	309	1000°C MAX		500-750 N/mm²	
Chain pins							
Material reference	JK Reference	Material No		Standard Hardening	JK Heat Treatment Designation	Standard hardening value	Standard hardening depth
		DIN	AISI				
STANDARD QUALITIES							
	BS970 1991						
16MnCr5	590M17	1.7131	5115	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
15NiCr13	633M13	1.5752	3310	CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
18CrNi8		1.592		CASE HARDENING	CH	58-62 HRC	0,8-1,0 mm
C45	080M46	1.0503	1045	INDUCTION HARDENING	IH	52-56 HRC	1,5-2,0 mm
				HARDENING AND TEMPERING	TH	45-50 HRC	
42CrMo4	708M40	1.7225	4140	INDUCTION HARDENING	IH	56-60 HRC	1,5-2,0 mm
				HARDENING AND TEMPERING	TH	56-60HRC	
CORROSION AND ACID RESISTANT MATERIAL							
X46Cr13	420S29	1.4034	420	HARDENING AND TEMPERING	TH	50-52 HRC	
X105CrMo17	440S49	1.4125	440	HARDENING AND TEMPERING	TH	50-55 HRC	
Circlips							
Material reference	JK Reference	Material No		Standard Hardening	JK Heat Treatment Designation	Standard hardening value	Standard hardening depth
		DIN	AISI				
STANDARD QUALITIES							
DD12	PI2	1.0398	621				
Ferritic – Cromweld 3Cr12	SS410	1.4003	410				
Austenitic	SS304	1.4301	303				

Flights are robotically welded in one of three manufacturing facilities in the UK, Poland and the USA. The integrity of the welding is fundamental to best performance.

The configuration will vary dependent on the style of machine.

# Pin styles

## Type 22

Standard double circlip



## Type HD/22

Headed pin with standard circlip



## Type HD/45/28RP

Headed pin with collar and roll pin retention



## Type HD/45/28S

Headed pin with collar and S cotter retention



## Type SN/28S

Antirotation snub pin washer and S cotter retention



## Type HD/28S

Headed pin with washer and S cotter retention



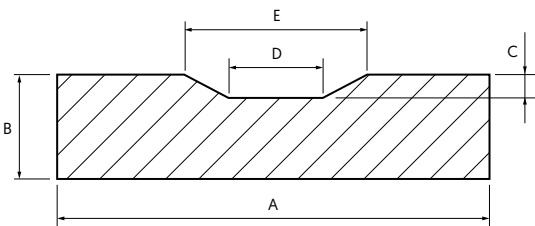
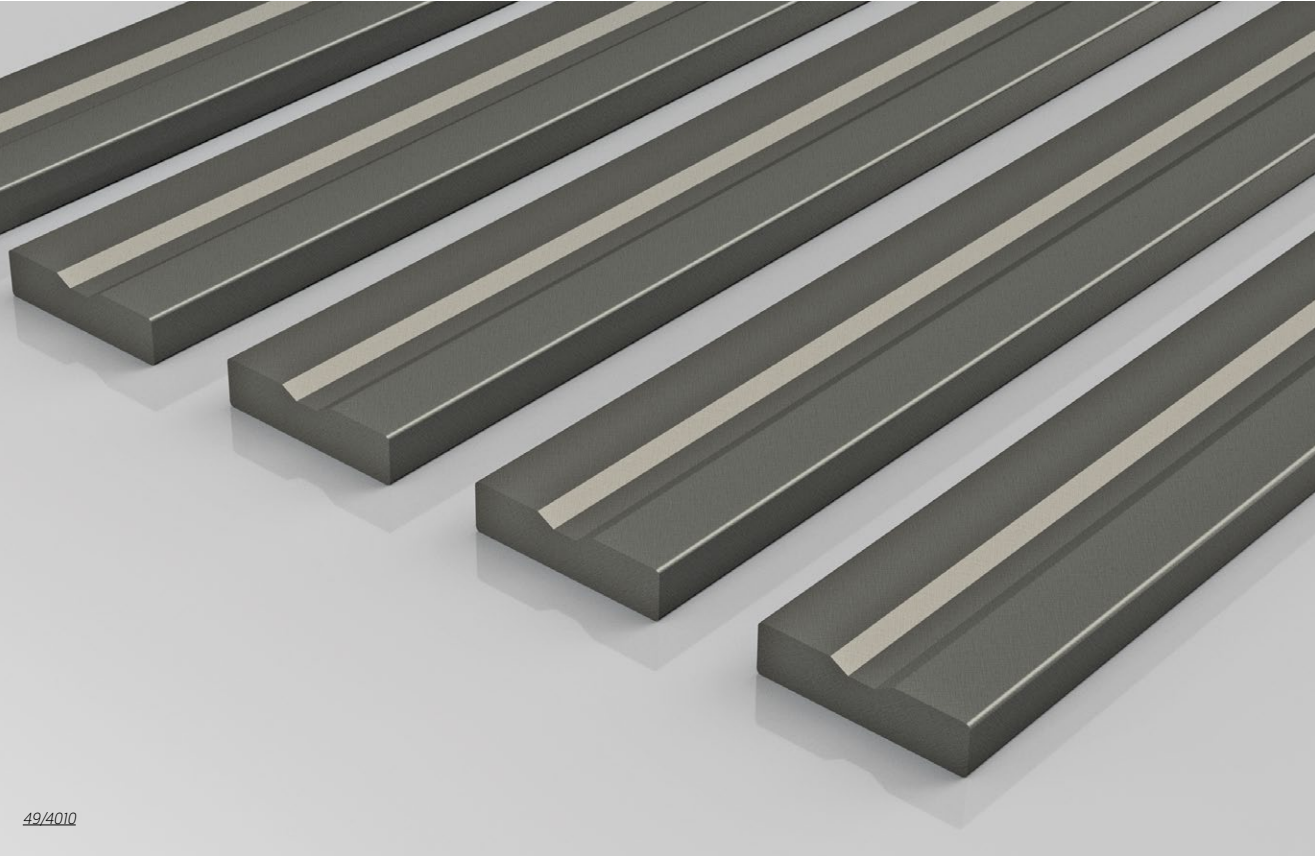
Note: Where S cotters are employed split cotters can be used as an alternative.





# High Manganese Wear Rail.

The standard recommendation for forged chain wear rail is manganese steel, an austenitic structure, offering unique work hardening properties. In its rolled condition it offers a hardness value of 200-220 Bnh increasing up to 600 Bnh if the optimum operational conditions prevail.



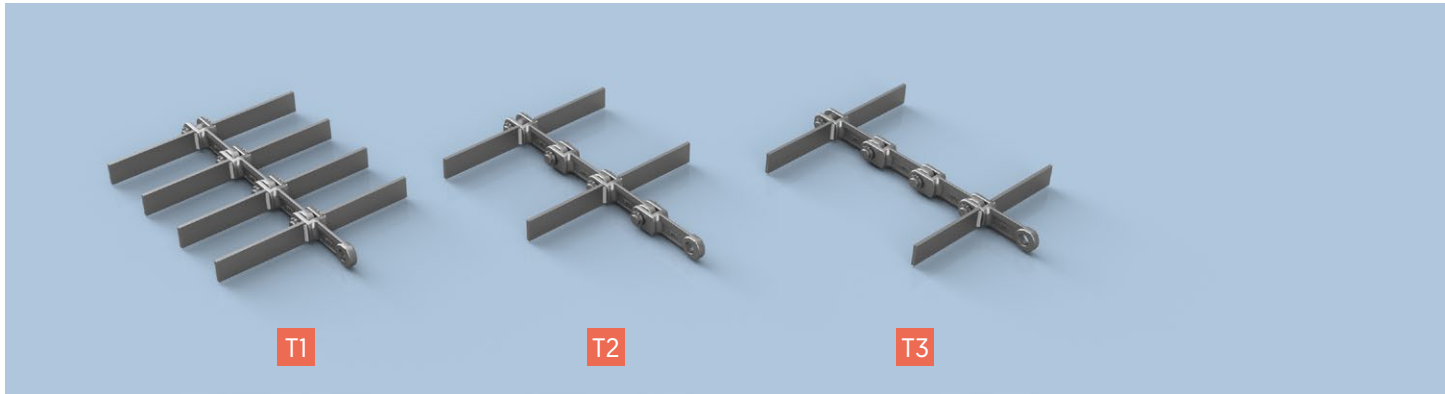
Material	DIN	Hardness	Standard Length
120mn12	1.3401	200-220 Bnh	3000mm -0/+5

High Manganese Wear Rail						
John King References	A	B	C	D	E	Weight
	mm					kg/m
49/25X10	25.0	10.0	2.0	5.0	12.0	1.83
49/40X10	40.0	10.0	2.0	5.0	12.0	3.01
49/50X10	50.0	10.0	2.0	5.0	12.0	3.82
49/60X10	60.0	10.0	2.5	6.0	16.0	4.45
49/60X12	60.0	12.0	2.5	6.0	16.0	5.50
49/60X20	60.0	20.0	3.0	6.0	16.0	9.15

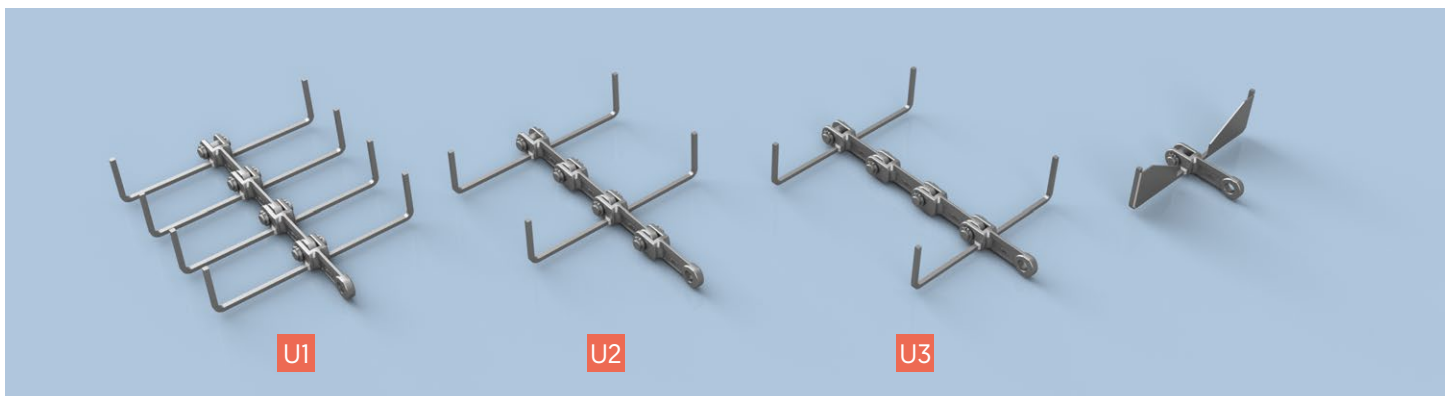
# Flight attachment options to Forged Chains.



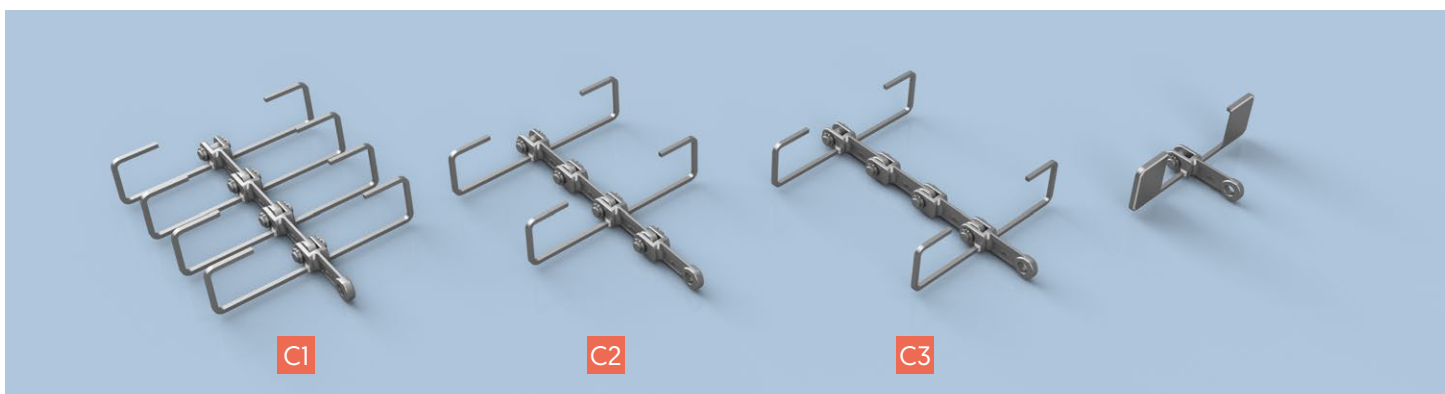
## T Type Attachments for Horizontal and Slightly Inclined Conveying



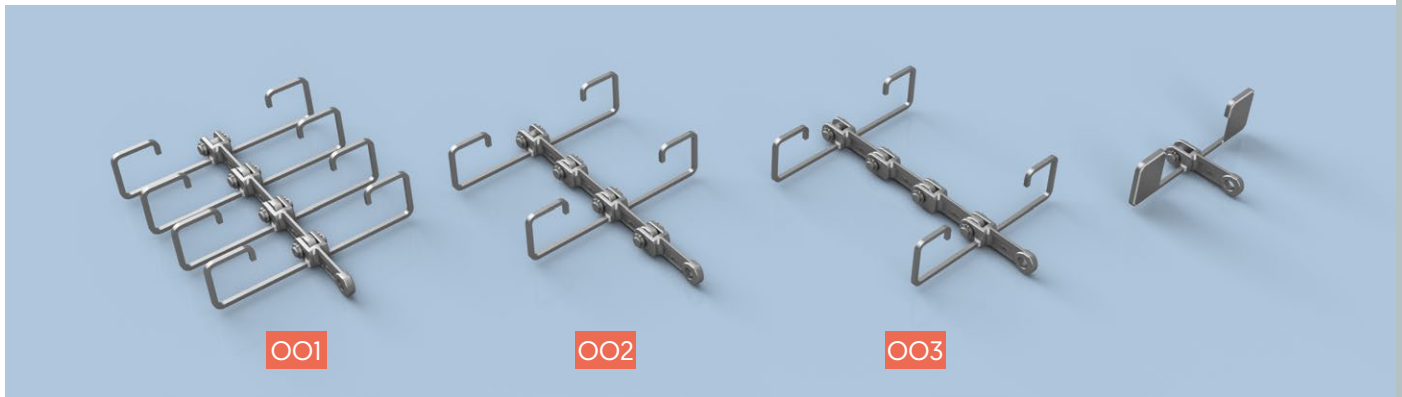
## U Type Attachments for Horizontal and Inclined Conveying (with or without blanking plate)



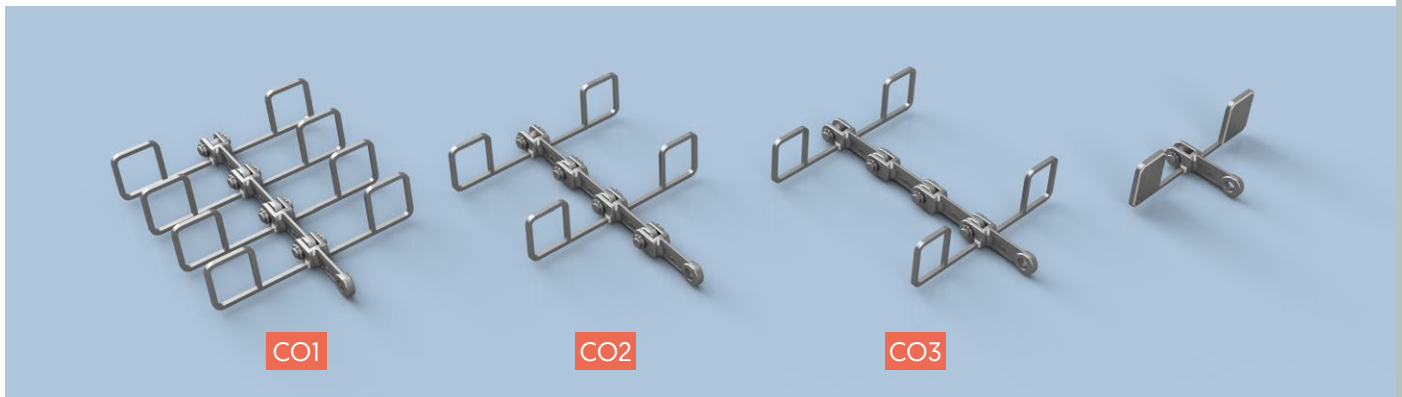
## C Type Attachments for Horizontal, Inclined and Vertical Conveying (with or without blanking plate)



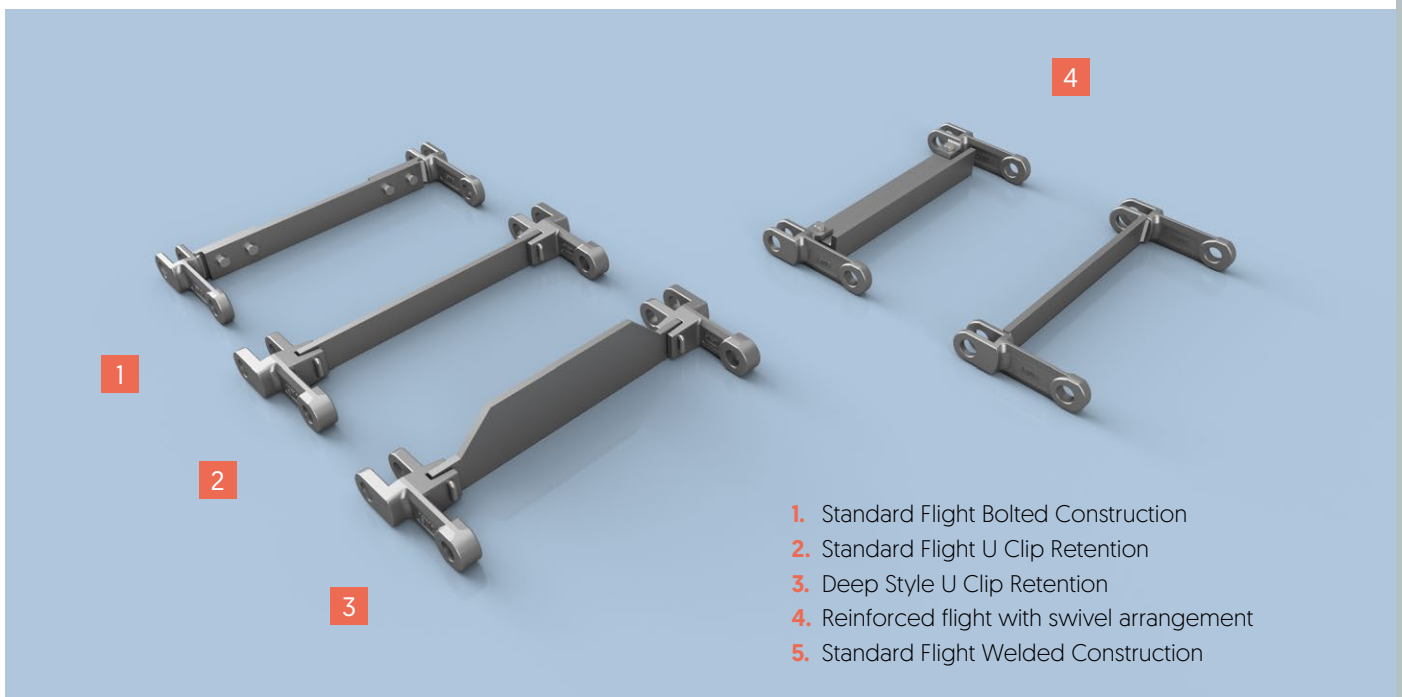
## OO Type Attachments for Horizontal and Inclined Conveying (with or without blanking plate)



## CO Type Attachments for Horizontal and Inclined Conveying (with or without blanking plate)



## Double Series Flight Options I Format



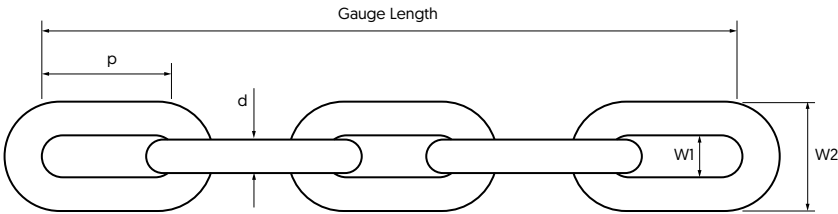


# Round Link Steel Chains.



Round link steel chains are commonplace in the Cement and Aggregates industries. Their simple and open construction make them effective in such environments. The main standard is DIN 22252. The chains are available in two categories, a through hardening grade [TH] for high strength for long conveyors with high load and a case hardened grade [CH] for best wear resistance. Sprockets with petal style teeth covering all configurations are also produced in house.

## Round Link Chains DIN 22252-2



Round Link Steel Chains								
Nominal size	Diameter		Pitch		Width		Gauge Length	
	d	Tolerance	p	Tolerance	W1 min.	W2 max.	5 x p	Tolerance
d x p	mm							
14 x 50	14	±0.4	50	±0.5	17	48	250	±1.0
18 x 64	18	±0.5	64	±0.6	21	60	320	±1.0
22 x 86	22	±0.7	86	±0.9	26	73	430	±1.0
26 x 92	26	±0.8	92	±0.9	30	85	460	±1.0
30 x 108	30	±0.9	108	±1.1	34	97	540	±1.2
34 x 126	34	±1.0	126	±1.3	38	109	630	±1.3

Through Hardened TH		Round Link Steel Chains				Case Hardened CH	
Nominal size	Reference number	Proof load	Breaking Load	Reference number	Proof load	Breaking Load	Weight
d x p	TH series	min. kN		CH series	max. kN		kg/m
14 x 50	38/14X50/TH	185	246	38/14X50/CH	89	148	4
18 x 64	38/18X64/TH	305	407	38/18X64/CH	165	275	6.6
22 x 86	38/22X86/TH	456	608	38/22X86/CH	220	365	9.5
26 x 92	38/26X92/TH	637	850	38/26X92/CH	308	510	14
30 x 108	38/30X108/TH	848	1130	38/30X108/CH	400	680	18
34 x 126	38/34X126/TH	1090	1450	38/34X126/CH	425	710	22.7

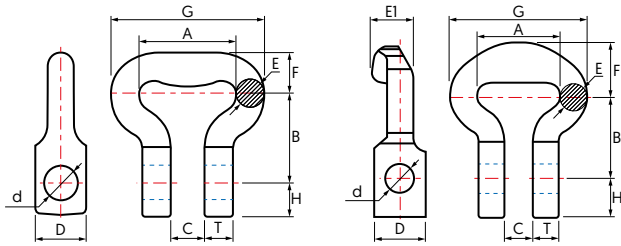
TH grade: 23 MnNiCrMo5-4 (DIN 1.7115) as DIN 22252-2  
CH Grade: CrNi/CrMo options High surface hardness 64Hrc carburising depths 0.1-0.14 diameter.



## Twin Outboard Chain Systems DIN 22253

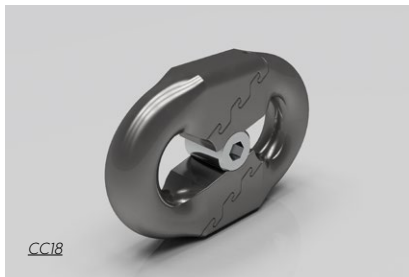


Flight bar connectors with single or double hole are available for use in conjunction with chain for twin strand operation. Fabricated or forged flight bars are also produced to customer standards.

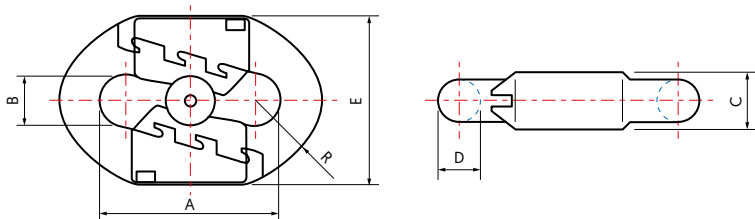


Twin Outboard Chain Systems															
Nominal size	Reference number		A	B	C	D	E	EI	F	G	H	T	d	Weight	
														PL	WP
d x t	Padless PL	Wear Pad WP	mm											kg	
14 x 50	40/14X50	40/14X50/WP	50	51	19	32	14	29	27	78	18	15	17	0.46	0.7
18 x 64	40/18X64	40/18X64/WP	64	55	22	43	18	40	45	100	37	19	21	1	1.25
22 x 86	40/22X86	40/22X86/WP	86	75	26	52	22	46	58	132	44	23	25	1.6	2.6
26 x 92	40/26X92	40/26X92/WP	92	78	30	58	26	56	59	147	44	27	28	2.8	3.8
30 x 108	40/30X108	40/30X108/WP	108	96	34	70	30	59	60	172	44	32	31	4	5.2
34 x 126	40/34X126	40/34X126/WP	126	110	38	70	34	35	65	198	52	36	37	5.8	7.3

## CC Series Chain Connector

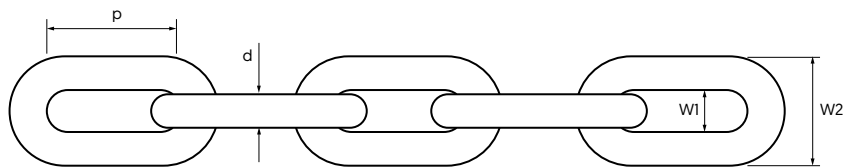


A new generation chain connector is available with the CC series clamp. It is suitable for both horizontal and vertical application to be used in AFC, plough haulage and general conveying applications. Special material selection combined with close tolerance machining ensures the connector offers high strength greater than the minimum demands of DIN 22252/2.



CC Series Chain Connector											
For nominal chain size	Reference Number	D	A	B	E	C	R	Test force TF	Breaking force BF	Operating force WF	Weight
		max	max	max	max	max	nom				
		mm	mm						kN		kg/pc
14 x 50	47/CC14	14±0.5	50±0.8	16	51	19	27	185	246	154	0.80
18 x 64	47/CC18	18±0.5	64±0.8	20	65	23	31	305	407	254	1.32
22 x 86	47/CC22	22±0.7	86±0.9	24	85	27	35	455	645	380	1.35
26 x 92	47/CC26	26±0.8	92±0.9	28	97	33	41	637	900	531	1.92
30 x 108	47/CC30	30±0.9	108±1.1	32	109	36	47	848	1200	707	2.98
34 x 126	47/CC34	34±1.0	126±1.3	36	121	41	52	1090	1540	907	4.15

## Welded Link Chain DIN 764, DIN 766



### Welded Link Chain According to DIN 764

Nominal size	Diameter	Pitch	Allowed Tolerance	Width		Allowable Tolerance Over 11 Links	Minimum Breaking Load		Weight
	d	p		W1 min.	W2 max.		Standard	Extra	
							JK2	JK3	
d x p	mm						kN		kg/m
16 x 56	16	56	+0.5 -0.5	22	58	+2.8 -1.4	115	140	5.2
18 x 63	18	63	+1.0 -0.5	24	65	+3.1 -1.6	140	180	6.5
20 x 70	20	70	+1.1 -0.6	27	72	+3.5 -1.8	180	225	8.2
23 x 80	23	80	+1.3 -0.7	31	83	+4.0 -2.0	225	280	11.0
26 x 91	26	91	+1.5 -0.8	35	94	+4.5 -2.3	260	360	14.0
30 x 105	30	105	+1.7 -0.9	39	108	+5.2 -2.7	350	450	19.0
36 x 126	36	126	+2.1 -1.1	47	130	+6.3 -3.2	500	630	26.5
39 x 136	39	136	+2.2 -1.2	51	140	+6.7 -3.7	560	750	31.0
42 x 147	42	147	+2.4 -1.3	55	151	+7.3 -3.7	680	800	36.0

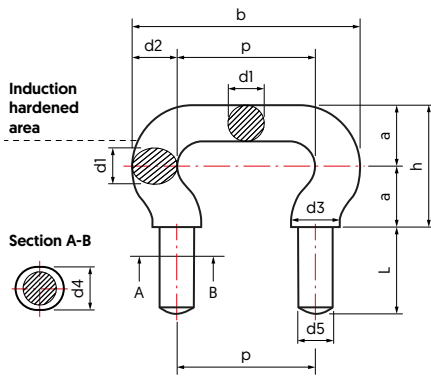
### Welded Link Chain According to DIN 766

Nominal size	Diameter	Pitch	Allowed Tolerance	Width		Allowable Tolerance Over 11 Links	Minimum Breaking Load		Weight
	d	p		W1 min.	W2 max.		Standard	Extra	
							JK2	JK3	
d x p	mm						kN		kg/m
16 x 45	16	45	+0.8 -0.4	19.2	58	+2.2 -1.1	115	140	5.8
18 x 50	18	50	+0.8 -0.4	21.6	65	+2.5 -1.2	140	180	7.4
20 x 56	20	56	+1.0 -0.5	24	72	+2.8 -1.4	180	225	9.0
23 x 64	23	64	+1.1 -0.5	27.6	83	+3.2 -1.6	225	280	12.0
26 x 73	26	73	+1.2 -0.6	31.2	94	+3.6 -1.8	260	360	15.0
30 x 84	30	84	+1.4 -0.7	36	108	+4.2 -2.1	350	450	20.0
36 x 101	36	101	+1.7 -0.8	43.2	130	+5.0 -2.5	500	630	29.0

### Chain Specification for Welded Link Chains DIN 764, DIN 766

		Standard	Extra
		JK2	JK3
Material		Mn alloy	NiCrMo alloy
Surface hardness	HV30 min.	760	800
Total case depth	HTA xd min. ±0.01d	0.10	0.13
Effective case depth	DC I/550 xd min. ISO 2639	0.06	0.08

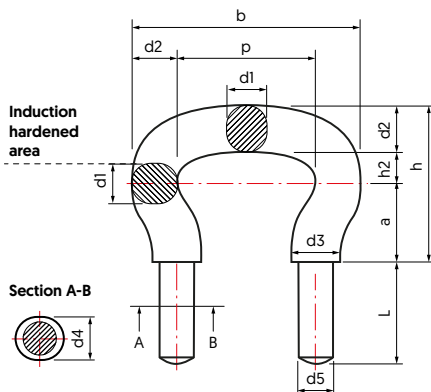
## Chain Shackles DIN 745



Assembled with calibrated distance plate.  
**Note:** JK recommend all metal locking nuts.

Chain Shackles DIN 745												
Dimensions										Minimum breaking force		Weight
p	a	b	d1	d2	d3	d4	d5	h	L	Standard	Extra	
										JK2	JK3	
mm										kN		kg/each
63	30	105	18	21	23	20	M16	60	40	168	215	0.55
70	34	116	20	23	28	23	M20	68	45	210	265	0.80
80	37	132	23	26	31	25	M20	74	45	270	335	1.10
91	43	149	26	29	34	29	M24	86	55	340	430	1.60
105	50	173	30	34	38	31	M24	100	55	460	575	2.10
126	59	206	36	40	44	37	M30	118	70	630	756	3.80
147	68	239	42	46	50	42	M30	136	70	800	890	5.55

## Chain Shackles DIN 5699



Assembled with calibrated distance plate.  
**Note:** JK recommend all metal locking nuts.

Chain Shackles DIN 5699																		
Dimen- sions	Toler- ance	Dimensions											Minimum breaking force			Weight	Corresponding chain strands for wheels	
p		a	b	d1	d2	d3	d4	d5	h	h2	L	z	Standard	Extra	Extra+		Smooth	Toothed
													JK2	JK3	JK4		DIN 764/766	DIN 764
mm													kN				kg/each	mm
56	±0.5	35	92	16	18	19	17	M14	64	12	38	3	130	165	170	0.38	13	16
63	±0.5	37	105	18	21	23	20	M16	71	13	46	4	168	215	221	0.55	16	18
70	±0.5	42	116	20	23	28	23	M20	80	15	60	4.5	210	265	275	0.80	18	20
80	±0.8	47	132	23	26	31	25	M20	89	16	60	4.5	270	335	345	1.10	20	23
91	±0.8	52	149	26	29	34	29	M24	99	18	66	6	340	430	445	1.60	23	26
105	±1.0	60	173	30	34	38	31	M24	114	20	66	6	460	575	595	2.10	26	30
126	±1.0	71	206	36	40	44	37	M30	134	23	78	8	650	780	810	3.80	30	26
147	±1.0	81	241	42	47	50	42	M36	157	29	85	8	890	1030	1110	5.55	36 / 39	42



FM 77342  
ISO 9001



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