



## PRODUCT CATALOGUE



ISO 9001:2001  
Cert. No. 8410020007202/ES  
Cert. No. 8410020007202/01-E1

**Precision Steel Link Chains  
&  
Chain Wheels**



Cert. No. TF-0017

**ROLCON ENGINEERING CO. LTD.**

# "ROL-KOBO" CHAINS & SPROCKETS

Rolcon's modern Chain and Sprockets, manufacturing plants were established in 1967 in technical and financial collaboration with **M/s.KOBO- Donghua Gmbh & CO.KG**. West Germany, makers of world famous 'KOBO' chains, having more than 105 years of experience in the field.

Rolcon being ISO 9001 certified is the largest manufacturer of Chains and Sprockets in the country. Its plant is equipped with most modern CNC machines. Special purpose machinery. New range of heat treatment machinery, and Latest testing facilities.

Rolcon's complete manufacturing range consists of Precision Industrial Transmission Chains conforming to the international standards like ISO 606/DIN 8187/BS 228/ASME B29 IN/AP 7F. It also manufactures, and exports Conveyor, Elevator and Special Purpose Chains, and all suitable Sprockets for the above stated Chains.

Rolcon's Chains & Sprockets are mainly utilized in the following industries:  
· Cement · Fertilizer · Steel · Sugar · Chemical · Mining  
· Paper Plants · ONGC & many more industries.

Rolcon's strong network of distributors as well as sales outlets throughout India helps its esteemed customers for better communication, quick deliveries, and prompt after sales service.

Rolcon's chains are well known for its · Highest breaking loads, · Excellent wear life, and · Increased fatigue strength. All the above have been achieved by selecting appropriate material, precise heat treatment, rigid quality control and constant R & D efforts done indigenously as well as from its West German collaborators.

A special marketing team of Rolcon guides, and recommends its esteemed clients for total solution for their specific requirements, and problems of chain and sprocket drives including design.

Backed by 36 years of experience in its field Rolcon has also gained lots of practical experience from its customers who are using Rolcon's chain and sprockets. This experience is continuously fed

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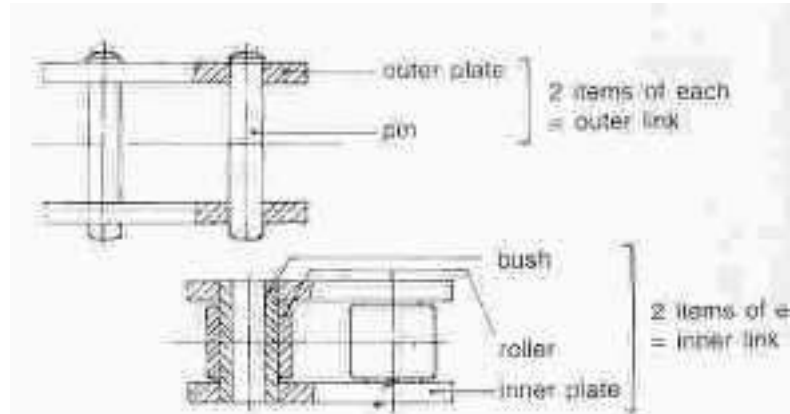
# Construction of Link Chain

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## Chains

Every link chain consists of inner and outer links. The diagram opposite shows both links together with their component parts. The design and construction of the individual parts will vary according to the type of chain.

Different materials may be used for each and every part of the chain, although high-grade steel of variant qualities and heat treatment is the main material.



## Pins

Pins are subject to bending and shearing stresses and are, therefore, generally made from high-grade casehardening steels. The appropriate heat treatment gives them a tough core and a wear-resistant, extremely hard surface. Suitable treatment of the surface and adherence to close tolerances ensure excellent coupling and pressfitting conditions.

## Bushes

Bushes have to withstand bending and deformation stresses and are generally made from casehardening steel alloys. As with the pins, appropriate heat treatment ensures wear resistances and surface quality.

## Rollers

Rollers are subject mainly to impact stress and are, therefore, normally made from heat treatable steels. Thick-walled tread rollers are also made from casehardening steels and other materials. Close tolerances ensure a trouble-free fit on the bushes.

## Linkplates

Linkplates are subject mainly to tensile stress and are made from heat treatable steels. They are heat treated according to the type of chain and achieve high fatigue and tensile strength with corresponding elasticity. The accuracy of the hole and of pitch, secured partly by the fine blanking process, ensure an exact fit for pins and bushes and a very close overall tolerance in length in the chain.

## **Important Information To Accompany Enquiries And Others**

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### **Chains**

Pitch = dimension from one pin center to the other; inside width = width between inner link plates; roller diameter; bush diameter; pin diameter; also if possible : breaking strain; linkplate dimensions; quality of material; overall chain width; chain length; type and number of connecting / cranked links and exact number of links for endless chains.

### **Chains Drives**

Horsepower; pinion speed; transmission ratio; operating conditions; degree of impulsiveness; maintenance possibilities; temperature; humidity; dirt -

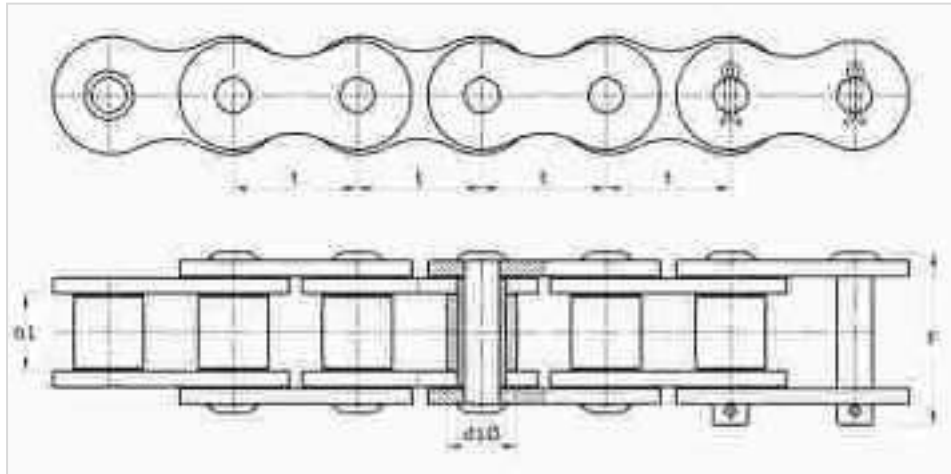
### **Chains Wheels**

Number of teeth; pitch circle diameter; process of tothing and type of chain to mesh with; wheel design as shown on page 62; bore and tolerance; keyway and setscrew; length of hub, one sided, symmetrical or asymmetrical; material and, if applicable, heat treatment -

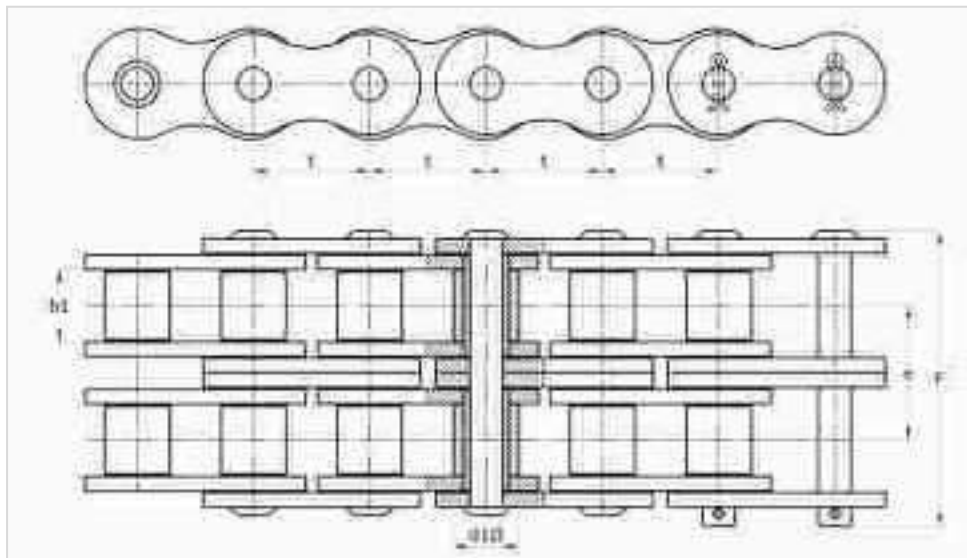
### **Conveyor Chains**

Type; dimension and weight of moving load; conveyor speed; conveyor direction and length; method of charging and discharging; general operating conditions; maintenance; degree of humidity; temperature and corrosion factors; details of space available for housing the conveyor chain, the return pulley, the tension and driving stations; if possible, please include dimensional drawings -

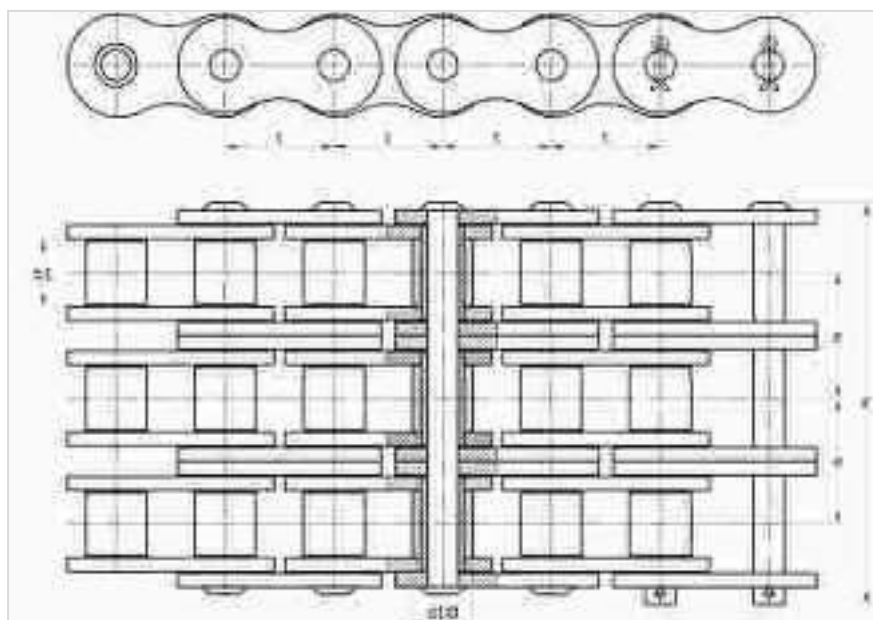
**High Performance Precision Rolkobo Roller Chains To  
ISO 606 / DIN 8187 / BS 228 / IS 2403 Standards**  
**Simplex**



**Duplex**



**Triplex**



**High Performance Precision Rolkobo Roller Chains To**

# ISO 606 / DIN 8187 / BS 228 / IS 2403 Standards

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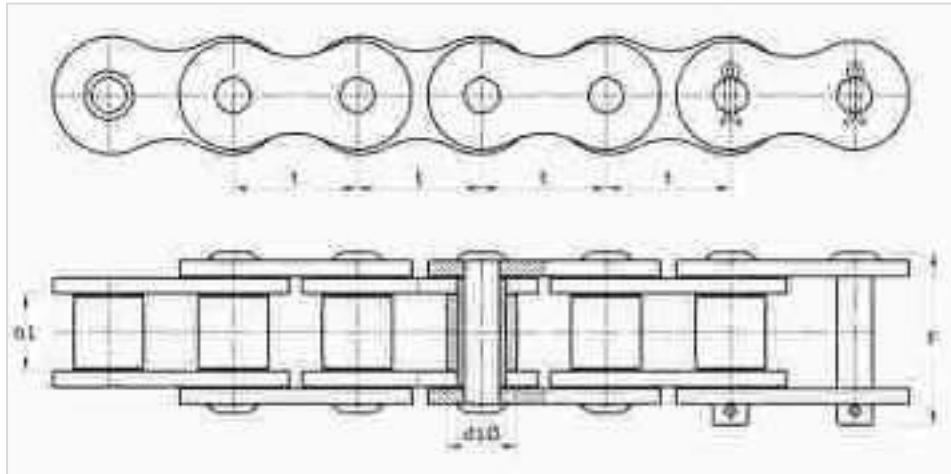
## SIMPLEX

t pitch	0	b1	d1	F	Guaranteed	Weight
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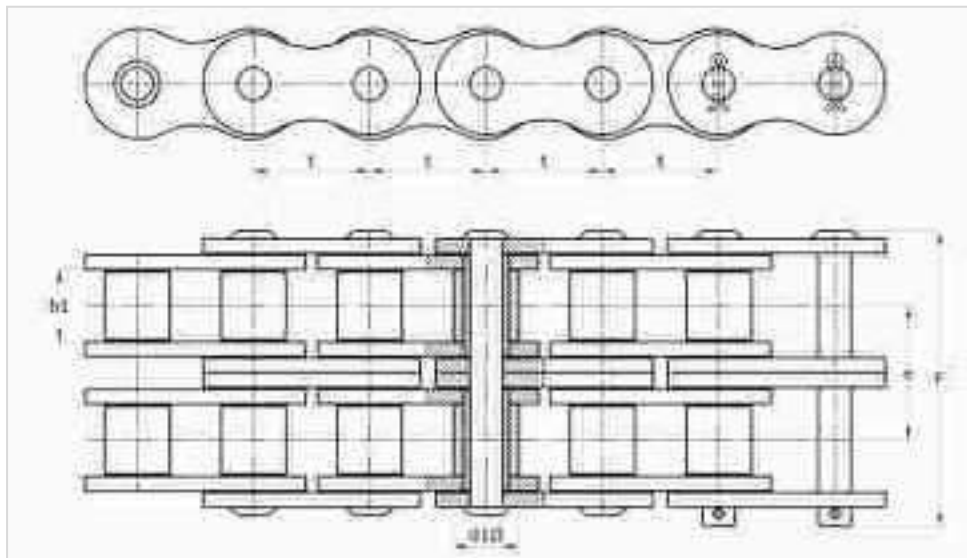
pitch



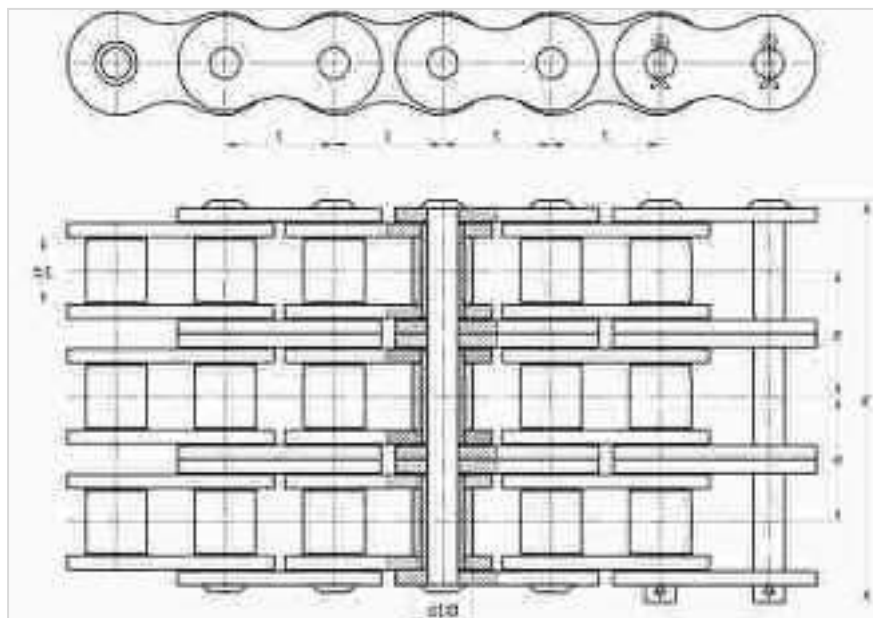
**High Performance Precision Rolkobo Roller Chains To  
ISO 606 / DIN 8187 / BS 228 / IS 2403 Standards**  
**Simplex**



**Duplex**



**Triplex**



# High Performance Precision Rolkobo Roller Chains To

## ISO 606 / DIN 8188 / ASME B29 / IS 2403 Standards

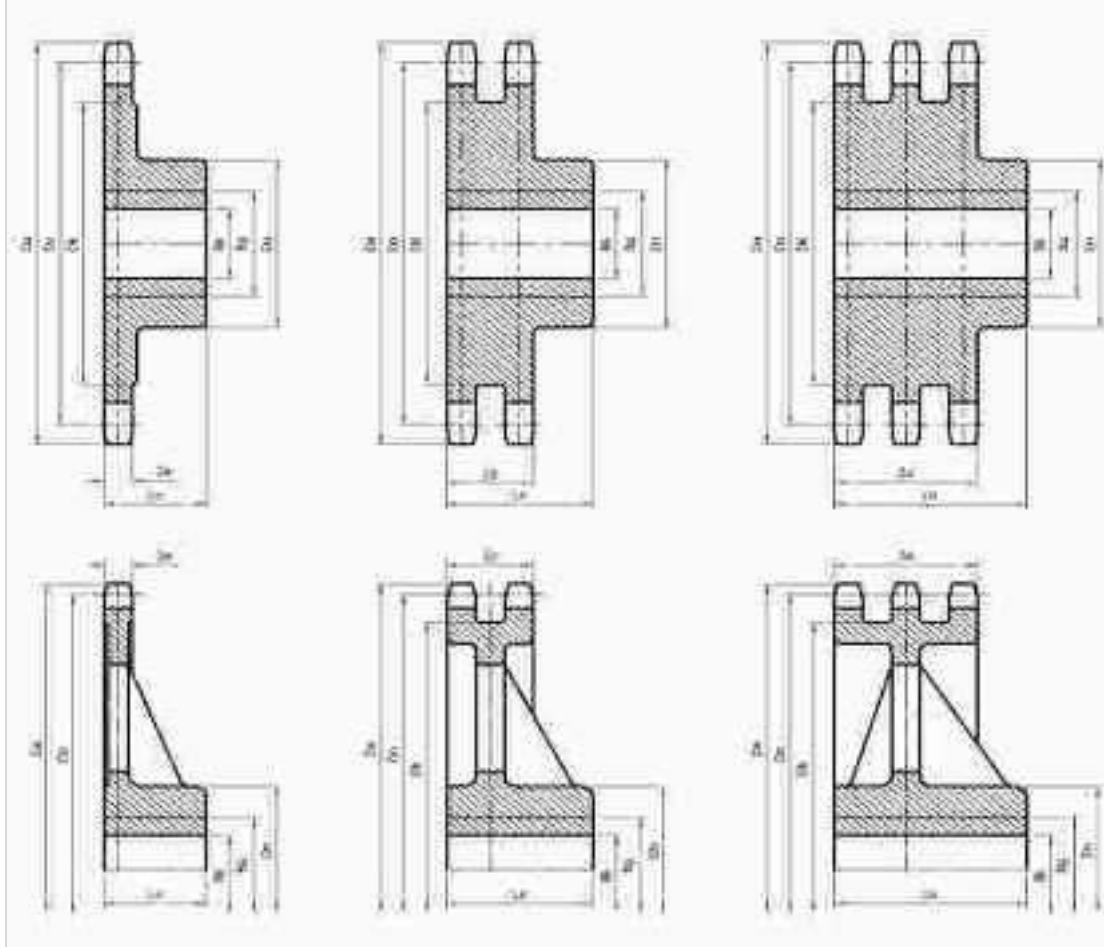
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### SIMPLEX

	0	b1	d1	F	Guaranteed	Weight
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t  
pitch

## High Performance Standard Chain Wheels (For Roller Chains)



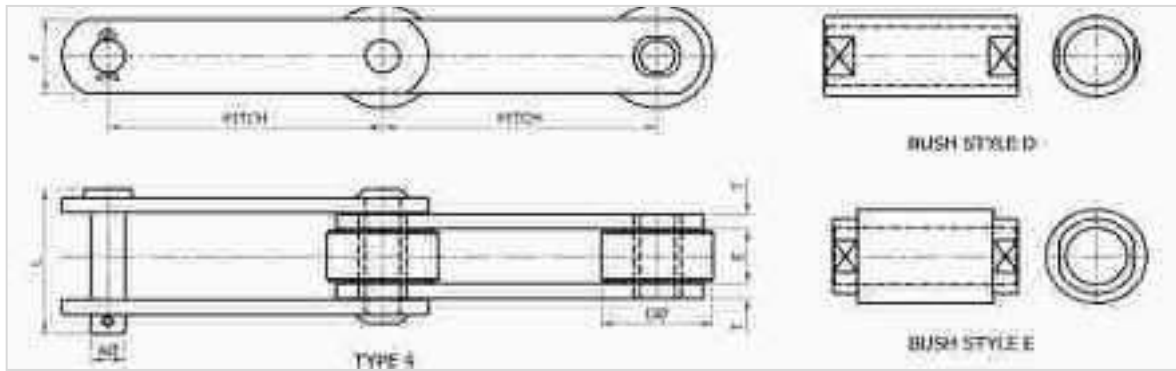
Chain No.	Pitch	Roller No.	No. of Teeth	Mat.	Do mm	Da mm	Dk mm	Ze Zz / Zd mm	Bk mm	Bg mm	Dn mm	Ln mm	R q kg/ piece
120	9.525 mm	12013	13	M.S or EN8	39.8	43	28	5.2	10	15	28	24	0.12

Chain No.	Pitch	Roller No.	No. of Teeth	Mat.	Do mm	Da mm	Dk mm	Ze Zz / Zd mm	Bk mm	Bg mm	Dn mm	Ln mm	R q kg/ piece
320	9.525 mm	32013	13	M.S or EN8	39.8	43	28	25.7	10	15	28	38	0.2

Chain No.	Pitch	Rol KOBO No.	No. of Teeth	Mat.	Do mm	Da mm	Dk mm	Ze Zz / Zd mm	Bk mm	Bg mm	Dn mm	Ln mm	R q kg/ piece
226	12.7 mm	22613	13	M.S or EN8	53.07	58	37	21	15	20	37	34	0.33
	1/2"	22615	15		61.08	66	45		15	25	45	34	0.46
		22617	17		69.12	74	53		15	32	53	34	0.7
		22619	19		77.16	82	61		15	40	61	38	1
		22621	21		85.21	90	70		15	45	70	38	1.25
		22623	23		93.27	98	78		15	50	78	38	1.5
		22625	25		101.33	106	86		15	55	86	38	1.8
		22638	38	Cl. or Cast Steel	153.79	159	139		25	60	100	45	3.3
		22657	57		230.54	235	216		25	60	100	50	4.5
		22676	76		307.32	312	292		25	60	100	55	6.1
		22695	95		384.11	389	369		25	60	100	55	7.6
		226114	114		460.91	466	446		25	60	100	60	10.5
Chain No.	Pitch	Rol KOBO No.	No. of Teeth	Mat.	Do mm	Da mm	Dk mm	Ze Zz / Zd mm	Bk mm	Bg mm	Dn mm	Ln mm	R q kg/ piece
326	12.7 mm	32613	13	M.S or EN8	53.07	58	37	34.9	15	20	37	50	0.5
	1/2"	32615	15		61.08	66	45		15	25	45	50	0.7
		32617	17		69.12	74	53		15	32	53	50	0.96
		32619	19		77.16	82	61		15	40	61	55	1.4
		32621	21		85.21	90	70		15	45	70	55	1.8
		32623	23		93.27	98	78		15	50	78	55	2.2
		32625	25		101.33	106	86		15	55	86	55	2.6
		32638	38	Cl. or Cast Steel	153.79	159	139		25	75	120	50	5.1
		32657	57		230.54	235	216		25	90	145	55	8.5
		32676	76		307.32	312	292		25	90	145	60	11.3
		32695	95		384.11	389	369		25	90	145	60	12.7
		326114	114		460.91	466	446		25	90	145	65	16.4

Chain No.	Pitch	Roller No.	No. of Teeth	Mat.	Do mm	Da mm	Dk mm	Ze Zz / Zd mm	Bk mm	Bg mm	Dn mm	Ln mm	R q kg/ piece
133	15.875 mm	13313	13	M.S or EN8	66.34	73	50	8.9	15	30	50	28	0.5

# High Performance Bush Roller Chains

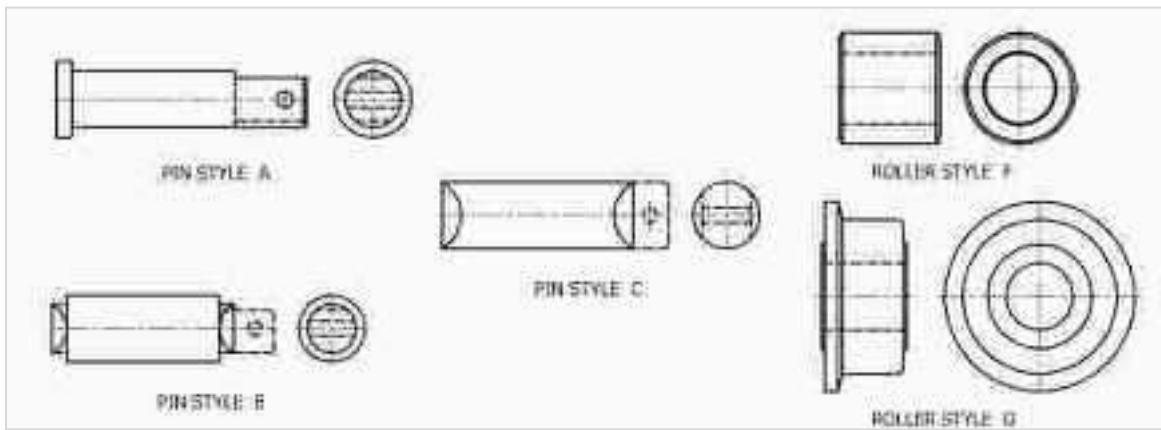


Chain No.	Chain Type	Average Pitch mm	Braking Load Kgs.	A	L (approx)	D	E	F	T	STYLE		
				mm						Pins	Bushing	Rollers
0070	4	76.20	10000	12.70	65.20	41.30	27.00	28.60	6.00	A	D	F
0071R	4	76.20	11000	14.30	72.00	50.00	35.0	40.00	5.00	A	D	F
0180	4	76.20	2200	9.525	23.90	25.40	12.70	19.05	2.38	B	E	G
0087	4	76.20	7400	11.11	53.086	47.625	19.05	31.10	3.81	A	D	F
0080	4	100.00	5500	11.11	26.60	30.00	10.50	25.80	3.10	A	D	F
0100	4	100.00	22000	17.74	58.00	50.00	25.00	50.00	6.00	A	D	F
0034	4	101.60	22000	17.74	76.50	66.00	31.40	50.00	7.75	B	D	F
0043	4	101.60	17000	17.74	77.50	60.00	35.00	45.00	6.00	A	D	F
0052	4	101.60	14000	14.56	48.00	25.04	20.00	40.00	5.00	B	E	F
0061	4	101.60	14500	15.85	70.00	55.02	32.00	40.00	5.00	A	D	F
0062	4	101.60	14500	15.85	61.00	55.00	32.00	40.00	5.00	B/C	D	G/F
0064	4	101.60	10000	11.12	69.00	44.50	30.00	30.00	6.30	B	D	G
0089R	4	101.60	15000	15.90	90.00	55.00	50.80	50.00	7.00	C	D	F
0099	4	101.60	15000	14.27	61.00	55.00	25.00	40.00	6.00	B	D	F
0102	4	101.60	14000	14.74	48.00	25.40	20.00	40.00	5.00	B	E	F
0137R	4	101.60	13636	17.74	69.00	55.00	35.00	45.00	6.00	C	D	F
0176	4	101.60	12000	17.74	68.50	55.00	31.75	40.00	5.00	B	D	F
0177	4	101.60	13000	17.74	77.25	60.00	35.00	45.00	6.00	B	D	F
0187	4	101.60	14000	13.80	54.00	48.00	25.40	40.00	5.00	B	D	F
0192	4	101.60	15000	14.27	53.00	47.625	25.00	40.00	6.00	B	D	F
0198R	4	101.60	18182	17.74	68.00	60.00	35.00	50.00	6.00	A	D	F
0020	4	150.00	11500	17.74	50.00	48.00	20.00	40.00	5.00	B	D	F
0049	4	150.00	30000	19.52	107.00	72.00	45.00	50.00	10.00	A	E	G
0035	4	126.90	21500	22.74	68.00	66.00	31.30	50.00	6.25&7.75	B	D	F
0044	4	126.90	13000	17.74	77.25	60.00	35.00	45.00	6.00	A	E	F
0039	4	152.40	11000	15.85	49.00	57.15	15.24	40.00	5.00	B	D	F
0041	4	152.40	16300	15.82	67.00	66.00	30.00	50.00	7.50	A	D	F

Pins of style B and style C are indicating rivetted lengths only.



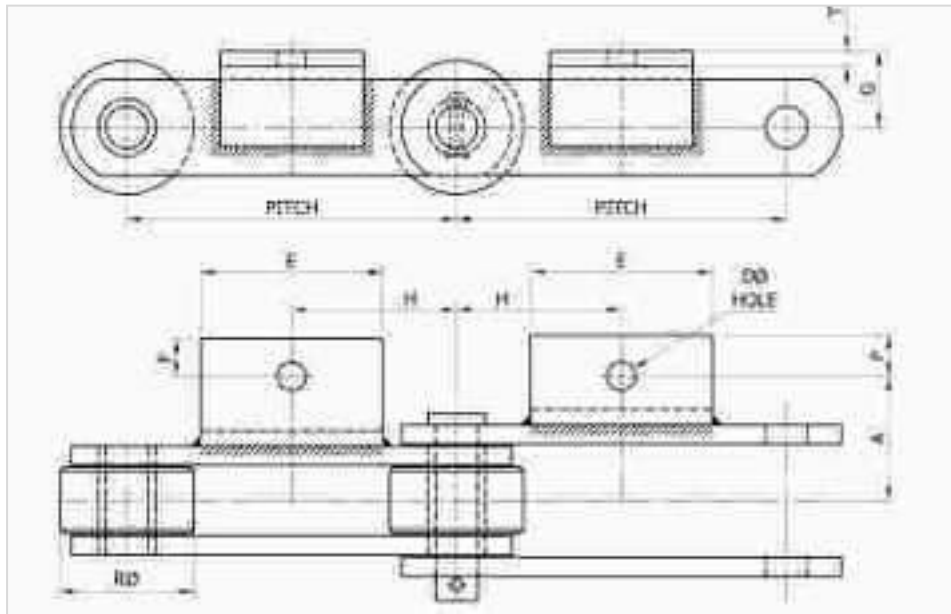
## High Performance Bush Roller Chains



Chain No.	Chain Type	Average Pitch mm	Braking Load kgs	A	L (approx)	D	E	F	T	STYLE		
				mm						Pins	Bushing	Roller
45	4	152.4	22500	22.75	99.5	80	55	50	7.5	B	D	F
46	4	152.4	25000	19	89	65	35	50	9.525	A	D	F
54	4	152.4	25000	22.22	94	76.2	35	50	10	A	D	F
55	4	152.4	18000	19	81.5	65	35	50	7.5	A	D	F
60	4	152.4	11000	14.56	57	63.5	19.8	40	5	B	D	F
73	4	152.4	21000	21.75	98	60	54	50	7.5	B	D	F
74	4	152.4	11000	14.28	46	47.62	19.05	38.1	5	B	E	F
75	4	152.4	11000	14.28	48	46.62	19.05	40	5.08	C	D	F
81	4	152.4	15000	15.85	90.5	69.9	36.05	50.8	9.5	B	D	F
85	4	152.4	5600	8.95	39.9	57.2	15	26	4	B	E	F
0088R	4	152.4	40000	22	95	65	47.5	55	10	C	D	F
90	4	152.4	16000	17.74	83	60	45	50	6	C	D	F
94	4	152.4	30000	19	90.5	65	36.5	50	10	A	D	F
109	4	152.4	22000	19	97	56.5	39.7	50	7.5	A	D	F
122	4	152.4	32300	19	95.5	63.5	37	60	10	A	D	F
0125R	4	152.4	50000	25.4	155.6	75.45	76.2	65	12.7	A	D	G
161	4	152.4	35000	25.4	85	88.9	41	65	8	C	E	G
173	4	152.4	13000	15.85	50	60.32	19.05	40	6	B	D	F
183	4	152.4	40000	22.74	96	76.2	36	65	10	A	D	F
0188R	4	152.4	3500	22.74	126	65	56	55	10	A	D	F
190	4	152.4	9000	10.2	39.5	31.75	15.9	28.6	4	C	E	F
197	4	152.4	40850	22.74	96	76.2	36	65	10	A	D	F
130	4	200	21000	21.75	94	80	54	50	7.5	C	D	G
37	4	250	15000	17.74	72	67	26	50	5.5	A	E	F
118	4	250	16300	20	86	70	45	50	8	C	D	G

Pins of style B and style C and Pins of style B and style C are indicating rivetted lengths only.

## High Performance Bush Roller Chains



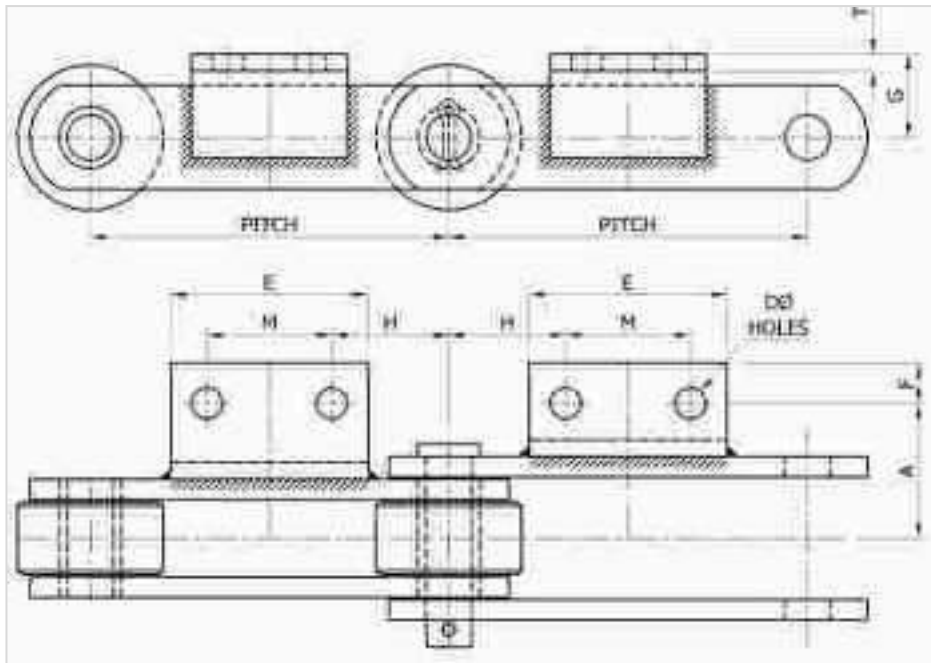
### A.1 Attachments (one hole one).

Chain No.	Average Pitch Mm	Breaking Load Kgs	A	D	E	F	G	H	P	R	T	STYLE		
												Pins	Bushings	Rollers
70	76.2	10000	48.2	9.525	50.8	10	14.3	38.1	12	41.3	5	A	D	F
0090/A	101.6	15000	44	13	40	19.5	40	50.8	19.5	55	5.5	B	D	F
102	101.6	14000	40	9	60	20	35	50.8	20	25.4	6	B	D	F
39	152.4	11000	38.1	14.40Sq	56	25.5	25.4	76.2	25.5	57.15	5	B	D	F
74	152.4	11000	43.205	14.28Sq	57.12	15.09	19.05	76.2	15.09	47.62	3.17	C	D	F
85	152.4	5600	36.9	14.40Sq	56.5	20.6	24	76.2	20.6	57.2	5	B	E	F
122	152.4	32000	108	14.2	63.5	17.5	40.7	44	17.5	63.5	9.5	A	E	F
35	126.9	21500	65	17	75	18.7	45	63.45	18.7	66	6	B	D	F

Pins may be furnished in direction.

Please specify

## High Performance Bush Roller Chains



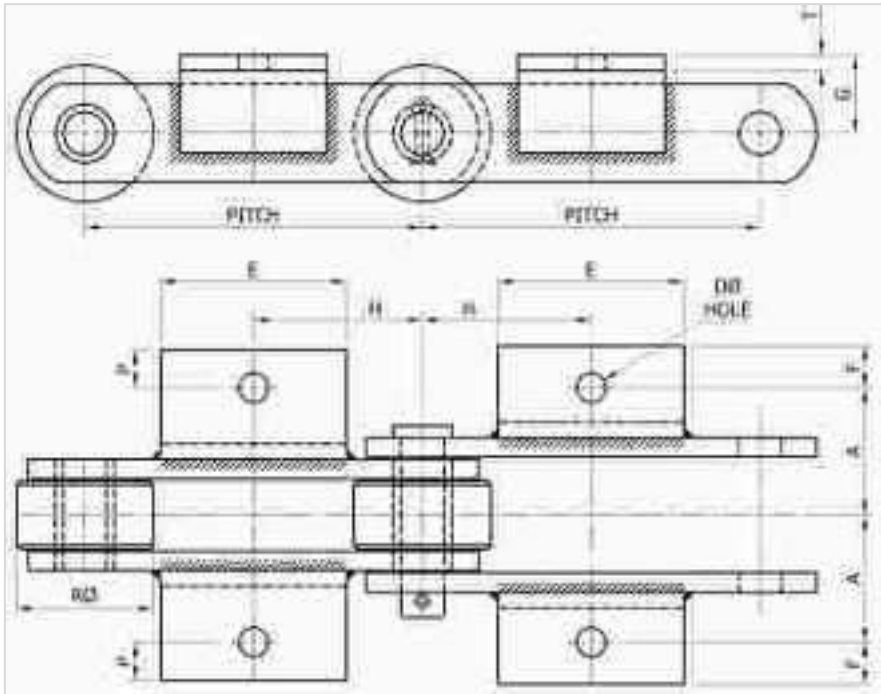
### A.2 Attachments (one side wedged, two holes).

Chain No.	Average Pitch Mm	Breaking Load Kgs	A	D	E	F	G	H	M	T	STYLE		
											Pins	Bushings	Roller
34	101.5	22000	65	11	55	18.7	45	34.57	32	6	B	D	F
61	101.6	12350	65	9	55	15.6	45	34.8	32	6	A	D	F
62	101.6	8000	50	12	71	30.6	45	30.8	40	6	B	D	G
64	101.6	11700	50	12	71	16.3	28	30.85	39.9	6	B	D	G
60	152.4	11000	42.8	10	95.25	17.2	60	47.75	57.15	3	B	D	F
161	152.4	35000	84.3	15.87	95.24	20.63	8.78	44.45	63.49	9.5	C/A	E	G
173	152.4	13000	44.45	10.7	84	11.55	31.75	47.7	57	5	B	D	F
190	152.4	9000	36.6	11.1	101.6	14.3	23.8	58.7	38.1	4.76	C	E	F

Pins may be furnished in reverse direction.

Please specify

## High Performance Bush Roller Chains



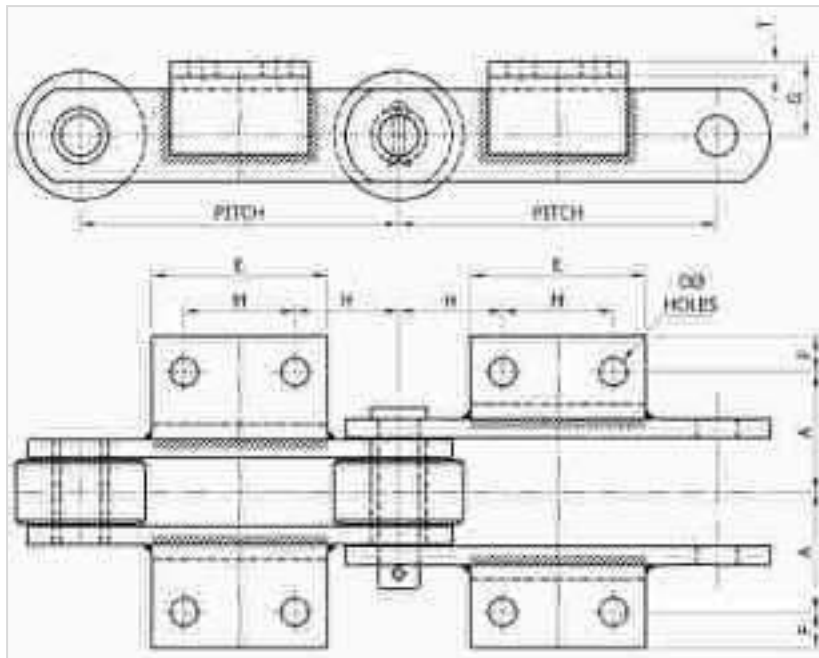
K1 Attachments(one hole, two side).

Chain No.	Average Pitch Mm	Breaking Load Kgs.	A	D	E	F	G	H	P	R	T	STYLE		
												Pins	Bushings	Rollers
0071 R	76.2	11000	57.15	10.00Sq	35	21	25	38	21	50	6	A	D	F
192	101.6	5000	44	13	40	20	34	51	20	47.6	5	B	D	F
55	152.4	18000	66	13.5	40	17	30	76	17	65	6	A	D	F
109	152.4	23000	73.02	17.4	70	8.83	51	76	8.83	56.5	6	A	D	F

Pins may be furnished in reverse direction.

Please specify

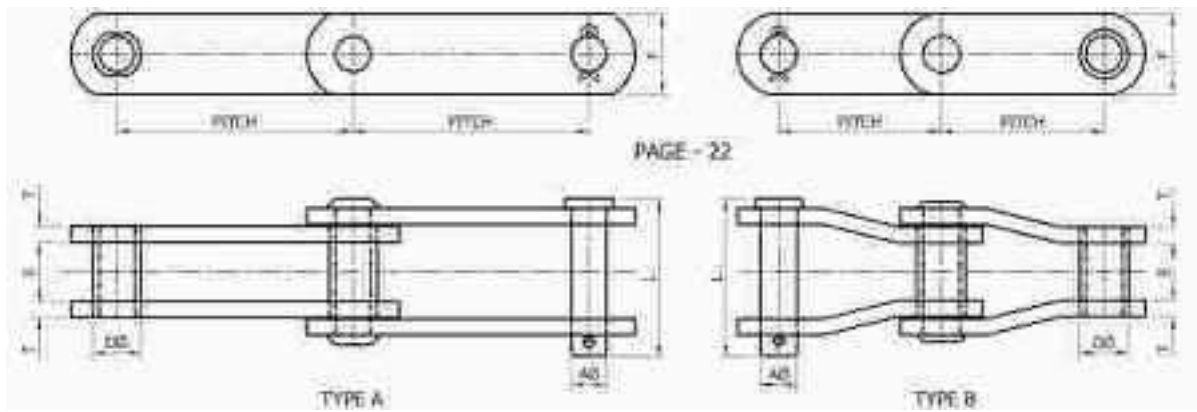
## High Performance Bush Roller ( Apron Feeder Chains)



**K2 Attachments(Both side welded, two holes).**

Chain No.	Average Pitch Mm	Breaking Load Kgs.	A	D	E	F	G	H	M	T	STYLE		
											Pins	Bush- Ings	Rol- lers
0043	101.50	13000	65.50	11.00	50.00	15.25	45.00	36.75	28.00	6.00	B	D	F
0089	101.60	12500	73.80	12.70	71.40	16.70	28.50	31.80	38.00	6.00	A	D	F
0137R	101.60	13636	60.00	11.00	60.00	20.00	32.00	36.80	28.00	6.00	A	D	F
0176	101.60	5455	65.00	9.00	55.00	15.60	45.00	34.75	32.00	6.00	B	E	F
0177	101.60	5910	65.50	11.00	65.00	15.25	45.00	35.80	30.00	6.00	A & B	D	F
0198R	101.60	18182	65.00	11.00	60.00	15.75	32.00	35.80	30.00	6.00	A	D	F
0041	152.40	16300	67.50	11.00	80.00	12.00	45.00	53.70	45.00	8.00	A	D	F
0045	152.40	22500	82.50	11.00	80.00	11.50	50.00	53.70	45.00	8.00	B	D	F
0088R	152.40	18181	79.00	15.00	112.00	19.60	38.00	41.20	70.00	10.00	A	D	F
0090	152.40	16000	63.50	11.00	80.00	21.50	50.00	53.70	45.00	6.00	C	D	F
0125	152.40	50000	25.40	15.87	107.95	22.22	49.45	44.50	63.40	9.50	A	D	F
0188	152.40	35000	72.50	15.00	14.00	25.00	38.00	31.20	90.00	10.00	C	D	F
0044	126.90	13000	65.50	11.00	65.00	14.75	45.00	48.45	30.00	6.00	A	D	F

# High Performance Bush Roller Chains



Chain No.	Chain Type	Average Pitch mm	Average Ultimate Strength Kgs	A	L (approx)	D	E	F	T	STYLE	
										Pins	Bushing
0101	A	100.00	8500	18.00	58.00	26.00	25.00	50.00	6.00	A	D
0121	A	100.00	8000	17.74	54.00	26.00	25.00	40.00	5.00	A	D
0119*	A	101.60	10909	15.875	111.00	25.40	54.00	38.10	10.00	A	Malleable
0089	A	101.60	15000	15.90	90.00	25.40	50.80	50.00	7.00	C	E
0137	A	101.60	13636	17.74	77.50	26.00	35.00	45.00	6.00	A	D
0198	A	101.60	18182	17.74	68.00	26.00	35.00	50.00	6.00	A	D
0088	A	152.40	40000	22.00	117.50	34.00	47.50	55.00	10.00	A	D
0090	A	152.40	16000	17.74	83.00	25.00	45.00	50.00	6.00	B	D
0104	B	152.40	27272	19.05	113.00	31.76	57.00	39.50	9.50	A	E
0125	A	152.40	50000	25.40	155.60	44.45	76.20	63.50	12.70	A	D
0188	A	152.40	35000	22.00	126.00	34.00	56.00	55.00	10.00	A	D
0091	A	160.00	16000	18.00	79.00	26.00	35.00	45.00	6.00	A	D
0114	A	160.00	50000	31.75	143.51	47.62	50.80	76.19	12.70	A	D
0126	A	200.00	16300	20.00	87.00	30.00	45.00	50.00	7.50	A	D
0076	B	228.60	39545	25.40	148.50	44.45	63.50	70.00	14.30	A	D
0086	A	250.00	45000	29.96	125.00	41.90	54.50	70.00	10.00	A	D

\* Equivalent to Link Belt Chain No. C102B

Equivalent to Jeffrey Chain No. WS110

Equivalent to Jeffrey Chain No. 6859

# High Performance Feeder Table Chains

Rolkobo	Pitch	Breaking Load
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## High Performance Cane Carrier Chains

Chain	Pitch	Breaking Load/	$d_1$
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## High Performance Rake Elevator / Carrier Chains

Chain no.	Chain Type	Pitch	Breaking Load/ Strand (kgs)
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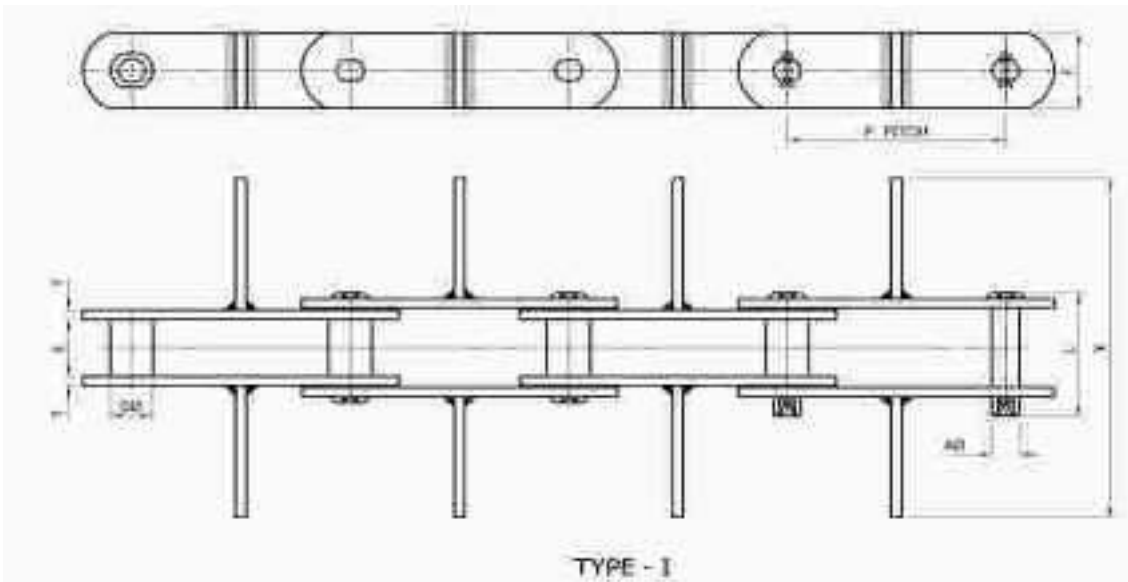
# High Performance Bush Elevator Chains

Chain no.	Type	Chain Pitch P	Breaking Load/ Strand (kgs)
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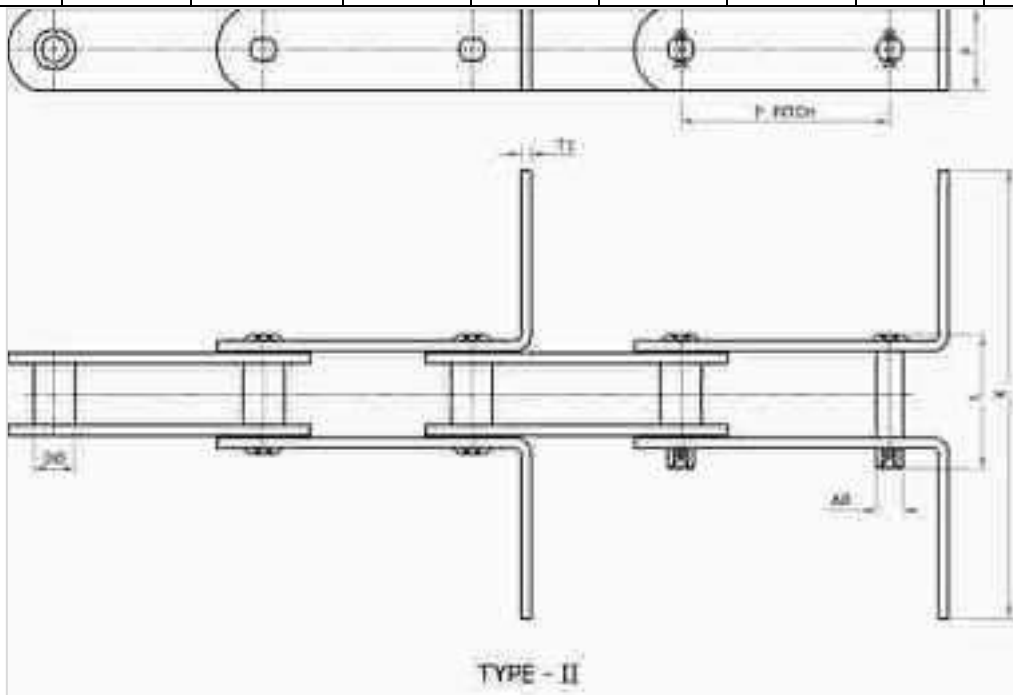
# High Performance Baggage Carrier Chains

Chain	Chain	Chain	Breaking Load/	$d_1$
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# High Performance Flow Conveyor Redler Chains

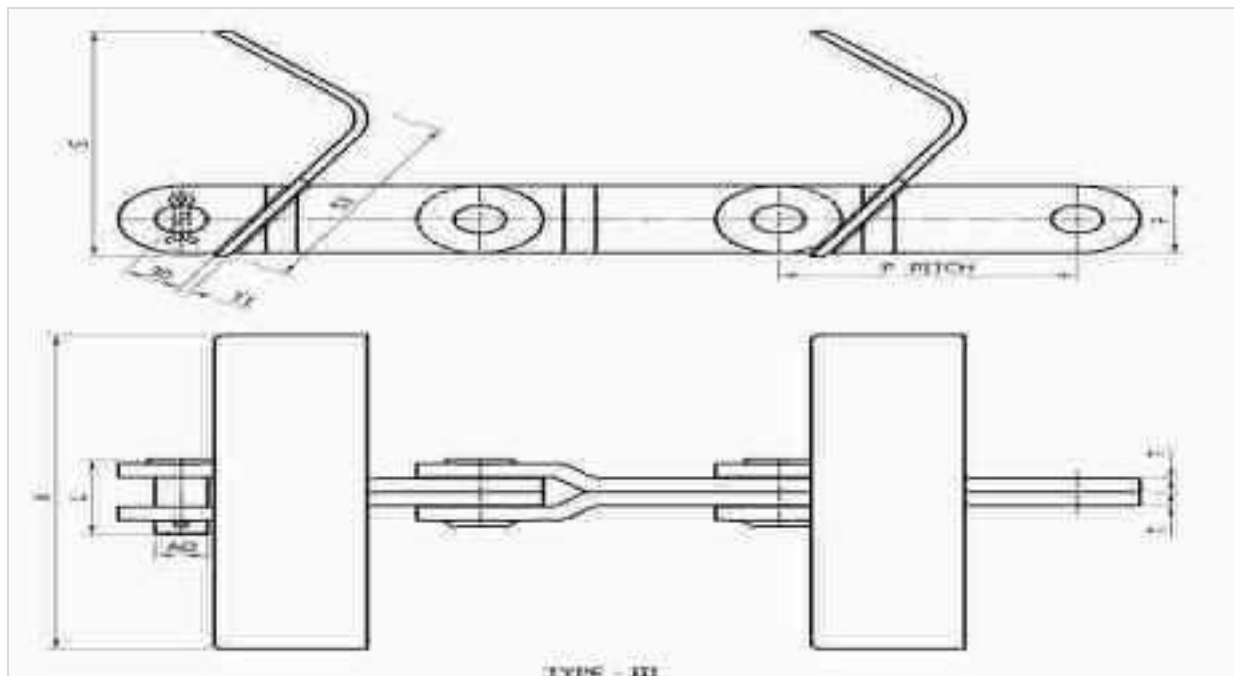


Chain No.	Pitch	Breaking Load	A	L	D	E	F	T	T1	X
				max.		min.				max.
RK-RL-101.6	4"	11,500 kgs.	14.28	56	25	22	40	5	8	190
RK-RL-127	5"	11,500 kgs.	14.28	56	25	22	40	5	8	315
RK-RL-150	150mm	11,200 kgs.	15	76	21	32	40	6	8	400
RK-RL-160	160mm	22,400 kgs.	21	95	30	48	60	8	8	315
RK-RL-200	200mm	31,500 kgs.	25	116	36	48	70	10	10	600



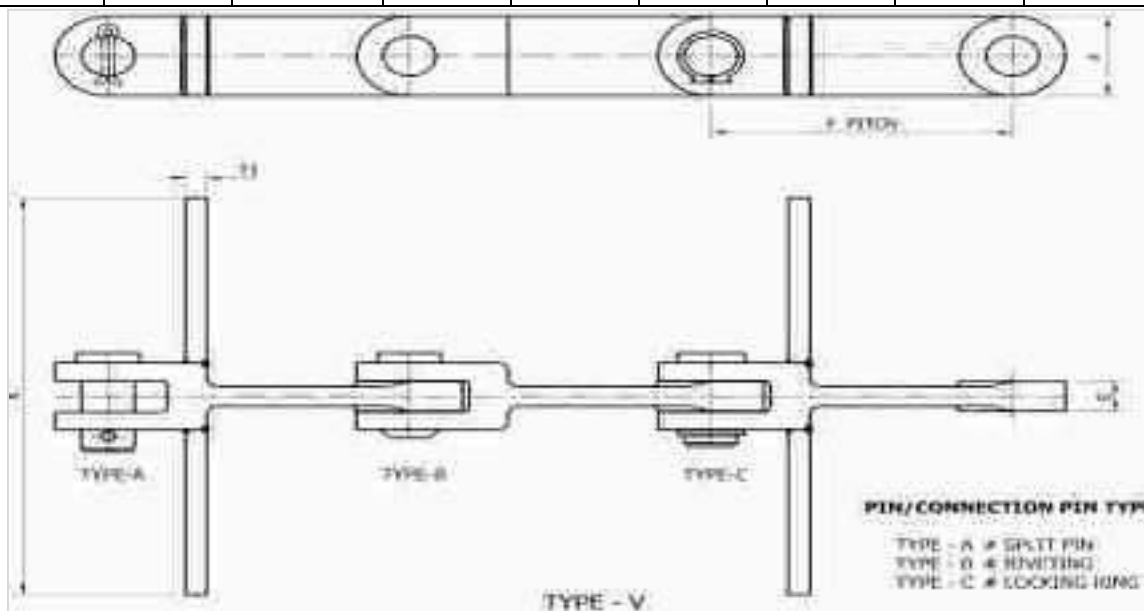
Chain No.	Pitch	Breaking Load	A	L	D	E	F	T	T1	X
				max.		min.				max.
RK-RL-125/14	125mm	14,000 kgs.	14.56	80	25.4	27.5	40	6	8	276
RK-RL-125/19	125mm	19,000 kgs.	19.85	91	32	34	50	6	10	482
RK-RL-125/35	125mm	35,000 kgs.	22	95	35	34	65	8	10	482
RK-RL-150	150mm	25,000 kgs.	19.85	104	32	45	65	8	10	440
RK-RL-160	160mm	22,000 kgs.	21	95	30	40	60	8	10	315

# High Performance Flow Conveyor Redler Chains



TYPE - III

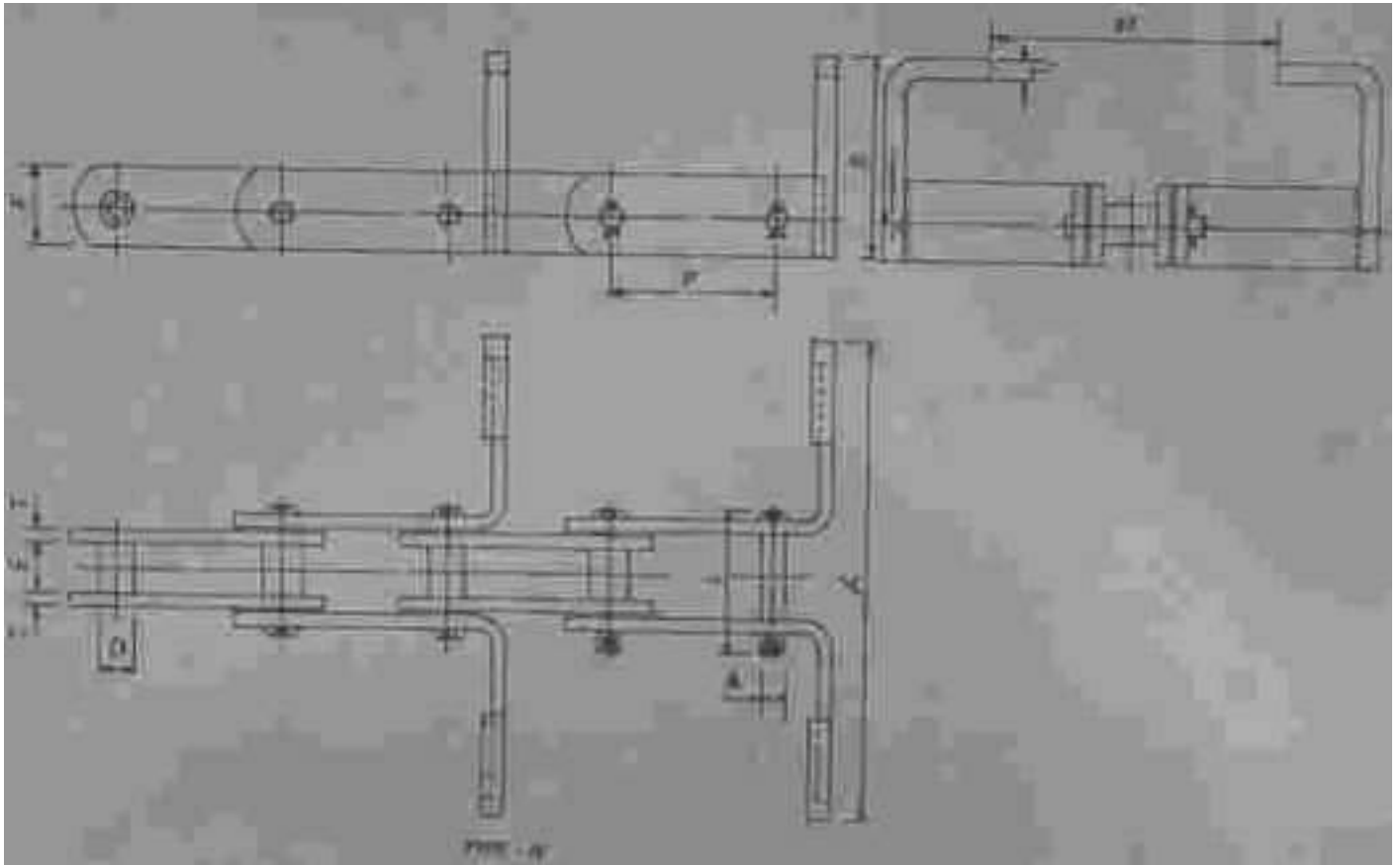
Chain No.	Pitch	Breaking Load	A	L max.	F	T	T1	S	S1	X
										max.
RK-RL-125	125 mm	42,000 kgs.	25	60	60	12	5	158	105	485
RK-RL-142/24	142 mm	24,000 kgs.	22.22	58	50	8	6	145	105	278
RK-RL-142/30	142 mm	30,000 kgs.	22.74	56	50	8	6	170	122	325
RK-RL-142/42	142 mm	42,000 kgs.	25	67	60	12	5	158	105	275
RK-RL-160	160 mm	22,500 kgs.	22.22	70	55	10	5	300	200	685



TYPE - V

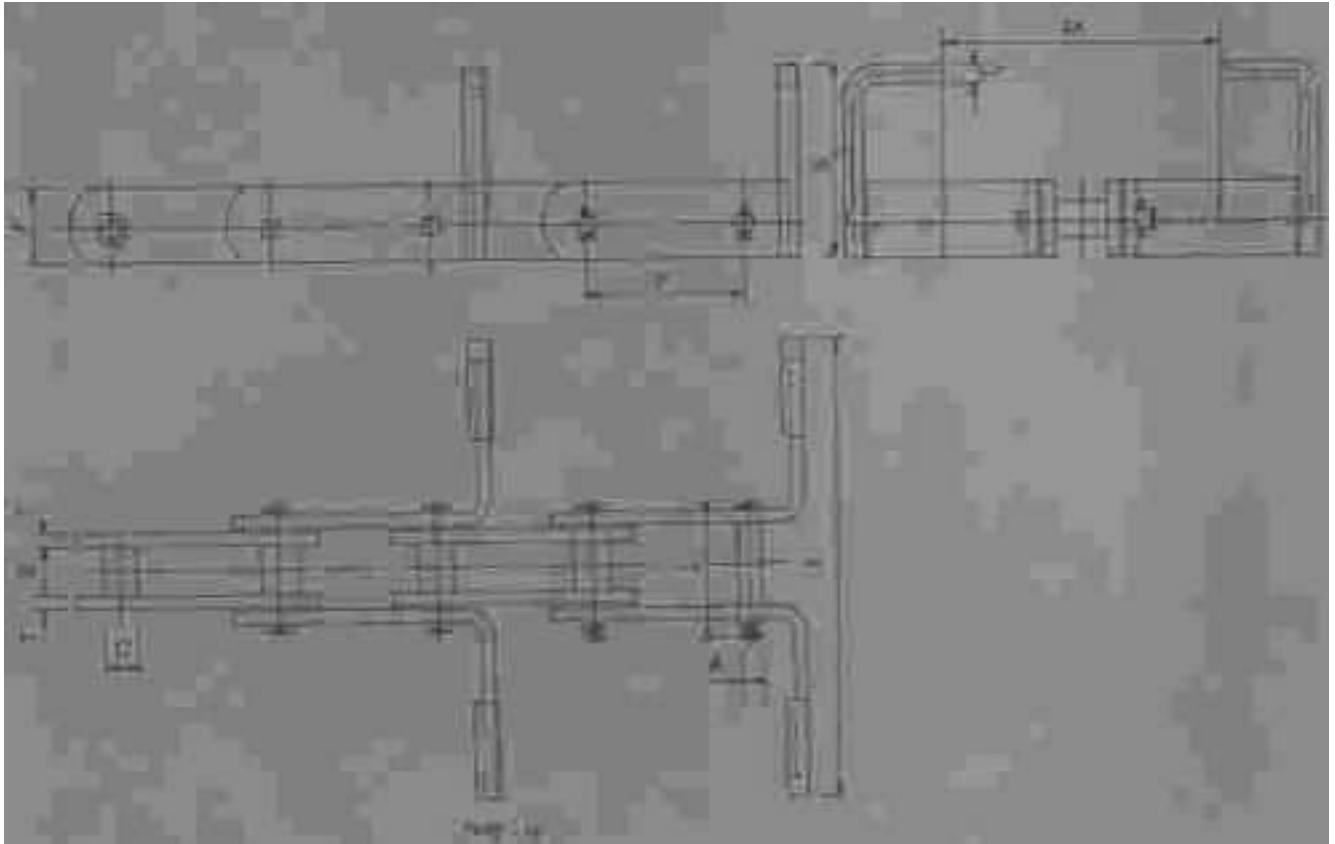
Chain No.	Pitch	Breaking Load	A	L max.	E	F	T1	X
					min.			max.
RK-RL-142/25	142 mm	25,000 kgs.	25	61	19	50	10	290
RK-RL-142/28	142 mm	28,000 kgs.	25	61	18	48	12	485
RK-RL-142/22	142 mm	22,000 kgs.	22.7	61	19	50	10	375

## High Performance Flow Conveyor Redler Chains



Chain No.	Pitch	Breaking Load	A	L max.	D	E min.	F	T	T1	S	X max.	2x
RK-RL-125	125 mm	15,000 kgs.	15.85	96	31	35.6	50	6/8	12 Sq	94	476	308
RK-RL-150/25	150 mm	25,000 kgs.	19.85	104	32	45	65	8	12 Sq	100	440	275
RK-RL-150/30	150mm	30,000 kgs.	25	115	49	43	70	12	16 Sq	150	580	160
RK-RL-160	160mm	22,400 kgs.	21	95	30	48	60	6/8	12 Sq	100	315	200

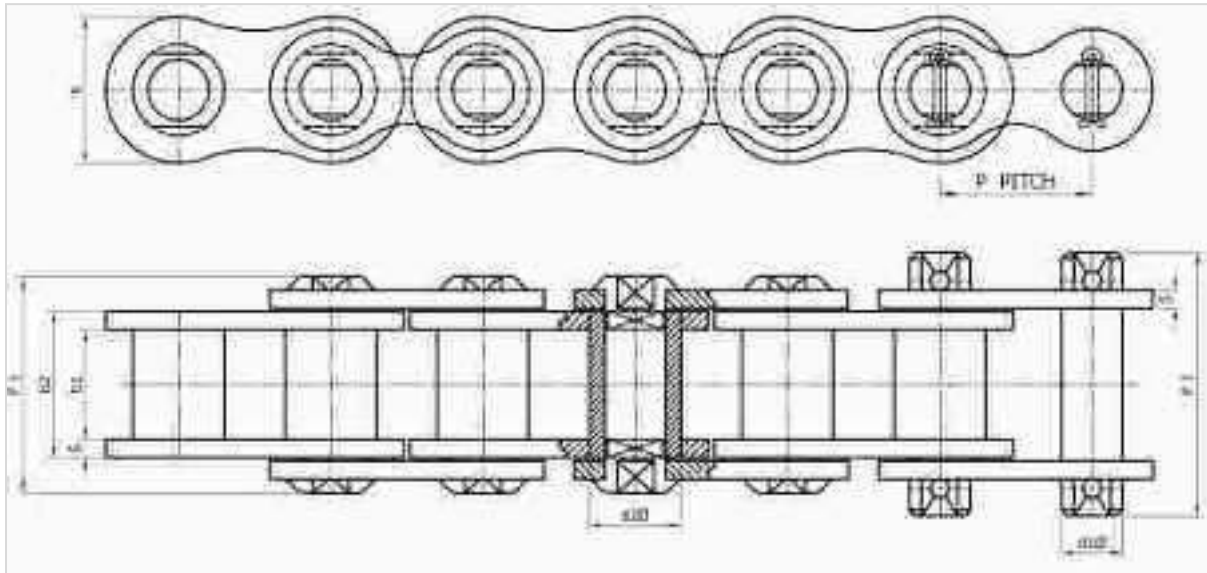
# High Performance Flow Conveyor Redler Chains



Chain No.	Pitch	Breaking Load	A	L max.	D	E min.	F	T	T1	S	X max.	2x
RK-RL-200	200 mm	15,000 kgs.	15.85	77	24	30	50	8	10 Sq	115	195	75
RK-RL-150	150 mm	30,000 kgs.	25	114	49	43	70	12	20 Sq	200	579.5	169.5
RK-RL-160	160mm	20,000 kgs.	17.74	91	25	35	50	10	12 Sq	100	480	140

# High Performance Bush Driving Chains

To DIN 8164



ChainNo.	Ref.No.	P	b <sub>1</sub>	b <sub>2</sub>	d <sub>2</sub>	d <sub>1</sub>	f <sub>1</sub>	f <sub>3</sub>	H	S	Breaking
		mm	mm	mm	mm	mm	mm	mm	mm	mm	load (Kgs)
201	40010000	15	14	18.2	9	6	26.1	29.4	14	2	1,250
202	40020000	20	16	22.2	12	8	32.6	38.2	18.8	3	2,500
203	40030000	25	18	24.2	15	10	35.6	43.2	24	3	3,300
204	40040000	30	20	28.2	17	11	41.6	49.2	27.8	4	4,600
205	40050000	35	22	30.2	18	12	44	54	29.8	4	5,000
206	40060000	40	25	35.2	20	14	52	61	35	5	7,200
207	40070000	45	30	42.2	22	16	61	70	38	6	10,000
208	40080000	50	35	47.2	26	18	66	79	43	6	12,500
209	40090000	55	45	61.2	30	20	85.5	99	48.7	8	16,000
210	41100000	60	50	66.5	32	22	92.3	102	54.7	8	18,000
211	41110000	65	55	71.5	36	26	97.5	113	61	8	20,000
212	41120000	70	65	85.5	42	30	117	130.2	66.5	10	27,000
214	41140000	80	70	95	44	32	130	148	75	12	31,600
216	41160000	90	80	105	50	36	140	160	85.8	12	40,000
218	41180000	100	90	115	56	42	152	169	95.5	12	50,000



## High Performance Stud Chains (Gall Chain)

Chain No	Pitchmm	P <sub>1</sub>	E	d
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# High Performance Top Roller Chains

Chain Pitch Breaking A

# High Performance Water Screen Chains

Chain Pitch Breaking

# High Performance Extended Pitch Roller Chains

Chain No	Chain Type	Pitch	Breaking Load	A
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## High Performance Leaf Chains

Chain No	Pitch	Breaking load	A
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# High Performance Deep Bucket Conveyor Chains for Clinker Transport

Chain No	Pitch	Breaking load/	D <sub>1</sub>
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# High Performance Reclaimer Scraper Chains.

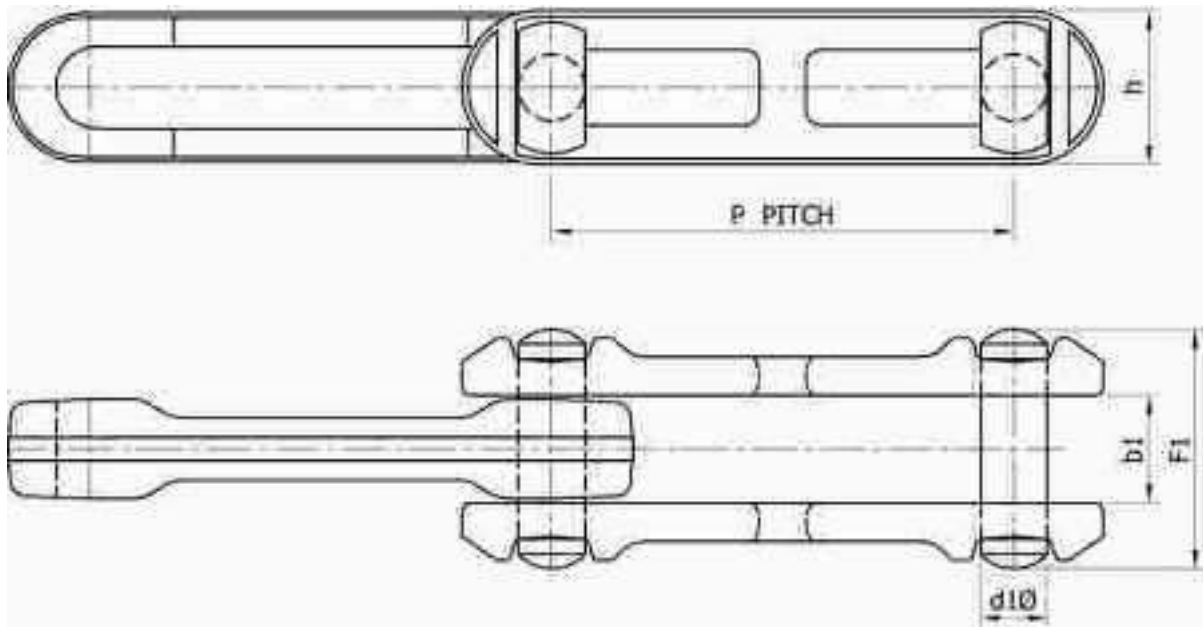
Chain	Pitch	Breaking load/	D <sub>1</sub>
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# High Performance Pan Conveyor Chains

Chain No	Pitch	D1
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## High Performance Rivetless Chains



Chain No	P mm	B <sub>1</sub>	D <sub>1</sub>	F <sub>1</sub>	h	Breaking Load (kgs)
R065	65	15	10	35	30	8,700
R070	76.2	21	12.7	46	28	15,700
R100	100	25	16	60	36	21,900
R101	101.6	25	16	60	36	21,900
R152	152.4	34	23	79	51	38,500
R153	153.18	40.5	28.57	96	65.9	45,454
R153/1	153.18	33	22.22	80	50.8	27,272
R229	229.3	51.6	34.92	124	77.8	1,00,000

# High Performance Heavy Duty Chains For Shovels/ Excavators & Other

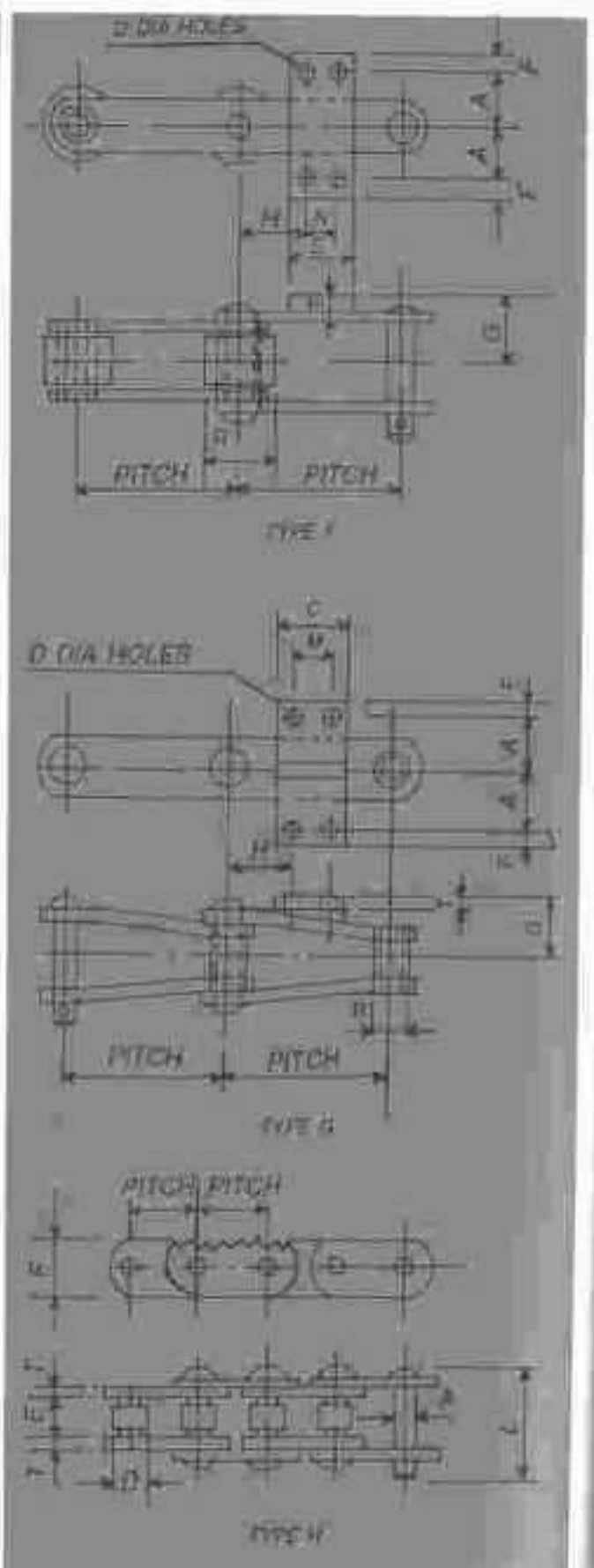
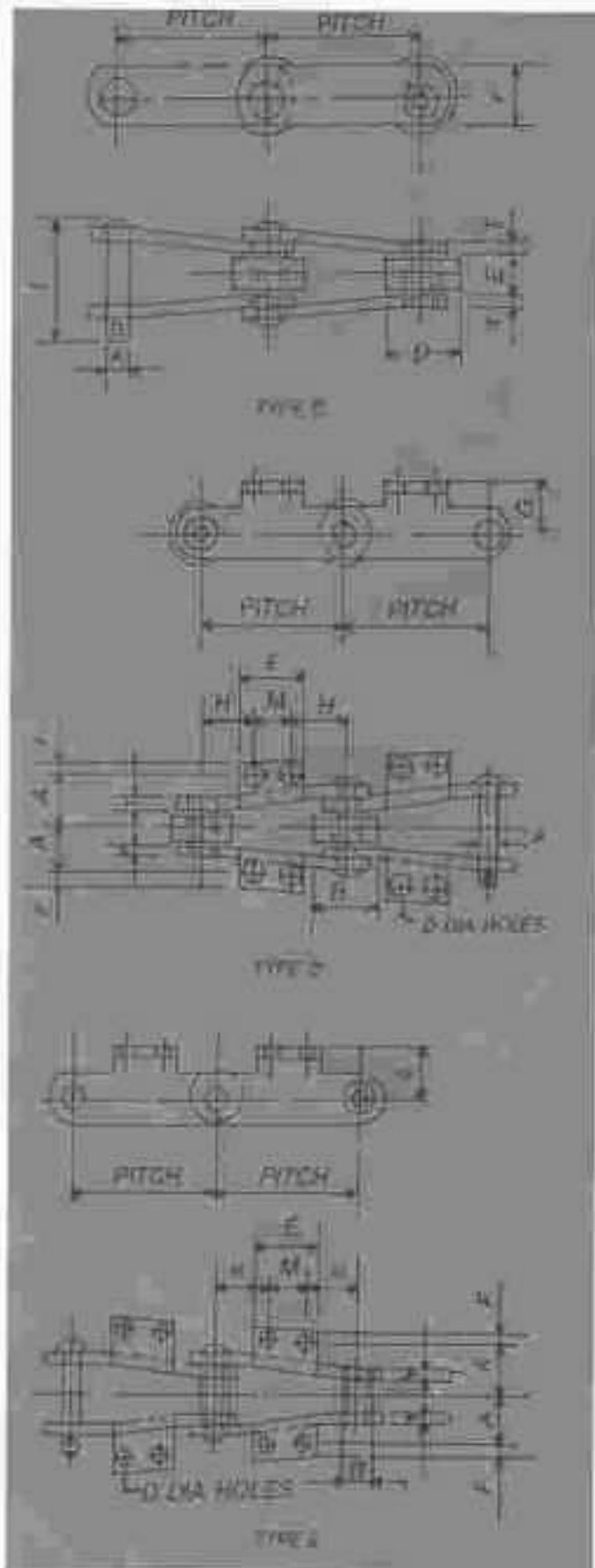
## Heavy Earthmoving & Mining Equipment

(Suitable for Crawler, Crowd, Propel and Driving Chains)

Chain	Pitch	Roller	Inside	Side Bar	Height of	Overall	Breaking
No.		Dia.	Width	Thickness	Side Bar	Pin Length	Load
		A	B	C	D	E	

1634A

# High Performance Special Purpose Chains



## High Performance Special Purpose Chains

Chain No.	Chain Type	Average Pitch mm	Average Ultimate Strength kgs	A	L (approx)	D	E	F	T	STYLE		
										Pins	Bush- Ings	Rol- lers
70.6.050	H	50	10000	14.63	62.5	25.4	25.4	40	5	A	D	F
0204*	C	66.268	10900	11.12	55	22.2	25	29	5	A	E	F
70.6.100	H	100	10000	14.63	62.5	25.4	25.4	40	5	A	D	F
138	C	152.4	36000	22.74	98	76.2	37	60	10	A	D	F
186	C	152.4	24000	15.87	103.5	31.75	54.5	38.4	8	A	E	F

\* Equivalent to Rex Chain No. -587.

## ATTACHMENTSCHAIN

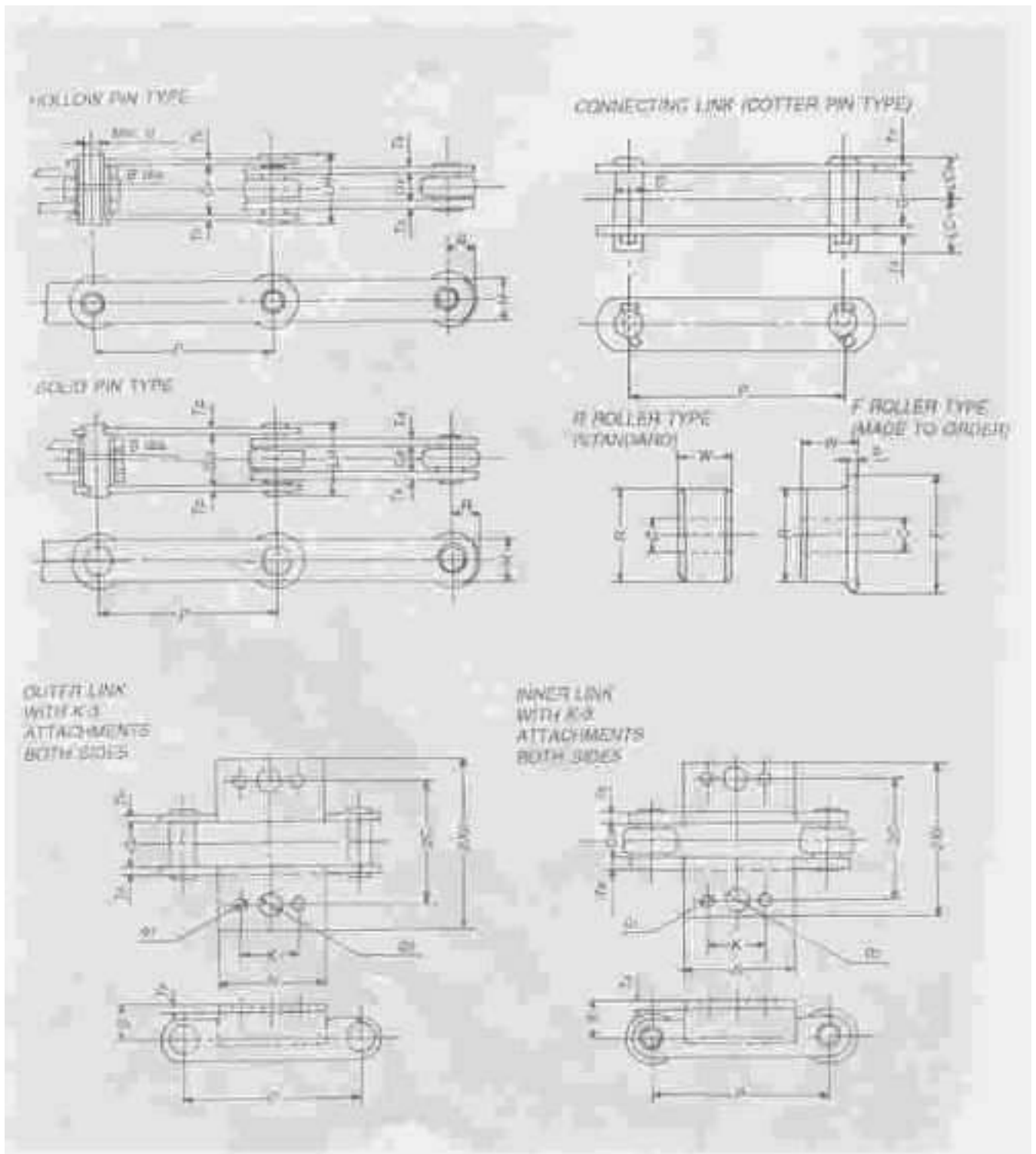
Chain No.	Chain Type	Average Pitch mm	Average Ultimate Strength kgs	A	D	E	F	G	H	M	R	T	STYLE		
													Pins	Bush- Ings	Rol- lers
185	E	102.5		72	6	75	23	27.5	32.25	38	44	7.5	A	E	-
73	F	152.6	21000	40	11	114	17	51.5	51.2	50	60	8	A	D	F
104	E	152.6	27272	67	10.3	82	16.5	26.1	54	44.4	31.75	9.5	A	E	-
186	D	152.4	24000	68	14.3	76.3	25.25	25.4	53.975	44.45	31.75	8	A	E	F
76	G	228.6	29545	50.8	16.66	139.7	25.4	74.6	57.15	88.9	44.45	15.875	A	D	-

Equivalent to Jeffrey Chain No.-WS110.

Equivalent to Rex Chain No.-542..

\*\* Equivalent to Jeffrey Chain No.-6859.

# High Performance Flow Conveyor Chains



The hollow pin type of chain is designed for ready assembling of Attachments or cross rods to outer links at any desired spacing

This method is recommended for use under normal condition applications.

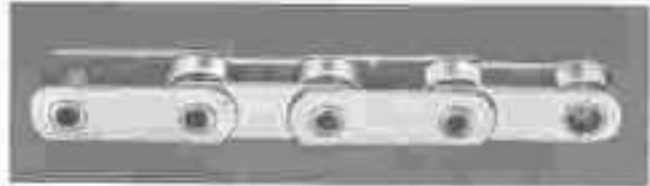
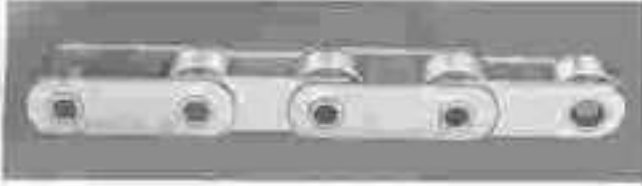
## High Performance Hollow Pin/Solid Pin Type Chains

High Performance Conveyor chain are designed and manufactured for the general industrial use.

Standard type chains are normally in stock to ensure prompt delivery

Special type chains are also available upon request.

The solid pin type of chain is application to the same wheels as Equivalent hollow pin type of chain, but the breaking load of the is higher than that of the equivalent hollow pin type of chain, and is Particularly preferred for conveyors working under serve loading conditions.



### Plain chain dimensions (inch & mm.)

Chain Breaking Load (Upper figure-Hollow pin Type Lower figure-Solid pin type)	Chain Pitch	Chain No.		Roller					Pin				Bus h	Link Plate				Width between plates		
		P	Hollow Pin Type	Solid Pin Type	R	W	C	F	b	D	Hollow C	o LH		LC 1	LC 2	B	H	TP	Tb	r
6,000 lb	3	H060 030	S075 030	1.25	0.55	0.72	1.63	0.12	0.55	0.38	1.48	0.99	0.74	0.71	1	0.15	0.17	0.59	1	0.6
	4	H060 040	S075 040								37.6				25.4	3.8	4.3	15	25.4	15.2
	6	H060 060	S075 060	31.75	14	18.3	41.3	3	14	9.65	-38.4	25.2	18.8	18.03						
12,000 lb 15,000 lb	3	H120 030	S150 030	1.87	0.7	0.95	2.37	0.15	0.75	0.52	1.72	1.17	0.88	0.93	1.5	0.15	0.2	0.87	1.29	0.75
	4	H120 040	S150 040																	
	6	H120 060	S150 060	47.5	17.8	24.1	60.3	3.8	19.05	13.21	43.7	29.9	22.4	23.6	38.1	3.8	5.1	22	32.8	19.1
24,000 lb 30,000 lb	4	H240 040	S300 040	2.63	0.95	1.29	3.37	0.25	1.06	0.77	2.25	1.52	1.16	1.27	2	0.2	0.28	1.17	1.7	1
	6	H240 060	S300 060	66.8	24.1	32.8	85.7	6.4	26.92	19.56	57.15	38.6	29.5	32.2	50.8	5.1	7.1	29.7	43.2	25.4

Note: Choose stock pitch, other pitches available upon request. All sprocket wheels can be how furnished upon request. Can offer chains up to 35000 (lbs) breaking load.

o Dimensions parenthesized Solid Pin Type

## Attachment dimension (inch & mm.)

Chain Breaking Load (Upper figure- Hollow pin Type Lower figure- Solid pin type)	Chain Pitch	Chain No.		Standard type attachment dimensions													Additional Weight per Att. lb (kg)			
		P	Hollow Pin Type	Solid Pin Type	N	K	O1	O2	2C	2Xp	2Kb	Tp	Tb	S	Gp	Gb	Hollow Pin Type		Solid Pin Type	
																	Outer link with Att. one side	Innerr link with Att. One side	Outer link with Att. one side	Innerr link with Att. One side
6,000 lb  7,500 lb	3	H060 030	S075 030	1.5	0.87	0.37	0.42	3.00	3.96	3.96	0.15	0.17	0.75	1.02	0.60	0.10	0.10	0.10	0.10	
				38.1	22.2	9.4	10.7									0.05	0.05	0.05	0.05	
	4	H060 040	S075 040	2.5	1.25	0.37	0.42	76.2	100.6	100.6	3.8	4.3	19.1	26.0	15.22	0.17	0.17	0.17	0.17	
				63.5	31.8	9.4	10.7									0.08	0.08	0.08	0.08	
	6	H060 060	S075 060	4.5	2.25	0.37	0.42	88.9	123.4	123.4	3.8	5.1	31.8	32.8	19.1	0.31	0.31	0.31	0.31	
				114.3	57.2	9.4	10.7									0.14	0.14	0.14	0.14	
12,000 lb  15,000 lb	3	H120 030	S150 030	2.5	1.25	0.42	0.55	3.5	4.86	4.86	0.15	0.20	1.25	1.29	0.75	0.21	0.28	0.21	0.28	
				63.5	31.8	10.7	13.9									0.10	0.13	0.10	0.13	
	4	H120 040	S150 040	2.5	1.25	0.42	0.55	88.9	123.4	123.4	3.8	5.1	31.8	32.8	19.1	0.21	0.28	0.21	0.28	
				63.5	31.8	10.7	13.9									0.10	0.13	0.10	0.13	
	6	H120 060	S150 060	4.5	2.25	0.42	0.55	108.0	146.0	146.0	3.8	5.1	31.8	32.8	19.1	0.40	0.53	0.40	0.53	
				114.3	57.2	10.7	13.09									0.18	0.24	0.18	0.24	
24,000 lb  30,000 lb	4	H240 040	S300 040	2.2	1.25	0.48	—	4.25	5.75	5.75	0.20	0.28	1.5	1.7	1.00	0.33	0.38	0.33	0.38	
				56.2	31.8	12.2	—									0.15	0.17	0.15	0.17	
6	240 060	S300 060	4.2	2.25	0.48	0.61	108.0	146.0	146.0	5.1	7.1	38.1	43.2	25.4	0.50	0.70	0.50	0.70		
			106.7	57.2	12.2	15.5									0.23	0.32	0.23	0.32		

# High Performance Conveying & Elevating Chain

## INSTALLATION

### General Requirements

1. Shaft Alignment—Shaft must be rigidly supported in properly designed bearings. Shaft displacement will destroy the initial alignment and shorten chain and sprocket life. Align the shafts horizontally with a leveling device. Head and tail shafts must be parallel and at 90° to the direction of travel of the chain or conveyor. Take



## **OPERATION**

### **Loading**

1. Loading any conveyor should be accomplished as gently as possible to reduce impact. The load should, if possible, be placed or slid onto the conveyor to reduce surging caused by rough and irregular loading.
2. Unload a conveyor before shutting it down. Starting a loaded conveyor places extra strain on all the equipment.
3. A conveyor should be run occasionally during extended shut down periods to keep the working parts of the system free from corrosion and in operating condition. Overloads and shortened life will result if the system is allowed to bind up from corrosion.

## **MAINTANCE**

A chain conveyor, like any other operating equipment, requires good maintenance to obtain long life and satisfactory performance.

In the following paragraphs, it is assumed that :

- (1) the components of the system have been properly selected for the application;
- (2) the shafts, sprockets and conveyor have been installed correctly; and
- (3) adequate lubrication has been provided.

### **Inspection Schedule**

The major requirement is to establish a practical schedule and to follow it faithfully. Experience will indicate any need for changes in the schedule.

### 3. Shaft and sprocket alignment

Disconnect the lifting hook and re

# Conveyor Chain Calculation

	<b>terms:</b>	<b>abbreviations</b>	<b>dimension</b>
kp	chain load pull	f	(kp)
	conveyor belt pull	FF	(kp)
	central distance	A1	(m)
	chain weight	q	(kg/m)
[kp]	chain weight of conveyor belt	qf	(kg/m)
	weight of load to be conveyed	Q	(kg/m)
	conveying capacity (continuous)	QL	(t/h)
	conveying capacity (intermittent)	QU	(t/h)
	chain speed	v	(m/sec.)
	coefficient of friction	k	(-)
	load coefficient of friction	C	(-)
[kp]	apparent density of load	F	

[kp]

[t/h]

[m]

[k/p]

[t/n]

# Calculations Values and Formulas

terms:	abbreviations		dimensions
	new	old	
power	P	(N)	[HP]
rated horsepower	PK		[HP]
torque	Md		[mkp]
chain load pull	F	(P)	[kp]
chain breaking pull	FB	(PB)	[kp]
chain speed	v		[m/sec.]
chain weight	q		[kp/m]-[kg/m]
drive speed	n		[rpm]
no. of teeth on drive	z		[-]
pitch	p	(t)	[mm]
pitch circle diameter	Do	(Dt)	[mm]
centre distance	a		[mm]
no. of chain links	x		[-]
breaking area	f		[cm <sup>2</sup> ]
no. of teeth on driving wheel	z <sub>1</sub>		[-]
no. of teeth on driving wheel	z <sub>2</sub>		[-]
teeth no. factor	y	(n)	[-]
chain sag	hk	(f)	[mm]

## Formula

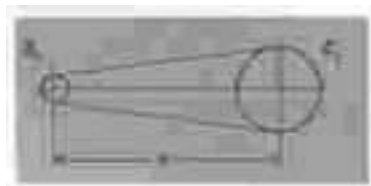
Horsepower: 
$$P = \frac{F \cdot v}{75} = \frac{Md \cdot n}{716,2} \quad [\text{HP}]$$

Torque: 
$$Md = \frac{716,2 \cdot P}{n} = \frac{F \cdot Do}{2000} \quad [\text{mkp}]$$

Chain Speed: 
$$v = \frac{75 \cdot P}{F} = \frac{Do \cdot n}{19100} = \frac{n \cdot z \cdot p}{60000} \quad [\text{m/sec.}]$$

Chain Load Pull: 
$$F = \frac{75 \cdot Fk}{v} = \frac{20Md}{Do} \quad [\text{kp}]$$

Pitch Circle Diameter: 
$$Do = \frac{p}{\sin(180/z)} = p \cdot y \quad [\text{mm}]$$



Center Distance: 
$$a \sim P \cdot [x] \quad [\text{mm}]$$

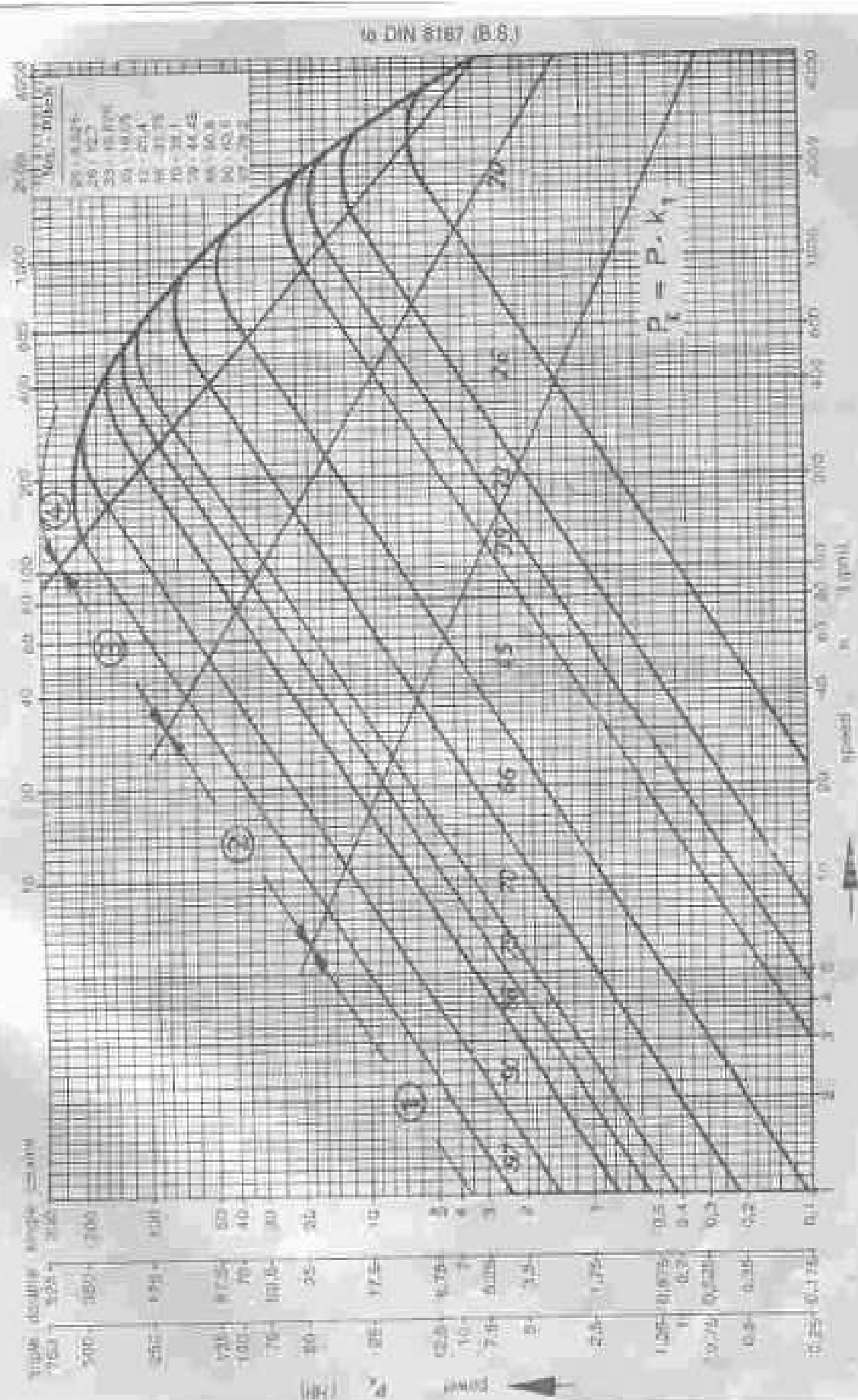
No. of Chain Links: 
$$[-]$$

chain sag: 
$$hk(\text{max}) = 0,02 \cdot a \quad [\text{mm}]$$

## **Roller Chain Selection with Performance Chart**

For the correct selection of a chain drive the following factors are of prime importance: horsepower, pinion speed, degree of impulsiveness, lubrication, maintenance, and pressure per unit of bearing area, chain pitch, chain life and safety. These factors

# Performance Chart



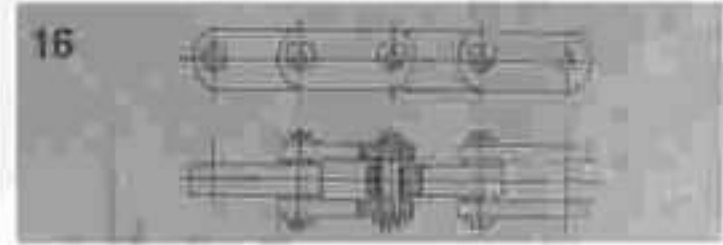
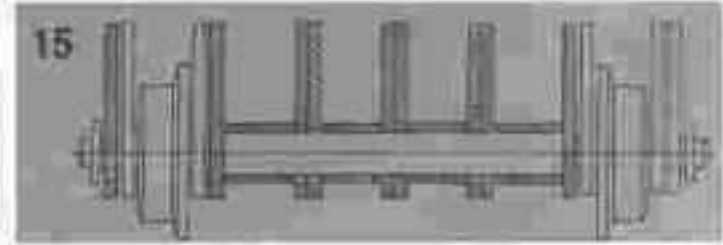
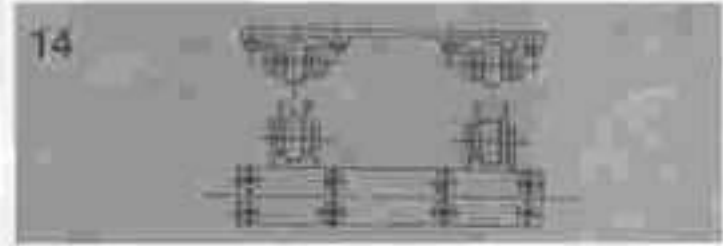
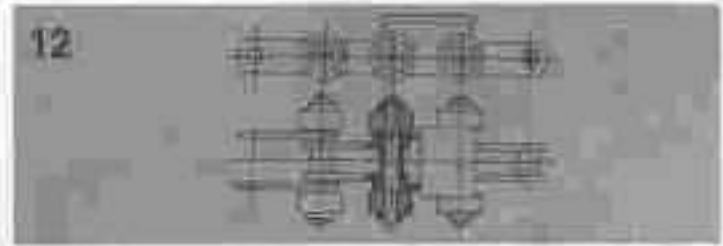
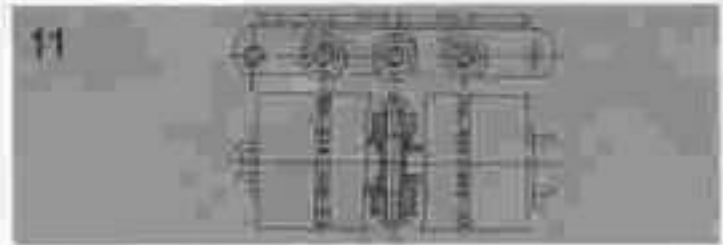
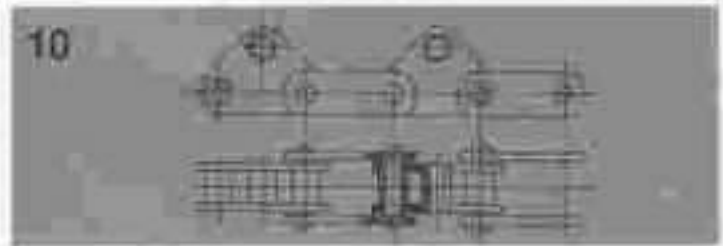
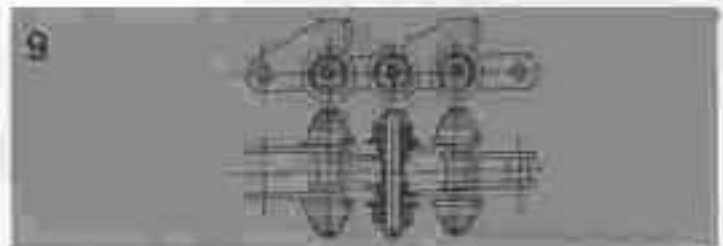
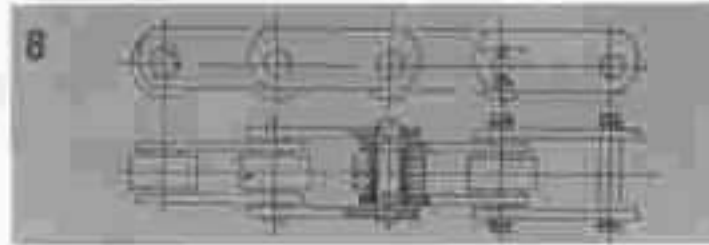
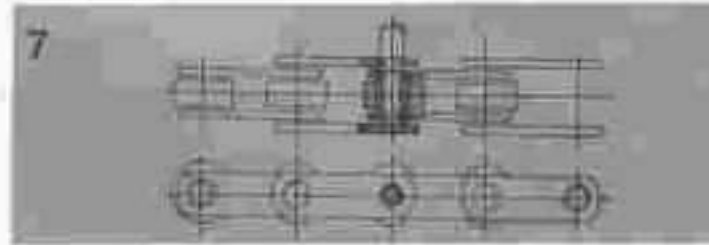
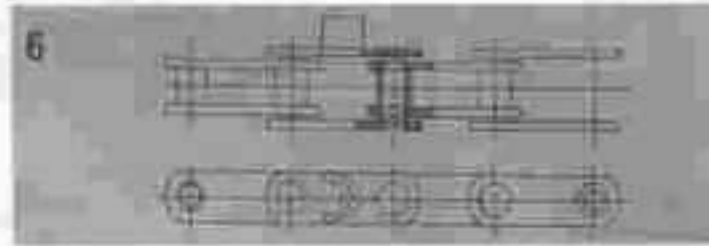
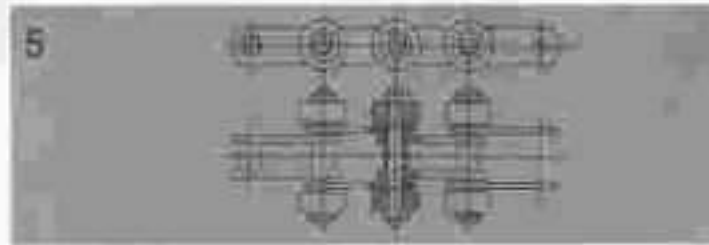
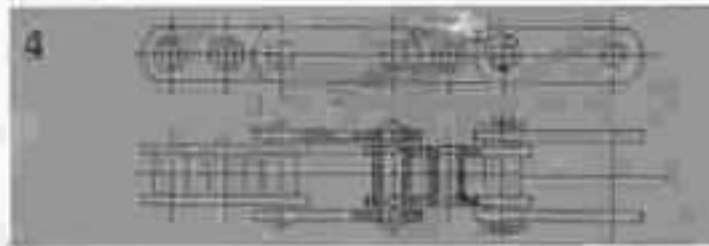
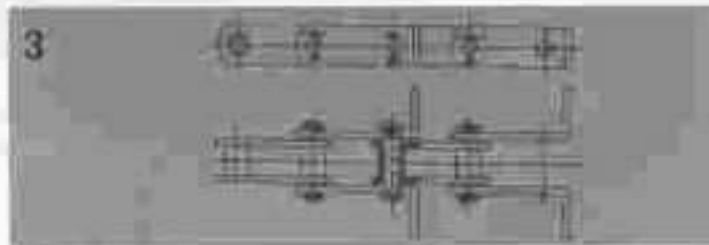
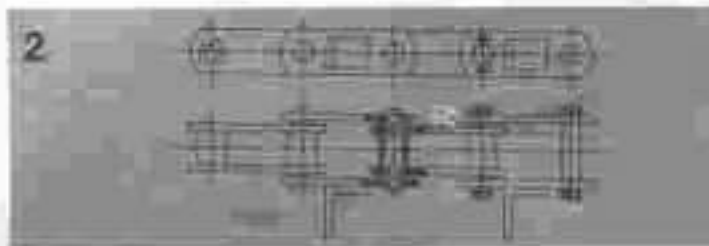
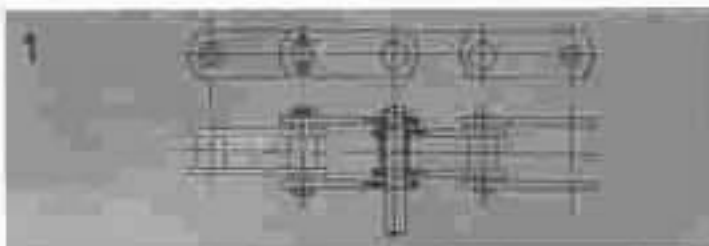
The figure shows in the chart indicate the basic characteristics of single-acting pump no. 0255-D (double-acting pump no. 0255-D) from standard chart no. 00300-D.

**USEFUL FACTS ABOUT LINK CHAINS**

1. <u>ROLLER CHAIN</u> <b>DRIVES</b>	1. LIFE OF LINK <b>CHAINS</b>	1. LUBRICATION <b>OF LINK CHAINS</b>	1. ASSEMBLY OF <b>LINK CHAINS</b>	1. CHAIN WHEELS
<p>Roller Chain drives are used everywhere and especially where belt drives or gear drives are no longer suitable. All the advantages of the belt and gear drives are untied in the roller chain drive, but without the attendant disadvantages. Roller chain drives are of rugged design, but offer high precision. they run at 98% efficiency without slip and can bridge long or even several centre distances. roller chain drives offer high elasticity and optimum efficiency. their essential advantage over the gear drive is that their transmission ration is in dependent of the centre distance.</p>	<p>Generally the pressure per unit of bearing and the breaking strain are the essential features for chain determination. However, because of the very large field of application, safety factors are also taken into account. Chain life, therefore, is not dependent solely on the breaking strain, but wear resistance of the articulation parts (pins, bushes, rollers) is of paramount importance. Basically, every chain should be dimensioned in such a way that there should never occur a breakdown in any component part; rather the articulation parts should wear out gradually. Wear in the chain joints inevitably cause extension of chain pitch, and consequently the chain wheel will no longer mesh properly. chain wear elongation should not exceed 3%. in summary, the important factors having effect on chain life are correct design and calculation of the chain in relation to the operating conditions accurate fitting and regular care and maintenance</p>	<p>After assembly and inspection every chain is pre-lubricated with preservative, by immersion in a bath of hot oil, which penetrates to the working surfaces. However, once the chain is in operation the method of lubrication should be adapted to the chain speed. Mineral oil SAW-40 to 60 and the following methods of lubrication are recoended for link chains:</p> <p style="text-align: center;">V Method of [M/S] Lubrication</p>	<p>Link chains are generally joined by fastening links. Wherever possible, chains with an <b>even number of links</b> should be used, so that the chains being and end with an inner link to be joined by a no. 10 <b>straight connecting link</b>. An <b>uneven number of links</b> will necessitate the use of a <b>cranked link</b>, which will adversely affect the breaking strain of the chain and decrease it by about 20%. When cutting continuous chain into specific lengths attention is to be paid that the outer link taken off must not be in perfect alignment and should be fitted as close as possible to the point of support. Care should also be taken that the shafts are parallel. As to the positioning of shafts an inclination of 60° to the horizontal is recommended. Vertically arranged centre drives necessitate constant tension adjustment to prevent the chain from disengaging from the lower wheel. Chain sag must not exceed 2% of the centre distance, and should be as little as possible on impulsive drives. Chain sag can be adjusted either by alteration of shaft centers, by retightening the tension station, or by adjusting the jockey or tension rail, over tightening of the chain should be avoided, since, in addition to imposing an extra load on the bearings, this will lead to quick wear and noisy running. The tightened should have tension-adjusting movement of at least 1.5 times the pitch to allow for removal of a 2 pitch assembly.</p>	<p>Chain life depends in part, of course, on the correct construction and tothing of the wheel. In general, the number of teeth on driving wheel is at least 10. Jockey and pinion used in secondary duty jobs may have a minimum of 13 teeth. For high-speed and impulsive drive it is recommended that the teeth be heat treated to increase wear resistance. Chain lap on the wheel should not be less than 120°, and the transmission ration of 1:8 should not be exceeded. The number of teeth on the wheels and the number of links in the chain should be correlated in such a way that the same roller will not, after each revolution, engage in the same tooth gap. In extreme cases, conveyor chains with large pitches and running at relatively low speeds will operate over wheels with a minimum of 6 teeth.</p>



# Special Purpose Chains





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In Collaboration with KÖBO-KTB GMBH & CO. KG, Germany

**MAKERS OF WORLD FAMOUS KÖBO CHAINS**