



MINING &
CONVEYOR
CATALOG

INNOVATION
CHAIN



IQNet Quality Certificate



Rina ISO



TSE 11987





Master Chain is an international chain processing company belongs to ZINTAS GROUP which founded at the end of 1970's with the vision of becoming a global brand based on the belief in the power of high technology and continuous improvement. Masterchain manufactures industrial chains that are used worldwide for mining and conveying, high-alloyed G80 and G100 chains for moving and lifting, hoisting and stud and studless chains for marine industry, high alloyed calibrated chains for agriculture industry, high wear and temperature resistant specially designed chains for cement industry, specially designed chains for forestry, snow chains, transmission chains and chain accessories exporting to more than 30 countries today.

The factory ground covers a total area of 25.000 square meters of which approximately 10.000 square meters are built on and consists of technologically advanced 125 machine stations. The customer satisfaction is the result of our appropriate pricing policy and high quality standards.

Master Chain Co. was the first organization in Turkey that has certified its chain manufacturing according to the international standard ISO 9001 Quality Management System Certification in 1996.

Master Chain Co. acts with the consciousness of the quality target based on the principle of customer satisfaction, environmentally friendly production processes and recyclable raw materials and products. Over 40 years Master Chain Co. has served its customers with its successful, dynamic, flexible employees. As a reflection of our corporate culture, all of our employees behave and think as a part of chain link, and always challenge to be the most powerful chain link of the whole system and aware of the priority of their responsibilities.



Master Chain Mining

Master Chain is a leading manufacturer of chains and accessories used in the mining sector. Master mining chains with over 40 year's of experience, expertise and production knowhow are produced up to 60 mm diameter with 3 different models. Mining components for underground coal mining such as chains, flight bars and connectors are critical elements. Special high-alloyed steel is used with leading induction heat treatment process to achieve highest tensile strengths up to Grade 100 quality. Technologically advanced computer supported calibration process allows to produce chains in higher precision and as safety is our first priority. Every chain link is tested above its maximum working load.



Round Link Mining Chain



Flat Link Mining Chain



MasterFlat Type Mining Chain



Flight Bars



Outboard Flight Bars



Chain Connectors

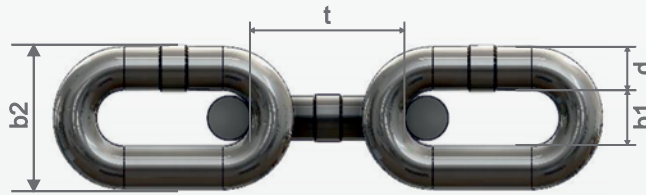
Round link mining chains

Acc. to DIN 22252

Round Link Mining Chain



Master Chain produces round link chains for the mining industry in rated sizes of 14 up to 42 mm according to DIN 22252 up to Grade 100 quality. Round link mining chains are used mainly in face conveyors, stage loaders and coal ploughs that are manufactured to work in extreme conditions to meet the demands of today's mining industry.



Nominal Diameter & Tolerance	Pitch & Tolerance	Inside Width (Min.)	Outside Width (Max.)	Quality	Proof Load	Elongation Under Test Load	Breaking Load	Weight
d mm	t mm	b1 mm	b2 mm	Grade	kN	Max. %	kN	Kg/m
14 ±0,4	50 ±0,5	17	48	G60	150	1,4	190	4
				G80	185	1,6	246	
				G100	250	1,9	310	
18 ±0,5	64 ±0,6	21	60	G60	260	1,4	320	6,6
				G80	305	1,6	407	
				G100	410	1,9	510	
19 ±0,5	64,5 ±0,6	22	63	G60	283	1,4	357	7,6
				G80	340	1,6	454	
				G100	410	1,9	510	
22 ±0,7	86 ±0,9	26	73	G60	380	1,6	480	9,5
				G80	490	1,6	610	
				G100	610	1,9	760	
24 ±0,7	86 ±0,9	28	79	G60	460	1,6	570	11,6
				G80	580	1,6	720	
				G100	720	1,9	900	
24 ±0,7	87,5 ±0,9	28	79	G60	460	1,6	570	11,5
				G80	580	1,6	720	
				G100	720	1,9	900	
26 ±0,8	92 ±0,9	30	85	G60	540	1,6	670	13,7
				G80	680	1,6	850	
				G100	850	1,9	1060	
30 ±0,9	108 ±1,1	34	97	G80	900	1,6	1130	18
				G100	1130	1,9	1410	
				G80	1090	1,6	1450	
34 ±1,0	126 ±1,3	38	109	G100	1450	1,9	1820	22,7
				G80	1360	1,6	1820	
				G100	1820	1,9	2270	
38 ±1,1	137 ±1,4	42	121	G80	1360	1,6	1820	29
				G100	1820	1,9	2270	
				G80	1660	1,6	2220	
42 ±1,1	146 ±1,5	48	137	G100	2220	1,9	2770	36
				G100	2220	1,9	2770	

Flat link mining chains

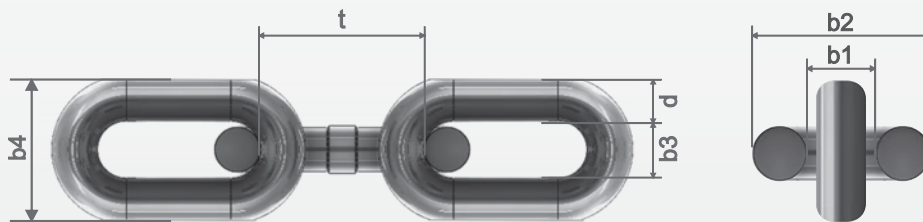
Acc. to DIN 22255

Flat Link Mining Chain



It is a chain type in which one of the two links has a flat surface and thus the external width of the vertical link is reduced. Since the height of the flat links produced according to DIN 22255 is less than the height of the round links produced according to DIN 22252, it will be possible to use higher diameter chains in the same conveyor line with small changes. For example, instead of DIN 22252 26x92mm round link chain with outer width of 85mm, a flat link chain of 30x108mm according to DIN 22255 corresponding to an outer width of 85mm may be used.

Master Chain manufactures flat link chains for mining industry in Grade 80 and Grade 100 quality in the range of 26-48mm diameter according to DIN 22255. Special chains can be produced according to different customer project demands.



Nominal Diameter & Tolerance	Pitch & Tolerance	Horizontal Link		Flat Vertical Link		Quality	Proof Load	Elongation Under Test Load	Breaking Load	Weight
		Inside Width (Min.)	Outside Width (Max.)	Inside Width (Min.)	Outside Width (Max.)					
d mm	t mm	b1 mm	b2 mm	b3 mm	b4 mm					
26 ±0,8	92 ±0,9	30	85	29	75	G80	680	1,6	850	13,7
						G100	850	1,9	1060	
30 ±0,9	108 ±1,1	34	97	33	85	G80	900	1,6	1130	18
						G100	1130	1,9	1410	
34 ±1,0	126 ±1,3	38	109	37	98	G80	1090	1,6	1450	22,7
						G100	1450	1,9	1820	
38 ±1,1	137 ±1,4	42	121	41	110	G80	1360	1,6	1820	29
						G100	1820	1,9	2270	
38 ±1,1	146 ±1,4	42	121	41	110	G80	1360	1,6	1820	27,6
						G100	1820	1,9	2270	
42 ±1,1	137 ±1,4	48	139	46	115	G80	1660	1,6	2220	37
						G100	2220	1,9	2770	
42 ±1,1	146 ±1,5	48	139	46	115	G80	1660	1,6	2220	36
						G100	2220	1,9	2770	
48 ±1,4	152 ±1,5	62	163	54	127	G80	2170	1,6	2900	47



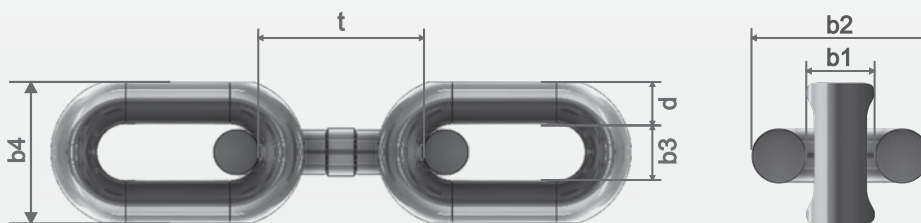
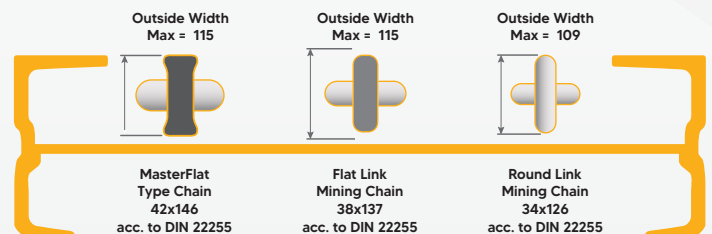
MasterFlat type mining chains

Acc. to DIN 22255

MasterFlat Type Mining Chain



It is a type of chain in which one of the two links used mostly in mechanized quarries and face conveyors is forged and its outer width is further reduced compared to flat link chains. MasterFlat type chains produced in accordance with DIN 22255 standard can be replaced with round link chains on the same conveyor line without the need for a complete system renewal. For example, the link width of the chains used as 34x126 according to DIN 22252 is 109mm, while this product can also be replaced with DIN 22255 42x146 MasterFlat type chain which also has an external width of 109 mm. Master Chain, according to DIN 22255 in the range of 34-60 mm Grade 80 quality MasterFlat type link chain produces. According to customer demands, different standards and thicknesses.



Nominal Diameter & Tolerance	Pitch & Tolerance	Horizontal Link		Flat Vertical Link		Proof Load	Elongation Under Test Load	Breaking Load	Weight
		Inside Width (Min.)	Outside Width (Max.)	Inside Width (Min.)	Outside Width (Max.)				
d mm	t mm	b1 mm	b2 mm	b3 mm	b4 mm	kN	Max. %	kN	Kg / m
34 ±1,0	126 ±1,3	38	109	37	98	1090	1,6	1450	22,7
38 ±1,1	137 ±1,4	42	121	41	110	1360	1,6	1820	29
38 ±1,1	146 ±1,4	42	121	41	110	1360	1,6	1820	27,6
42 ±1,1	137 ±1,4	48	139	46	115	1660	1,6	2220	37
42 ±1,1	146 ±1,5	48	139	46	115	1660	1,6	2220	36
48 ±1,4	152 ±1,5	62	163	52	121	1900	1,6	2900	46
52 ±1,9	170 ±1,7	65	177	54	128	2210	1,6	3400	54
56 ± 1,9	186 ±1,9	70	189	60	132	2610	1,6	3960	63
60 ±1,9	189 ± 2	72	198	63	136	3000	1,6	4520	72



Flight bars

Flight Bars

Dual Strand Flight Bar Acc. to DIN22259

Master Dual Strand Flight Bars are designed for dual strand chain conveyors. It is produced from special alloy steel as forged and heat treated up to 400HV hardness.



Single Strand Flight Bar Acc. to DIN22259

Master Single Strand Flight Bars are designed for single strand chain conveyors. It is produced from special alloy steel as forged and heat treated up to 400HV hardness.

Outboard Flight Bar Acc. to DIN22257

Masterchain outboard flight bars are available for the sizes between 14mm and 26 mm.

It is produced from forged alloy steel and heat treated up to 320 HV hardness. DIN 22257 flight bars are manufactured in accordance with DIN22253 chain connectors.



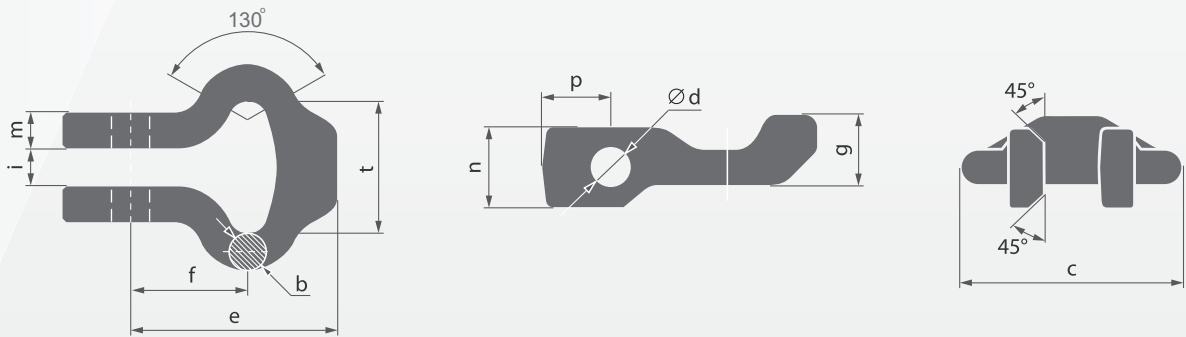
Chain connectors

Acc. to DIN 22253

Chain Connectors



Master Chain offers chain connector for outboard flight bars according to DIN22257. Master Chain produces chain connectors between 18mm up to 26mm and guarantees all mechanical and dimensional parameters to the requirements included in DIN 22253 standard.



Nominal Size (mm)	t	b	c	d	e	f	g	i	m	n	p
14 x 50	50	15	78	17	78	51	29	18	14,5	32	17
18 x 64	64	19	100	21	100	55	40	21	19	43	37
19 x 64.5	64,5	20	103	21	100	55	41	21	19	43	37
22 x 86	86	23	132	25	133	75	46	24,5	22,5	52	44
24 x 86	86	25	137	25	133	78	55,	26	25	53	44
26 x 92	92	27	146	25	141	85	56	28	26	58	45



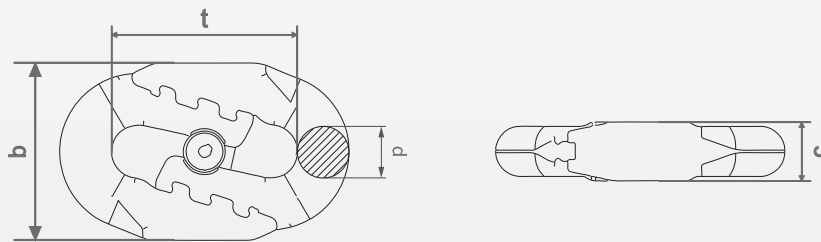
Connecting links

Acc. to DIN 22258-1

Connecting Links



Master Chain offers connecting links that can work in horizontal position for connecting flat type chains or in both position for connecting round link chain. Master Chain produces connecting links in rated sizes of 18mm up to 42mm and guarantees all mechanical and dimensional parameters to the requirements included in DIN 22258 standard.



d mm	t mm	b mm	c mm	Weight kg	Test Force kN	Breaking Force kN
18	64	72	24	0,7	305	361
22	86	84	28	1,3	456	540
24	86	85	30	1,5	543	642
26	92	96	33	2,0	637	754
30	108	109	36	3,0	848	1000
34	126	121	41	4,3	1090	1290
38	137	134	46	5,8	1360	1610
42	146	150	53	7,4	1660	1970



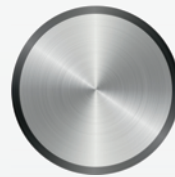
**Chains
for scraper
conveyors**

Chain For Scraper Conveyors

Master Chain superior quality highly-wear resistant chains are used for abrasive environments. Surface and case hardened chains with high surface hardness (up to 800 HV) and increased case hardening depth of 52 HRC (up to 0.10 x d) are produced in a wide range of chain steels and hardened steels, according to application requirements.

Benefits:

- High toughness in accordance with high tensile strength
- High wear resistance
- Corrosion protective coating available for increased service life



Quality M10
Carburizing Depth = d x0,10



Quality M14
Carburizing Depth = d x0,14

QUALITY	Quality M10 Carburizing Depth = d x0,10	Quality M14 Carburizing Depth = d x0,14
Breaking Stress	400 N/mm ²	350 N/mm ²
Max. Surface Hardness	800	800
Carburizing Depth	0,10d	0,14d
Case Hardening Depth	0,06	0,06

Nominal Diameter & Tolerance	Pitch & Tolerance	Inside Width (Min.)	Outside Width (Max.)	Weight	Proof Load	Breaking Load	Proof Load	Breaking Load
d mm	t mm	bi mm	ba mm	Kg/m	kN Min. M10	kN Min. M10	kN Min. M14	kN Min. M14
8 ±0,32	31 ±0,6	10,3	28	1,3	24	40	-	-
10 ±0,4	38 ±1,2	12,5	34	2,1	38	64	-	-
14 ±0,5	50 ±0,5	16,3	47	4	74	128	65	110
16 ±0,6	64 ±0,6	20	55	5	98	164	83	140
19 ±0,7	75±0,7	22	63	7,7	135	227	117	198
22 ±0,7	86±0,9	26	74	9,7	182	304	160	266
26 ±0,8	100±1,0	31	87	13,9	255	425	222	370
30 ±0,5	120±1,2	36	103	17,5	340	566	300	500
34 ±1,0	136 +2,-1,2	39	113	23,8	425	710	375	630
38 ±1,1	144 ±1,4	44	127	30	510	910	480	800

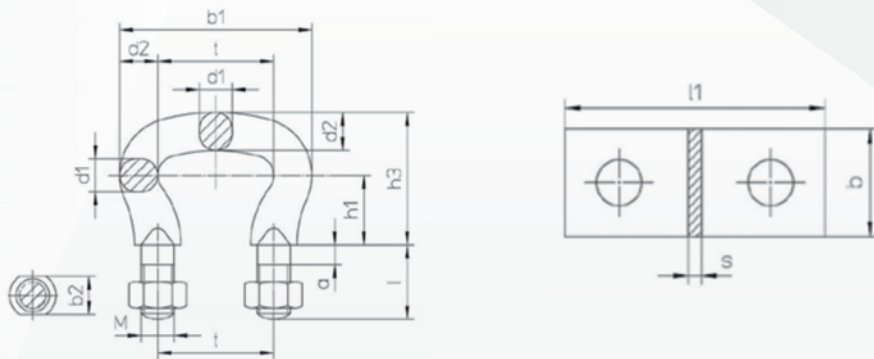


Chain Shackles

Acc. to DIN 5699

Chain Shackles

DIN 5699 chain shackles have a higher breaking load compared with DIN 745 chain shackles. This ensures higher service life and safety in operations. DIN 5699 chain shackles are used at cement industry, stones and mines industry, asphalt mixing plants and recycling plants. Surface finish is black or oiled.



t	a	b1	b2	d1	d2	M	h1	h3	l	Weight	Distance collar			Min. Breaking Load		
[mm]										[kg]	l1	b	s	[kg]	C45	G80
[mm]										[kg]	[mm]			[kg]	[kN]	
35	8	59	11	10	12	M10	23	43	25	0,14	65	30	5	0,07	50	56
45	8	75	13	13	15	M12	28	53	30	0,26	75	30	5	0,08	85	95
56	10	92	17	16	18	M14	34	64	35	0,34	95	40	6	0,17	125	140
63	10	105	20	18	21	M16	37	71	40	0,60	110	40	6	0,21	160	180
70	12	116	23	20	23	M20	42	80	45	0,87	120	50	6	0,25	200	224
80	12	132	25	23	26	M20	47	89	45	1,12	130	50	6	0,27	265	280
91	14	149	29	26	29	M24	52	99	55	1,86	150	60	8	0,56	335	355
105	14	173	31	30	34	M24	60	114	55	2,56	165	60	8	0,62	450	500
126	18	206	37	36	40	M30	71	134	65	4,40	200	70	10	0,97	630	700
147	22	241	42	42	47	M36	81	157	75	7,30	230	80	12	1,73	850	950

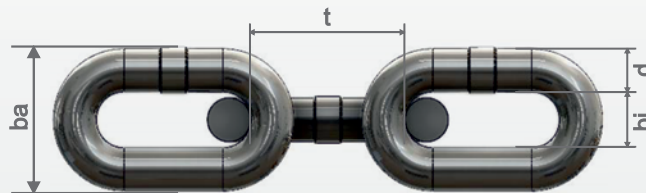
Other Chains in mining industry

Conveyor Chain

Acc. to DIN 764

Master Chain conveyor chains are produced with minimum production tolerances both in hardness and size thanks to the latest technology heat treatment and calibrating system. Conveyor chains which provide resistance against sudden loads, have relatively high breaking loads and longer service life are produced by Master Chain. Hardened conveyor chains can be used for operating temperatures up to 200 °C (392 °F) without loss of surface hardness.

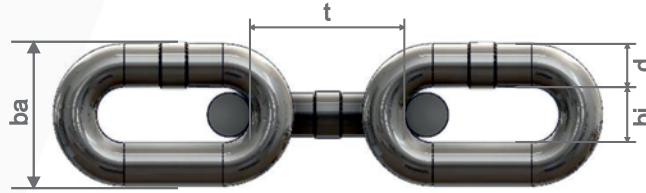
Master Chain conveyor chains are produced with minimum production tolerances both in hardness and size thanks to the latest technology heat treatment and computer aided calibrating system.



Nominal Diameter & Tolerans	Pitch & Tolerans	Inside Width (Min.)	Outside Width (Max.)	Weight	Proof Load	Proof Load	Proof Load	Breaking Load	11 x t Height
d mm	t mm	bi mm	Ba mm	Kg/m	kN Max. GK 2	kN Max. GK 3	kN Min. GK 2	kN Min. GK 3	mm
10 ±0,4	35 +0,6-0,3	14	36	2	10	12,5	40	50	385
13 ±0,5	45 +0,7-0,4	18	47	3,5	16	21,2	63	85	495
16 ±0,6	56 +0,9-0,5	22	58	5,2	25	32	100	125	616
18 ±0,9	63 +1,0-0,5	24	65	6,5	32	40	125	160	693
20 ±1,0	70 +1,1-0,6	27	72	8,2	40	50	160	200	770
23 ±1,2	80 +1,3-0,7	31	83	11	50	67	200	265	880
26 ±1,3	91 +1,5-0,8	35	94	14	63	85	250	340	1001
28 ±1,4	98 +1,6-0,9	36	101	16,5	75	100	300	400	1078
30 ±1,5	105 +1,7-0,9	39	108	19	85	112	340	450	1115
33 ±1,7	115 +1,9-1,0	43	119	22,5	100	132	400	530	1265
36 ±1,8	126 +2,1-1,1	47	130	26,5	125	160	500	630	1386
39 ±2,0	136 +2,2-1,2	51	140	31	140	190	560	750	1496
42 ±2,1	147 +2,4-1,3	55	151	36	170	224	680	900	1617

Conveyor Chain

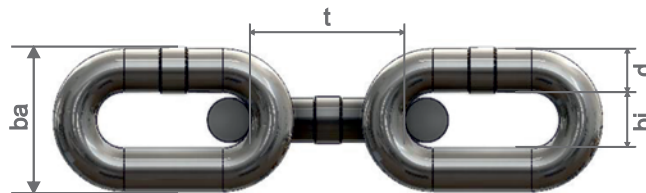
Acc. to DIN 20637



Nominal Diameter & Tolerance	Pitch & Tolerance	Inside Width (Min.)	Outside Width (Max.)	Weight	Material	Proof Load	Breaking Load
d mm	t mm	b mm	c mm	Kg/m		kN	kN
16±0,6	80 1,5	22,4	57,6	4,7	15Mn3Al	60	180
18±0,9	90 1,5	25	65	6	21Mn5	100	250

Conveyor Chain

Acc. to DIN 762



Nominal Diameter & Tolerance	Pitch & Tolerance	Inside Width (Min.)	Outside Width (Max.)	Weight	Working Load	Proof Load	Breaking Load
d mm	t mm	b mm	c mm	Kg/m	kN	kN	kN
10±0,4	50 +0,8 -0,4	14	36	1,8	10	25	50
13±0,5	65 +1,0 -0,5	18,2	46,8	3,1	16	40	80
16±0,6	80 +1,3 -0,6	22,4	57,6	4,7	25	63	125
18±0,9	90 +1,4 -0,7	25	65	6	32	80	160



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