



# CHAINS & SPROCKETS

SAWMILLS – PLANING LINES – GLU LAM LUMBER – WOOD PANELS – BIOMASS POWER PLANTS  
PAPER AND PULP INDUSTRY – CARDBOARD – SANITARY PAPER





# TABLE OF CONTENTS

CONVEYOR CHAINS	
HOLLOW PIN CONVEYOR CHAINS	4
SPROCKETS METRIC PITCH	11
LOG INFEEED DECKS	12
LOG SEPARATORS	13
LOG CONVEYORS	14
LOG INFEEED CONVEYORS	15
SCRAPER CHAINS	16
DROP FORGED LINK CHAINS, SPROCKETS AND IDLER ROLLERS	20
rEVOLUTION SCRAPER CHAINS	22
 SCRAPERS	24
LUMBER CONVEYORS	26
PRECISION ROLLER CHAINS	28
PRECISION ROLLER CHAINS WITH ATTACHMENTS	35
CORROSION-RESISTANT CHAINS	38
SHARP TOP ROLLER CHAINS, ROLLER CHAINS WITH PLASTIC COMPONENTS	40
LEAF CHAINS	50
LOG GRIPPER CHAINS	56
SPROCKETS PCD METRIC PITCH	58
PROFESSIONAL CHAIN WEAR GAUGE	59
PAPER AND PULP INDUSTRY	60
CHAIN BREAKER	65
 INDUSTRIAL CHAIN LUBRICATION SYSTEMS	66



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## WE ARE FB CHAIN

18  
70

**SWEDEN**  
Founded by Adolf Fredrik Hedengran

19  
12

### THE FIRST FB CHAINS

Start of production of roller chains, sharp-top roller chains, leaf chains and bush conveyor chains "efbe" brand in Eskilstuna

19  
45

**FINLAND**  
Production of bush and special conveyor chains including attachments

19  
86

### ENGLAND

Start of production of anchor bolts for leaf chains and components for industrial vehicles as well as for the engineering industry

19  
89

**AUSTRIA**  
Foundation of FB Ketten

19  
95

### GLOBAL CORPORATE BRAND

of all FB companies changed to the registered trademark FB

19  
99

**GERMANY**  
Foundation of FB Ketten

20  
07

**ENGLAND**  
Foundation of FBkc – manufacturer of special chains including installation service. Since 2019, part of FB Group

20  
14

**FRANCE**  
Foundation of FB Chaines

20  
19

**SWITZERLAND**  
Acquisition of Brandenberger Chain

20  
21

**FINLAND**  
FB Ketju has significantly increased its capacity and opened a second chain production in Lappi

**RotaLube®**  
becomes part of FB Group



# CHAINS FOR THE PAPER AND WOODWORKING INDUSTRY

The origins of FB date back to 1870, when Adolf Fredrik Hedengran founded a factory for the manufacture of iron and steel products in Eskilstuna, Sweden. In the following years, FB manufactured a variety of different bespoke products and started producing the first transmission and conveyor chains in 1912. The corporate history of well over a century is characterised by regular realignments to changing customer requirements and market conditions. Today, FB is one of Europe's largest high quality manufacturer and supplier of conveyor chains, transmission chains, leaf chains and sprockets. FB is the technology and market leader in the European woodworking and wood processing industry, in biomass power plants and pellet production as well as in the paper and pulp industry.

## Wood – a part of our life

Our planet consists of water and land, more than a third of which is covered by forest. Around a quarter of the world's population lives directly or indirectly from forests and their products. Wood is a versatile and renewable raw material that is used for many objects and structures. Almost every second an industrially cut tree is processed into paper products. Wood is part of our daily life and has shaped our history.

## Chain solutions for sawmills and wood processing

Being a natural product, wood presents a challenge for handling and processing, as no two logs are alike. Shavings and sawdust affect machines. Moreover, in this day and age, we expect more and more productivity and output. When considering a complete sawmill, chains do not appear to be essential at first. They will only come into focus if there are problems or production stops. Just like with a bicycle, everything depends on the chain!



## Conveyor chains and transmission chains for paper mills, pulp mills and cardboard manufacturers

FB Chain offers many proven solutions for log yards, recycling paper and pulp transport, paper roll transport or corrugated cardboard production and power generation. Our chain solutions master well-known problems such as moisture, uneven chain loads, high temperatures, paper dust, dirt or lack of lubrication.



## Technology and market leader

Through close cooperation with our customers, we have become the technology and market leader in the woodworking industry. FB chain application engineers develop innovative and profitable solutions, which we have been manufacturing in our own chain factories in Scandinavia since 1912. Benefit from our expertise and the service of your experienced FB sales engineers, who will develop innovative and profitable solutions for you.

## Individual solutions

Do you have problems finding the right product or do you see room for improvement in existing products? We will be happy to provide you with information, or be available for enquiries and technical details, also on site. Continuous improvement and proving our efficiency daily is what drives us.



# FB CONVEYOR CHAINS

**DIN 8165, DIN 8167 (ISO 1977), SMS 1698**

Conveyor chains produced by FB meet highest quality demands. FB conveyor chains with welded pins and bushes (type HT and HTH) feature the world's highest fatigue strength, operational safety and breaking load.

We achieve the high breaking load and fatigue strength by using high-quality steels which are very good for welding, our optimised chain design which has been improved over decades and the heat treatments that perfectly match the materials used.

In Scandinavia, we have been producing conveyor chains for over 110 years. In 2019 we started the newest and most modern production facility in Lappi (Finland).



#### **High operational safety and system availability**

Round riveted pins guarantee high fatigue strength and stability. Optionally 30-50% higher fatigue load and breaking strength due to welded pins and bushes



#### **High quality and long service life**

Due to high-quality steels, optimised chain design, process-controlled component production and heat treatment as well as fully automated chain assembly

## ADVANTAGES



#### **High load capacity and fatigue strength**

Precision punched plates with optimal and strong press fit increase resistance to shock loads and lateral loads



#### **Ideal for welding on attachments**

Thanks to link plates with low carbon content and high strength



#### **Flexibility and tailored solutions**

We customize dimensions, materials, heat treatments and designs to the parameters of your application. Stainless and hardened link parts are approved and tested solution for corrosive environment



#### **Ready to install solutions – resource-saving, sustainable and cost-efficient**

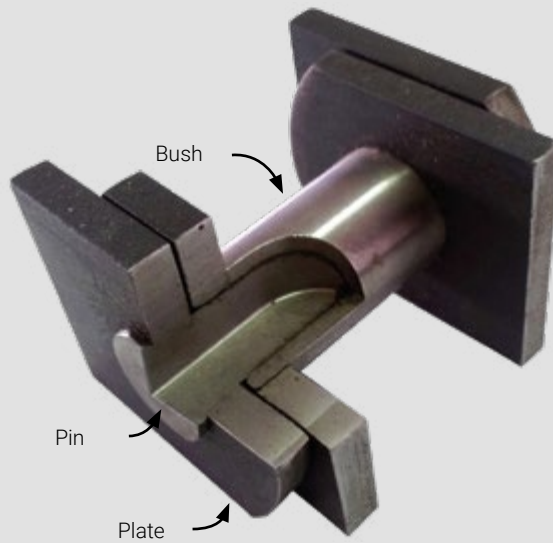
If required, we can cut the chains to length according to your specifications and install attachments. For you, this means less waste, lower costs and less effort



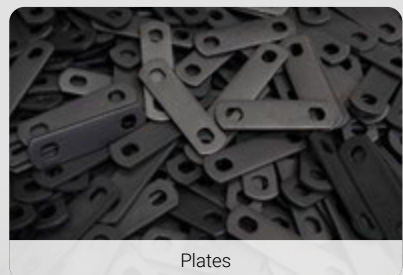
#### **State-of-the-art technology**

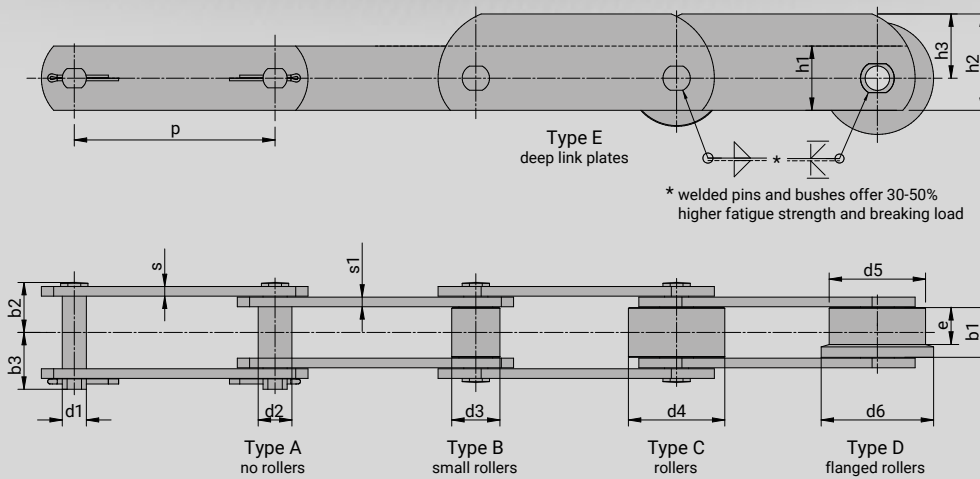
Customer-oriented and sustainable product and application development through constant exchange and close cooperation with plant operators and leading OEMs. Continuous investment in modern tools, machines and robot technology

# MATERIALS, HEAT TREATMENTS AND MANUFACTURING PROCESSES



	Pins	Bushes	Rollers	Plates
Materials:	alloy steels, on request also stainless and acid-resistant			easily weldable steels with low carbon content and high strength, on request also available as stainless and acid-resistant design
Heat treatment:	induction-hardened and ground on the bearing surface	case-hardened, optionally hardened and tempered and induction-hardened and ground		naturally hard, hardened and tempered or induction-hardened
Assembly:	round riveted or welded, optionally case-hardened materials	seamless drawn tube with anti-rotation shoulders, press-fitted with a very precise fit and welded from the outside of the inner plate if required	modern CNC machining centres	precision punched plate holes, double or triple punched
Options:	other locking methods such as head pins, clips, cotter pins or locking rings	maintenance-free bearings (e.g. IGUS)	wear bushes, ball bearings, needle bearings	coatings (e.g. galvanised)





### 30-50% increase in operational safety due to welded FB conveyor chains

FB is the leading manufacturer of welded conveyor chains. FB welding specialists continuously develop welding processes and welding robots to meet the high demands and requirements of our customers. The demand for longest possible chain service life, very high system availability and operational safety as well as lowest possible operating costs is the driver behind finding the best commercial and technical solution for you every day.



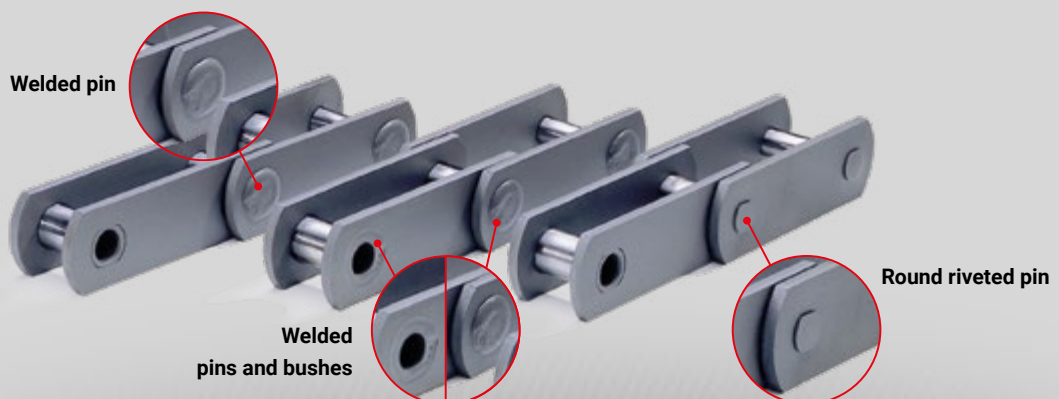
### Custom solutions

Conveyor chains can be adapted to any job in the field of conveying by means of welded and bended attachments, extended or weld-on pins, outer or inner rollers made of steel or plastic, low-maintenance bush bearings or ball bearings.



### Quality controls

We are committed to produce and supply high-quality, reliable and cost-efficient chains for our customers. To achieve this, we have established very demanding quality control standards. We monitor and control every production step and test the chains before shipping. We work closely with users, technical universities and external testing institutions to ensure the continuous development of our conveyor chains and manufacturing methods.





## FB CONVEYOR CHAINS DIN 8165, FV SERIES

Type	Break- ing load	Allowed load	Pitch	Inner width	Pin	Bush	Type B roller	Type C roller	Type D roller		Plates					
	F <sub>B</sub> min	F <sub>DYN</sub> min	P	b <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	d <sub>6</sub>	b <sub>2</sub>	b <sub>3</sub>	s/s <sub>1</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>
	(kN)	(N)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(FV40)	40	6.700	40 50 63 80 100	18	10	15	20	32	40	48	18,5	22,0	4	25	35	22,0
FV40	40	6.700	40 50 63 80 100	18	10	15	20	32	40	48	18,5	22,0	3	26	35	22,0
FV63	63	10.500	63 80 100 125	22	12	18	26	40	50	60	23,0	27,5	4	30	40	25,0
FV90	90	15.000	63 80 100 125	25	14	20	30	48	63	73	26,5	31,0	5	35	45	27,5
FV112	112	18.700	63 80 100 125 160	30	16	22	32	55	72	87	31,5	36,0	6	40	50	30,0
FV140	140	23.400	100 125 160 200	35	18	26	36	60	80	95	34,0	40,0	6	45	60	37,5
FV180	180	30.000	100 125 160 200	45	20	30	42	70	100	120	43,0	50,0	8	50	70	45,0
FV250	250	41.700	125 160 200 250	55	26	36	50	80	125	145	49,0	57,0	8	60	80	50,0
FV315	315	52.500	160 200 250 315	65	30	42	60	90	140	170	58,5	66,5	10	70	90	55,0
FV400	400	66.700	160 200 250 315	70	32	44	60	100	150	185	65,5	75,5	12	70	90	55,0
FV500	500	83.400	160 200 250 315	80	36	50	70	110	160	195	70,5	80,5	12	80	100	60,0
FV630	630	105.000	200 250 315 400	90	42	56	80	120	170	210	76,5	86,5	12	100	120	70,0

Other dimensions and designs on request.

## FB CONVEYOR CHAINS DIN 8167 (ISO 1977), M SERIES

Type	Break- ing load	Allowed load	Pitch	Inner width	Pin	Bush	Type B roller	Type C roller	Type D roller		Plates					
	F <sub>B</sub> min	F <sub>DYN</sub> min	P	b <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub> /d <sub>5</sub>	d <sub>6</sub>	e	b <sub>2</sub>	b <sub>3</sub>	s/s <sub>1</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>
	(kN)	(N)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
M40	40	5.700	63 80 100 125	20	8,5	12,5	18	36	42	13,5	21	24	4	25	35	22,5
M56	56	8.000	63 80 100 125	24	10	15	21	42	50	17,0	24	27	4	30	45	30,0
M80	80	11.400	80 100 125 160	28	12	18	25	50	60	20,0	29	33	5	35	50	32,5
M112	112	16.000	80 100 125 160	32	15	21	30	60	70	22,0	33	38	6	40	60	40,0
M160	160	22.800	100 125 160 200	37	18	25	36	70	85	25,5	38	43	7	50	70	45,0
M224	224	32.000	100 125 160 200	43	21	30	42	85	100	30,0	44	49	8	60	90	60,0
M315	315	45.000	160 200 250 315	48	25	36	50	100	120	33,0	51	58	10	70	100	65,0
M450	450	64.000	200 250 315 400	56	30	42	60	120	140	37,0	60	66	12	80	120	80,0
M630	630	90.000	250 315 400 500	66	36	50	70	140	170	45,0	69	78	14	100	-	-
(M900)	900	128.000	250 315 400 500	78	44	60	85	170	210	52,0	79	89	15	120	-	-
M900	900	128.000	250 315 400 500	78	44	60	85	170	210	52,0	79	89	16	120	-	-

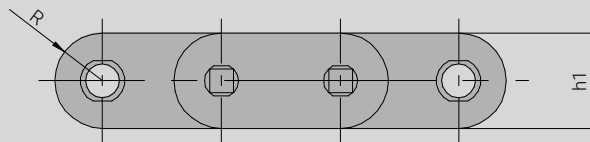
Other dimensions and designs on request.



## FB CONVEYOR CHAINS SMS 1698

Type	Breaking load	Allowed load	Pitch	Inner width	Pin	Bush	Type C roller	Plates						Outer plates	
	$F_{B \text{ min}}$	$F_{DYN \text{ min}}$						P	$b_1$	$d_1$	$d_2$	$d_4$	$2 \times b_2$	$b_3$	$h_1$
	(kN)	(N)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
3,5	35	5.800	50 63 80 100	18	10	15	32	49	22,0	25	35	22,5	4	4	6
5,5	55	9.160	50 63 80 100	22	12	18	40	54	27,5	30	40	25,0	5	4	6
8,5	85	14.100	63 80 100 150	25	14	20	50	65	31,0	35	50	32,5	6	5	8
12,5	125	20.800	100 150 200	35	18	26	60	81	36,0	40	60	40,0	8	6	8
18	180	30.000	100 150 200 250	45	20	30	70	96	40,0	50	78	45,0	8	6	10
24	240	40.000	100 150 200 250	55	26	36	80	116	50,0	60	80	50,0	10	8	12
30	300	50.000	150 200 250	65	30	42	90	128	57,0	70	90	55,0	10	8	12
40	400	66.600	150 200 250	80	36	50	110	148	66,5	80	110	70,0	10	12	12
65	650	108.300	150 200 250	80	36	50	110	158	75,5	90	120	75,0	12	15	15

Other dimensions and designs on request.



## FB SPECIAL CONVEYOR CHAINS

Type	Breaking load	Allowed load	Pitch	Inner width	Pin	Bush	Type B roller	Plates				
	$F_{B \text{ min}}$	$F_{DYN \text{ min}}$						p	$b_1$	$d_1$	$d_2$	$d_3$
	(kN)	(N)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(FV90)	125	15.000	50	25,0	14,00	20,0	-	26,0	30,5	5	40	20
(FV90B)	170	15.000	50 100	25,4	14,63	18,7	25,4	26,7	31,2	5	40	20
(FV112)	112	18.700	60	22,0	16,00	22,0	-	26,8	31,7	6	35	25
(FV140)	140	24.000	125	35,0	18,00	26,0	-	38,0	43,0	8	50	30
(M40)	40	5.700	60	22,0	8,50	12,5	-	26,1	29,0	6	25	20

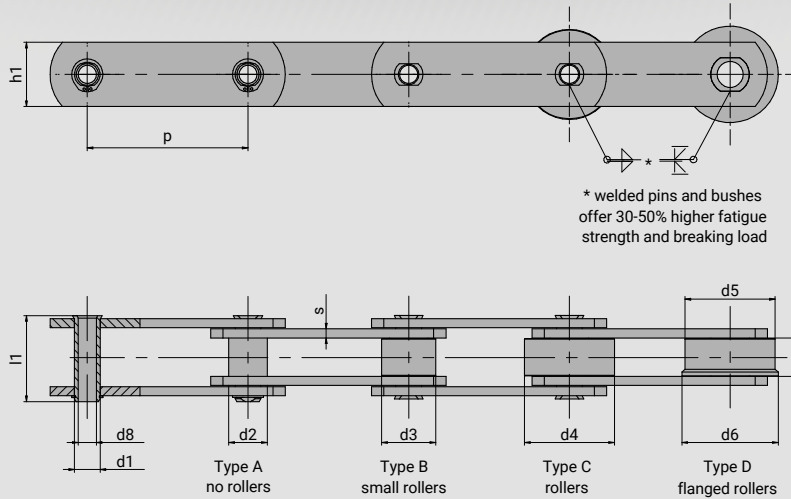
Other dimensions and designs on request.

## FB SPECIAL CONVEYOR CHAINS WITH HOLLOW PINS

Type	Breaking load	Allowed load	Pitch	Inner width	Pin		Bush	Plates			
	$F_{B \text{ min}}$	$F_{DYN \text{ min}}$			$d_8$	$d_1$		$d_2$	$l_1$	s	$h_1$
	(kN)	(N)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
(FVC63)	>53	10.500	40	22	8,2	12	18	47,1	5	35	-
(FVC90)	90	15.000	50	25	10,1	14	20	50,2	5	40	20







## FB HOLLOWPIN CONVEYOR CHAINS DIN 8165, FV SERIES

Type	Breaking load		Allowed load	Pitch	Inner width	Pin		Bush	Type B roller	Type C roller	Roller Type D		Plates							
	$F_B$ min	Plates hardened and tempered $F_B$ min	$F_{DYN}$ min			p	$b_1$				$d_8$	$d_1$	$d_2$	$d_3$	$d_4$	$d_5$	$d_6$	$l_1$	s	$h_1$
	(kN)	(kN)	(N)			(mm)	(mm)				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
FVC63	46	75	10.500	63 80 100 125 160	22	8,2	12	18	26	40	50	60	46	4	30					
FVC90	73	90	15.000	63 80 100 125 160 200 250	25	10,2	14	20	30	48	63	78	53	5	35					
FVC112	90	132	18.700	100 125 160 200 250	30	11,2	16	22	32	55	72	87	63	6	40					
FVC140	110	170	23.400	100 125 160 200 250	35	12,2	18	26	36	60	80	95	68	6	45					
FVC180	145	190	30.000	125 160 200 250 315	45	14,2	20	30	42	70	100	120	68	8	50					
FVC250	215	300	41.700	160 200 250 315	55	18,2	26	36	50	80	125	145	98	8	60					

## FB HOLLOWPIN CONVEYOR CHAINS DIN 8168, M SERIES

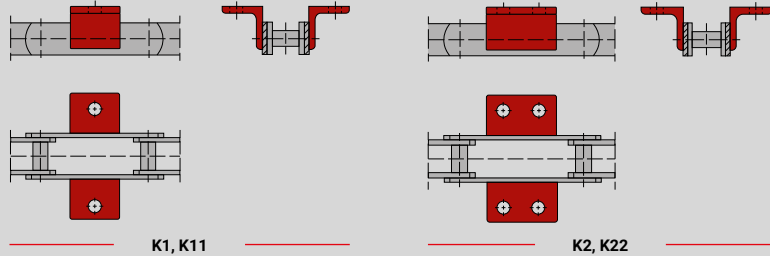
Type	Break- ing load	Allowed load	Pitch	Inner width	Pin		Bush	Type B roller	Type C roller	Roller Type D		Plates							
	$F_B$ min	$F_{DYN}$ min			p	$b_1$				$d_8$	$d_1$	$d_2$	$d_3$	$d_4$	$d_5$	$d_6$	$l_1$	s	$h_1$
	(kN)	(N)			(mm)	(mm)				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
(MC28)	28	4.000	63 80 100 125 160	20	8,5	12,5	18,0	25	36	36	45	42	4,0	25					
MC28	28	4.000	63 80 100 125 160	20	8,2	13,0	17,5	25	36	36	45	40	3,5	25					
(MC56)	56	8.000	80 100 125 160 200 250	22	10,1	15,0	21,0	30	50	50	60	49	5,0	35					
MC56	56	8.000	80 100 125 160 200 250	24	10,2	15,5	21,0	30	50	50	60	47	4,0	35					
(MC112)	112	16.000	80 100 125 160 200 250	30	14,1	20,0	30,0	42	70	70	85	66	7,0	50					
MC112	112	16.000	100 125 160 200 250 315	32	14,3	22,0	29,0	42	70	70	85	64	6,0	50					
(MC224)	224	32.000	125 160 200 250 315	40	20,2	30,0	42,0	60	100	100	120	86	10,0	70					
MC224	224	32.000	125 160 200 250 315	43	20,3	31,0	41,0	60	100	100	120	83	8,0	70					

Other dimensions and designs on request.

# CONVEYOR CHAINS WITH CUSTOMISED ATTACHMENTS

## Conveyor chains

with angle attachments on one or both sides

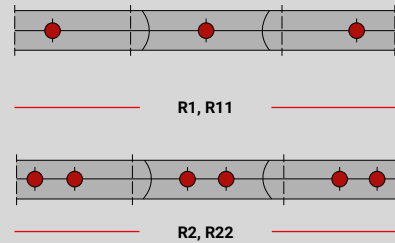


K1, K11

K2, K22

## Conveyor chains with holes

for assembling buckets, scrapers, plastic parts or attachments

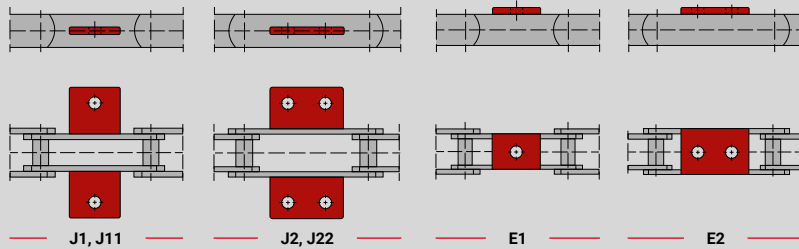


R1, R11

R2, R22

## Conveyor chains

with flat bar  
(flat steel attachments)



J1, J11

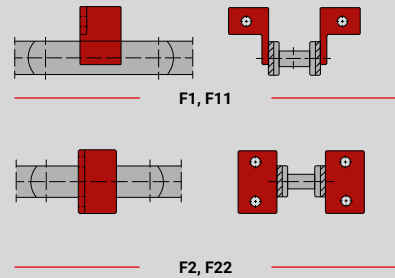
J2, J22

E1

E2

## Conveyor chains

with welded or bended attachments on one or both sides

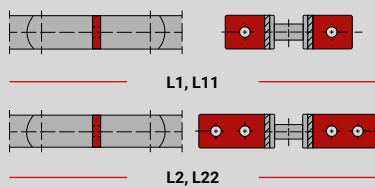


F1, F11

F2, F22

## Conveyor chains

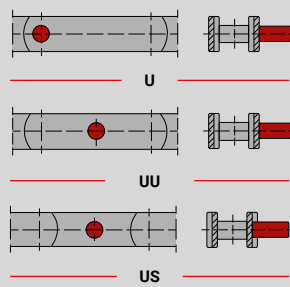
with scrapers welded on one or both sides, with or without holes, with or without plastic cleaners



L1, L11

L2, L22

## Extended pins

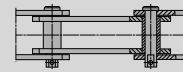


U

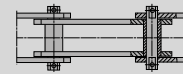
UU

US

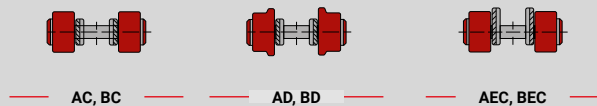
## Head pin



## Cotter pin



## External rollers

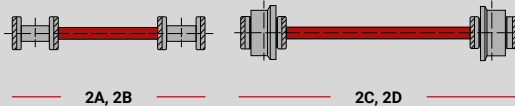


AC, BC

AD, BD

AEC, BEC

## Apron conveyor chains, flat-top chains

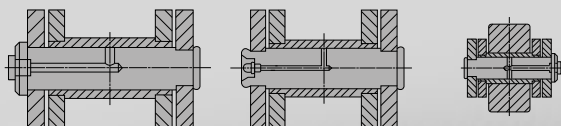


2A, 2B

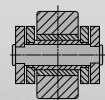
2C, 2D

# LOW-MAINTENANCE CONVEYOR CHAINS

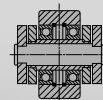
## Lubrication nipple with lubrication holes and keyways



## Wear bushes (bronze bushes)



## Ball bearing, needle bearing

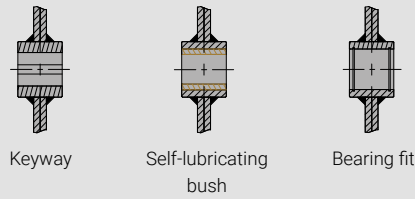
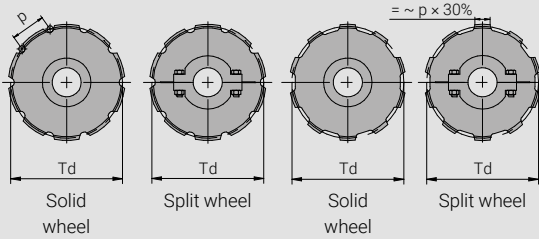


# SPROCKETS, METRIC PITCH

## Standard tooth gap

## Extended tooth gap – reversible design = double service life

## Bore types



Pitch circle diameter Td (mm)

Number of teeth	Pitch p (mm)											
	40	50	63	80	100	125	160	200	250	315	400	500
6	80,00	100,00	126,00	160,00	200,00	250,00	320,00	400,00	500,00	630,00	800,00	1000,00
7	92,19	115,24	145,20	184,38	230,48	288,10	368,76	460,96	576,20	726,01	921,92	1152,40
8	104,52	130,65	164,62	209,04	261,31	326,63	418,09	522,62	653,27	823,12	1045,24	1306,55
9	116,95	146,19	184,19	233,90	292,38	365,47	467,80	584,76	730,95	920,99	1169,52	1461,90
10	129,44	161,80	203,87	258,88	323,61	404,51	517,77	647,22	809,02	1019,37	1294,37	1618,05
11	141,98	177,47	223,61	283,96	354,95	443,68	567,92	709,90	887,37	1118,09	1419,80	-
12	154,54	193,18	243,41	309,09	386,37	482,96	618,19	772,74	965,92	1217,06	1545,48	-
13	167,14	208,93	263,25	334,28	417,86	522,32	668,57	835,72	1044,65	1316,25	1671,44	-
14	179,76	224,70	283,12	359,52	449,40	561,75	719,04	898,80	1123,50	1415,61	-	-
15	192,38	240,48	303,01	384,77	480,97	601,21	769,55	961,94	1202,42	1515,05	-	-
16	205,03	256,29	322,92	410,06	512,58	640,72	820,12	1025,16	1281,45	1614,62	-	-
17	217,68	272,11	342,85	435,37	544,22	680,27	870,75	1088,44	1360,55	1714,29	-	-
18	230,35	287,94	362,80	460,70	575,88	719,85	921,40	1151,76	1439,70	-	-	-
19	243,02	303,77	382,75	486,04	607,55	759,43	972,08	1215,10	1518,87	-	-	-
20	255,70	319,62	402,72	511,40	639,25	799,06	1022,80	1278,50	1598,12	-	-	-
21	268,38	335,47	422,69	536,76	670,95	838,68	1073,52	1341,90	1677,37	-	-	-
22	281,06	351,33	442,68	562,13	702,67	878,33	1124,27	1405,34	-	-	-	-
23	293,75	367,19	462,66	587,51	734,39	917,98	1175,02	1486,78	-	-	-	-
24	306,45	383,06	482,66	612,90	766,13	957,66	1225,80	1532,26	-	-	-	-
25	319,14	398,93	502,65	638,29	797,87	997,33	1276,59	1595,74	-	-	-	-
26	331,84	414,81	522,66	663,69	829,62	1037,02	1327,39	1659,24	-	-	-	-
27	344,55	430,69	542,66	689,10	861,38	1076,72	1378,20	1722,76	-	-	-	-
28	357,25	446,57	562,67	714,51	893,14	1116,42	1429,02	-	-	-	-	-
29	369,96	462,45	582,69	739,92	924,92	1156,13	1479,85	-	-	-	-	-
30	382,67	478,34	602,70	765,34	956,68	1195,85	1530,68	-	-	-	-	-



Split and hardened conveyor chain sprocket



Hardened conveyor chain sprocket



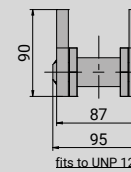
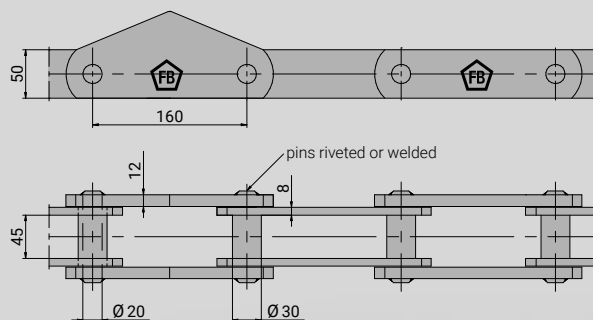
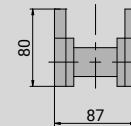
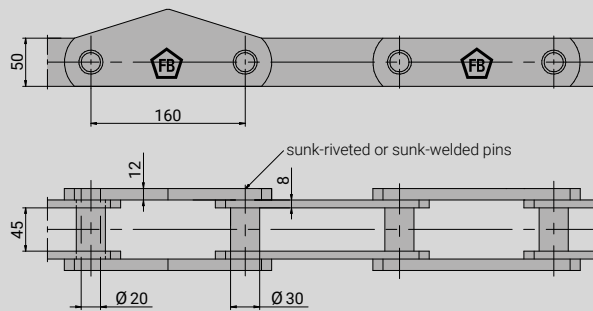
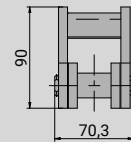
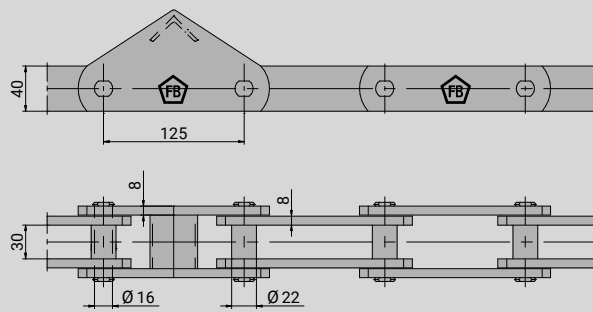
Solid tooth-rim



Split & hardened tooth-rim

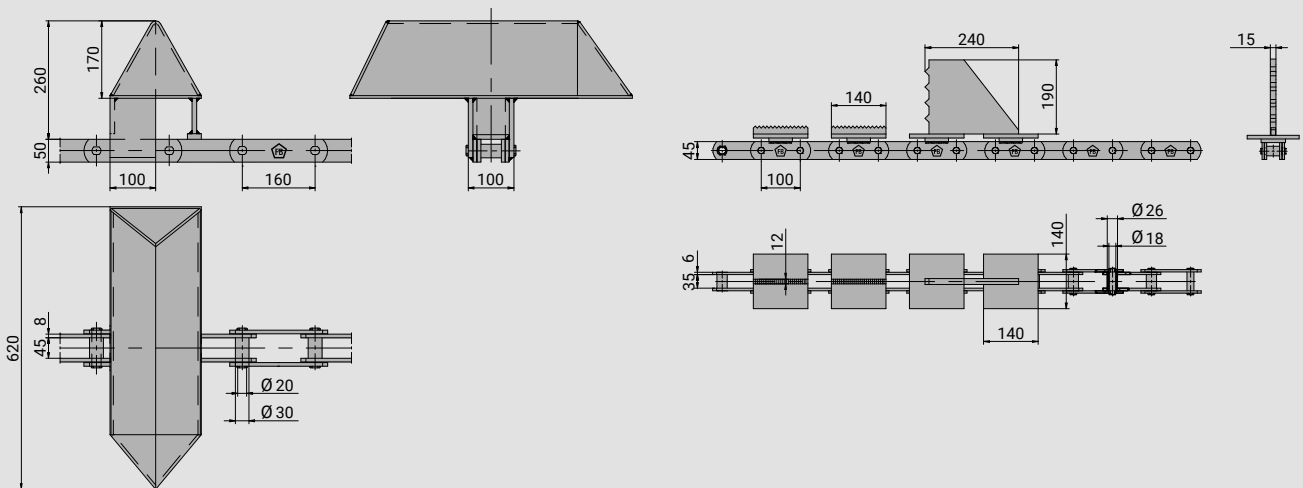
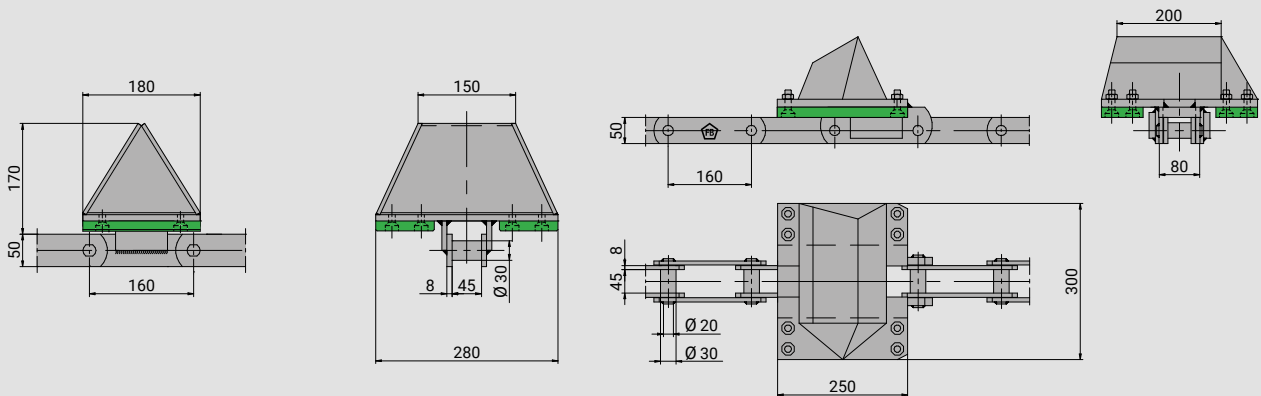


# LOG INFEED SYSTEM



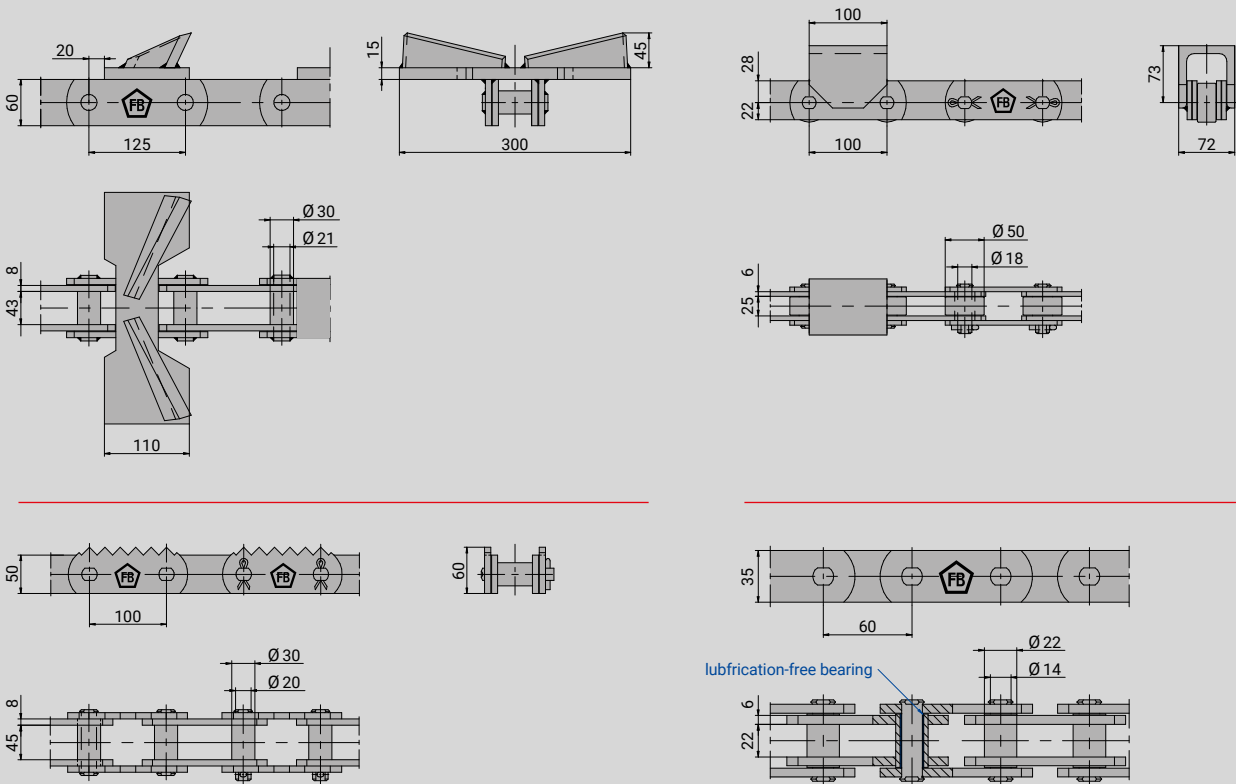
Other dimensions, styles and designs on request.

# SPLITTER AND SEPARATOR



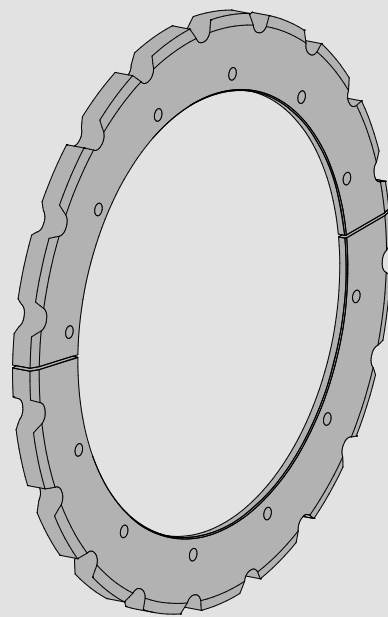
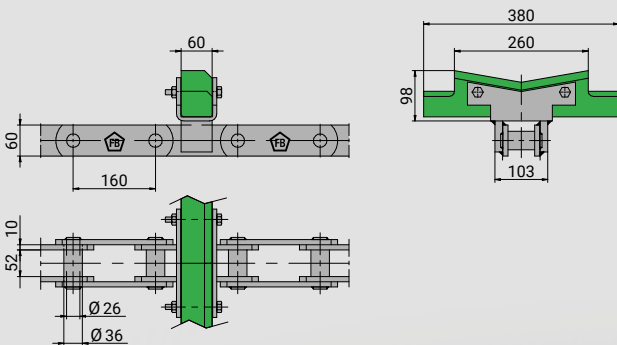
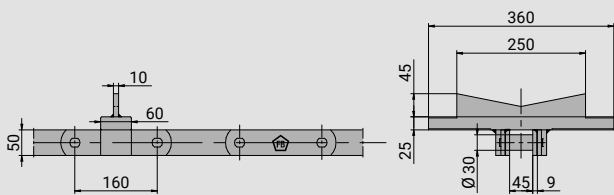
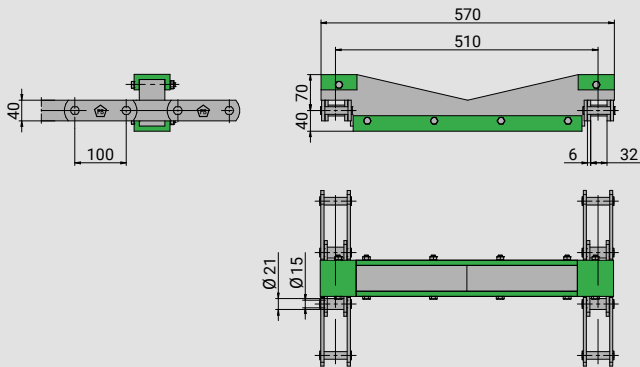
Other dimensions, styles and designs on request.

# LOG TRANSPORT



Other dimensions, styles and designs on request.

# LOG SORTING CHAINS



Other dimensions, styles and designs on request.

# FB SCRAPER CHAINS

Chain type	Pitch	Inner width	Pin	Bushes / rollers	Plates	Figure no.	Breaking load
	p	b <sub>i</sub>	∅ d <sub>i</sub>	∅ d <sub>2</sub> / d <sub>4</sub>	h <sub>i</sub> x s		(kN)
	(mm)	(mm)	(mm)	(mm)	(mm)		
(FV90)A100T/F11x400 or x600	100	25	14	20	40x6	1	140
M112A100T/F11x600	100	32	15	21	40x6	1	140
M112A100T/F2x400 or x600	100	32	15	21	40x6	2	140
FV140A125T/T4x500 or x1000	125	35	18	26	45x6	4	160
FV140A125T/F22x250 or x500	125	35	18	26	45x6	5	160
(M160)A160TERW/(F2)x640	160	37	18	25	50x7	3	185
FV180A125T/T4x500 or x1000	125	45	20	30	50x8	4	205
(FV180)C160V/(F4)x640	160	45	20	30 / 70	50x8	6	200

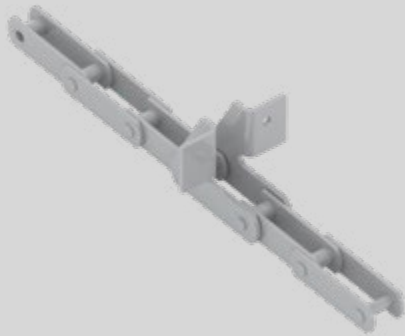


Figure no. 1

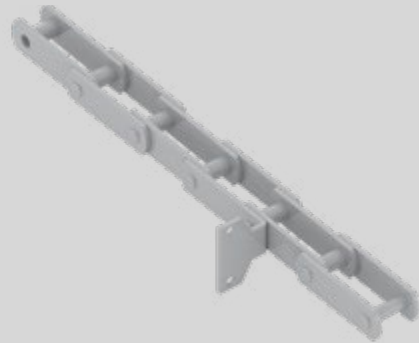


Figure no. 2

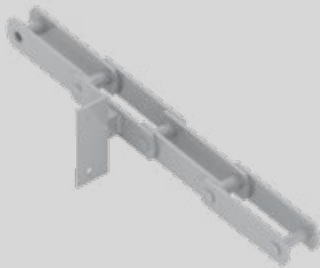


Figure no. 3

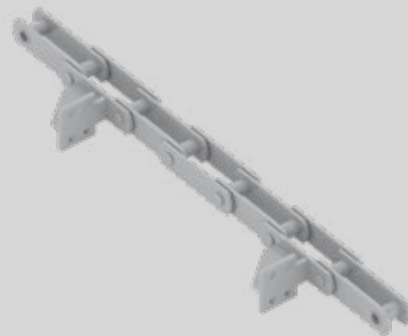


Figure no. 4

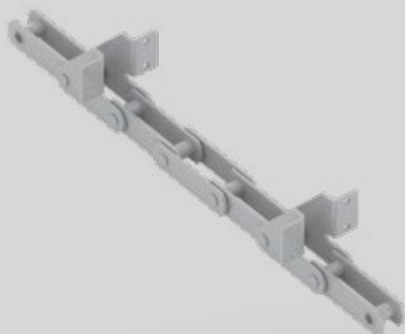


Figure no. 5

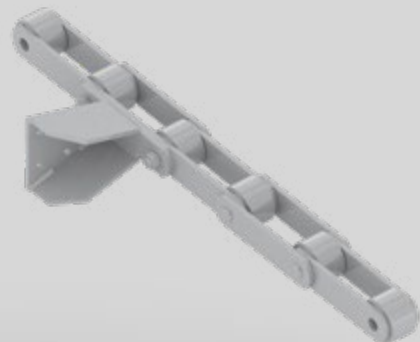
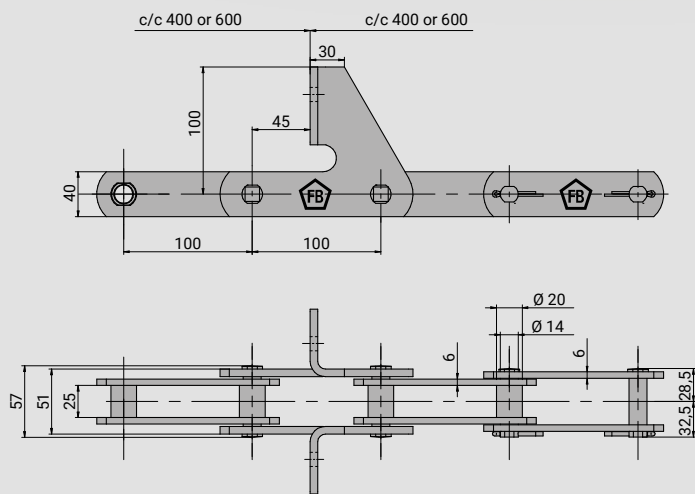
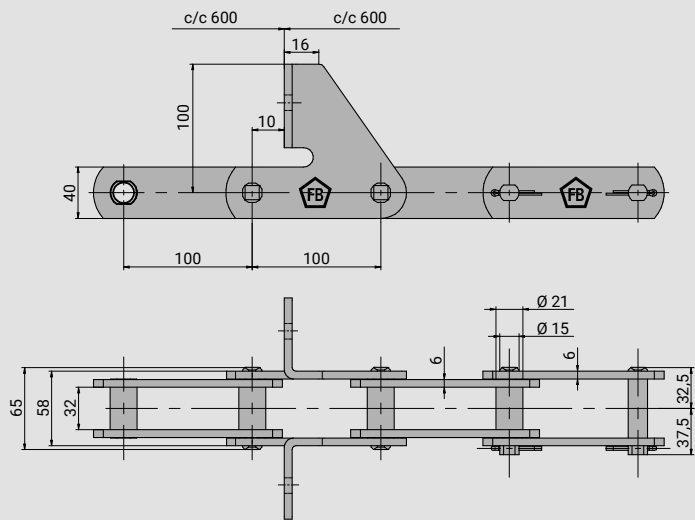
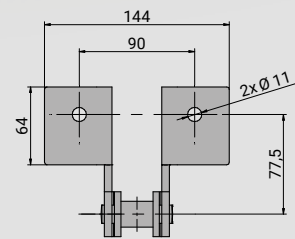


Figure no. 6

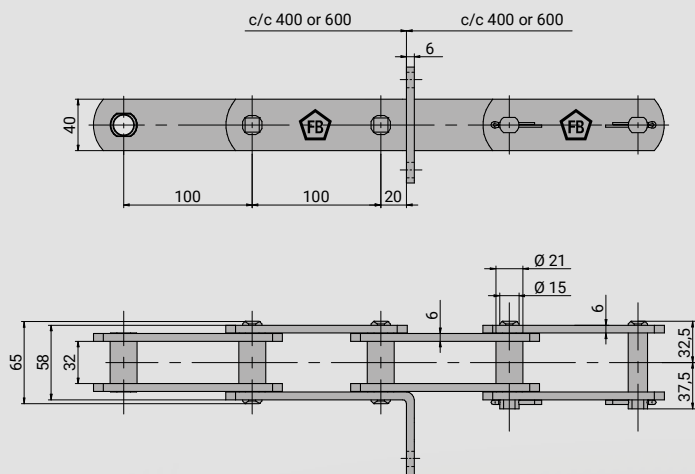
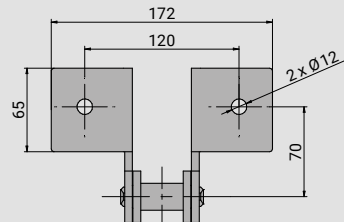




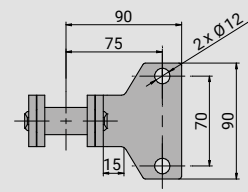
(FV90)A100T/F11x400/600

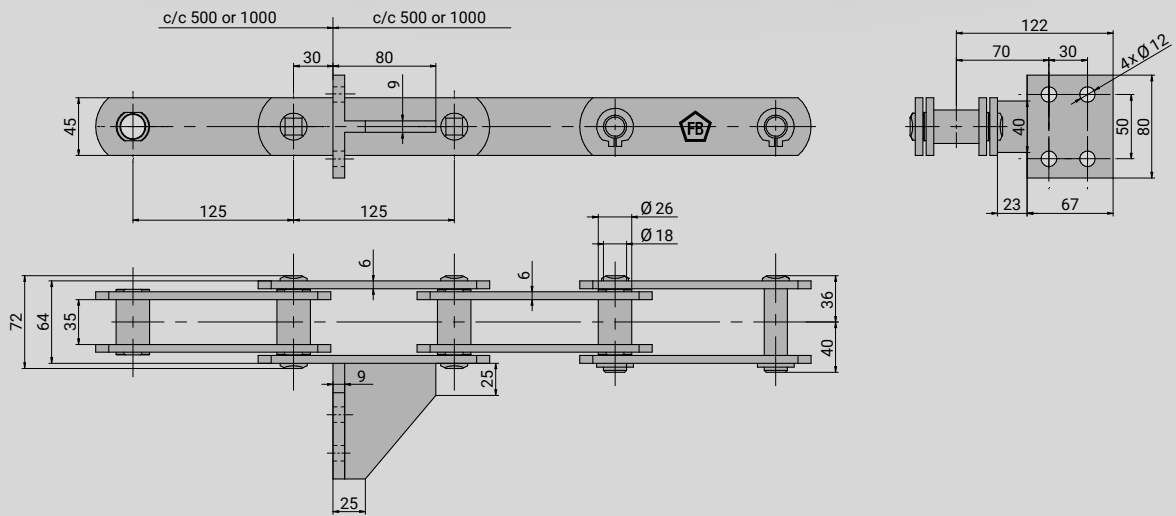


M112A100T/F11x600

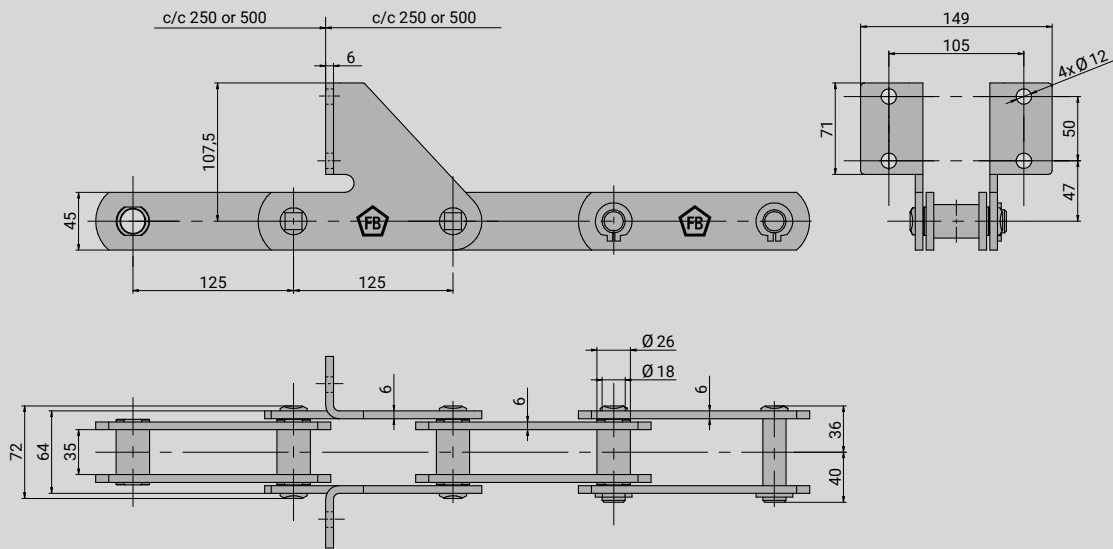


M112A100T/F2x400/600

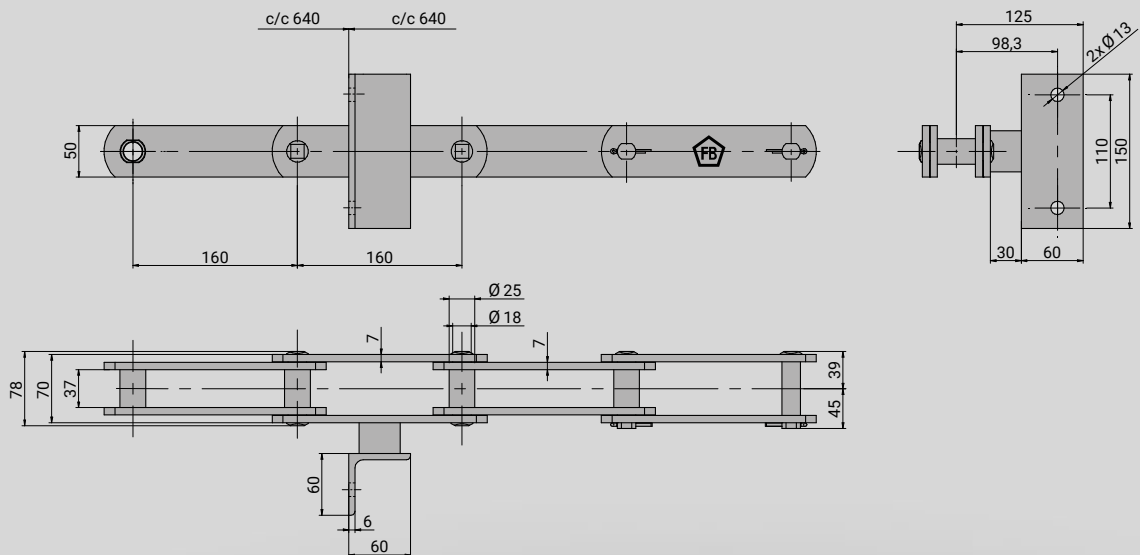




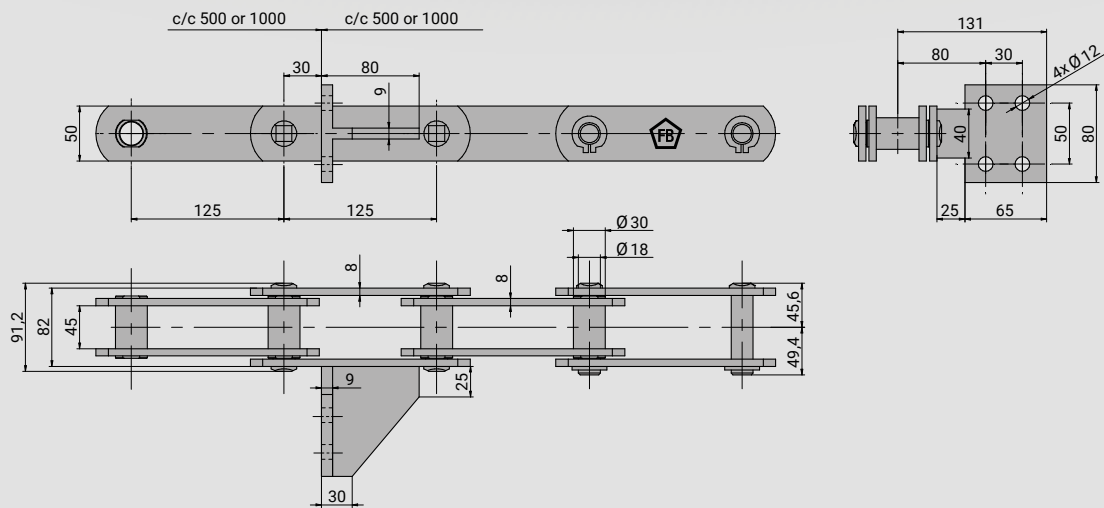
FV140A125T/T4x500/1000



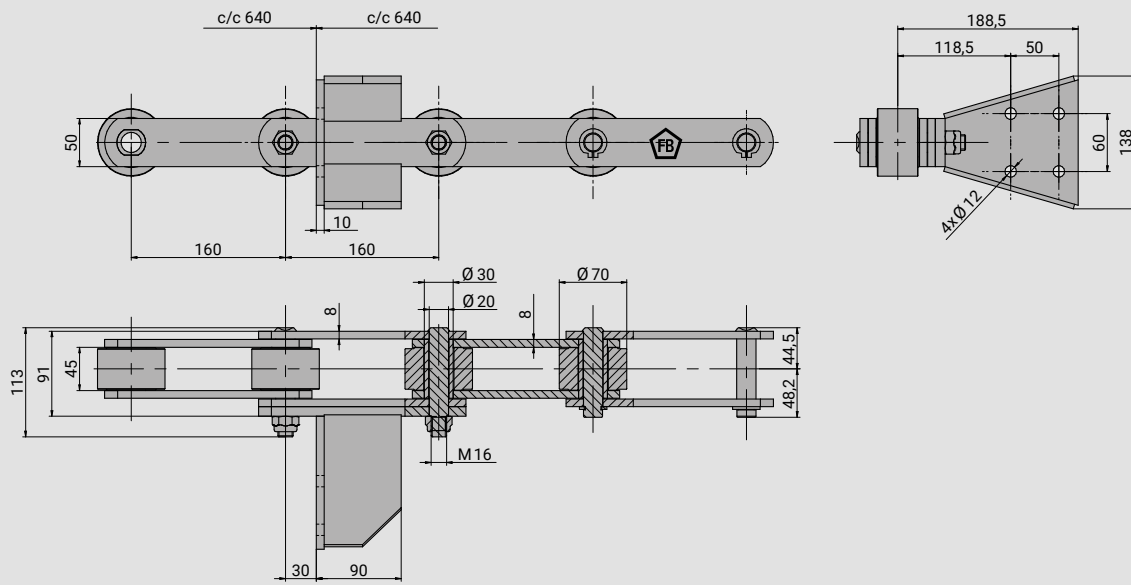
FV140A125T/F22x250/500



(M160)A160TERW/(F2)x640

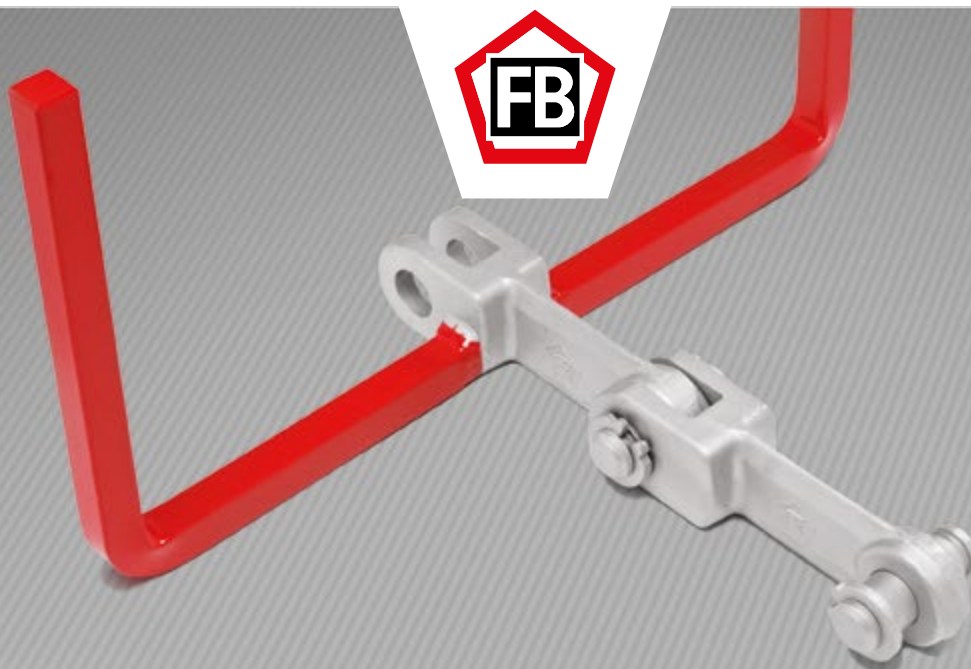


FV180A125T/T4x500/1000



(FV180)C160V/(F4)x640

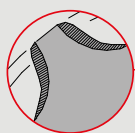




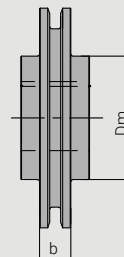
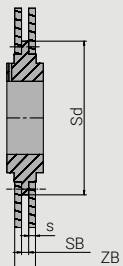
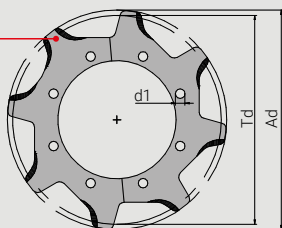
# FB DROP FORGED LINK CHAINS

## SPROCKETS WITH OPTIMISED TOOTH DESIGN

## PULLEYS



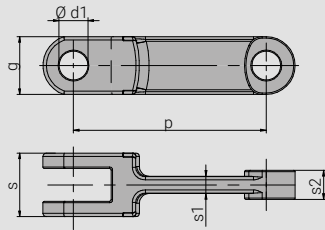
symmetric and reversible tooth shape = double service life



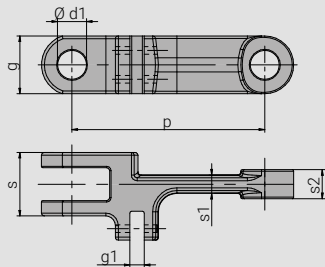
Number of teeth z	Outer Ø	Pitch circle Ø	R100104			R100105			Thread Ø	Hole Ø	Screws	Weight (kg/piece)
			Tooth width	Slot width	Wheel thickness	Tooth width	Slot width	Wheel thickness				
			ZB	SB	s	ZB	SB	s				
6	304	284,00	46	16	15	64	24	20	192	17	6 x M16	22
7	344	327,31	46	16	15	64	24	20	233	17	7 x M16	33
8	390	371,06	46	16	15	64	24	20	280	17	8 x M16	47
9	434	415,18	46	16	15	64	24	20	330	17	9 x M16	68
10	474	459,52	46	16	15	64	24	20	368	17	10 x M16	82
11	534	504,02	46	16	15	64	24	20	420	17	11 x M16	101
12	564	548,64	46	16	15	64	24	20	466	17	12 x M16	130
13	615	593,37	46	16	15	64	24	20	512	17	13 x M16	176
14	660	638,15	46	16	15	64	24	20	558	17	14 x M16	220
15	702	682,87	46	16	15	64	24	20	603	17	15 x M16	251
16	750	727,90	46	16	15	64	24	20	650	17	16 x M16	349

matching sprocket z =	Ø	R100104	R100105	Weight (kg/piece)
		Width	Width	
		b	b	
6	235	50	70	15
7	280	50	70	23
8	320	50	70	29
9	365	50	70	41
10	410	50	70	5
11	450	50	70	68
12	500	50	70	84
13	540	50	70	88
14	590	50	70	100
15	630	50	70	126
16	680	50	70	151

# DROP FORGED LINK CHAINS



Type A



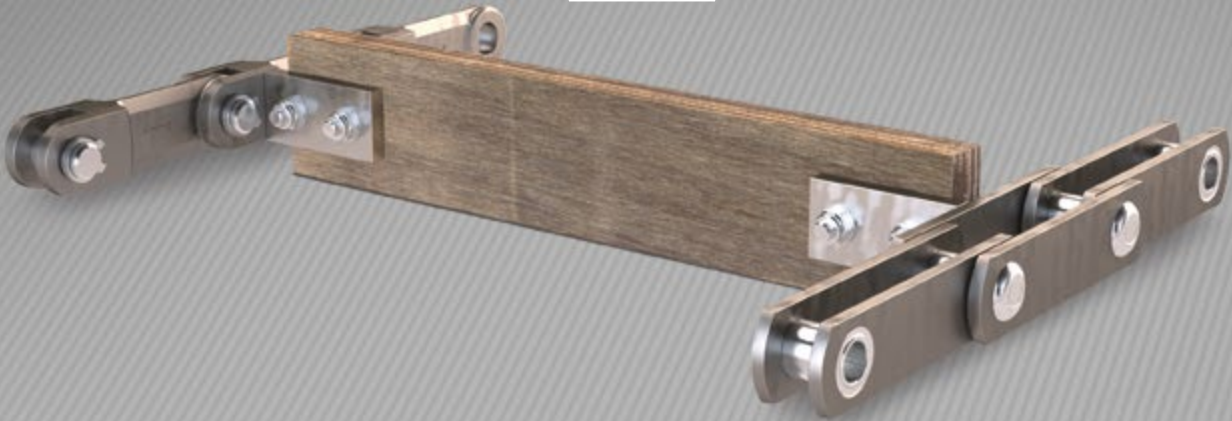
Type D

Alternative to type D

Chain type	Type	Pitch	Link width	Bar thickness		Link height	Attachment slot	Hole	Breaking load				Weight (kg/m)			
				s <sub>1</sub>	s <sub>2</sub>				g	g <sub>1</sub>	Ø d <sub>1</sub>	20MnCr5e*		18NiCrMo5e*	C40V**	42CrMo4V**
				(mm)	(mm)				(mm)	(mm)	(mm)	(mm)		(kN)	(kN)	(kN)
R100101	A	101,6	24	6	8,0	36	-	14	90	95	100	130	3,85			
R100102	A	101,6	30	8	12,0	36	-	14	120	130	150	200	5,25			
R200101	A	102,0	25	6	8,0	36	-	14	75	85	90	120	3,95			
R100103	A	142,0	24	6	8,0	47	-	20	110	120	145	200	4,50			
R100104	A	142,0	42	11	19,0	50	-	25	270	280	350	440	10,40			
R100105	A	142,0	62	15	28,0	50	-	25	370	400	500	600	14,90			
R200102	A	142,0	56	18	25,0	50	-	25	310	350	400	480	12,50			
R100106	A	150,0	24	6	8,0	50	-	20	110	120	145	200	5,00			
R100107	A	150,0	42	12	15,5	47	-	25	230	250	300	340	10,00			
R100108	A	160,0	50	12	23,0	50	-	25	300	320	400	520	10,50			
R200103	A	160,0	42	12	20,0	45	-	20	260	275	320	380	11,00			
R300175	D	175,0	72	22	30,0	60	11,0	30	500	550	600	710	15,00			
R100109	A	200,0	66	17	32,0	60	-	28	530	580	650	750	16,30			
R200105	A	200,0	54	15	25,5	50	-	25	310	350	400	480	12,80			
R200106	D	200,0	52	18	25,0	50	13,0	25	300	340	330	460	11,50			
R200107	D	200,0	58	17	25,0	50	11,5	25	310	350	450	550	13,00			
R200108	D	200,0	70	20	30,0	60	13,0	30	500	550	600	750	19,40			
R300216	A	216,0	64	20	26,0	73	-	35	480	500	630	700	20,00			
R100110	A	250,0	70	20	31,0	75	-	34	600	650	750	1.000	24,00			
R200110	A	250,0	66	18	33,0	60	-	28	530	580	650	750	14,00			
R200111	D	250,0	70	20	30,0	60	13,0	30	500	550	600	700	16,00			
R100111	A	260,0	70	21	31,0	75	-	34	600	650	750	1.000	21,65			

\* case-hardened \*\* hardened and tempered

■ Calculated theoretical breaking load □ Tested breaking load ■ Chain available, but new tool required



# FB - rEVOLUTION SCRAPER CONVEYOR CHAINS

The latest generation of scraper conveyor chains is the **INEXPENSIVE** and durable alternative to drop forged link chains, round steel chains and block chains.

The innovative and field approved properties of modern FB conveyor chains with welded pins and bushes as well as hardened and tempered link plates make them perfect for use in the building materials, recycling, wood and paper industries, as well as in waste incineration and biomass power plants.

FB rEVOLUTION scraper chains are designed to fit to existing conveyor systems and sprockets. They do not require modifications to the existing casing and can be manufactured in almost any chain pitch.



## ADVANTAGES



### Longer service life

Reduced longitudinal wear due to larger bearing surface and hardened pins and bushes, no gap corrosion between plates, pins or bushes. Double service life due to reversible sprockets and tooth segments



### Higher breaking load and fatigue strength

Welded pins, bushes and strong link plates increase breaking load and fatigue strength



### Better welding options

Increased space to weld attachments and excellent welding properties = stronger attachment connection than with drop forged link chains



### Increased operational safety

Very resistant against lateral loads and shock loads, strong attachment connection, no detachable components such as clips or cotter pins



### Decreased operating costs

Lighter chains (up to 30 % less weight), reduced longitudinal wear and extended service life of sprockets reduce operating costs



### Stainless alternative

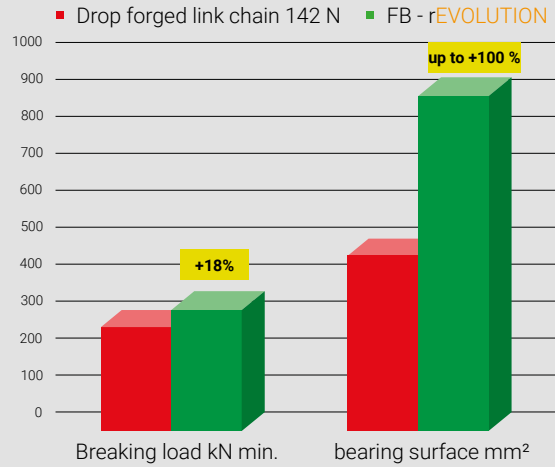
Also available with stainless hardened pins and bushes for use in corrosive environments



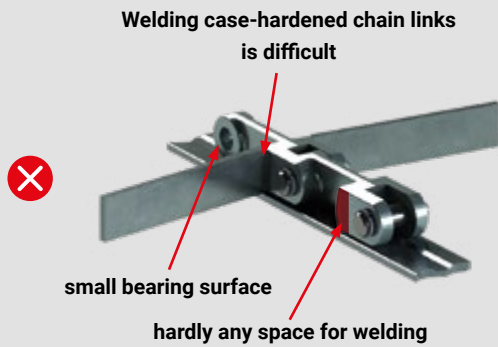
# FB - rEVOLUTION SCRAPER CHAIN SOLUTIONS

## AT A GLANCE:

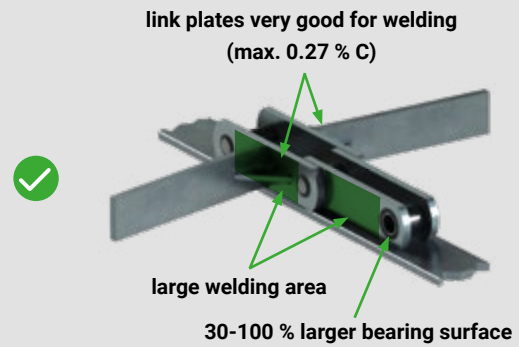
- reduce your operating costs
- increase your system run-time and operational safety
- extend the service life of your chains, sprockets and, in most cases, also chain rails
- offer the option for optimised attachment connections



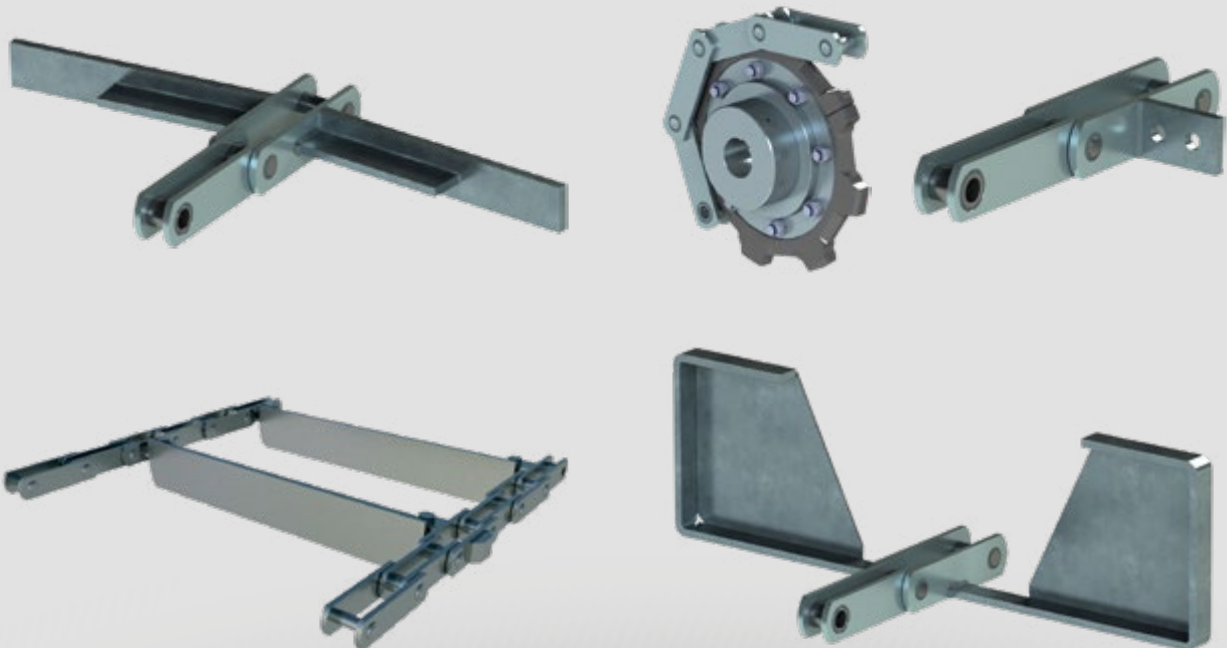
## drop forged link chains:



## FB - rEVOLUTION scraper conveyor chains:



## FB - rEVOLUTION SCRAPER CHAINS EXAMPLES





# - INNOVATIVE & SUSTAINABLE SCRAPERS

Scrapers for trough chain conveyors are usually made of steel, plastic or a combination of the two. The advantages of plastic include its light weight and low friction coefficient. The use of steel, on the other hand, offers greater resistance and any type of reinforcement through welded constructions.

The disadvantage of both materials is that excessive loads through foreign objects such as stones, steel clips, wires, etc. may bend them which can result to a reduction in the chain centre distance in double-chain conveyors. This then makes the chains jump off the sprockets – a serious breakdown is unavoidable. The mechanical damage to the chains and sprockets is usually less than the consequential costs to the conveyor system and the downtime costs to the lifelines such as fuel supply, silo discharge, ash removal and chip scrapers. In biomass power plants, some of the furnaces have to be operated using gas. This contradicts the sustainable concept of a biomass heating plant and causes very high costs.

Scraper attachments made of **inno** are an inexpensive alternative – a problem solver for these or similar applications. They slide just as easily as plastic, are abrasion-resistant and serve as a predetermined breaking point in case of heavy overloads. This protects the remaining system components, avoid high consequential costs and ensures the continued operation of the trough conveyors.

## ADVANTAGES



### Weight saving

Energy savings due to low friction coefficient (approx. 0,2) – slide twice as easily as steel and are approx. 60-80 % lighter



### High quality ensures high operational safety

The calculated predetermined breaking point guarantees high system run-time, operational safety and prevents high consequential costs



### Environmentally friendly

Sustainable natural material, physiologically harmless and biologically degradable (in most power plants, waste attachments are even incinerated)



### Cost savings

Scrapers pressed under high-pressure **inno** are robust and abrasion-resistant; they are usually used on several chain replacements and reduce operating costs



### Longer service life

No bulging, washable, antistatic, resistant to oils and water

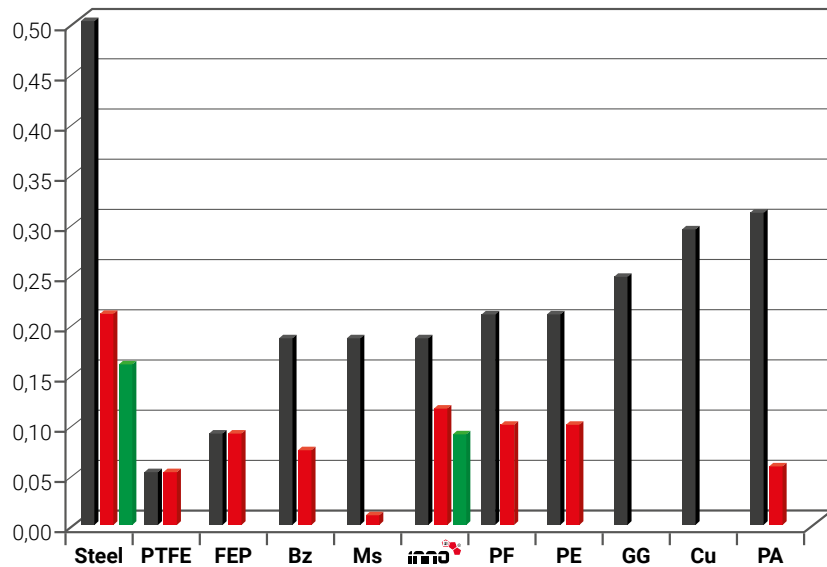


### Ideal resistance at maximum operating temperatures

Processed ready for installation and multifunctional use from -200 °C to approx. +100 °C



approx. friction coefficient $\mu$	Steel		
	dry	lubricated	lubricated Molykote
Steel	0,50	0,20	0,15
PTFE	0,04	0,04	
FEP	0,08	0,08	
Bz	0,18	0,07	
Ms	0,18		
inno	0,18	0,11	0,08
PF	0,20	0,10	
PE	0,20	0,10	
GG	0,24		
Cu	0,29		
PA	0,30	0,06	



Technical details		inno 100	inno 500	inno 1000
<b>Bulk density g/cm<sup>3</sup></b>				
DIN 53479		approx. 750 kg/m <sup>3</sup>	approx. 1.350 kg/m <sup>3</sup>	approx. 1.350 kg/m <sup>3</sup>
Flexural strength N/mm <sup>2</sup>	layer	65 N/mm <sup>2</sup>	165 N/mm <sup>2</sup>	160 N/mm <sup>2</sup>
DIN 53452	⊥ layer	75 N/mm <sup>2</sup>	180 N/mm <sup>2</sup>	190 N/mm <sup>2</sup>
Impact resistance kJ/m <sup>2</sup>	layer	-	25 kJ/m <sup>2</sup>	20 kJ/m <sup>2</sup>
DIN 53453	⊥ layer	-	50 kJ/m <sup>2</sup>	40 kJ/m <sup>2</sup>
Notched impact strength kJ/m <sup>2</sup>	layer	-	20 kJ/m <sup>2</sup>	14 kJ/m <sup>2</sup>
DIN 53453	⊥ layer	-	50 kJ/m <sup>2</sup>	-
Tensile strength N/mm <sup>2</sup>	layer	65 N/mm <sup>2</sup>	125 N/mm <sup>2</sup>	120 N/mm <sup>2</sup>
Compressive strength N/mm <sup>2</sup>	layer	43 N/mm <sup>2</sup>	135 N/mm <sup>2</sup>	130 N/mm <sup>2</sup>
DIN 53454	⊥ layer	35 N/mm <sup>2</sup>	270 N/mm <sup>2</sup>	240 N/mm <sup>2</sup>
Ball indentation hardness N/mm <sup>2</sup>	⊥ layer	-	140 N/mm <sup>2</sup>	150 N/mm <sup>2</sup>
Gap load N	⊥ layer	-	3.000 N	3.600 N
Shearing resistance N/mm <sup>2</sup>	layer	-	10 N/mm <sup>2</sup>	10 N/mm <sup>2</sup>
	⊥ layer	-	60 N/mm <sup>2</sup>	-
<b>Modulus of elasticity N/mm<sup>2</sup></b>				
DIN 53457 flexure	⊥ layer	8.200 N/mm <sup>2</sup>	17.000 N/mm <sup>2</sup>	17.000 N/mm <sup>2</sup>
DIN 53457 pressure	⊥ layer	7.400 N/mm <sup>2</sup>	2.600 N/mm <sup>2</sup>	-
	layer	5.600 N/mm <sup>2</sup>	6.000 N/mm <sup>2</sup>	14.000 N/mm <sup>2</sup>
<b>Coefficient of sliding friction <math>\mu_G</math></b>				
against mill finish stainless steel sheet II	⊥ layer	-	0,2 - 0,3	0,18
<b>Water absorption in percent after 24 h water storage (test specimen 50x50x30) DIN 53495</b>				
		26%	3,50%	3,80%

|| layer = in the direction of the layers ⊥ Layer = perpendicular to the layers

For special applications, we are also able to produce special designs with significantly optimised properties. Please contact us.



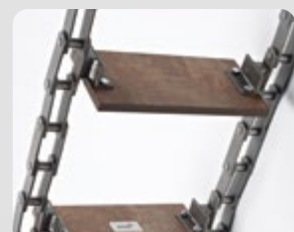
Missing predetermined breaking point



Missing predetermined breaking point

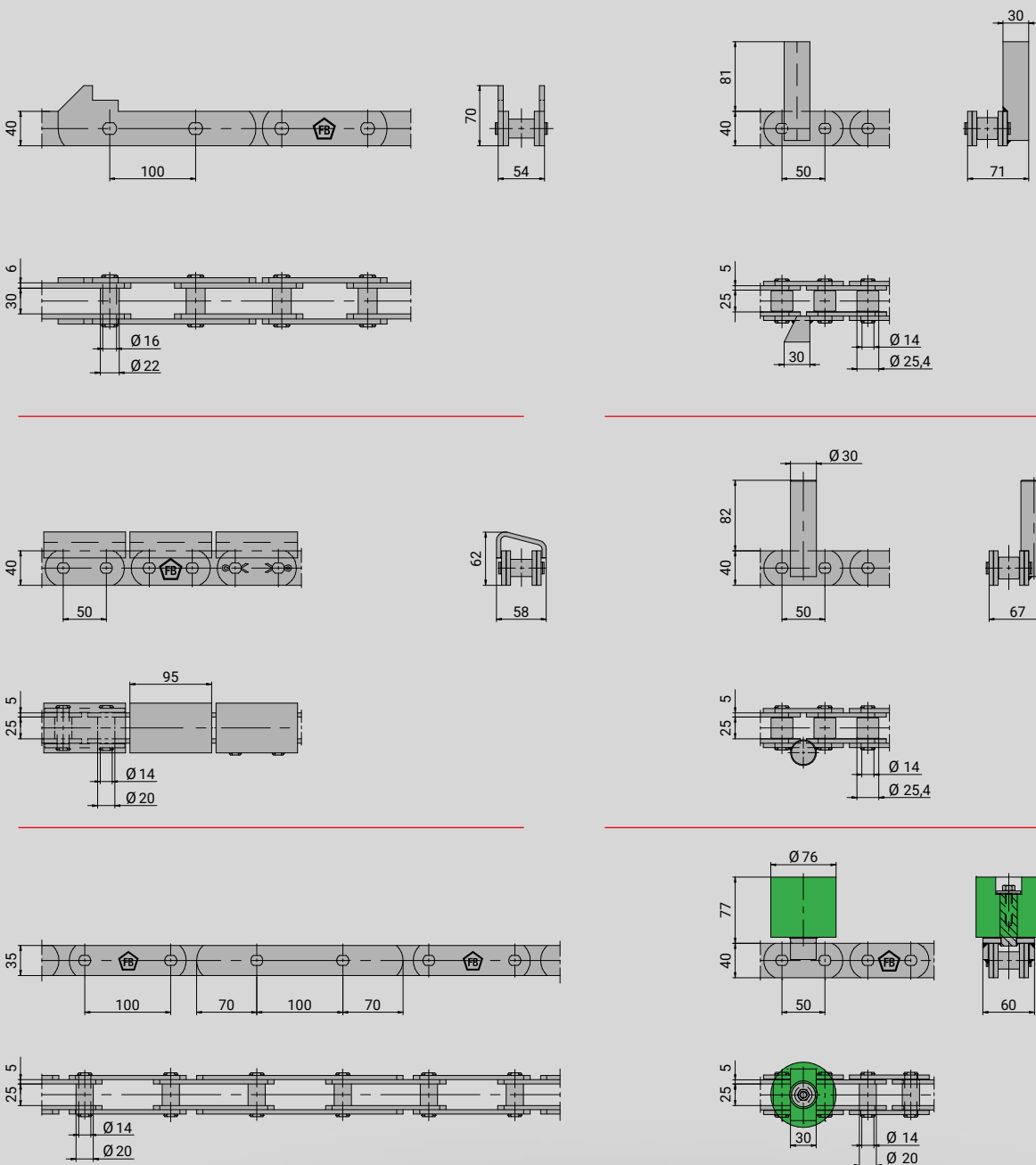


inno scraper attachment



Profile chain with inno scratchers

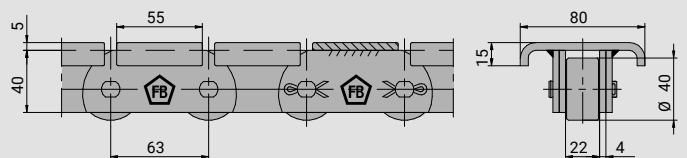
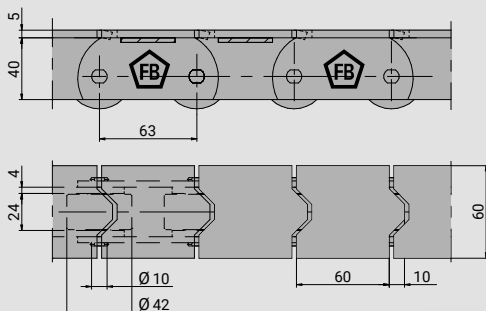
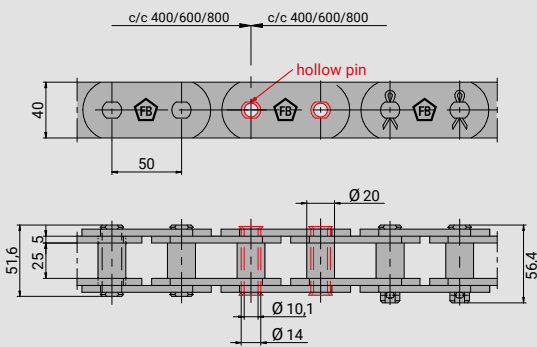
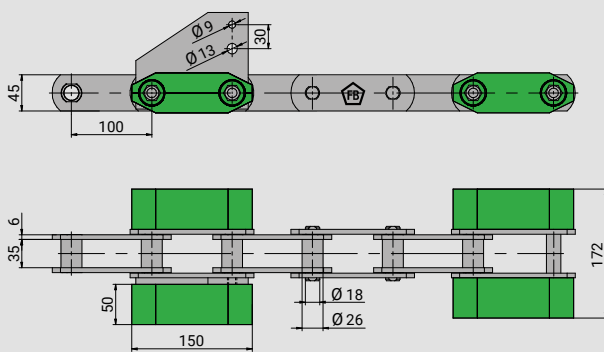
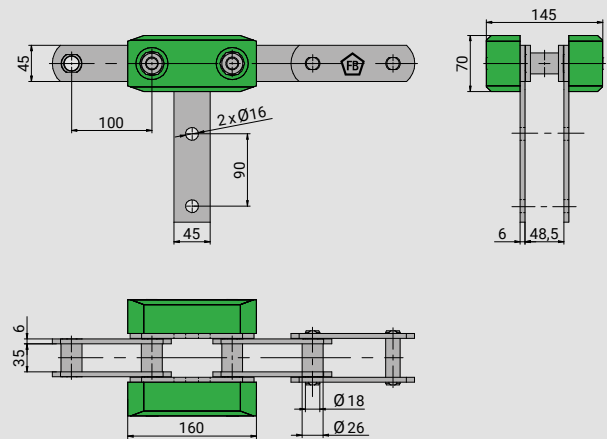
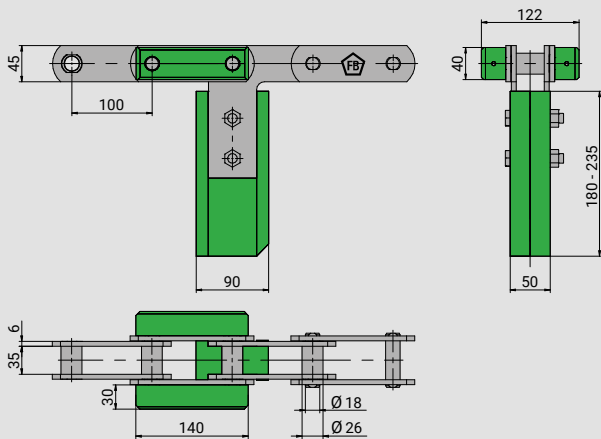
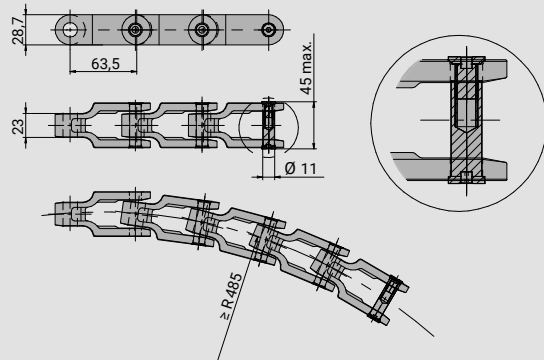
# TIMBER CONVEYORS



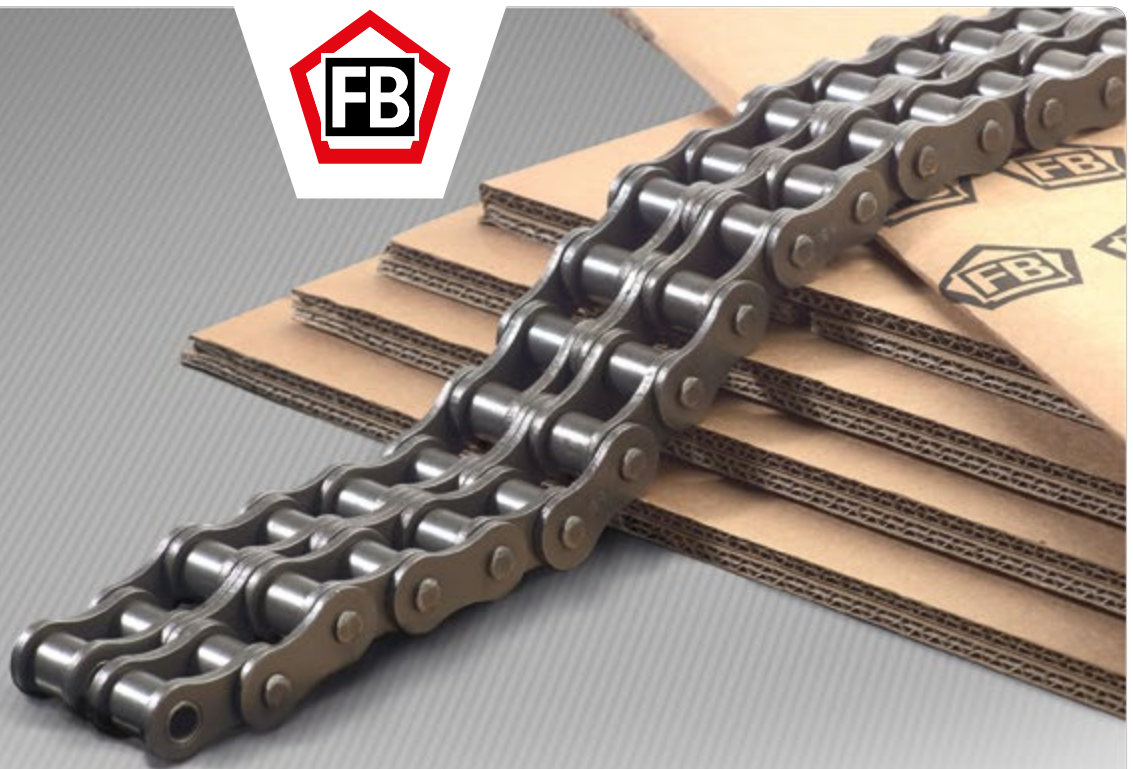
Other dimensions, styles and designs on request.



CC600 curved conveyor



Other dimensions, styles and designs on request.



# FB PRECISION ROLLER CHAINS

**Precision roller chains with high efficiency ratio for optimum use in industrial applications.**

**Given correct chain design, optimum operating conditions and proper lubrication and maintenance, roller chains achieve an efficiency ratio of almost 99 %.**

Roller chains consist of inner links with inner plates, bushes and rollers, as well as outer links with riveted pins. The rollers reduce friction losses and wear, reduce noise and, thanks to their design, allow the transmission of high forces and high chain speeds of up to 30 m/s.



#### **High fatigue strength and durability**

Precise components with tight manufacturing tolerances and precision punched plates with high waist

## ADVANTAGES



#### **High quality ensures operational safety**

High-quality steels and tools, process-controlled component production and heat treatment, fully automated chain assembly and quality control during production guarantee the high quality of FB roller chains



#### **Low wear of the roller chains**

Cold-pressed SBR (Solid Bush Roller) design



#### **Resource-saving and sustainable**

Recyclable materials and resource-saving production minimise the impact on the environment



#### **Chain cutting service – less time and effort**

We cut the chains to length according to your specifications. For you, this means less waste, lower costs and less effort



#### **Short delivery times due to pan-European logistics**

Even for roller chains with add-on parts (e.g. extended, angle and guide plates, extended pins and various plastic components, brackets, rubber, etc.)

# PRECISION MANUFACTURING

**FB precision roller chains are produced with seamless cold-pressed bushes and rollers.**

**FB link plates are manufactured using progressive toolings that press, cut and calibrate in one step. This allows us to achieve the largest-possible contact surface between the plates and the link parts and thus the highest-possible fatigue strength.**

The chain pins are calibrated, precisely cut to length and ground after heat treatment.

After heat treatment, the plates are shot-peened to remove sharp edges, eliminate minor surface damage and increase the residual stress of the components.

**FB precision roller chains are assembled fully automatically, dynamically prestretched and lubricated immediately afterwards.**

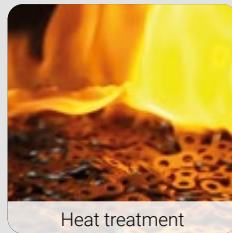
This means that the chain links rotate via sprockets and pulleys while being pre-stretched and lubricated. This ensures that the oil can penetrate well into all chain components. Dynamic pre-stretching and dynamic lubrication ensure reduced initial elongation and less link wear.



Progressive tool



Calibration of the wire



Heat treatment



Dynamic prestretching

## Optimised plate shape increases fatigue strength

FB ISO roller chains are manufactured with high waist link plates to increase fatigue strength and operational reliability.



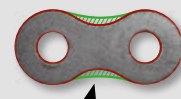
Inner plate 16B



Outer plate 12B



Inner plate 10B



Inner plate 08B

High waist

# OPTICAL COMPONENT INSPECTION

**All components and assembled chains are checked using automated photo technology.**

**Missing components, pins that are too short, defective riveting or other potential problems and defects are immediately marked and rejected at this point.**

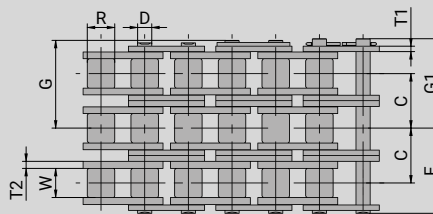
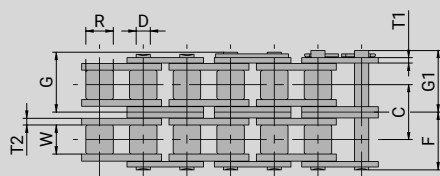
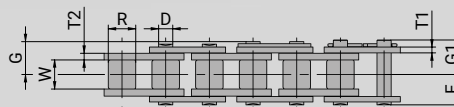
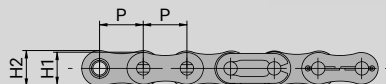
Our optical image recognition systems (CCD = Charge Coupled Device) are integrated into the assembly lines and, after years of continuous improvements, have replaced almost all manual or mechanical inspection methods.



Optical image recognition (CCD)



# FB PRECISION ROLLER CHAINS B SERIES, ISO 606 - DIN 8187

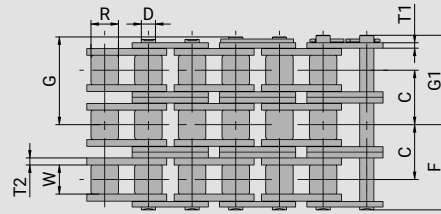
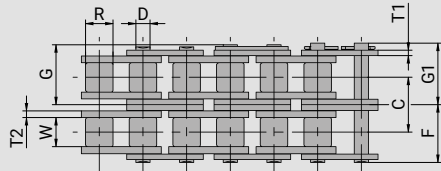
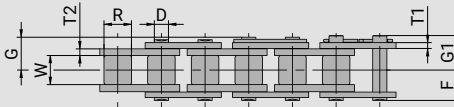
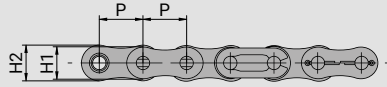


Chain type	Pitch		Connecting links	Inner width	Rollers	Plates				Pins				Centre distance	Breaking load		Weight			
	P					W min	Ø R max	H1 max	H2 max	T1 max	T2 max	Ø D max	F max		G max	G1 max		C	DIN	Ø FB
	(inches)	(mm)																		
06B-1*	3/8"	9,525	CG	5,72	6,35	8,10	8,10	1,00	1,30	3,28	6,10	7,40	-	-	8.900	10.300	0,39			
06B-2*	3/8"	9,525	NG	5,72	6,35	8,10	8,10	1,00	1,30	3,28	11,20	12,30	-	10,24	16.900	18.600	0,74			
06B-3*	3/8"	9,525	KG	5,72	6,35	8,10	8,10	1,00	1,30	3,28	16,30	17,40	-	10,24	24.900	26.500	1,09			
08B-1	1/2"	12,700	CG	7,75	8,51	10,20	11,80	1,50	1,50	4,44	8,20	9,50	-	-	17.800	19.100	0,65			
08B-2	1/2"	12,700	NG	7,75	8,51	10,20	11,80	1,50	1,50	4,44	15,30	16,70	-	13,92	31.100	34.300	1,30			
08B-3	1/2"	12,700	KG	7,75	8,51	10,20	11,80	1,50	1,50	4,44	22,20	23,50	-	13,92	45.500	49.100	1,92			
10B-1	5/8"	15,875	SG	9,65	10,16	13,00	14,60	1,65	1,65	5,06	9,60	11,10	11,80	-	22.200	26.500	0,92			
10B-2	5/8"	15,875	CG	9,65	10,16	13,00	14,60	1,65	1,65	5,06	17,90	19,40	20,10	16,59	44.500	53.000	1,68			
10B-3	5/8"	15,875	NG	9,65	10,16	13,00	14,60	1,65	1,65	5,06	26,20	27,50	28,20	16,59	66.700	79.500	2,62			
12B-1	3/4"	19,050	SG	11,68	12,07	16,00	16,00	1,80	1,80	5,72	11,10	12,60	13,70	-	28.900	33.400	1,24			
12B-2	3/4"	19,050	CG	11,68	12,07	16,00	16,00	1,80	1,80	5,72	20,80	22,40	23,40	19,46	57.800	66.700	2,28			
12B-3	3/4"	19,050	NG	11,68	12,07	16,00	16,00	1,80	1,80	5,72	30,60	31,90	32,50	19,46	86.700	100.100	3,55			
16B-1	1"	25,400	SG	17,02	15,88	20,80	20,80	3,20	4,00	8,28	17,70	19,25	20,20	-	60.000	78.500	2,65			
16B-2	1"	25,400	CG	17,02	15,88	20,80	20,80	3,20	4,00	8,28	33,64	35,16	36,16	31,88	106.000	157.000	5,25			
16B-3	1"	25,400	NG	17,02	15,88	20,80	20,80	3,20	4,00	8,28	49,58	51,12	52,12	31,88	160.000	235.400	7,86			
20B-1	1 1/4"	31,750	SG	19,56	19,05	26,00	26,00	3,50	4,50	10,19	20,50	-	23,50	-	95.000	117.700	3,85			
20B-2	1 1/4"	31,750	NG	19,56	19,05	26,00	26,00	3,50	4,50	10,19	38,73	-	41,72	36,45	170.000	235.400	7,65			
20B-3	1 1/4"	31,750	KG	19,56	19,05	26,00	26,00	3,50	4,50	10,19	56,95	-	59,95	36,45	250.000	353.200	11,45			
24B-1	1 1/2"	38,100	SG	25,40	25,40	33,00	33,00	5,20	6,00	14,63	26,65	-	32,35	-	160.000	176.600	7,60			
24B-2	1 1/2"	38,100	NG	25,40	25,40	33,00	33,00	5,20	6,00	14,63	50,83	-	56,53	48,36	280.000	353.200	14,80			
24B-3	1 1/2"	38,100	KG	25,40	25,40	33,00	33,00	5,20	6,00	14,63	75,00	-	80,72	48,36	425.000	529.700	21,90			
28B-1	1 3/4"	44,450	SG	30,99	27,94	37,00	37,00	6,30	7,50	15,90	32,48	-	37,97	-	200.000	206.000	9,05			
28B-2	1 3/4"	44,450	NG	30,99	27,94	37,00	37,00	6,30	7,50	15,90	62,26	-	67,75	59,56	360.000	402.000	17,12			
28B-3	1 3/4"	44,450	KG	30,99	27,94	37,00	37,00	6,30	7,50	15,90	92,04	-	97,53	59,56	530.000	589.000	25,61			
32B-1	2"	50,800	SG	30,99	29,21	42,00	42,00	6,40	7,10	17,81	32,68	-	38,17	-	250.000	260.000	10,63			
32B-2	2"	50,800	NG	30,99	29,21	42,00	42,00	6,40	7,10	17,81	61,95	-	67,45	58,55	450.000	495.400	20,85			
32B-3	2"	50,800	KG	30,99	29,21	42,00	42,00	6,40	7,10	17,81	91,23	-	96,72	58,55	670.000	745.600	31,57			
40B-1	2 1/2"	63,500	SG	38,10	39,37	52,90	52,90	8,00	8,50	22,89	40,20	-	47,30	-	355.000	388.500	16,25			
40B-2	2 1/2"	63,500	NG	38,10	39,37	52,90	52,90	8,00	8,50	22,89	76,35	-	83,45	72,29	630.000	745.600	31,86			
40B-3	2 1/2"	63,500	KG	38,10	39,37	52,90	52,90	8,00	8,50	22,89	112,50	-	119,60	72,29	950.000	1.098.700	48,14			
48B-1	3"	76,200	SG	45,72	48,26	63,50	63,50	10,00	12,10	29,24	49,40	-	56,50	-	560.000	610.200	25,05			
48B-2	3"	76,200	NG	45,72	48,26	63,50	63,50	10,00	12,10	29,24	95,00	-	102,10	91,21	1.000.000	1.157.600	49,83			
48B-3	3"	76,200	KG	45,72	48,26	63,50	63,50	10,00	12,10	29,24	140,60	-	147,70	91,21	1.500.000	1.736.400	75,07			
56B-1	3 1/2"	88,900	SG	53,34	53,98	77,85	77,85	12,30	13,60	34,32	117,00	-	137,00	-	850.000	850.000	35,80			
56B-2	3 1/2"	88,900	NG	53,34	53,98	77,85	77,85	12,30	13,60	34,32	223,00	-	243,60	106,60	1.600.000	1.600.000	70,00			
56B-3	3 1/2"	88,900	KG	53,34	53,98	77,85	77,85	12,30	13,60	34,32	330,50	-	350,20	106,60	2.240.000	2.240.000	105,00			

\* with straight plates. Other dimensions on request.



# FB PRECISION ROLLER CHAINS A SERIES, ISO 606 - DIN 8188



Chain type	Pitch		Connecting links	Inner width	Rollers	Plates				Pins				Centre distance	Breaking load		Weight			
	P					W min	Ø R max	H1 max	H2 max	T1 max	T2 max	Ø D max	F max		G max	G1 max		C	DIN	Ø FB
	(inches)	(mm)																		
40-1	½"	12,700	SG	7,85	7,92	10,20	11,80	1,50	1,50	3,98	8,20	9,35	10,00	-	13.900	18.100	0,63			
40-2	½"	12,700	CG	7,85	7,92	10,20	11,80	1,50	1,50	3,98	15,30	17,00	17,60	14,40	27.800	36.300	1,19			
40-3	½"	12,700	NG	7,85	7,92	10,20	11,80	1,50	1,50	3,98	22,65	23,80	24,55	14,40	41.700	54.400	1,77			
40-3	½"	12,700	KG	7,85	7,92	10,20	11,80	1,50	1,50	3,98	22,65	23,80	24,55	14,40	41.700	54.400	1,77			
50-1	⅝"	15,875	SG	9,40	10,16	13,00	14,80	2,00	2,00	5,09	10,10	11,65	12,60	-	21.800	30.400	1,01			
50-2	⅝"	15,875	CG	9,40	10,16	13,00	14,80	2,00	2,00	5,09	19,20	20,70	21,10	18,10	46.300	60.800	2,04			
50-3	⅝"	15,875	NG	9,40	10,16	13,00	14,80	2,00	2,00	5,09	28,30	29,65	30,20	18,10	65.400	91.200	3,05			
50-3	⅝"	15,875	KG	9,40	10,16	13,00	14,80	2,00	2,00	5,09	28,30	29,65	30,20	18,10	65.400	91.200	3,05			
60-1	¾"	19,050	SG	12,57	11,91	15,50	17,50	2,40	2,40	5,96	12,50	14,15	15,40	-	31.100	43.100	1,44			
60-2	¾"	19,050	CG	12,57	11,91	15,50	17,50	2,40	2,40	5,96	24,00	25,50	26,90	22,80	62.600	86.300	3,03			
60-3	¾"	19,050	NG	12,57	11,91	15,50	17,50	2,40	2,40	5,96	35,35	36,95	37,65	22,80	93.900	129.500	4,50			
60-3	¾"	19,050	KG	12,57	11,91	15,50	17,50	2,40	2,40	5,96	35,35	36,95	37,65	22,80	93.900	129.500	4,50			
80-1	1"	25,400	SG	15,75	15,88	20,40	23,90	3,20	3,20	7,94	16,10	17,75	18,80	-	55.600	76.500	2,40			
80-2	1"	25,400	CG	15,75	15,88	20,40	23,90	3,20	3,20	7,94	30,60	32,20	33,60	29,30	111.200	153.000	5,26			
80-3	1"	25,400	NG	15,75	15,88	20,40	23,90	3,20	3,20	7,94	45,30	47,00	48,00	29,30	166.800	229.600	7,80			
80-3	1"	25,400	KG	15,75	15,88	20,40	23,90	3,20	3,20	7,94	45,30	47,00	48,00	29,30	166.800	229.600	7,80			
100-1	1¼"	31,750	SG	18,90	19,05	24,80	30,10	4,00	4,00	9,54	20,10	-	23,10	-	87.000	115.800	3,74			
100-2	1¼"	31,750	CG	18,90	19,05	24,80	30,10	4,00	4,00	9,54	38,00	-	41,00	35,80	174.000	231.500	7,51			
100-3	1¼"	31,750	NG	18,90	19,05	24,80	30,10	4,00	4,00	9,54	55,90	-	58,90	35,80	261.000	347.300	11,20			
100-3	1¼"	31,750	KG	18,90	19,05	24,80	30,10	4,00	4,00	9,54	55,90	-	58,90	35,80	261.000	347.300	11,20			
120-1	1½"	38,100	SG	25,22	22,23	30,00	35,00	4,80	4,80	11,11	25,20	-	28,60	-	125.000	152.100	6,18			
120-2	1½"	38,100	CG	25,22	22,23	30,00	35,00	4,80	4,80	11,11	47,90	-	51,30	45,40	250.000	304.100	12,25			
120-3	1½"	38,100	NG	25,22	22,23	30,00	35,00	4,80	4,80	11,11	70,60	-	74,00	45,40	375.000	456.200	18,30			
120-3	1½"	38,100	KG	25,22	22,23	30,00	35,00	4,80	4,80	11,11	70,60	-	74,00	45,40	375.000	456.200	18,30			
140-1	1¾"	44,450	SG	25,22	25,40	36,20	42,00	5,60	5,60	12,71	27,30	-	31,50	-	170.000	210.900	7,49			
140-2	1¾"	44,450	CG	25,22	25,40	36,20	42,00	5,60	5,60	12,71	51,75	-	55,75	48,90	340.000	421.800	14,83			
140-3	1¾"	44,450	NG	25,22	25,40	36,20	42,00	5,60	5,60	12,71	76,20	-	80,40	48,90	510.000	632.700	22,20			
140-3	1¾"	44,450	KG	25,22	25,40	36,20	42,00	5,60	5,60	12,71	76,20	-	80,40	48,90	510.000	632.700	22,20			
160-1	2"	50,800	SG	31,55	28,58	41,40	48,00	6,40	6,40	14,29	32,55	-	37,25	-	223.000	269.800	10,10			
160-2	2"	50,800	CG	31,55	28,58	41,40	48,00	6,40	6,40	14,29	61,80	-	66,50	58,50	446.000	539.600	20,04			
160-3	2"	50,800	NG	31,55	28,58	41,40	48,00	6,40	6,40	14,29	91,05	-	95,75	58,50	669.000	809.300	30,02			
160-3	2"	50,800	KG	31,55	28,58	41,40	48,00	6,40	6,40	14,29	91,05	-	95,75	58,50	669.000	809.300	30,02			
200-1	2½"	63,500	SG	37,85	39,68	51,80	60,10	8,00	8,00	19,85	39,75	-	47,10	-	347.000	451.300	16,50			
200-2	2½"	63,500	CG	37,85	39,68	51,80	60,10	8,00	8,00	19,85	75,55	-	82,85	71,60	694.000	902.500	32,70			
200-3	2½"	63,500	NG	37,85	39,68	51,80	60,10	8,00	8,00	19,85	111,35	-	118,65	71,60	1.041.000	1.353.800	49,05			
200-3	2½"	63,500	KG	37,85	39,68	51,80	60,10	8,00	8,00	19,85	111,35	-	118,65	71,60	1.041.000	1.353.800	49,05			
240-1	3"	76,200	SG	47,35	47,63	62,40	72,20	9,50	9,50	23,81	47,70	-	54,80	-	500.000	672.000	24,20			
240-2	3"	76,200	CG	47,35	47,63	62,40	72,20	9,50	9,50	23,81	91,60	-	98,70	87,80	1.000.000	1.344.000	47,80			
240-3	3"	76,200	NG	47,35	47,63	62,40	72,20	9,50	9,50	23,81	135,50	-	142,60	87,80	1.500.000	2.016.000	71,10			
240-3	3"	76,200	KG	47,35	47,63	62,40	72,20	9,50	9,50	23,81	135,50	-	142,60	87,80	1.500.000	2.016.000	71,10			

Other dimensions on request.



CG  
Spring clip connecting link



SG  
Cotter connecting link



NG  
Riveting link, outer link



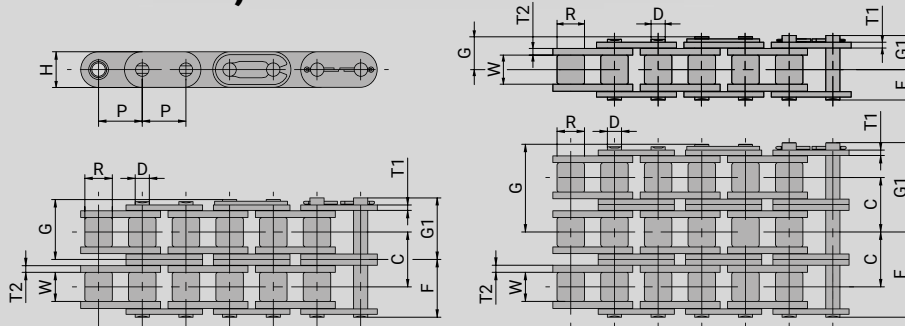
KG  
Offset link



IG  
Inner link



# FB PRECISION ROLLER CHAINS STRAIGHT PLATES, ISO 606 - DIN 8187



Chain type	Pitch		Connecting links	Inner width	Rollers	Plates					Pins				Centre distance		Breaking load		Weight
	P					W min	Ø R max	H max	T1 max	T2 max	Ø D max	F max	G max	G1 max	C	DIN	Ø FB		
	(inches)	(mm)																(mm)	
06B-1GL	3/8"	9,525	CG	5,72	6,35	8,10	1,00	1,30	3,28	6,10	7,40	-	-	8.900	10.300	0,39			
06B-2GL	3/8"	9,525	NG	5,72	6,35	8,10	1,00	1,30	3,28	11,20	12,30	-	10,24	16.900	18.600	0,74			
06B-3GL	3/8"	9,525	KG	5,72	6,35	8,10	1,00	1,30	3,28	16,30	17,40	-	10,24	24.900	26.500	1,09			
08B-1GL	1/2"	12,700	CG	7,75	8,51	11,80	1,50	1,50	4,45	8,35	9,85	-	-	17.800	32.300	0,80			
08B-2GL	1/2"	12,700	NG	7,75	8,51	11,80	1,50	1,50	4,45	15,43	16,78	-	13,92	31.100	41.300	1,45			
08B-3GL	1/2"	12,700	KG	7,75	8,51	11,80	1,50	1,50	4,45	22,45	23,65	-	13,92	45.500	52.700	2,10			
10B-1GL	5/8"	15,875	SG	9,65	10,16	14,70	1,70	1,70	5,08	9,75	11,15	12,15	-	22.200	38.200	1,06			
10B-2GL	5/8"	15,875	CG	9,65	10,16	14,70	1,70	1,70	5,08	18,05	19,45	20,45	16,59	44.500	54.800	2,00			
10B-3GL	5/8"	15,875	KG	9,65	10,16	14,70	1,70	1,70	5,08	26,35	27,75	28,75	16,59	66.700	70.800	2,87			
12B-1GL	3/4"	19,050	SG	11,68	12,07	16,10	1,85	1,85	5,72	11,25	12,95	13,85	-	28.900	31.300	1,32			
12B-2GL	3/4"	19,050	CG	11,68	12,07	16,10	1,85	1,85	5,72	21,00	22,60	23,60	19,46	57.800	65.700	2,62			
12B-3GL	3/4"	19,050	KG	11,68	12,07	16,10	1,85	1,85	5,72	30,75	32,4	33,45	19,46	86.700	102.500	3,89			
16B-1GL	1"	25,400	SG	17,02	15,88	21,00	3,20	4,00	8,28	17,70	19,25	20,20	-	60.000	73.200	2,70			
16B-1GL(24)	1"	25,400	CG	17,02	15,88	24,00	3,20	4,00	8,28	17,70	19,25	20,20	-	60.000	73.200	3,30			
16B-2GL	1"	25,400	NG	17,02	15,88	21,00	3,10	4,15	8,28	34,00	35,30	37,00	31,88	106.000	146.700	6,10			
16B-3GL	1"	25,400	KG	17,02	15,88	21,00	3,10	4,15	8,28	49,90	51,30	53,00	31,88	160.000	200.600	9,12			
20B-1GL	1 1/4"	31,750	SG	19,56	19,05	26,40	3,50	4,55	10,19	20,70	-	24,90	-	95.000	101.300	4,16			
24B-1GL	1 1/2"	38,100	NG	25,40	25,40	33,00	5,00	6,00	14,63	26,70	-	31,10	-	160.000	180.900	7,47			
32B-1GL	2"	50,800	KG	30,99	29,21	42,20	6,30	7,00	17,81	33,40	-	37,50	-	250.000	271.500	10,45			

Other dimensions on request.

# FB HEAVY DUTY ROLLER CHAINS, REINFORCED, SIMILAR TO ISO 606

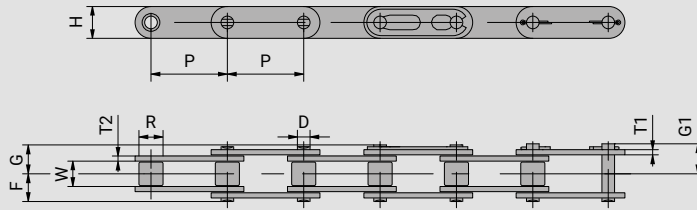
Chain type	Pitch		Connecting links	Inner width	Rollers	Plates					Pins				Centre distance		Breaking load		Weight
	P					W min	Ø R max	H1 max	H2 max	T1 max	T2 max	Ø D max	F max	G max	G1 max	C	DIN	Ø FB	
	(inches)	(mm)																	
12B-1H	3/4"	19,050	SG, CG, NG, KG	11,68	12,07	16,00	16,00	2,35	2,35	6,10	12,28	13,73	14,38	-	29.000	45.000	1,60		
16B-1H	1"	25,400	SG, CG, NG, KG	17,02	15,88	24,10	24,10	3,50	4,50	8,90	18,50	21,05	22,00	-	78.000	96.000	3,00		
16B-2H	1"	25,400	SG, NG, KG	17,02	15,88	24,00	24,00	3,20	4,00	9,00	34,00	-	39,40	31,88	106.000	180.000	6,25		
24B-1H	1 1/2"	38,100	SG, NG, KG	25,40	25,40	36,20	36,20	6,00	7,50	14,63	29,30	-	34,10	-	225.000	239.000	7,80		
60-1HGL*	3/4"	19,050	SG, CG, NG, KG	12,57	11,91	18,00	18,00	3,25	3,25	5,94	14,65	16,35	17,05	-	31.300	40.000	1,60		

\* with straight plates. Other dimensions on request.



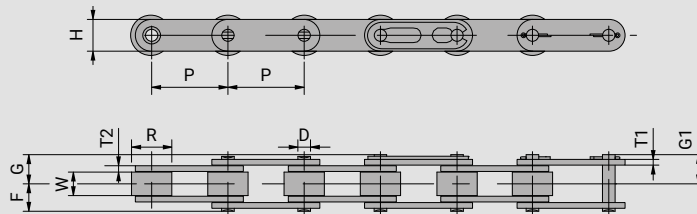


# FB LONG PITCH ROLLER CHAINS STRAIGHT PLATES, ISO 1275 - DIN 8181



Chain type	Pitch		Connecting links	Inner width	Rollers	Plates			Pins				Breaking load		Weight		
	P					W min	Ø R max	H max	T1 max	T2 max	Ø D max	F max	G max	G1 max		DIN	Ø FB
	(inches)	(mm)															
C2040	1"	25,400	CG, NG, KG	7,85	7,92	12,00	1,50	1,50	3,98	8,20	9,35	10,10	13.900	18.100	0,49		
C2050	1¼"	31,750	SG, CG, NG, KG	9,40	10,16	15,00	2,00	2,00	5,09	10,10	11,65	12,60	21.800	30.400	0,84		
C2060H	1½"	38,100	CG, NG, KG	12,57	11,91	18,00	3,20	3,20	5,96	14,10	15,70	16,60	31.300	43.100	1,45		
C2080H	2"	50,800	SG, CG, NG, KG	15,75	15,88	24,10	4,00	4,00	7,94	17,90	19,40	20,80	55.600	76.500	2,41		
C2100H	2½"	63,500	SG, NG, KG	18,90	19,05	30,10	4,80	4,80	9,54	21,70	-	24,90	87.000	112.800	3,50		
C2120H	3"	76,200	SG, NG, KG	25,22	22,23	36,20	5,60	5,60	11,11	26,98	-	30,57	125.000	147.100	6,00		
C2160H	4"	101,600	SG, NG, KG	31,55	28,58	48,20	7,20	7,20	14,29	34,15	-	38,85	222.400	294.200	8,90		

Other dimensions on request.

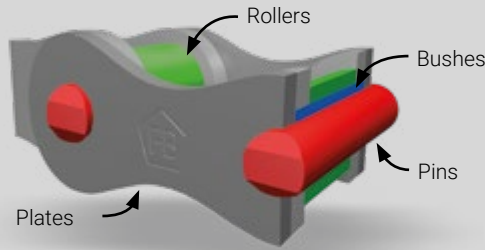


Chain type	Pitch		Connecting links	Inner width	Rollers	Plates			Pins				Breaking load		Weight		
	P					W min	Ø R max	H max	T1 max	T2 max	Ø D max	F max	G max	G1 max		DIN	Ø FB
	(inches)	(mm)															
C2042	1"	25,400	SG, CG, NG, KG	7,85	15,88	12,00	1,50	1,50	3,98	8,20	9,35	10,10	13.900	18.100	0,86		
C2052	1¼"	31,750	SG, CG, NG, KG	9,40	19,05	15,00	2,00	2,00	5,09	10,10	11,65	12,60	21.800	30.400	1,32		
C2062H	1½"	38,100	SG, CG, NG, KG	12,57	22,23	18,00	3,20	3,20	5,96	14,10	15,70	16,60	31.300	43.100	2,17		
C2082H	2"	50,800	SG, CG, NG, KG	15,75	28,58	24,10	4,00	4,00	7,94	17,90	19,40	20,80	55.600	76.500	3,45		
C2102H	2½"	63,500	SG, NG, KG	18,90	39,67	30,10	4,80	4,80	9,54	21,70	-	24,90	87.000	112.800	4,68		
C2122H	3"	76,200	SG, NG, KG	25,22	44,45	36,20	5,60	5,60	11,11	26,98	-	30,57	125.000	147.100	8,00		
C2162H	4"	101,600	SG, NG, KG	31,55	57,15	48,20	7,20	7,20	14,29	34,15	-	38,85	222.400	294.200	13,52		

Other dimensions on request.



# MATERIALS, HEAT TREATMENTS AND MANUFACTURING PROCESSES



	<b>Pins</b>	<b>Bushes</b>	<b>Rollers</b>	<b>Plates</b>
<b>Materials:</b>	alloy steels	carbon steels (C steels)	carbon steels (C steels)	carbon steels (C steels)
<b>Heat treatment:</b>	hardened or hardened and tempered*	case-hardened	hardened or hardened and tempered*	hardened and tempered
<b>Manufacturing:</b>	deburred, centreless ground or mirror polished, 2/4 point riveted*.	seamless cold-pressed, deburred, centreless ground	seamless cold-pressed, deburred, centreless ground	precision punched plate holes, double or triple punched*, tumbled and shot-peened

\*depending on the chain dimension and the application



Roller chains with chamfered plates ISO 606 (DIN 8187, DIN 8188) and FB-factory-standards – simplex, duplex, triplex



Roller chains with straight plates ISO 606 (DIN 8187, DIN 8188) and FB-factory standards – simplex, duplex, triplex



Long pitch roller chains ISO 1275 (DIN 8181) and FB-factory standards



# FB PRECISION ROLLER CHAINS WITH ATTACHMENTS

Many applications require roller chains with add-on parts to perform different functions (carrying, pushing, pulling or rolling the conveyed material). **We manufacture bespoke attachment-chains with ISO dimensions, according to drawings, samples or our own on-site-measurements. We offer INEXPENSIVE solutions for a wide range of transmission and conveying tasks.**

Angle plates, attachment plates, plain plates or guide plates as well as extended pins are the most frequently used add-on parts for roller chains. Steel, plastic or roller attachments are usually mounted on the extended pins. In order to reduce costs, we use pins from duplex or triplex roller chains wherever possible.

**We offer suitable and flexible chain solutions for almost any application.**



#### High fatigue strength and durability

Precise components with close manufacturing tolerances and precision-punched plates with a high press fit and optimum heat treatment guarantee fatigue strength and breaking loads exceeding ISO specifications

## ADVANTAGES



#### High quality ensures operational safety

High-quality steels and tools, process-controlled component production and heat treatment, fully automated chain assembly and quality control during production guarantee the high quality of FB roller chains



#### Low chain elongation of the roller chains

Ground pins and bushes with very high surface quality, pre-stretching to  $\geq 30\%$  of the breaking load and cold-pressed SBR\* bushes and rollers reduce chain elongation



#### Resource-saving and sustainable

Recyclable materials and resource-saving production ensure a minimisation of the environmental impact



#### Chain cutting service – less time and effort

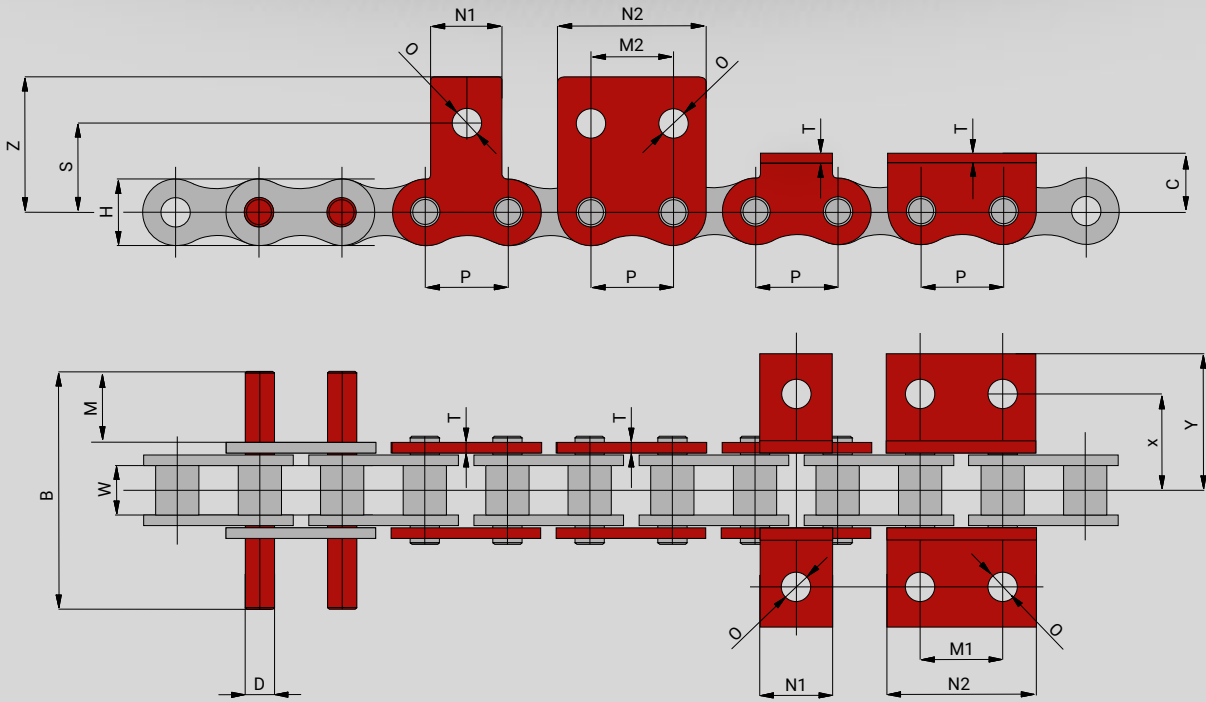
We cut the chains to length according to your specifications. For you, this means less waste, lower costs and less effort



#### Short delivery times due to pan-European logistics

Even for stainless steel roller chains with add-on parts (e.g. angle, extended, or guide plates, extended pins and various plastic components, brackets, rubber, etc.)

\* (SBR = Solid Bush Roller)



Part number	Pitch		Inside diameter	Plates		Plane plates - angle plates									
	P			W min	H	T	M1	M2	N1	N2	O	C	X	Y	S
	(inches)	(mm)	(mm)												
06B-1	3/8"	9,525	5,72	8,10	1,30	-	-	8,00	-	3,00	6,70	9,70	14,70	10,00	14,50
08B-1	1/2"	12,700	7,75	11,80	1,50	12,70	12,70	11,00	22,90	4,30	8,90	13,80	20,85	13,70	20,80
10B-1	5/8"	15,875	9,65	14,60	1,65	15,88	15,88	14,00	28,95	5,30	10,30	15,90	24,80	16,50	24,90
12B-1	3/4"	19,050	11,68	16,00	1,80	19,05	19,05	18,00	36,00	6,60	12,20	17,60	26,35	18,50	28,20
16B-1	1"	25,400	17,02	20,80	3,20	25,40	25,40	24,00	45,70	8,40	17,00	29,00	41,90	27,40	39,70
16B-1 PA 1610	1"	25,400	17,02	20,80	3,10	-	25,40	-	45,70	8,40	-	-	-	27,20	40,00
16B-1 WA 1614	1"	25,400	17,02	20,80	3,10	25,40	-	-	-	8,40	17,00	28,9	43,10	-	-
20B-1	1 1/4"	31,750	19,56	26,00	3,50	-	-	45,00	-	10,50	21,50	32,80	46,80	33,00	47,00
24B-1	1 1/2"	38,100	25,40	33,00	6,00	-	-	54,00	-	12,50	25,00	39,20	55,20	36,50	52,50

Also available WITHOUT holes. Plane plates and angle plates on one or both sides and are designed as outer link by default.  
Other dimensions and/or designs on request.

Part number	Pitch		Inside diameter	Plates		Extended pins				
	P			W min	H	T	M		B	
	(inches)	(mm)	(mm)				(mm)	(mm)	(mm)	(mm)
06B-1	3/8"	9,525	5,72	8,10	1,30	11,60	21,80	23,70	33,90	3,28
08B-1	1/2"	12,700	7,75	11,80	1,50	15,00	28,80	30,90	44,80	4,45
10B-1	5/8"	15,875	9,65	14,60	1,65	17,80	34,50	35,70	52,30	5,08
12B-1	3/4"	19,050	11,68	16,00	1,80	21,10	40,60	42,10	61,60	5,72
16B-1	1"	25,400	17,02	20,80	3,20	33,80	65,50	67,10	98,80	8,28
20B-1	1 1/4"	31,750	19,56	26,00	3,50	38,20	74,70	76,80	113,30	10,19
24B-1	1 1/2"	38,100	25,40	33,00	6,00	49,90	98,90	100,90	149,90	14,63

Extended pin also available with snap ring groove or holes.  
Other dimensions and/or designs on request.



## WE OFFER A WIDE VARIETY OF ADD-ON PARTS:

- Angle plates
- Extended plates or guide plates
- Sharp-top link plates
- Pins extended on one or both sides
- Plastic parts
- Brackets with vulcanised rubber
- Bolted-on attachments
- Custom products (laser, plasma, machining)
- Many products made to specification

Bespoke attachment-chains will be pre-assembled ready for installation. Design, attachment distance and mounting positions (one side, two sides) are adapted exactly to your requirements.

On demand with various **corrosion-resistant coatings** or as **stainless** designs available.

## ANGLE PLATE DESIGNS



## EXTENDED PLATE DESIGNS



## EXTENDED PINS





# CORROSION-RESISTANT CHAINS WITH GEOMET® COATING

**Stainless steel chains are very expensive and their fatigue strength, breaking load and wear resistance are much lower than those of ISO roller chains.**

**Chains with an abrasion-resistant coating and improved initial lubrication are an INEXPENSIVE alternative for applications in corrosive environments.**

Breaking forces and fatigue strengths of FB GEOMET® chains exceed international standards for roller chains and leaf chains.  
(ISO 606 - DIN 8187; DIN 8188 and/or ISO 4347 - DIN 8152)

The GEOMET® surface coating is sustainable, environmentally friendly and free of Chromium trioxide. It also complies with the environmental regulations of the European Parliament. (2000/53/EG and 2011/65/EU)

## ADVANTAGES



### Completely chromium-free, water-based coating

Free of heavy metals. We do not use nickel, cadmium, lead, barium or mercury in the coating process



### High strength, resilience and durability

Fatigue strength, wear resistance and breaking strength exceed ISO specifications. The chains have good chemical and mechanical resistance



### Ideal resistance at maximum operating temperatures

CRF GEOMET® chains master extreme temperatures from -30 ° to +250 °C over a longer period of time



### Can be recoated without problems and is non-electrolytic

As in most applications, the thin coating provides electrical conductivity. The silver coating colour can be recoated without problems



### No fear of hydrogen embrittlement

GEOMET® coatings do not cause hydrogen embrittlement



### Reduced friction coefficient

The friction coefficient is between 0,06 - 0,18 (ISO 16047), which is 25-30 % lower than that of similar ISO chains



# CORROSION PROTECTION



Uncoated chain gets heavily corroded due to exposure to various environmental influences (e.g. rain, road salt, salty air in harbours)



Chains with abrasion-resistant coating are an INEXPENSIVE alternative for use in corrosive environments

## CRF GEOMET® CHAINS with special surface coating look like new even after the salt spray test (ASTM B117).

The excellent result after 600 hours in the salt spray test speaks for itself. The chains have not suffered any visible corrosion and look almost the same after the long-term test.

### Stress test:

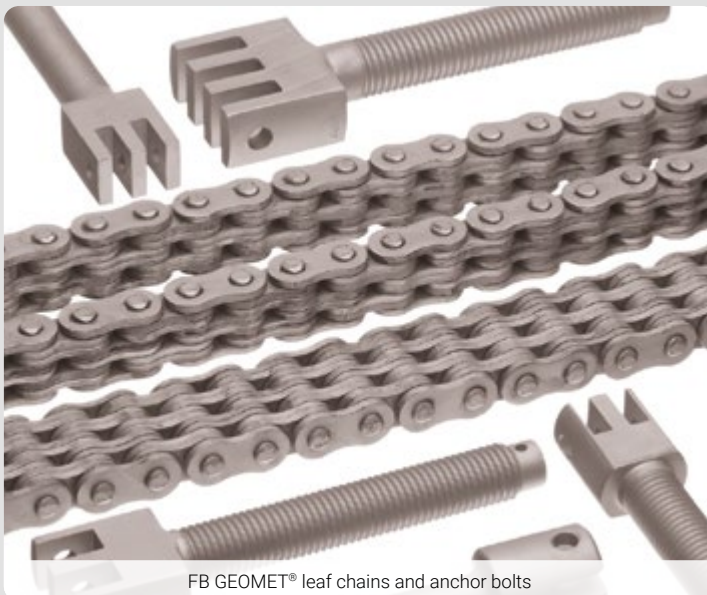
600 hours  
in salt spray test (ASTM B117)

Before the test:

After the test:



The salt spray test is a standardised test for the evaluation of the corrosion protection of metallic coatings or chemical or physical surface treatments. The test specimens are positioned in a test chamber in which a sprayed salt solution affects the chains under standardised conditions.

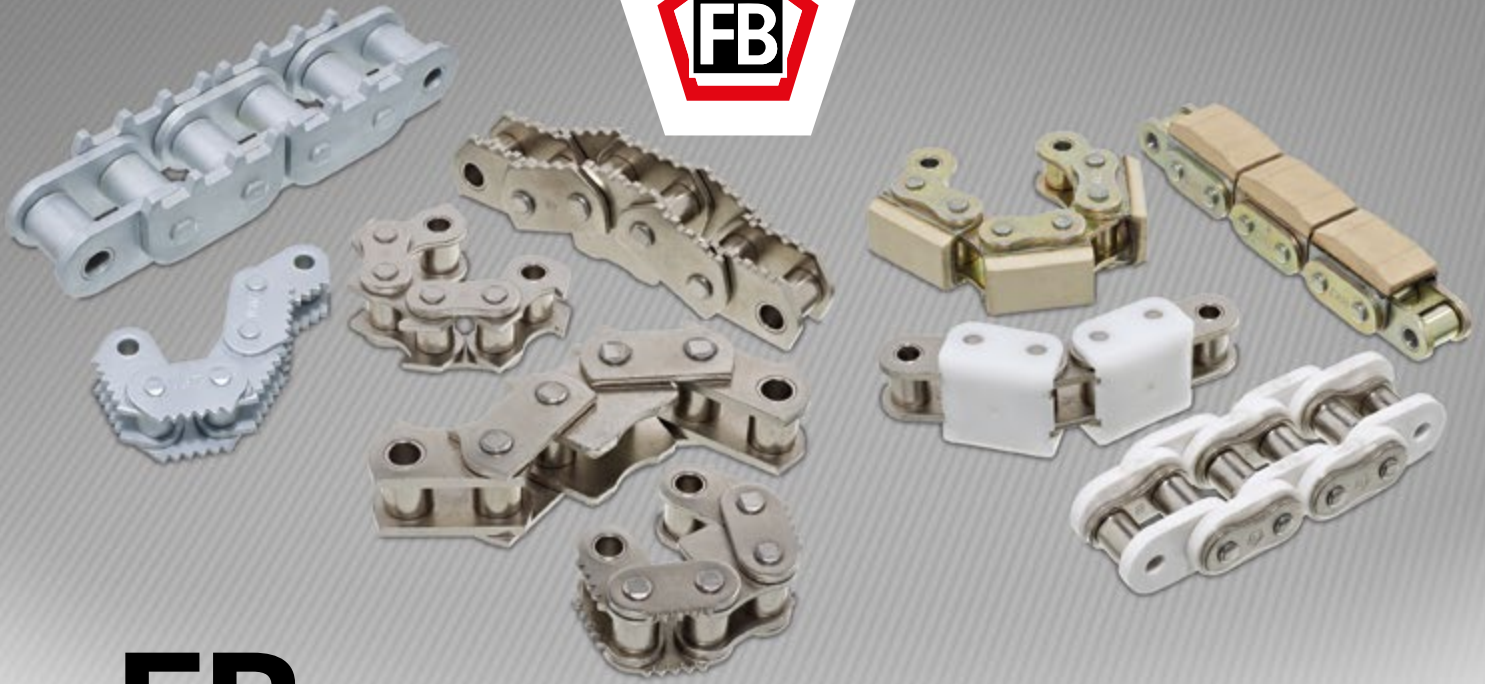


FB GEOMET® leaf chains and anchor bolts



FB GEOMET® leaf chains in a salt storage factory

Avoid contact with other stainless steel components (e.g. sprockets, screws, etc.), since this could lead to contact corrosion. We do not recommend using GEOMET® chains in direct contact with food, as powdery or metallic abrasion may occur during use.



# FB ROLLER CHAINS

## WITH SHARP-TOP PLATES OR PLASTIC COMPONENTS

FB roller chains with sharp-top plates or integrated plastic components cannot be compared with transmission roller chains, because they work as conveyor chains in direct contact with the conveyed material. These are usually heavy logs, boards, composite lumber, construction lumber, chipboard, medium-density fibreboard or oriented structural board, coated steel and aluminium profiles.

We meet highest quality standards and, in over 100 years of experience, have adapted and continuously optimised materials, heat treatments, processing and design of these highly stressed roller chains to the challenging operating conditions.

Fatigue strength is more important than breaking load when it comes to achieving high operational reliability. Through the ideal combination of many different manufacturing parameters and processes, we achieve fatigue strength values that far exceed ISO specifications.



### Short delivery times – largest warehouse in Europe

We stock all common sharp-top roller chains, roller chains with plastic parts or rubber for the wood industry

## ADVANTAGES



### FB innovations turn into new standards

We have developed the block intermediate plates in multiple chains or hardened teeth in infed chains for chop saws and were the first to use the SBR\* design in sharp-top chains. Our plastic clips are the best on the market, they are approved and have been optimised in close cooperation with users



### High quality ensures operational safety

High-quality steels and tools, process-controlled component production and heat treatment, automated chain assembly and quality control during production guarantee the high quality of sharp-top roller chains with plastic components from FB



### 30% less chain elongation, low link wear

Dynamic pre-stretching and optimised initial lubrication, cold-pressed SBR\* bushes and rollers



### Resource-saving, sustainable and cost-efficient

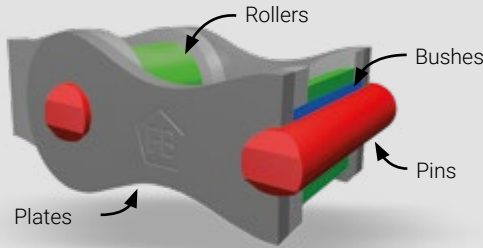
FB chain cutting service – we cut the chains to length according to your specifications. For you, this means less waste, lower costs and less work

\* (SBR = Solid Bush Roller)





# MATERIALS, HEAT TREATMENTS AND MANUFACTURING PROCESSES



	<b>Pins</b>	<b>Bushes</b>	<b>Rollers</b>	<b>Plates</b>
Materials:	alloy steels	carbon steels (C steels)	carbon steels (C steels)	carbon steels (C steels)
Heat treatment:	hardened or hardened and tempered*	case-hardened hardened	hardened or hardened and tempered*	hardened and tempered
Manufacturing:	deburred, centreless ground polished, 2/4 point riveted*	seamless cold-pressed, deburred, centreless ground	seamless cold-pressed, deburred, centreless ground	Precision-punched plate holes, double or triple punched*, riveted or shot-peened

\* depending on chain dimension and intended application

## INITIAL LUBRICATION

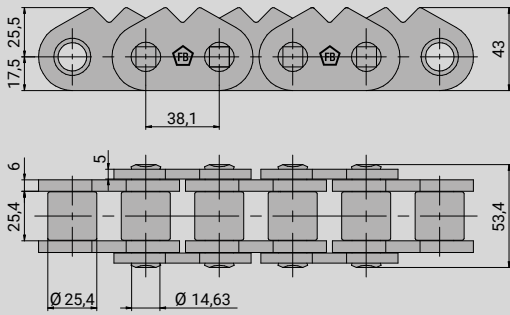
FB precision roller chains are immersed in a 150 °C oil bath for approx. 50 minutes. We rotate the bearings and the lubricant penetrates into the link parts and thus prolongs the service life of the chain and the sprockets. It absorbs the shocks occurring when the chain enters the sprocket and reduces noise during operation. Roller chains with plastic plates and chains with vulcanised rubber receive special lubrication that does not contaminate the plastics or rubber.

Our initial lubrication is a combination of lubricant and corrosion protection. We recommend relubricating the chains accordingly when they are put into operation or after a short operating time.

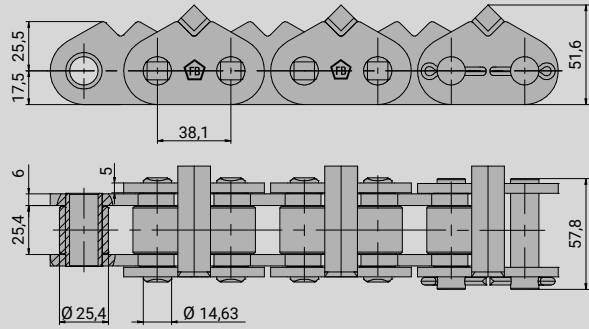
We also offer special lubrications which fit challenging operating conditions (e.g. H1-compliant for the food industry, for high temperatures, for high surface pressures, etc.).



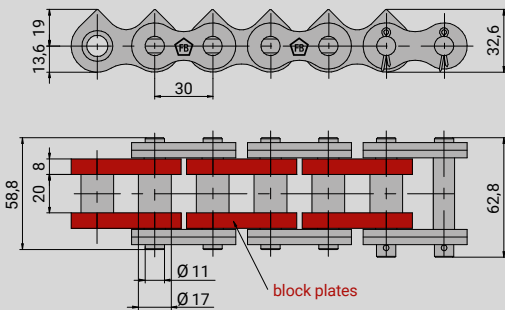
# LOG ROTATION



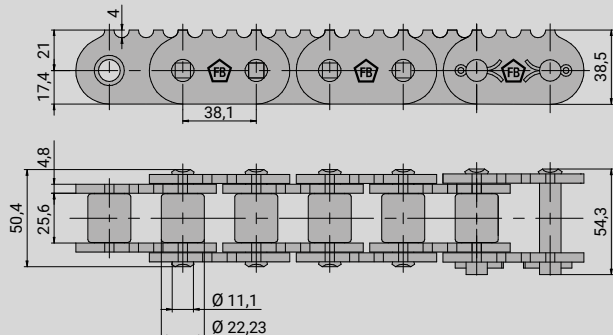
5152.000.23T



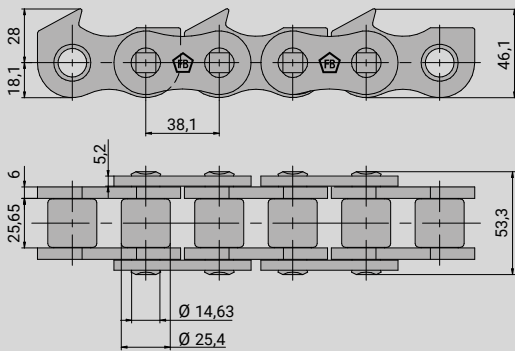
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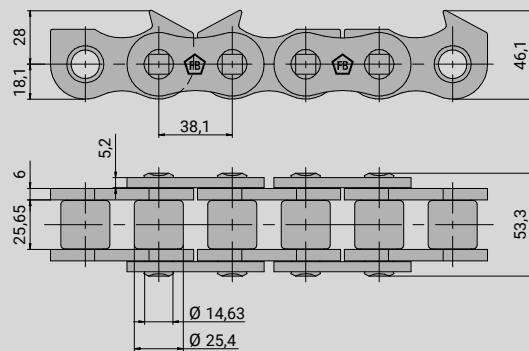
BK20.30FBVERZx60I



LEK120-1T  
6152.000.02



24B-1FBVERZ1x76,2I/OWB



24B-1FBVERZ1x76,2IR/OWB



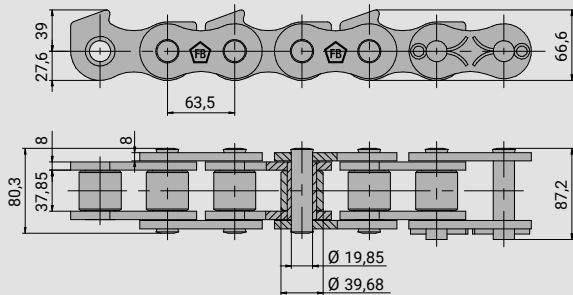
Log rotation - butt flare reducer



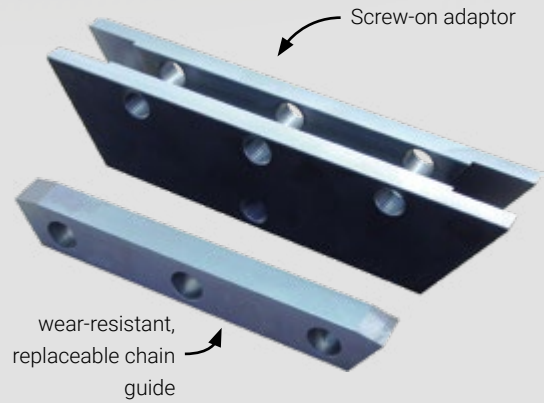
Log rotation - band saw



# LOG ROTATION

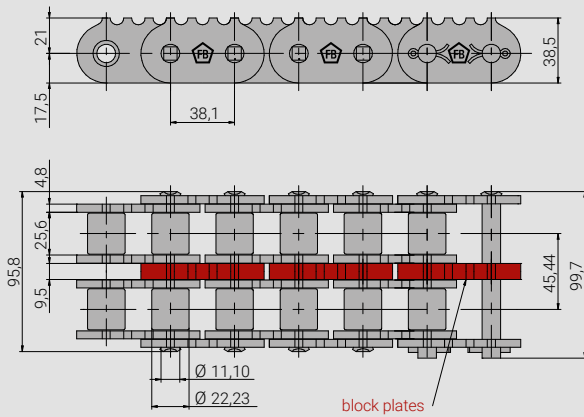


200-1T-KIA30

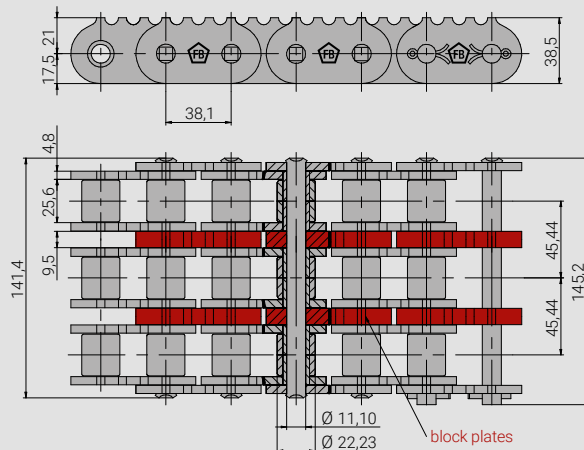


Butt flare reducer – split chain guide

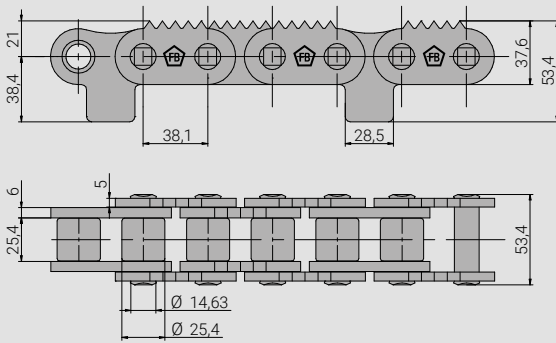
# CHIPPER CANTER INFEEED



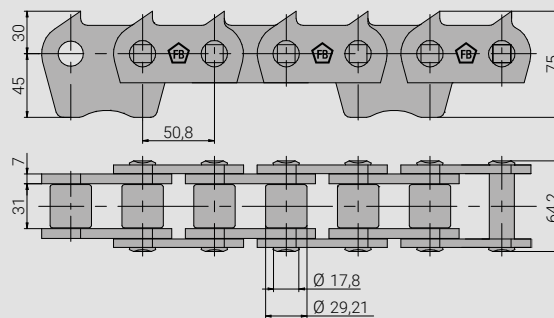
LEK120-2T  
6252.000.02



LEK120-3T  
6352.000.02



24B-1TVERZS/PLX152,4I



32B-1FBVERZS2/PLx203,2I  
5167.000.55

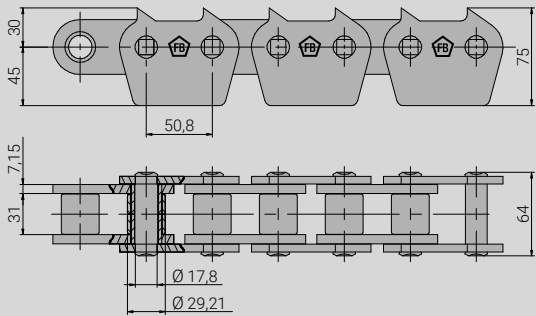


Profiler – infeed chains

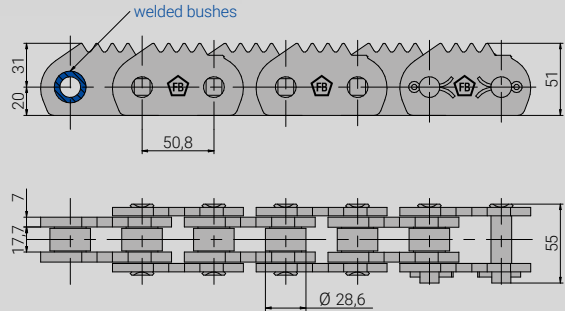


Canter infeed

# CANTER INFEED

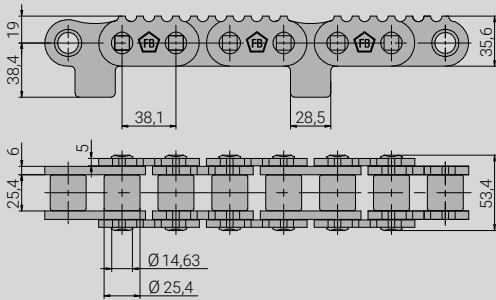


5269.000.4

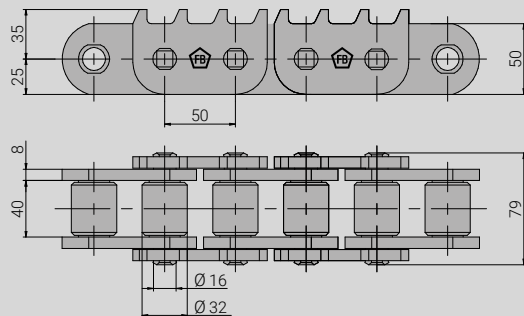


(32-1T)VERZ4

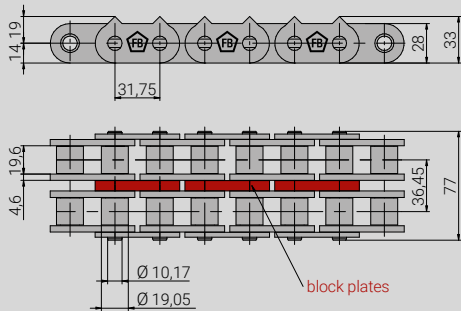
# CANTER OUTFEED (BOARD SEPARATOR)



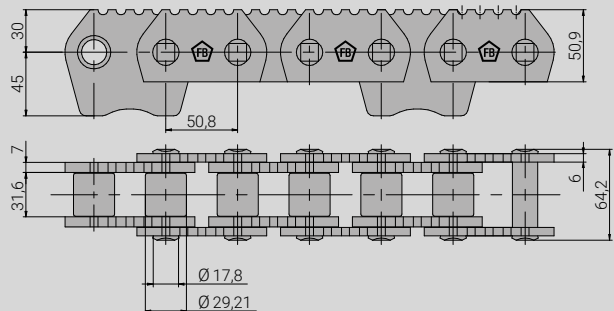
24B-1TVERZ/PLx152,4I  
5152.000.51



LZK40.50FB-50x8



5230.000.04



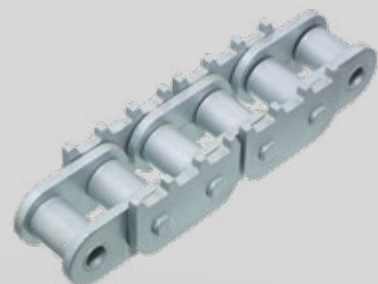
32B-1FBFVERZ5/PLx203,2I  
5167.000.56



Canter – sprocket

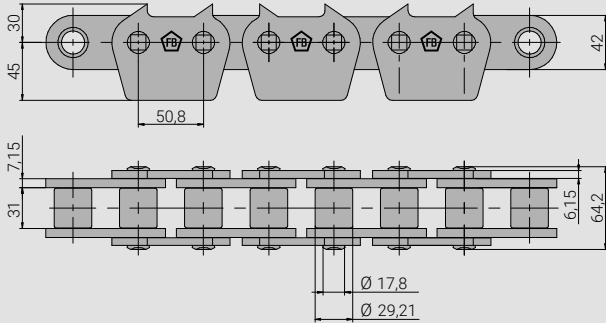


Profiler - idler sprocket, bearing cover

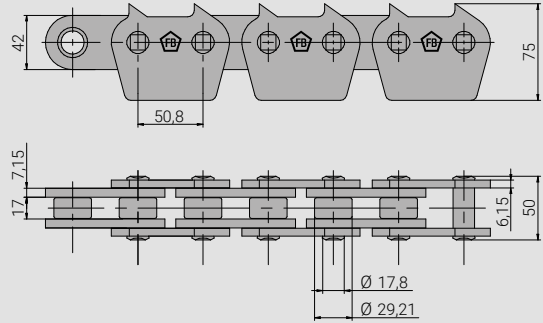


Timber separator chain SE

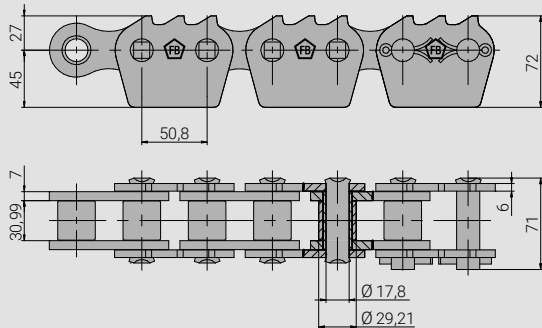
# CANTER OFFFEED (BOARD SEPARATOR)



5167.000.08



5202.000.8

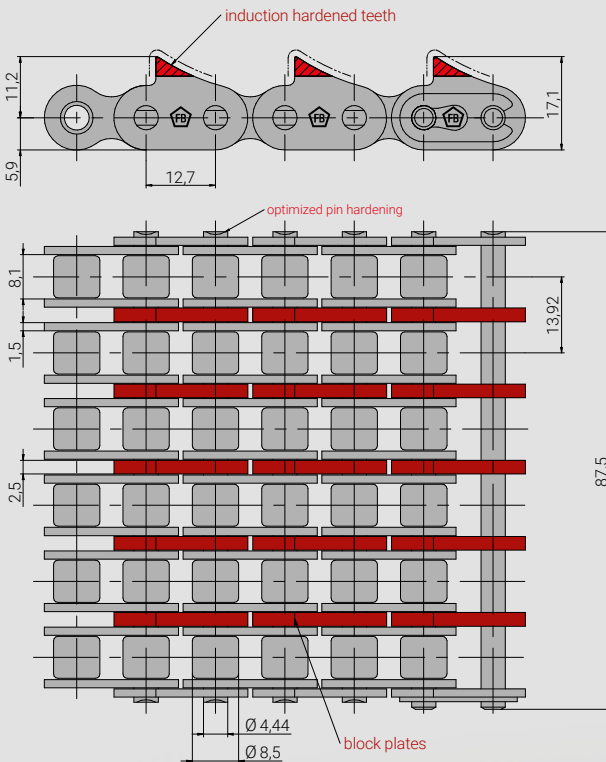


5167.000.13T

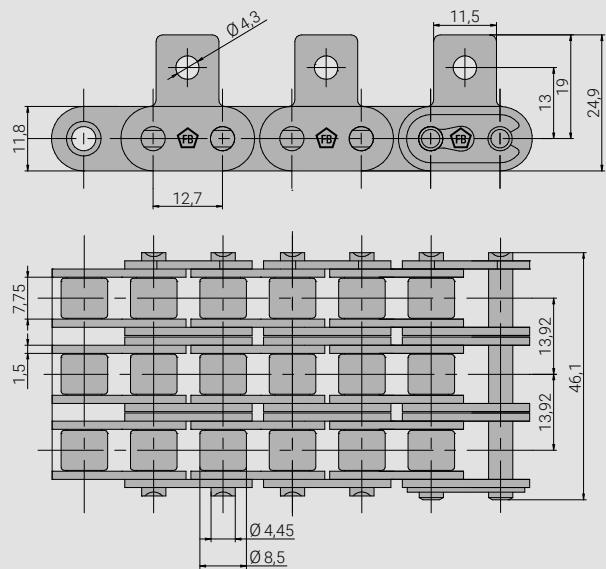


Circular resaw – infeed chain chipper

# TRIMMER, SAWS, HORIZONTAL CONVEYORS

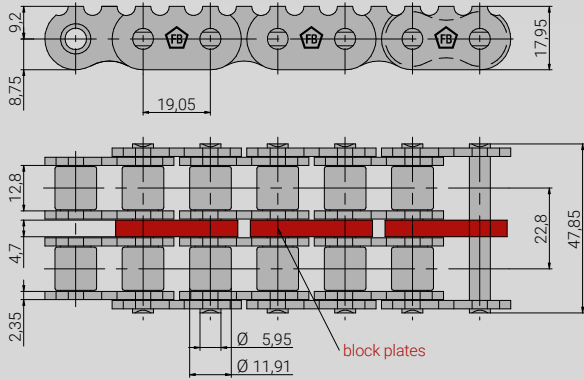


08B-6FBVERZAHNTx25,4  
Triplex 08B-3FBVERZAHNTx25,4

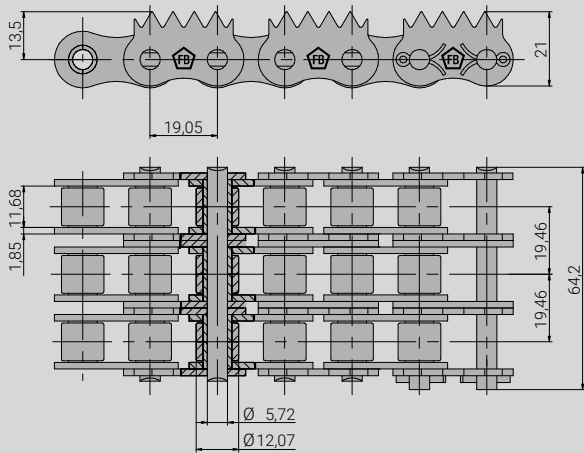


08-3TGL11,8M1x25,4  
Infeed chain

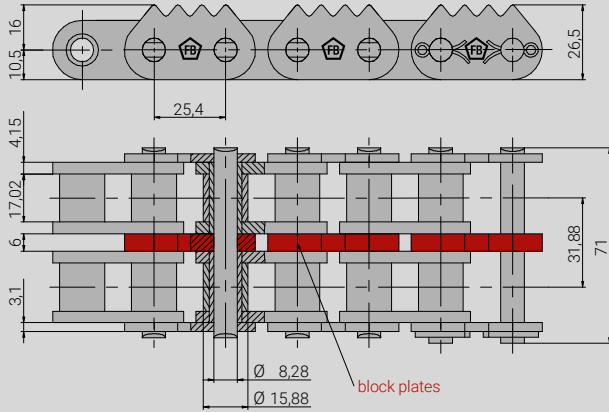
# EDGERS, SAWS, HORIZONTAL CONVEYORS



**60-2VERZ101019B1NH**  
Triplex 60-3VERZ160607F3NH



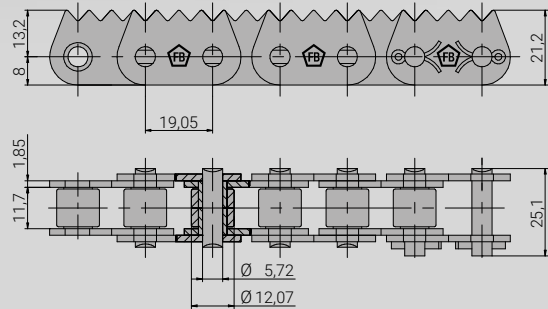
**12B-3FBVERZAHNTS6/S0**



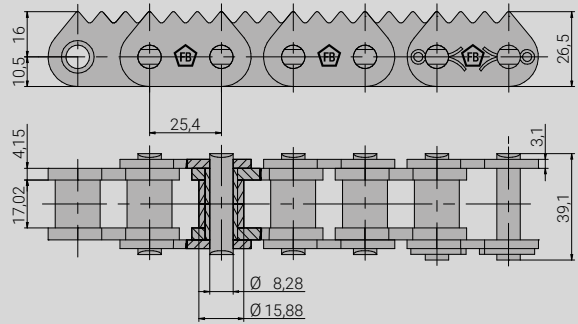
**5218.000.18FB**  
Simplex 16B-1FBVERZAHNTx50,8 / Triplex 5318.000.06FB



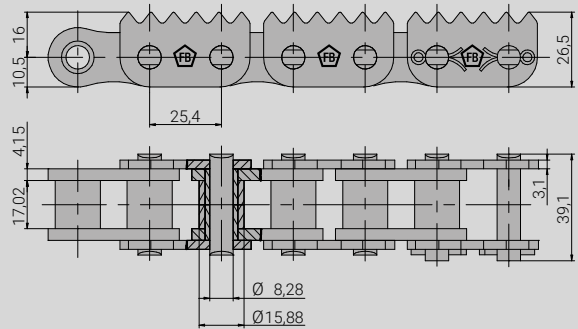
Horizontal conveyor – infeed chain



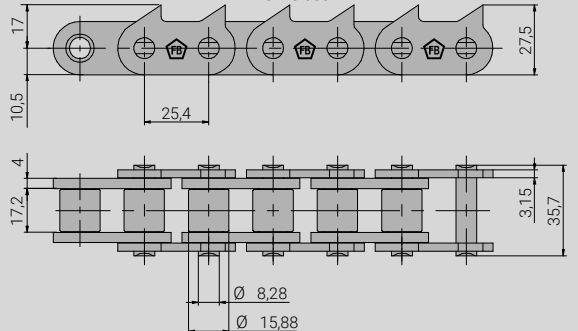
**12B-1FBVERZAHNTS5**  
Duplex 12B-2FBVERZAHNTS5



**16B-1FBVERZAHNT**  
5118.000.35



**16B-1FBVERZAHNT6x50,8**  
5118.000.77



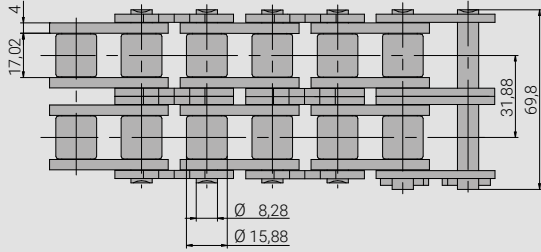
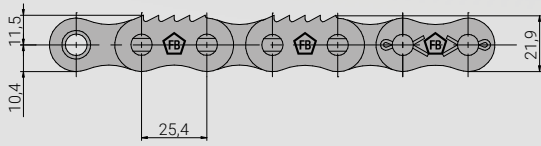
**16B-1FBSÄGEVERZ2x50**  
5118.000.51



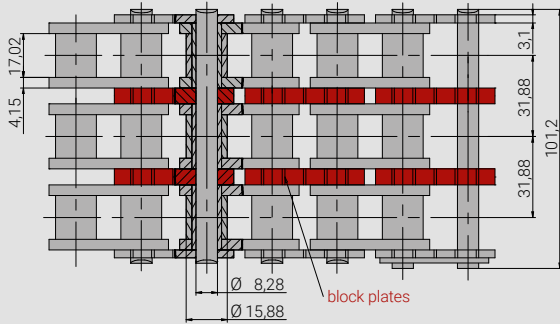
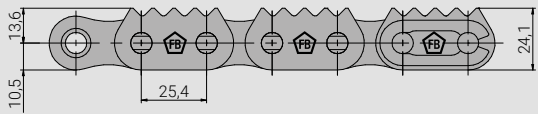
Edger – circular saw



# EDGERS, SAWS, HORIZONTAL CONVEYORS

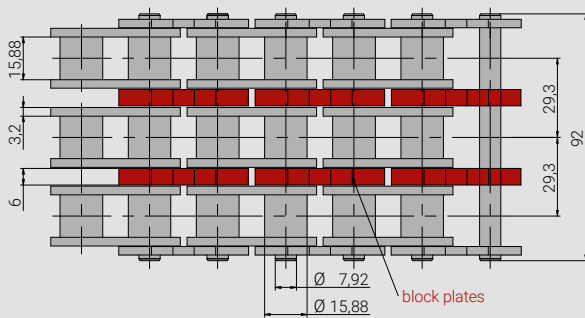
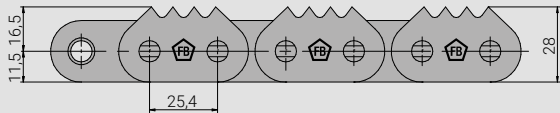


**5218.000.20FB**



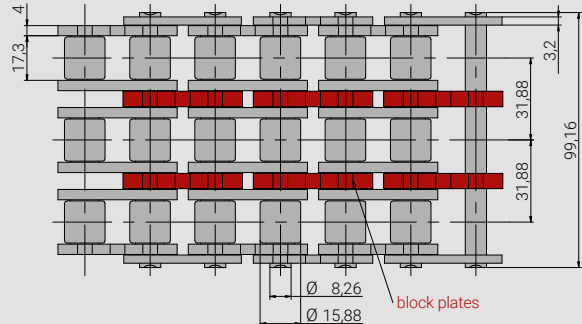
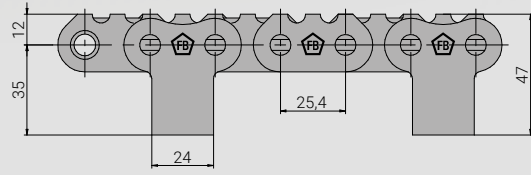
**16B-3FBVERZ5H24**

Duplex 16B-2FBVERZ5H24

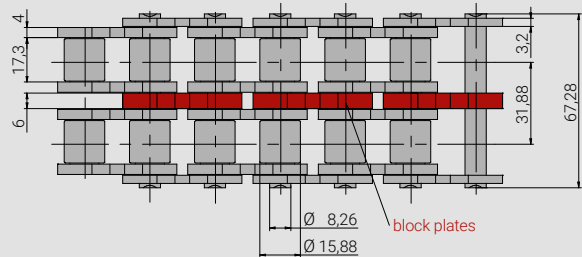
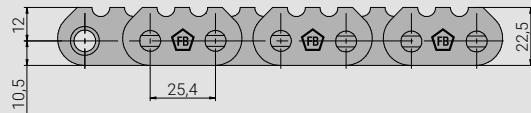


**6318.000.01**

Simplex 6118.000.03 / Duplex 6218.000.02T

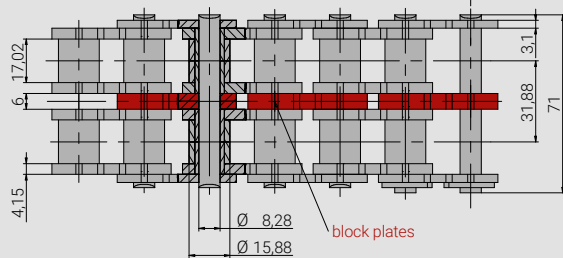
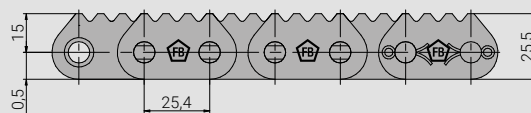


**16B-3FBFVERZ/PLx101,6**



**16B-2TFVERZ3x25,4**

Simplex 16B-1TFVERZ3x25,4 / Triplex 16B-3TFVERZ3x25,4



**5218.000.19FB**

Simplex 5118.000.35 / Triplex 5318.000.07

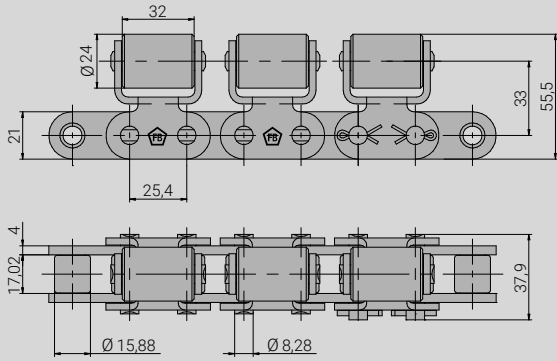


Horizontal timber conveyor

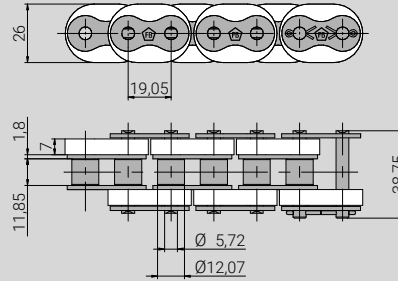


Ascending conveyor

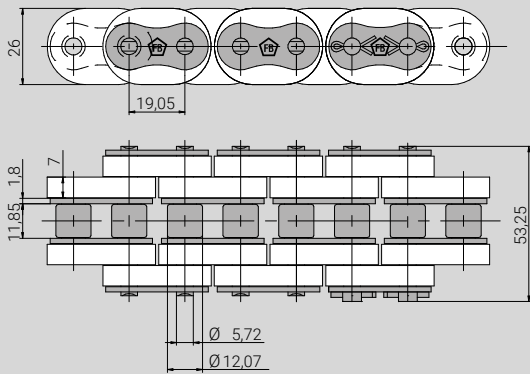
# EDGERS, SAWS, HORIZONTAL CONVEYORS



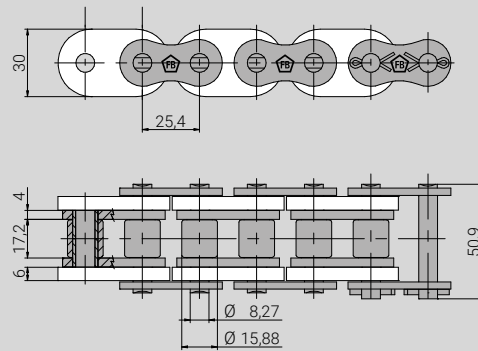
**16B-1FBGL21/ROLLE32**



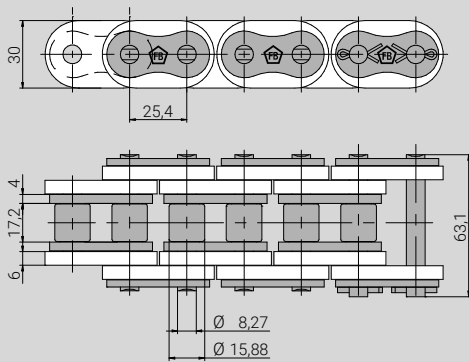
**12B-1FB-100304B2**



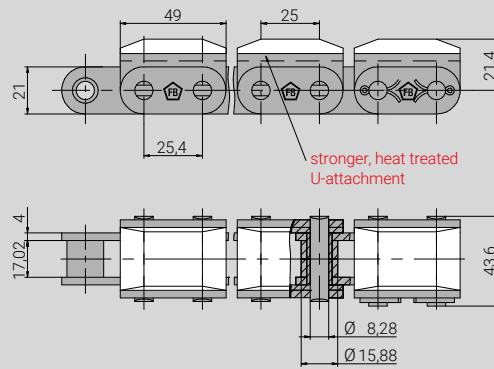
**12B-1FB080822B2**



**5118.000.12FB**



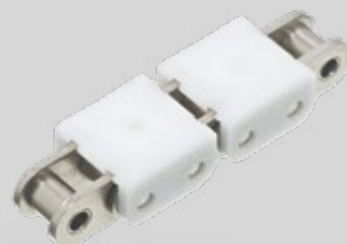
**5118.000.09FB POM weiß**  
5118.000.09FBTPU92 PUR nature



**16B-1FBWG70/U2,03**



Glu lum plant, construction lumber

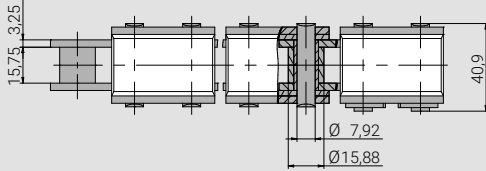
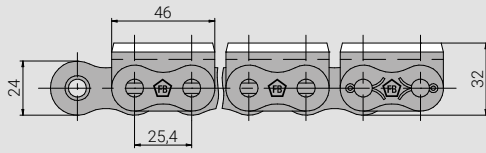
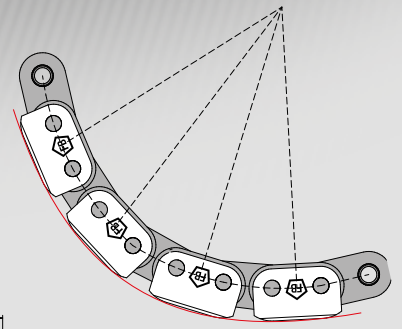


Roller chains with plastic clips

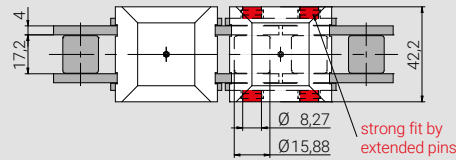
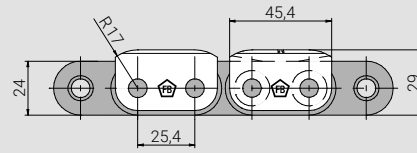




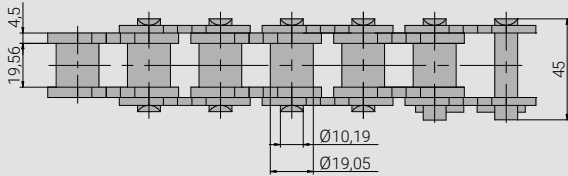
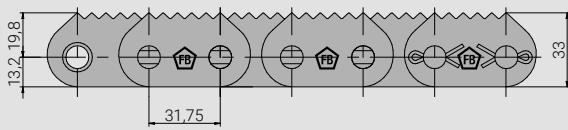
# EDGERS, SAWS, HORIZONTAL CONVEYORS



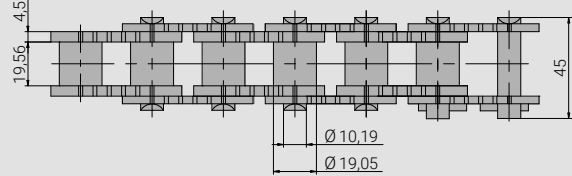
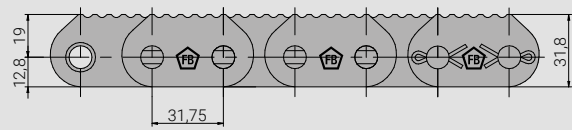
80-1FBWG70



5121.000.08FBR17

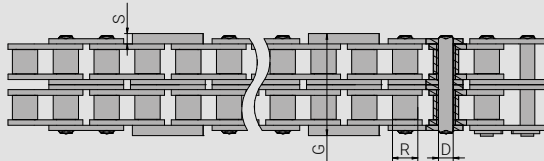
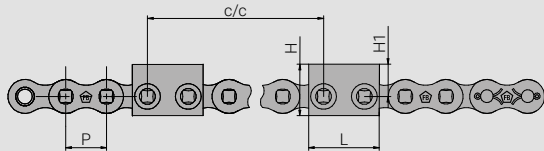


5130.000.22FB



5130.000.23FB

# LOG TRANSPORT CHAINS



40B-2T-MN110x80x16x635

Part number	Pitch	Roller	Pins	Attachments					c/c
	P (mm)	R (mm)	D (mm)	L (mm)	H (mm)	H1 (mm)	G (mm)	S (mm)	
32B-1	50,8	29,21	17,89	100	50	30	90,1	16	508,0 609,6
40B-1	63,5	39,37	22,89	110	80	50	104,4	16	635,0 762,0
40B-2	63,5	39,37	22,89	110	80	50	177,2	16	635,0

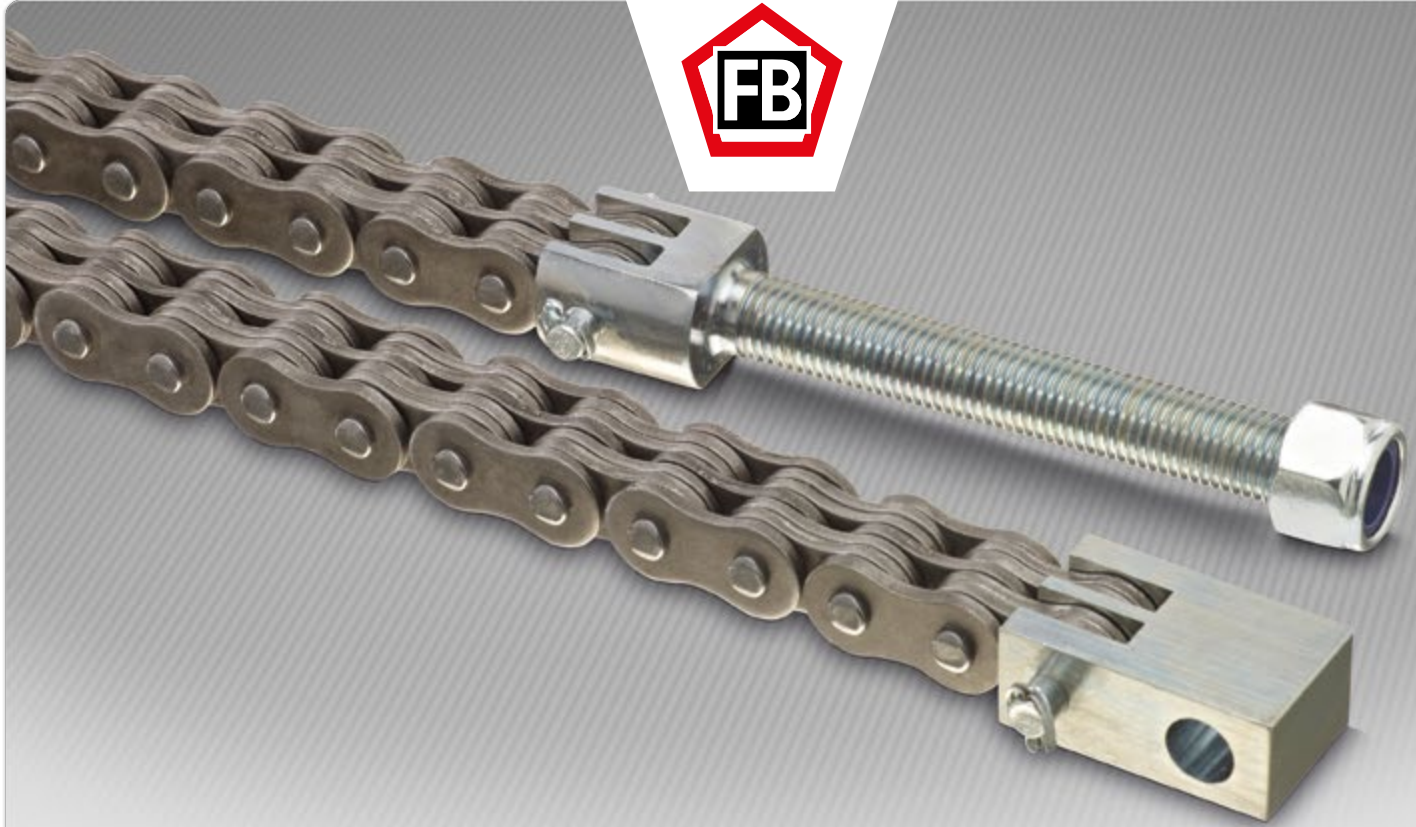
Subject to dimensional and design changes.



Log conveyor



Log transport before debarker



# FB LEAF CHAINS

**DIN 8152, ISO 4347, ANSI B29.8**

Leaf chains are safety critical components which transmit very high tensile forces while being small in size. They are most frequently used in industrial vehicles, forklift trucks, telehandlers, lifting tables, machining centers, storage systems or stabilizing chains in timber stackers. FB leaf chains achieve breaking loads and fatigue strengths that far exceed DIN-ISO specifications.



#### High operational safety and system availability

Fatigue strength and breaking load exceed DIN-ISO specifications



#### High quality and long service life

High-quality steels, optimised chain design, process-controlled component production and heat treatment as well as fully automated chain assembly guarantee consistent high quality



#### Special chains

We build many leaf chains with dimensions and plate designs that deviate from the DIN-ISO standard

## ADVANTAGES



#### High fatigue strength and durability

Plates with precise punching, optimised press fits, large bearing surfaces, quality steels and heat treatments



#### Reduced initial elongation

Fully automated dynamic pre-stretching



#### Consistent quality

We monitor and control every production step. In addition to our quality controls during production, we regularly have our chains tested by external testing institutes



#### Short delivery times

Also for leaf chains with plastic add-on parts



#### Resource-saving, sustainable and cost-efficient

FB chain cutting service - we cut the chains to length according to your specifications at short notice. For you, this means less waste, lower costs and less work

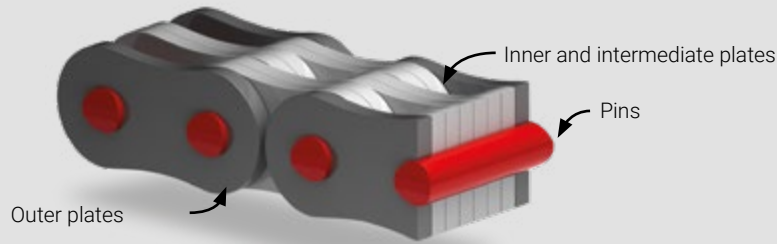


#### Ready-to-install complete packages

We supply ready-to-install kit-solutions: leaf chains, anchor bolts, chain fasteners, connecting pins and pulleys



# MATERIALS, HEAT TREATMENTS AND MANUFACTURING PROCESSES



	Pins	Outer plates	Inner and intermediate plates
Materials:	alloy steels	carbon steels (C steels)	
Heat treatment:	hardened	hardened and tempered	
Manufacturing:	centreless ground	precision punched plate holes, double or triple punched (depending on chain dimension and application), shot-peened, assembled with optimised press fit and riveted	double or triple punched (depending on chain dimension and application), shot peened, mounted with slip-fit and rotating on pin



Batch identification for traceability



## Optical component inspection

All components and assembled chains are checked using automated photo technology. Missing components, pins that are too short, defective riveting or other potential problems and defects are immediately marked and rejected at this point. Our optical image recognition systems (CCD = Charge Coupled Device) are integrated into the assembly lines and, after years of continuous improvements, have replaced almost all manual or mechanical inspection methods.

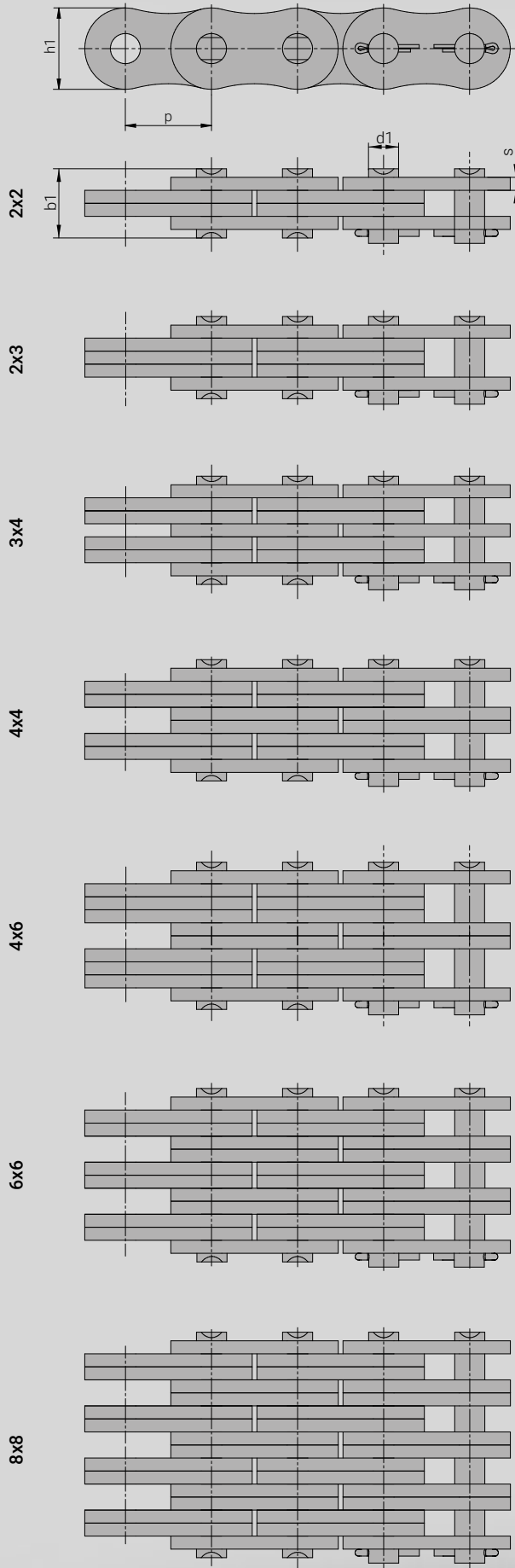
## FB tools

The chain wear gauge developed by FB engineers is the most accurate and suitable measuring tool to determine chain wear. It can be used for chains from 3/8" to 3" and visually indicates the state of wear. Chain cutting tools and chain brushes are also available in proven FB quality.

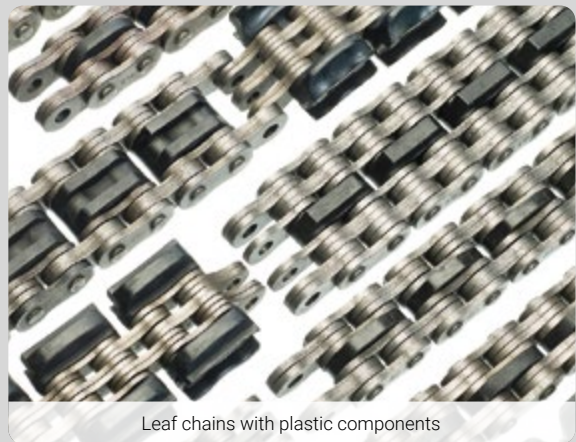
## Initial lubrication

FB leaf chains are supplied with optimised initial lubrication. During the lubrication process, the joints are rotating so that the oil can penetrate safely to the lubrication points (into the chain link). The lubricant protects against corrosion minimises wear and noise.

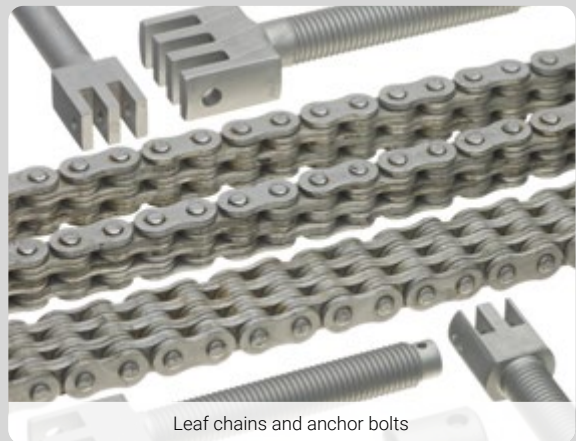
# FB LEAF CHAIN DESIGNS



Batch identification for traceability



Leaf chains with plastic components



Leaf chains and anchor bolts



Pulley with brass bearing



# FB LEAF CHAINS HEAVY SERIES BL (LH)

Chain type	Alternative name	Plate combination	Pitch		Plates		Pins		Breaking load		Weight (kg/m)
			p		h <sub>1</sub> max	s max	Ø d <sub>1</sub> max	b <sub>1</sub> max	DIN	Ø FB	
			(inches)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	
BL422	LH0822	2x2	1/2"	12,700	12,00	2,00	5,06	10,60	22.200	29.400	0,69
BL423	LH0823	2x3	1/2"	12,700	12,00	2,00	5,06	12,60	22.200	29.400	0,77
BL434	LH0834	3x4	1/2"	12,700	12,00	2,00	5,06	16,80	33.400	44.100	1,07
BL444	LH0844	4x4	1/2"	12,700	12,00	2,00	5,06	18,90	44.500	58.900	1,19
BL446	LH0846	4x6	1/2"	12,700	12,00	2,00	5,06	23,10	44.500	58.900	1,48
BL466	LH0866	6x6	1/2"	12,700	12,00	2,00	5,06	27,20	66.700	88.300	1,80
BL523	LH1023	2x3	5/8"	15,875	14,85	2,40	5,95	15,20	33.400	44.100	1,13
BL534	LH1034	3x4	5/8"	15,875	14,85	2,40	5,95	20,10	48.900	66.700	1,56
BL544	LH1044	4x4	5/8"	15,875	14,85	2,40	5,95	22,65	66.700	88.300	1,78
BL546	LH1046	4x6	5/8"	15,875	14,85	2,40	5,95	27,50	66.700	88.300	2,22
BL566	LH1066	6x6	5/8"	15,875	14,85	2,40	5,95	32,50	100.100	132.400	2,74
BL623	LH1223	2x3	3/4"	19,050	17,90	3,15	7,94	19,35	48.900	68.700	1,82
BL634	LH1234	3x4	3/4"	19,050	17,90	3,15	7,94	25,95	75.600	103.000	2,52
BL644	LH1244	4x4	3/4"	19,050	17,90	3,15	7,94	29,50	97.900	137.300	2,87
BL646	LH1246	4x6	3/4"	19,050	17,90	3,15	7,94	36,00	97.900	137.300	3,57
BL666	LH1266	6x6	3/4"	19,050	17,90	3,15	7,94	42,35	146.800	206.000	4,27
BL822	LH1622	2x2	1"	25,400	24,00	3,90	9,52	21,11	84.500	117.700	2,30
BL823	LH1623	2x3	1"	25,400	24,00	3,90	9,52	25,25	84.500	117.700	3,15
BL834	LH1634	3x4	1"	25,400	24,00	3,90	9,52	33,53	129.000	176.600	4,37
BL844	LH1644	4x4	1"	25,400	24,00	3,90	9,52	37,67	169.000	235.400	4,98
BL846	LH1646	4x6	1"	25,400	24,00	3,90	9,52	45,95	169.000	235.400	6,20
BL866	LH1666	6x6	1"	25,400	24,00	3,90	9,52	54,23	253.600	353.200	7,50
BL1023	LH2023	2x3	1 1/4"	31,750	30,10	4,70	11,10	29,70	115.600	157.000	3,85
BL1034	LH2034	3x4	1 1/4"	31,750	30,10	4,70	11,10	39,50	182.400	235.400	5,84
BL1044	LH2044	4x4	1 1/4"	31,750	30,10	4,70	11,10	44,40	231.300	313.900	7,20
BL1046	LH2046	4x6	1 1/4"	31,750	30,10	4,70	11,10	54,20	231.300	313.900	8,24
BL1066	LH2066	6x6	1 1/4"	31,750	30,10	4,70	11,10	64,00	347.000	470.900	10,63
BL1222	LH2422	2x2	1 1/2"	38,100	35,00	4,70	12,70	29,05	151.200	201.100	4,83
BL1223	LH2423	2x3	1 1/2"	38,100	35,00	4,70	12,70	34,85	151.200	201.100	6,54
BL1234	LH2434	3x4	1 1/2"	38,100	35,00	5,60	12,70	46,50	244.600	301.700	9,10
BL1244	LH2444	4x4	1 1/2"	38,100	35,00	5,60	12,70	52,30	302.500	402.200	10,39
BL1246	LH2446	4x6	1 1/2"	38,100	35,00	5,60	12,70	63,95	302.500	402.200	12,01
BL1266	LH2466	6x6	1 1/2"	38,100	35,00	5,60	12,70	75,60	453.700	603.300	14,58
BL1422	LH2822	2x2	1 3/4"	44,450	42,00	6,40	14,28	32,90	191.300	225.600	7,20
BL1423	LH2823	2x3	1 3/4"	44,450	42,00	6,40	14,28	39,40	191.300	225.600	9,05
BL1434	LH2834	3x4	1 3/4"	44,450	42,00	6,40	14,28	52,60	315.800	372.800	12,60
BL1444	LH2844	4x4	1 3/4"	44,450	42,00	6,40	14,28	59,30	382.600	451.300	14,41
BL1446	LH2846	4x6	1 3/4"	44,450	42,00	6,40	14,28	72,40	382.600	451.300	17,98
BL1466	LH2866	6x6	1 3/4"	44,450	42,00	6,40	14,28	85,70	578.300	676.900	21,52
BL1488	LH2888	8x8	1 3/4"	44,450	42,00	6,40	14,28	112,00	765.100	902.500	28,59
BL1622	LH3222	2x2	2"	50,800	48,00	7,20	17,45	36,70	289.100	343.400	9,72
BL1623	LH3223	2x3	2"	50,800	48,00	7,20	17,45	44,10	289.100	343.400	12,11
BL1634	LH3234	3x4	2"	50,800	48,00	7,20	17,45	59,70	440.400	539.600	16,86
BL1644	LH3244	4x4	2"	50,800	48,00	7,20	17,45	67,40	578.300	686.700	19,22
BL1646	LH3246	4x6	2"	50,800	48,00	7,20	17,45	82,55	578.300	686.700	23,92
BL1666	LH3266	6x6	2"	50,800	48,00	7,20	17,45	98,05	867.400	1.030.100	28,71
BL1688	LH3288	8x8	2"	50,800	48,00	7,20	17,45	128,40	1.156.500	1.373.400	38,19



# FB LEAF CHAINS LIGHTWEIGHT SERIES LL (EL)



Chain type	Alternative name	Plate combination	Pitch		Plates		Pins		Breaking load		Weight (kg/m)
			p		h <sub>1</sub> max	s max	Ø d <sub>1</sub> max	b <sub>1</sub> max	DIN	Ø FB	
			(inches)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	
LL0822	EL422	2x2	1/2"	12,700	10,20	1,50	4,44	8,25	18.000	17.800	0,36
LL0844	EL444	4x4	1/2"	12,700	10,20	1,50	4,44	14,50	36.000	36.400	0,69
LL0866	EL466	6x6	1/2"	12,700	10,20	1,50	4,44	20,75	54.000	54.600	1,05
LL1022	EL522	2x2	5/8"	15,875	13,00	1,65	5,06	9,00	22.000	25.500	0,50
LL1044	EL544	4x4	5/8"	15,875	13,00	1,65	5,06	15,90	44.000	51.000	1,00
LL1066	EL566	6x6	5/8"	15,875	13,00	1,65	5,06	22,77	66.000	78.500	1,48
LL1088	EL588	8x8	5/8"	15,875	13,00	1,65	5,06	29,60	89.000	104.000	1,95
LL1222	EL622	2x2	3/4"	19,050	16,00	1,80	5,72	10,10	29.000	39.200	0,74
LL1244	EL644	4x4	3/4"	19,050	16,00	1,80	5,72	17,70	58.000	65.000	1,45
LL1266	EL666	6x6	3/4"	19,050	16,00	1,80	5,72	25,30	87.000	97.000	2,16
LL1622	EL822	2x2	1"	25,400	20,80	3,20	8,27	16,65	60.000	78.500	1,57
LL1644	EL844	4x4	1"	25,400	20,80	3,20	8,27	30,05	120.000	157.000	3,09
LL1666	EL866	6x6	1"	25,400	20,80	3,20	8,27	43,10	180.000	235.400	4,60
LL2022	EL1022	2x2	1 1/4"	31,750	26,00	3,50	10,18	19,20	95.000	117.700	2,01
LL2044	EL1044	4x4	1 1/4"	31,750	26,00	3,50	10,18	34,00	190.000	235.400	3,93
LL2066	EL1066	6x6	1 1/4"	31,750	26,00	3,50	10,18	48,80	285.000	315.000	5,86
LL2088	EL1088	8x8	1 1/4"	31,750	26,00	3,50	10,18	63,60	380.000	471.000	8,20
LL2422	EL1222	2x2	1 1/2"	38,100	33,00	5,20	14,62	26,15	170.000	176.600	4,18
LL2444	EL1244	4x4	1 1/2"	38,100	33,00	5,20	14,62	47,95	340.000	353.200	8,48
LL2466	EL1266	6x6	1 1/2"	38,100	33,00	5,20	14,62	69,75	510.000	529.700	12,20
LL2488	EL1288	8x8	1 1/2"	38,100	33,00	5,20	14,62	91,55	680.000	706.300	16,00
LL2822	EL1422	2x2	1 3/4"	44,450	37,00	6,40	15,89	31,35	200.000	224.600	5,20
LL2844	EL1444	4x4	1 3/4"	44,450	37,00	6,40	15,89	57,95	400.000	448.300	10,10
LL2866	EL1466	6x6	1 3/4"	44,450	37,00	6,40	15,89	84,55	600.000	673.000	14,90
LL2888	EL1488	8x8	1 3/4"	44,450	37,00	6,40	15,89	111,15	800.000	896.600	19,80
LL3222	EL1622	2x2	2"	50,800	42,20	6,40	17,81	32,50	260.000	291.200	7,20
LL3244	EL1644	4x4	2"	50,800	42,20	6,40	17,81	58,50	520.000	582.400	12,86
LL3266	EL1666	6x6	2"	50,800	42,20	6,40	17,81	84,50	780.000	873.600	18,43
LL3288	EL1688	8x8	2"	50,800	42,20	6,40	17,81	110,70	1.050.000	1.176.000	25,37
LL3244FB(T6)	EL1644FB-6	4x4	2"	50,800	42,00	6,00	17,81	57,00	520.000	540.400	12,50
LL3266FB(T6)	EL1666FB-6	6x6	2"	50,800	42,00	6,00	17,81	110,00	1.050.000	1.080.800	25,00



# FB LEAF CHAINS AL, ANSI B29.8



Chain type	Plate combination	Pitch		Plates		Pins		Breaking load		Weight (kg/m)
		p		h <sub>1</sub> max	s max	Ø d <sub>1</sub> max	b <sub>1</sub> max	DIN	Ø FB	
		(inches)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	
AL422	2x2	1/2"	12,700	10,20	1,50	3,96	8,05	15.000	17.700	0,36
AL444	4x4	1/2"	12,700	10,20	1,50	3,96	14,35	30.000	35.300	0,71
AL466	6x6	1/2"	12,700	10,20	1,50	3,96	20,70	45.000	53.000	1,22
AL522	2x2	5/8"	15,875	13,00	2,00	5,06	10,60	25.000	30.400	0,63
AL523	2x3	5/8"	15,875	13,00	2,00	5,06	12,70	25.000	30.400	0,78
AL544	4x4	5/8"	15,875	13,00	2,00	5,06	19,00	50.000	60.800	1,23
AL566	6x6	5/8"	15,875	13,00	2,00	5,06	27,40	75.000	91.200	2,10
AL588	8x8	5/8"	15,875	13,00	2,00	5,06	35,85	100.000	121.600	2,46
AL622	2x2	3/4"	19,050	15,50	2,35	5,95	12,40	34.000	44.100	0,90
AL623	2x3	3/4"	19,050	15,50	2,35	5,95	14,85	34.000	44.100	1,12
AL644	4x4	3/4"	19,050	15,50	2,35	5,95	22,30	68.000	88.300	1,78
AL646	4x6	3/4"	19,050	15,50	2,35	5,95	27,30	68.000	88.300	2,25
AL666	6x6	3/4"	19,050	15,50	2,35	5,95	33,25	102.000	132.400	3,03
AL688	8x8	3/4"	19,050	15,50	2,35	5,95	42,20	136.000	176.600	3,60
AL822	2x2	1"	25,400	20,40	3,10	7,94	15,65	59.000	76.500	1,48
AL844	4x4	1"	25,400	20,40	3,10	7,94	28,45	118.000	153.000	2,92
AL866	6x6	1"	25,400	20,40	3,10	7,94	41,25	177.000	229.600	4,97
AL888	8x8	1"	25,400	20,40	3,10	7,94	54,05	236.000	306.000	5,78
AL1022	2x2	1 1/4"	31,750	24,80	3,90	9,52	21,11	86.000	117.700	2,35
AL1044	4x4	1 1/4"	31,750	24,80	3,90	9,52	37,67	172.000	235.400	4,61
AL1066	6x6	1 1/4"	31,750	24,80	3,90	9,52	54,23	258.000	353.200	7,88
AL1088	8x8	1 1/4"	31,750	24,80	3,90	9,52	70,79	344.000	470.900	9,23
AL1222	2x2	1 1/2"	38,100	30,00	4,70	11,10	24,60	122.500	157.000	3,40
AL1244	4x4	1 1/2"	38,100	30,00	4,70	11,10	44,20	245.000	314.000	6,65
AL1266	6x6	1 1/2"	38,100	30,00	4,70	11,10	63,80	367.500	471.000	10,14
AL1444	4x4	1 3/4"	44,450	36,20	5,60	12,70	52,30	309.000	402.200	10,34
AL1466	6x6	1 3/4"	44,450	36,20	5,60	12,70	75,60	463.500	608.200	15,16
AL1644	4x4	2"	50,800	41,40	6,40	14,28	59,55	390.000	539.600	12,98
AL1666	6x6	2"	50,800	41,40	6,40	14,28	86,15	585.000	804.400	19,41
AL1688	8x8	2"	50,800	41,40	6,40	14,28	112,75	780.000	1.079.100	25,84



# FB LOG-GRIPPER CHAINS

Optimised FB stabilizer chains for log-grippers like Kalmar, Sisu, Liebherr and other manufacturers.



FB log-gripper for stabilizing of logs

Log stackers are usually equipped with gripper chains that are locked on both sides by rivet bolts with washers. The rivet bolts get loose due to swinging logs during transport and lateral loads when aligning the logs.

**FB stacker chains eliminate this problem. They are stable, durable and cheaper.**

## ADVANTAGES



### Stable and resilient pin lock

The high-performance pin lock prevents the chain pins from becoming loose



### Higher operational safety

Well-fitting chains and movable chain links ensure even load distribution. Logs are thus optimally secured



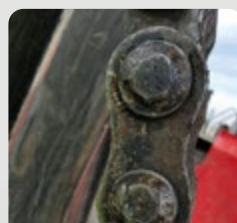
### Longer service life

Virtually no more flaring due to hardened and tempered plates with high tensile strength and considerably less plate wear

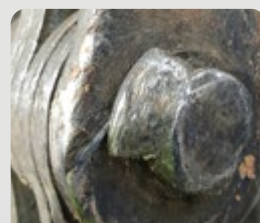


### No conversions necessary

FB hold-down chains do not require any conversion of the gripper, as the functional dimensions are identical to those of OEM chains



Welding of rivet bolts by user

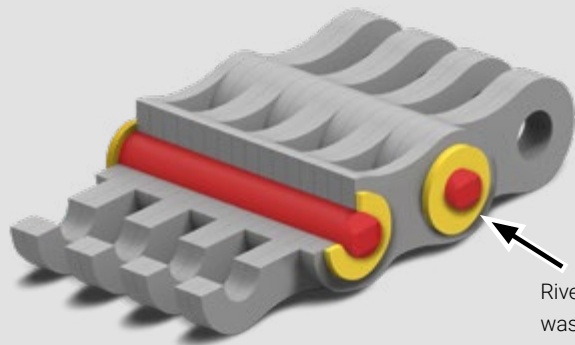


Weld breaks in field use





## STANDARD SOLUTION LEAF CHAINS



Rivet bolts with washers

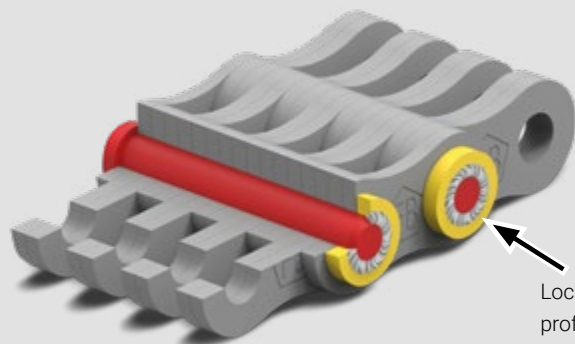


Massive damage to the pins and washers after only **3 months**

Leaf chains for log-stackers are usually locked on both sides using rivet bolts with washers. This design has the disadvantage that the rivet bolts get loose due to lateral loads. MRO-departments then usually weld the bolts to the washers. However, this is only a non-durable solution and costs unnecessary time and money. Moreover, there is the risk that the logs fall down during travel of the stacker, which is a very high safety risk for man and machine.

**However, the downtimes of these expensive machines is the highest cost, much higher than new FB-log-gripper chains.**

## APPROVED SOLUTION FROM FB FB LOG-GRIPPER CHAINS



Locking ring is professionally welded to the pin



FB log-gripper chain after **12 months** of use

**We developed the innovative FB log-stacker chains together with our customers and improved them in field use. The result is the ideal design of the FB log-gripper chains.**

To counteract the high dynamic loads and lateral forces, we have chosen a chain pin with a resistant head. We lock the opposite side with a strong ring, which we expertly weld to the pins. The clearance between the link plates and the chain pins has also been optimised so that the stacker-chain does not swing sideways too much during travel. During transport, it is also very important that the chains are laterally stable and not stiff, so that the logs do not fall down.



# SPROCKETS PCD METRIC PITCH

Pitch circle diameter Td (mm) = n\*p

Number of teeth	Z	n	Pitch p (mm)										
			06B 06C	08B ASA40	10B ASA50	12B ASA60	16B ASA80	20B ASA100	24B ASA120	28B ASA140	32B ASA160	40B ASA200	48B ASA240
6	2,0000	19,05	25,40	31,75	38,10	50,80	63,50	76,20	88,90	101,60	127,00	152,40	177,80
7	2,3048	21,95	29,27	36,59	43,91	58,54	73,18	87,81	102,45	117,08	146,35	175,62	204,89
8	2,6131	24,89	33,19	41,48	49,78	66,37	82,97	99,56	116,15	132,75	165,93	199,12	232,31
9	2,9238	27,85	37,13	46,42	55,70	74,26	92,83	111,40	129,96	148,53	185,66	222,79	259,93
10	3,2361	30,82	41,10	51,37	61,65	82,20	102,75	123,29	143,84	164,39	205,49	246,59	287,69
11	3,5495	33,81	45,08	56,35	67,62	90,16	112,70	135,23	157,77	180,31	225,39	270,47	315,55
12	3,8637	36,80	49,07	61,34	73,60	98,14	122,67	147,21	171,74	196,28	245,35	294,41	343,48
13	4,1786	39,80	53,07	66,33	79,60	106,14	132,67	159,20	185,74	212,27	265,34	318,41	371,48
14	4,4940	42,80	57,07	71,40	85,61	114,15	142,68	171,22	199,76	228,29	285,37	342,44	399,51
15	4,8097	45,81	61,08	76,35	91,63	122,17	152,71	183,25	213,79	244,33	305,42	366,50	427,59
16	5,1258	48,82	65,10	81,37	97,65	130,20	162,75	195,29	227,84	260,39	325,49	390,59	455,69
17	5,4422	51,84	69,12	86,39	103,67	138,23	172,79	207,35	241,91	276,46	345,58	414,69	483,81
18	5,7588	54,85	73,14	91,42	109,70	146,27	182,84	219,41	255,98	292,55	365,68	438,82	511,95
19	6,0755	57,87	77,16	96,45	115,74	154,32	192,90	231,48	270,06	308,64	385,80	462,96	540,11
20	6,3925	60,89	81,18	101,48	121,78	162,37	202,96	243,55	284,14	324,74	405,92	487,10	568,29
21	6,7095	63,91	85,21	106,51	127,82	170,42	213,03	255,63	298,24	340,84	426,05	511,26	596,48
22	7,0267	66,93	89,24	111,55	133,86	178,48	223,10	267,72	312,34	356,96	446,19	535,43	624,67
23	7,3439	69,95	93,27	116,59	139,90	186,54	233,17	279,80	326,44	373,07	466,34	559,61	652,88
24	7,6613	72,97	97,30	121,62	145,95	194,60	243,25	291,90	340,54	389,19	486,49	583,79	681,09
25	7,9787	76,00	101,33	126,66	151,99	202,66	253,32	303,99	354,65	405,32	506,65	607,98	709,31
26	8,2962	79,02	105,36	131,70	158,04	210,72	263,41	316,09	368,77	421,45	526,81	632,17	737,53
27	8,6138	82,05	109,40	136,74	164,09	218,79	273,49	328,19	382,88	437,58	546,98	656,37	765,77
28	8,9314	85,07	113,43	141,79	170,14	226,86	283,57	340,29	397,00	453,72	567,14	680,57	794,00
29	9,2491	88,10	117,46	146,83	176,19	234,93	293,66	352,39	411,12	469,85	587,32	704,78	822,24
30	9,5668	91,12	121,50	151,87	182,25	243,00	303,75	364,49	425,24	485,99	607,49	728,99	850,49

31	9,8845	45	14,3356	59	18,7892	73	23,2438	87	27,6990	101	32,1545
32	10,2023	46	14,6536	60	19,1073	74	23,5620	88	28,0172	102	32,4727
33	10,5201	47	14,9717	61	19,4255	75	23,8802	89	28,3355	103	32,7910
34	10,8380	48	15,2898	62	19,7437	76	24,1984	90	28,6537	104	33,1093
35	11,1558	49	15,6079	63	20,0618	77	24,5167	91	28,9720	105	33,4275
36	11,4737	50	15,9260	64	20,3800	78	24,8349	92	29,2902	106	33,7458
37	11,7916	51	16,2441	65	20,6982	79	25,1531	93	29,6085	107	34,0641
38	12,1096	52	16,5622	66	21,0164	80	25,4713	94	29,9267	108	34,3823
39	12,4275	53	16,8803	67	21,3346	81	25,7896	95	30,2450	109	34,7006
40	12,7455	54	17,1984	68	21,6528	82	26,1078	96	30,5632	110	35,0188
41	13,0635	55	17,5166	69	21,9710	83	26,4260	97	30,8815		
42	13,3815	56	17,8347	70	22,2892	84	26,7443	98	31,1997		
43	13,6995	57	18,1529	71	22,6074	85	27,0625	99	31,5180		
44	14,0175	58	18,4710	72	22,9256	86	27,3807	100	31,8362		

Pitch circle diameter Td (mm) = n\*p

Number of teeth	Z	n	Pitch p (mm)
			06B 06C
6	2,0000	19,05	9,525

$$\varnothing = n \times p$$

Calculate the pitch circle diameter.

Example:  $\varnothing = n \times p$   
 $19.05 = 2.0000 \times 9.525$



# PROFESSIONAL FB CHAIN WEAR GAUGE

## How do I know if I need to replace my roller or leaf chains?



Leaf chains and roller chains must be replaced when the chains have elongated by 2-3 %. At this point, they can no longer be used safely, as fatigue strength and minimum breaking force are greatly reduced from this wear value. From 3 % longitudinal chain wear, leaf and roller chains must be replaced definite-

ly and quickly, as they have less operational safety and no longer offer any safety against shock loads or overloading.

The patented FB chain wear gauge is the most accurate and suitable instrument to check the chain wear on your leaf and roller chains with inch pitch. It can be used in the 3/8" to 3" range and measures link wear in 0,25% increments from 0-4%. From 2 %, it displays a red warning window. This allows you to see if a chain may become a safety risk before the next maintenance. This is also the biggest difference as compared to chain wear gauges from other manufacturers, as these only indicate whether a chain is worn or not. Create a safe working environment with the FB chain wear gauge.

## ADVANTAGES



### Quick and easy

The FB chain wear gauge is very easy to use. Set the chain pitch (e.g. 1 3/4"), read the length, done! No time-consuming calculations necessary



### Safe and accurate

The FB chain wear gauge is the most accurate instrument for measuring chain elongation. It allows you to make sure that leaf and roller chains work properly



### Easy to clean

The FB chain wear gauge can be cleaned using water and some washing-up liquid



### Robust and durable

The FB chain wear gauge is available in two designs. Made of stainless steel and high-quality PVC

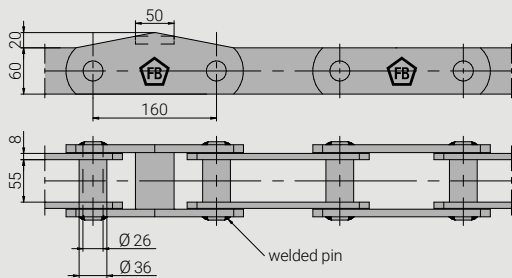


### Available in several languages

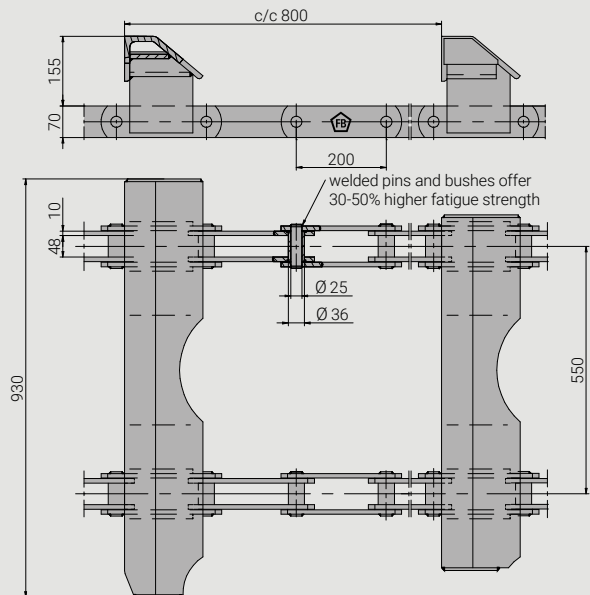
We offer the stainless steel design in German and English. The PVC design is also available in French and Italian



# PAPER AND PULP INDUSTRY

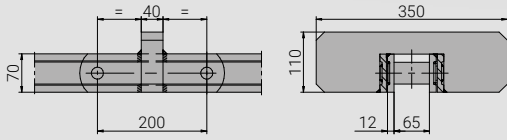


Log infeed deck

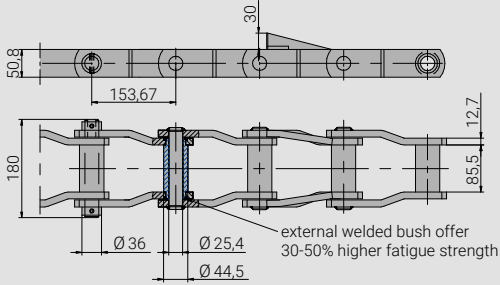


Slasher conveyor (Saw conveyor, saw table)

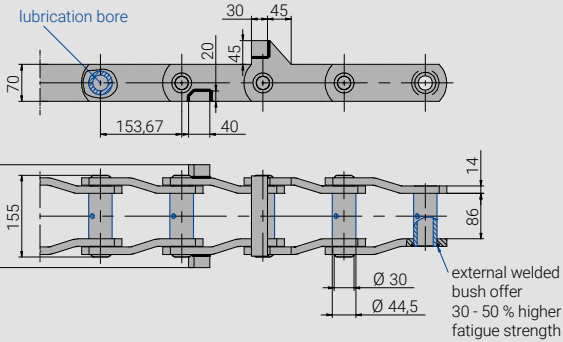




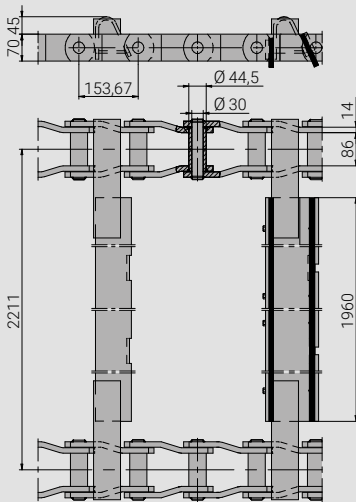
Debarking drum



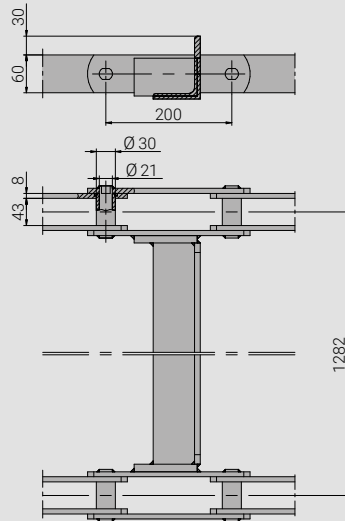
Debarking drum



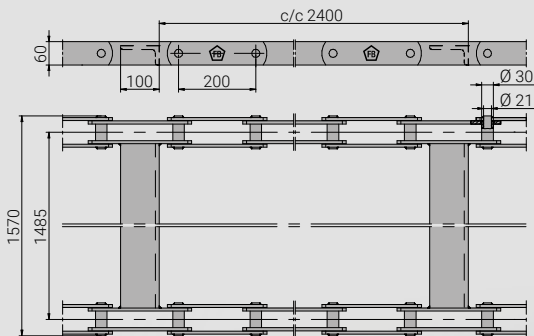
Debarking drum



Separator

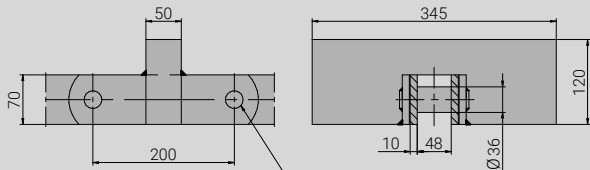


Bark scraper

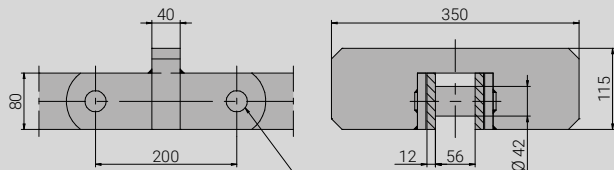


Waste scraper





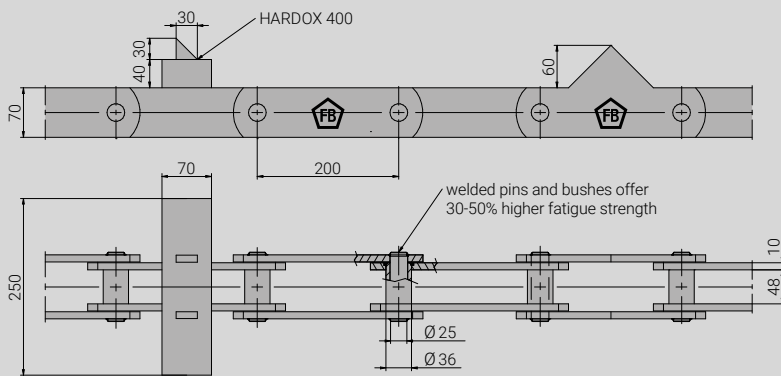
welded pins and bushes offer 30-50% higher fatigue strength



welded pins and bushes offer 30-50% higher fatigue strength



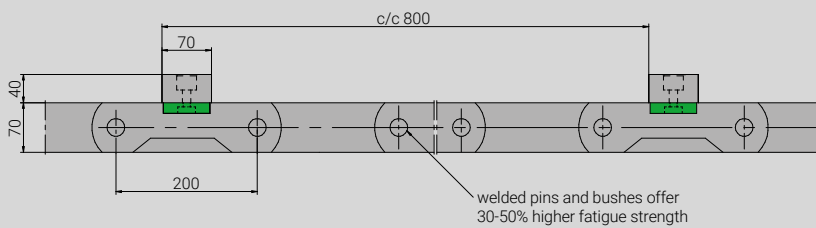
Pile conveyor



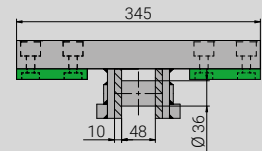
welded pins and bushes offer 30-50% higher fatigue strength



Pile conveyor

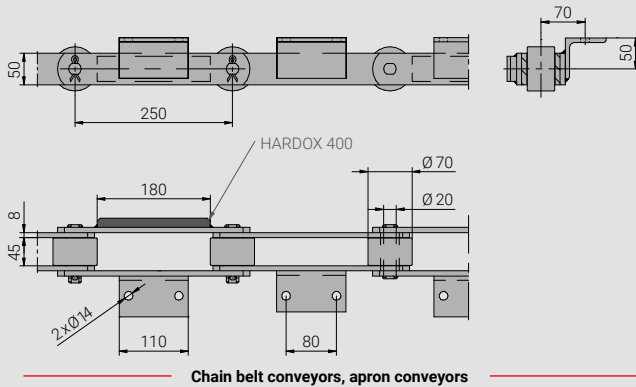


welded pins and bushes offer 30-50% higher fatigue strength

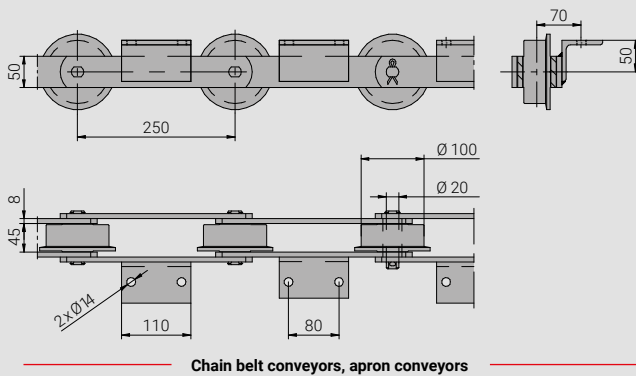


Pile conveyor

# RECYCLING PAPER AND PULP



Chain belt conveyors, apron conveyors



Chain belt conveyors, apron conveyors

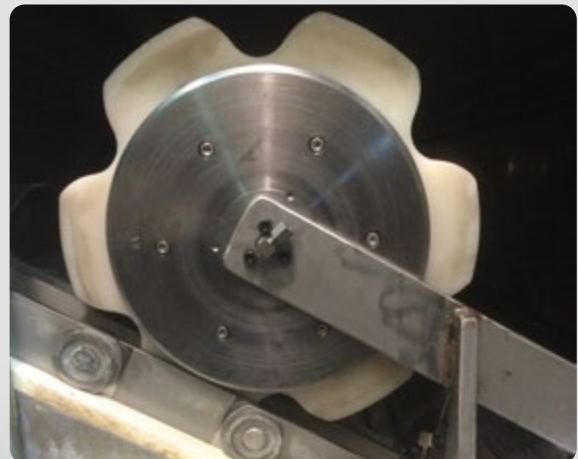


## Increased service life and decreased operating costs – optimum lubrication at the right time.

RotaLube® is the only industrial chain lubrication system that guarantees the ideal amount of lubricant to be applied at the correct lubrication point.

Automatic lubrication is not affected by speed variations or chain pitch and works perfectly for roller chains and conveyor chains of any size and type.

In addition, automated lubrication reduces the need for service technicians and eliminates wasteful over-oiling. All these benefits not only save time and money, but also protect the environment.

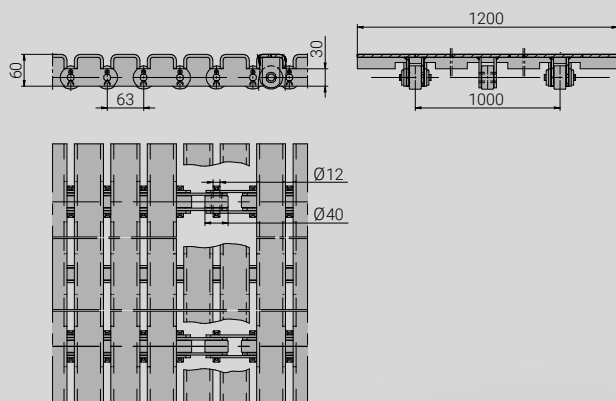
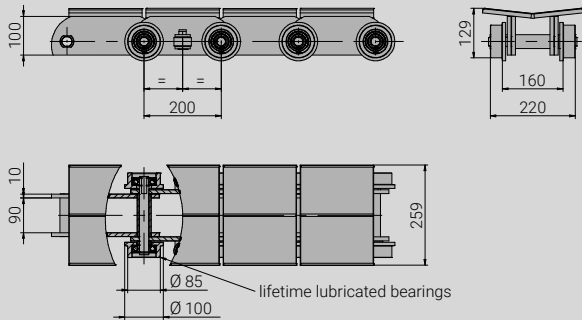
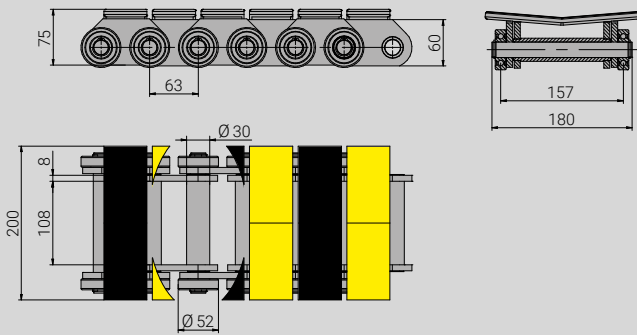
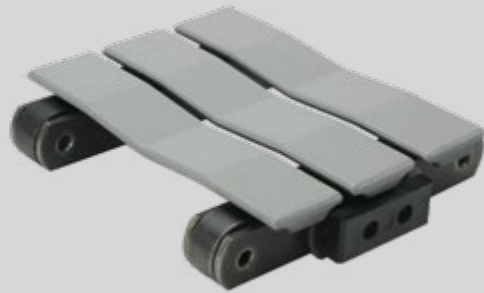
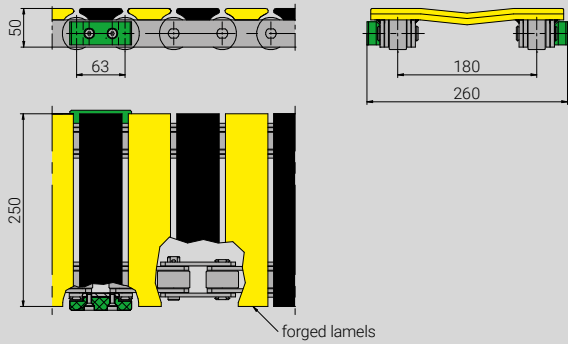


# RotaLube®

A member of the Group of Companies

Further information after page 66

# PAPER ROLL TRANSPORT







## HYGIENIC PAPER



Roller packing

# FB CHAIN BREAKER

The FB chain breaker is a successfully used tool for maintenance and length adjustment on leaf and roller chains.

Service and maintenance can be done in literally no time and without much effort. It makes conventional tools for removing rivet heads or cutting chains redundant.

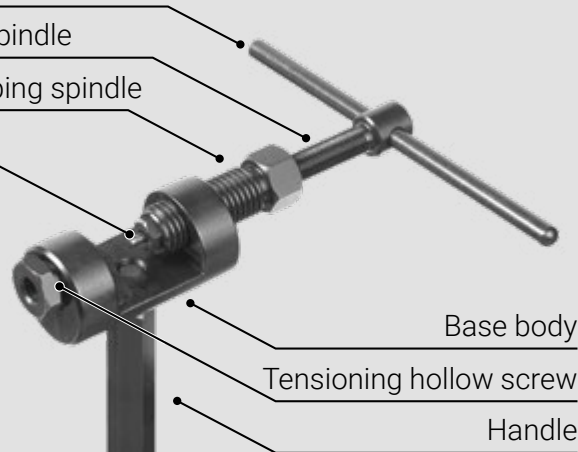
By hand or clamped in a vice, you can easily press pins out of the link plates.

Winch

Extraction spindle

Chain clamping spindle

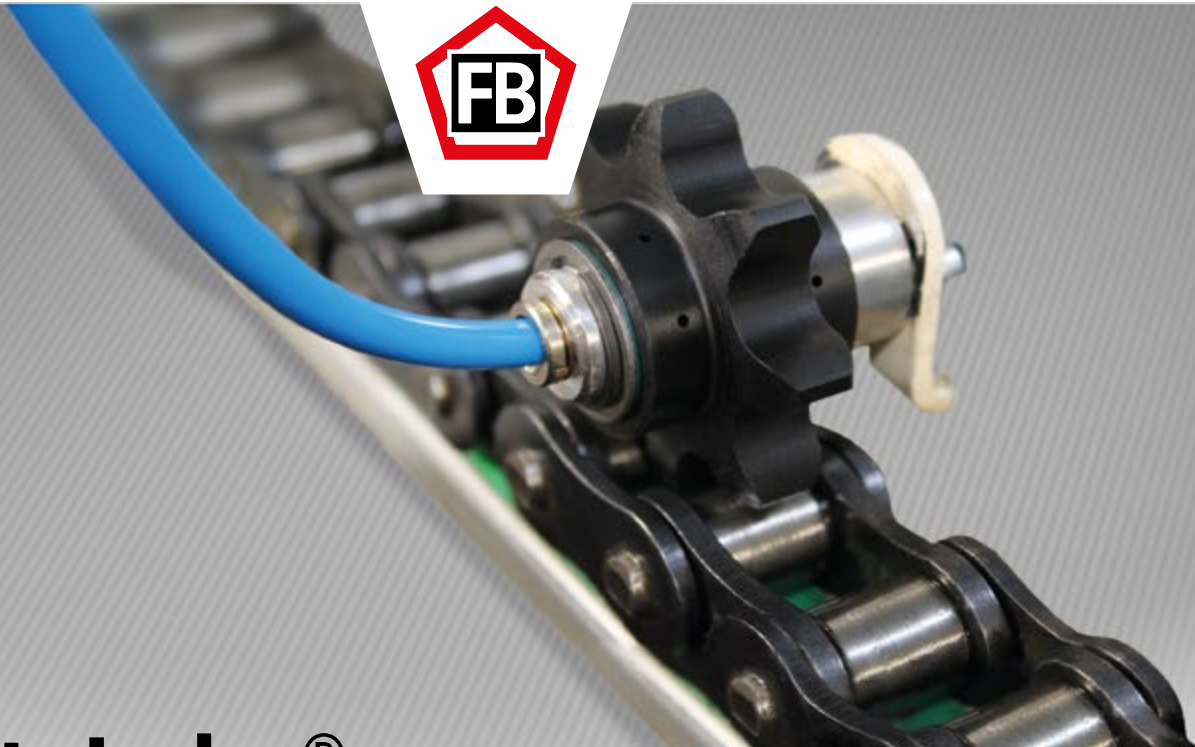
Drive pin



Chain breaker in vice

Part number	Capacity range				Clamping width
	Roller chains ISO 606		Leaf chains ISO 4347		
	Standard	Pitch (inches)	Standard	Pitch (inches)	max. (mm)
KTX1	DIN 8187 DIN 8188	$\frac{3}{8}$ " - $\frac{1}{2}$ "	DIN 8152-1 (LL/EL) DIN 8152-3 (BL/LH) ANSI 29.8 (AL)	$\frac{3}{8}$ " - $\frac{1}{2}$ "	27
KTX2	DIN 8187 DIN 8188	$\frac{1}{2}$ " - $\frac{3}{4}$ "	DIN 8152-1 (LL/EL) DIN 8152-3 (BL/LH) ANSI 29.8 (AL)	$\frac{1}{2}$ " - $\frac{3}{4}$ " $\frac{1}{2}$ " - $\frac{5}{8}$ " $\frac{1}{2}$ " - $\frac{3}{4}$ "	27
KTX3	DIN 8187 DIN 8188	$\frac{5}{8}$ " - 1" $\frac{5}{8}$ " - 1 $\frac{1}{4}$ "	DIN 8152-1 (LL/EL) DIN 8152-3 (BL/LH) ANSI 29.8 (AL)	$\frac{5}{8}$ " - 1" $\frac{5}{8}$ " - $\frac{3}{4}$ " $\frac{5}{8}$ " - 1 $\frac{1}{4}$ "	45

Clamping width = max. pin length



# RotaLube® CHAIN LUBRICATION SYSTEM

**Extend the service life of your chains and sprockets with the unique RotaLube® automatic lubrication system.**

**The optimum amount of lubrication at the right time. RotaLube® is the only industrial chain lubrication system that guarantees that the lubricant is applied at the correct lubrication point.**

The automatic lubrication reacts to speed changes without delay and works perfectly for roller chains and conveyor chains of any size and type.



## ADVANTAGES



### Longer chain life

Up to 60 times longer service life, especially recommended in corrosive environments



### Cost savings

Increased system availability and profitability, reduces lubricant consumption, energy costs and spare parts costs



### Simple and effective application

System runs fully automatically, easy to install, constant monitoring



### Flexible

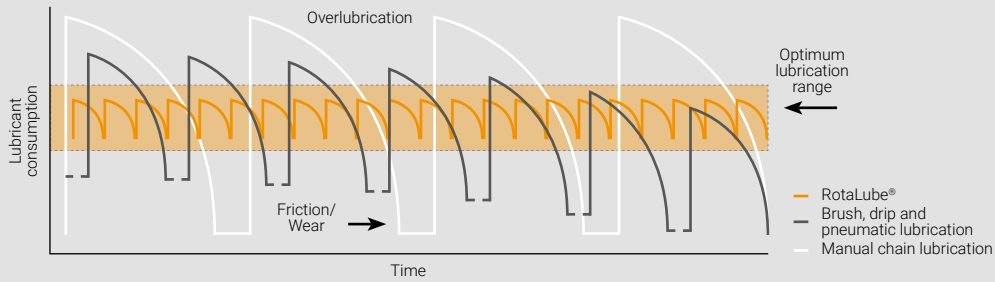
Can be used for different chain sizes, conveyed goods and operating conditions as well as lubricant types and manufacturers, system can lubricate from above, below or from the side



### Environmentally friendly

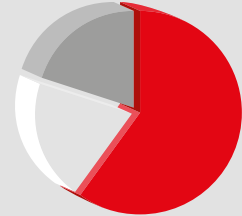
No waste of lubricant by avoiding overlubrication

### Efficiency of RotaLube®

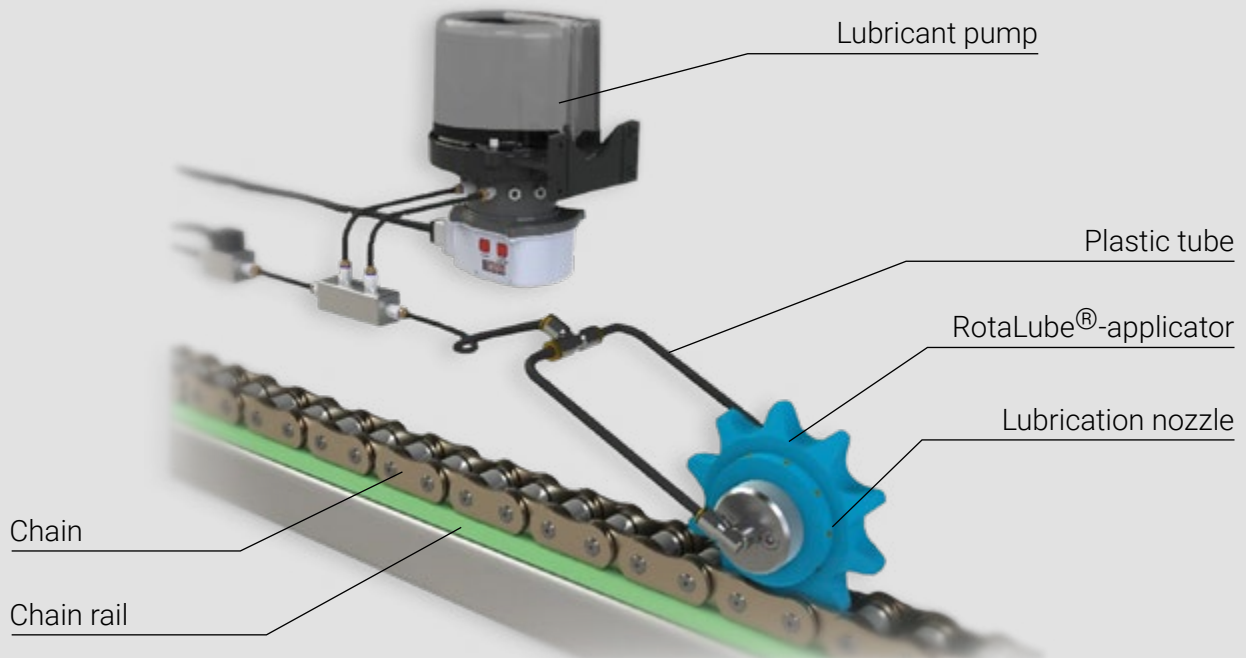


### Reasons for chain wear

- 60 % incorrect lubrication
- 20 % mechanical damage
- 20 % other reasons



## ASSEMBLY EXAMPLE



### IMPORTANT PROPERTIES OF LUBRICANT:



- very good creep behaviour to quickly penetrate the gap between the chain components
- excellent protection against wear and corrosion
- resistant to dirt, water, various acids, etc.
- highest water and oxidation resistance
- very good long-term adhesion, so that the lubricants cannot be flung from the chain in case of large centrifugal forces
- lubricants with cleaning properties are ideal



## CHAIN SOLUTIONS FOR OVER A CENTURY

### FB consulting and sales

Belgium	<a href="http://www.fb-ketten.be">www.fb-ketten.be</a>
Netherlands	<a href="http://www.hefttruck-ketting.nl">www.hefttruck-ketting.nl</a>
Luxembourg	<a href="http://www.forkliftchain.eu">www.forkliftchain.eu</a>
Germany	<a href="http://www.fb-ketten.de">www.fb-ketten.de</a>
France	<a href="http://www.fb-chaines.fr">www.fb-chaines.fr</a>
Austria	<a href="http://www.fb-ketten.at">www.fb-ketten.at</a>
Switzerland	<a href="http://www.fb-ketten.ch">www.fb-ketten.ch</a>
Sweden	<a href="http://www.fb-kedjor.se">www.fb-kedjor.se</a>
Norway	<a href="http://www.fbkjeder.no">www.fbkjeder.no</a>
Slovakia	<a href="http://www.fb-retezy.eu">www.fb-retezy.eu</a>
Czech Republic	<a href="http://www.fb-retezy.eu">www.fb-retezy.eu</a>

### FB production

Finland	<a href="http://www.fbketju.com">www.fbketju.com</a>
England	<a href="http://www.fbchain.com">www.fbchain.com</a> <a href="http://www.leafchain.com">www.leafchain.com</a>

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#### FB Ketjutekniikka Oy

Yrittäjätie 14 • 27230 Lappi, Finland • phone +358 207 199 460  
fb@fbketju.com • www.fbketju.com

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#### FB Kedjor AB

Sättargatan 4, 63229 Eskilstuna, Sweden • phone +46 161 53300  
order@fbkedjor.se • info@fbkedjor.se • www.fb-kedjor.se

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#### FB Chain Ltd

Unit 5, Greenbank Business Park, Dyneley Rd., Blackburn BB1 3AB, United Kingdom • phone +44 1254 580022  
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**Profitable chain-solutions for a sustainable tomorrow**