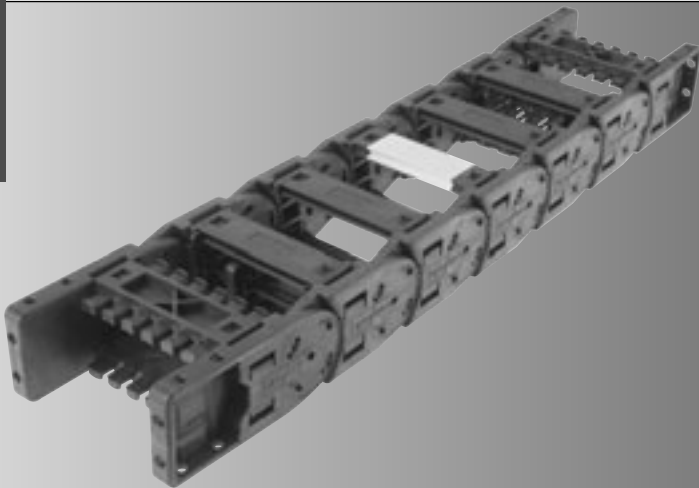


CABLE DRAG CHAIN SYSTEMS



PowerLine

MP 32



MP 32 - PowerLine

Order variants

Style (order code)									
Configuration (order code) * = standard									
Radius (order code)									
in mm									
Internal width (order code)									
in mm									
External width									
in mm									
MP32 045	71	45	045						
MP32 062	88	62	062						
MP32 071	97	71	071						
MP32 084	110	84	084						
MP32 096	122	96	096						
MP32 107	133	107	107						
MP32 121	147	121	121						
MP32 144	170	144	144						
MP32 146	172	146	146						
MP32 171	197	171	171						
MP32 182	208	182	182						
MP32 196	222	196	196						
MP32 220	246	220	220						
MP32 246	272	246	246						
MP32 296	322	296	296						
MP32 346	372	346	346						
MP32 396	422	396	396	80	080				
MP32 446	472	446	446	100	100	0			
MP32 496	522	496	496	120	120	2*			
MP32 546	572	546	546	150	150	4			
MP32 xxx	Inside	>80-	200	200	200	6		0	
	+ 26	600	ALU	250	250	9		9	

Order number:	0320			0			0
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Configuration:

- 0 crossbar every link; w/bias
- 2* crossbar EOL; w/bias
- 4 AL crossbar every link; w/bias
- 6 AL crossbar EOL; w/bias
- 9 Customer order

Style:

- 0 Standard (PA)
- 9 Special version

Sample order

0320 045 080 0000

Inside width = 45 mm
 Radius = 80 mm
 Configuration = 0
 Style = 0

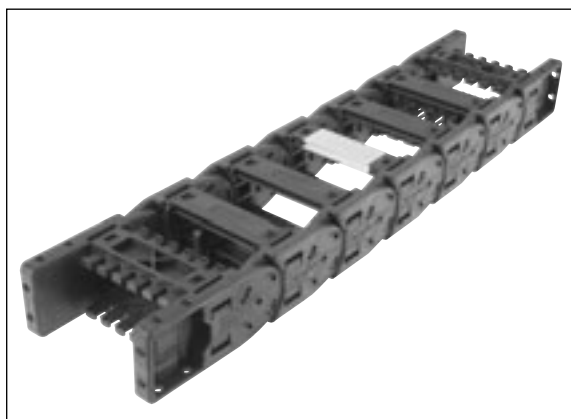
Ideal operating conditions










- Extreme accelerations
- Extreme speeds
- Extreme unsupported lengths
- Very high additional loads
- Opens on both sides
- Variable widths thanks to aluminium ridge
- Flexible internal separation
- Rotated 90°, unsupported/flat

Alternative chain type

- MP 36 G closed series
- MP 35 opening cover in inside bend, easier to use

Features

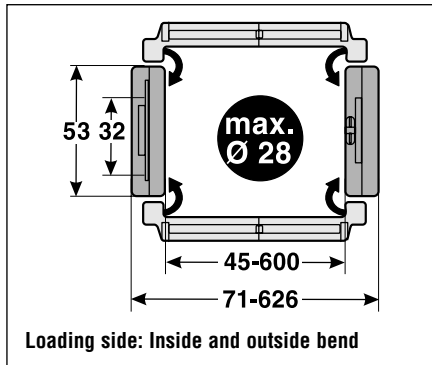


-  Chain bracket with fixing means on three sides
-  Aluminium frame ridges with integrated lock grid in variable lengths
-  Frame ridge strain relief can be integrated into chain bracket
-  Foldable shelf system for reliable cable guidance
-  Frame ridges / covers in inside and outside bend can be removed
-  Integratable separator for cable separation
-  Radii with medium bias (R) for all applications
-  Frame ridge connector for securing very wide frame ridges
-  Back radius combinations

MP 32 - PowerLine

Technical data

Chain link dimensions



Material properties

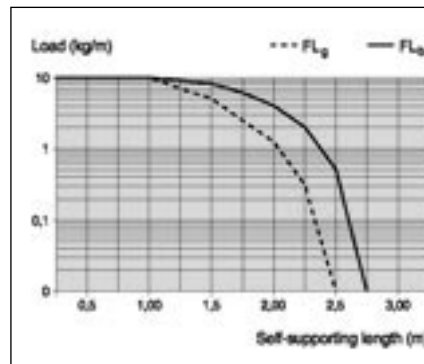
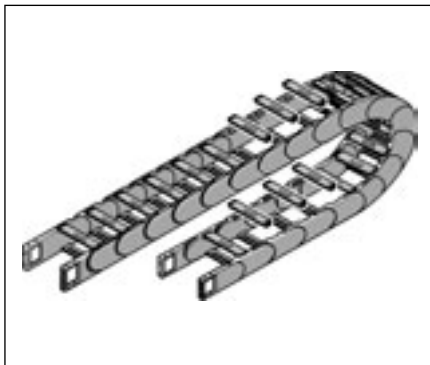
Service temperature: -30 to +120 °C
 Gliding friction factor: 0.30
 Static friction factor: 0.45
 Fire classification: in conformity with UL94 HB

Other material properties on request

Technical specifications

Travel distance, gliding, L_g : 100 m
 Travel distance, self-supporting, L_s : see diagram
 Travel distance, vertical, hanging, L_{vh} : 60 m
 Travel distance, vertical, upright, L_{vu} : 5 m
 Rotated 90°, self-supporting, L_{sg} : 2 m
 Speed, gliding, V_g : 5 m/s
 Speed, self-supporting, V_s : 20 m/s
 Acceleration, gliding, a_g : 25 m/s²
 Acceleration, self-supporting, a_s : 30 m/s²

Unsupported length

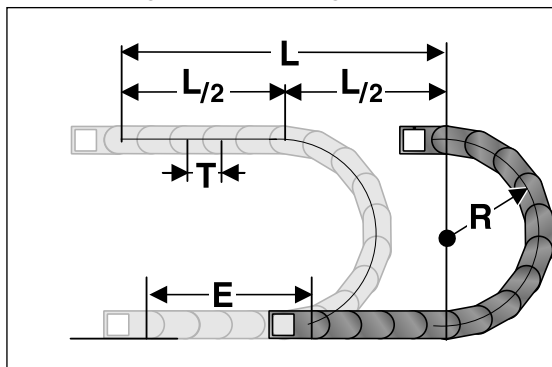


FL_g:
 Ideal installation situation for high stresses at the limit of the max. travel parameters. In this range the chain upper run is still biased, straight or has a max. sag of 10 – 50 mm depending on the type of chain.

FL_s:
 Satisfactory installation position for many applications working in the lower to middle range of the max. travel parameters. Depending on the chain type, the sag of the chain upper run is > 10 – 50 mm but less than the max. sag.

If the sag is greater than FL_s, the arrangement is unsuitable and should be avoided. Please choose a more stable murrplastik cable drag chain.

Determining the chain length



L = Travel distance
 R = Radius
 T = Pitch
 E = Distance between entry point and middle of travel distance

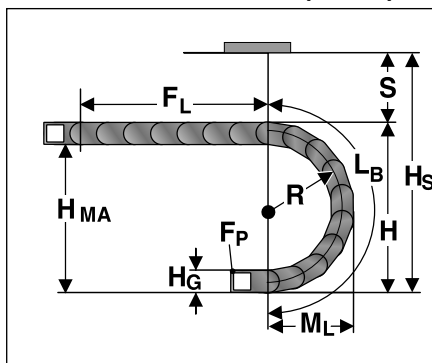
Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + E$$

≈ 1 m chain = 16 x 64.5 mm links

The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

Installation dimensions (in mm)

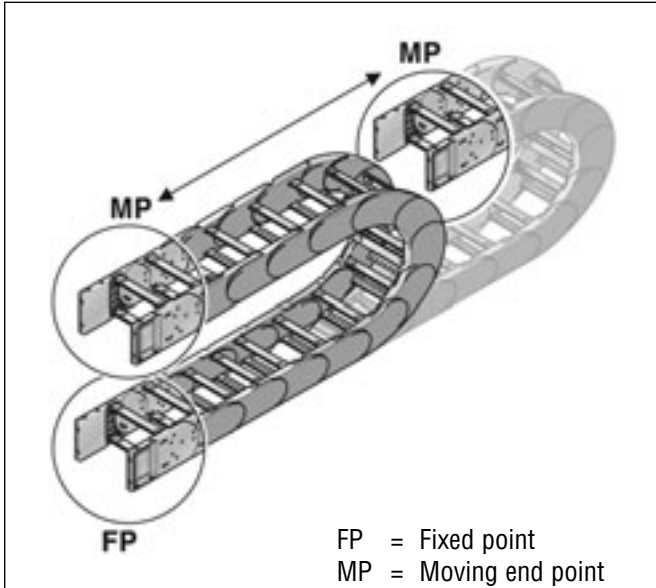


Radius R	80	100	120	150	200	250
Outside height of chain link (H_e)	53	53	53	53	53	53
Height of bend (H)	213	253	293	353	453	553
Height of moving end connection (H_{MA})	160	200	240	300	400	500
Safety margin (S)	30	30	30	30	30	30
Installation height (H_s)	243	283	323	383	483	583
Arc projection (M_L)	171	191	211	241	291	341
Bend length (L_b)	399	462	525	619	776	933

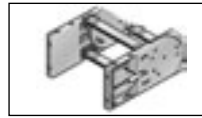


MP 32 - PowerLine

Chain bracket



Chain bracket



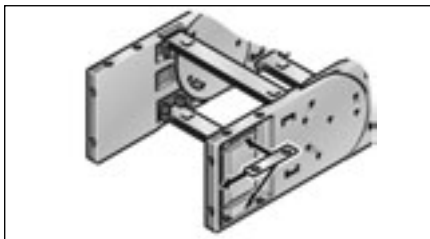
Flexible

Chain bracket

Type

Order no.

Pack



KA 32-F

032000050

1

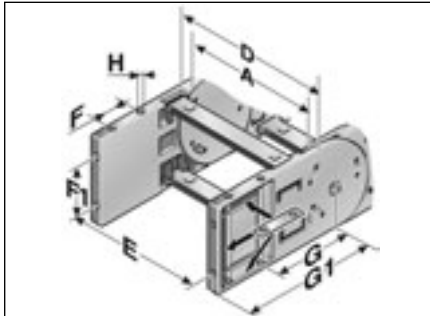
This chain bracket offers universal connection options (top, bottom and front) and is attached to the ends of the chain like a side link. This allows the chain to move right up to the bracket. Each chain requires two chain brackets. The brackets should be fastened with M5 screws. Metal inserts (provided) are used to minimise the cold flow properties.

This is an enormous advantage, guaranteeing the smooth transfer of high loads to the chain.

MP 32 - PowerLine

Chain bracket

Dimensions in mm



Type	A	D	E	F	F1	G	G1	H Ø
KA 32-F	45.00	71.00	59.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	62.00	88.00	76.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	71.00	97.00	85.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	84.00	110.00	98.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	96.00	122.00	110.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	107.00	133.00	121.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	121.00	147.00	135.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	144.00	170.00	158.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	146.00	172.00	160.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	171.00	197.00	185.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	182.00	208.00	196.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	196.00	222.00	210.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	220.00	246.00	234.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	246.00	272.00	260.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	252.00	278.00	266.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	296.00	322.00	310.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	346.00	372.00	360.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	396.00	422.00	410.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	446.00	472.00	460.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	496.00	522.00	510.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	546.00	572.00	560.00	22.50	22.00	57.80	93.00	5.50
KA 32-F	Variable	A+26.00	A+14.00	22.50	22.00	57.80	93.00	5.50



MP 32 - Accessories

Separator

Type	Order no.	Description	Pack
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Separator

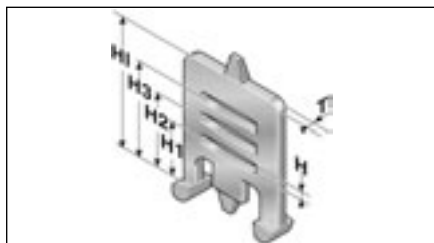
TR 32	032000009200	Separator	1
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Lock grid spacing 5.60 mm

We recommend that separators are used if multiple round cables or conduits with differing diameters are to be installed.
An offset configuration of the separators is advisable.

Type	Dimensions in mm					
	TI	H	H1	H2	H3	HI

TR 32	3.00	4.20	10.40	16.20	22.00	32.40
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Separator

H-shaped shelf unit

Type	Order no.	Description	Pack
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H-shaped shelf unit

RE 3235	100000322010	RE 3235 Shelf unit, H-shaped 1
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RE 3252	100000323510	RE 3252 Shelf unit, H-shaped 1
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RE 3275	100000327510	RE 3275 Shelf unit, H-shaped 1
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Lock grid spacing 5.60 mm

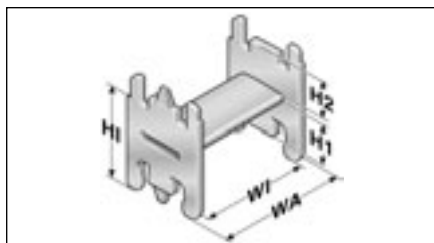
Insert to obtain additional levels in pre-defined distances.

Type	Dimensions in mm				
	WA	WI	H1	H2	HI

RE 3235	43.20	35.20	14.20	14.20	32.40
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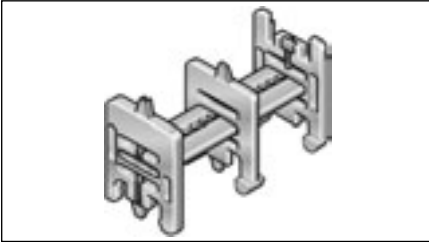
RE 3252	60.00	52.00	14.20	14.20	32.40
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RE 3275	82.40	74.40	16.40	12.00	32.40
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H-shaped shelf unit

MP 32 - Accessories

Shelving system	Type	Order no.	Description	Width in mm	Pack
	RB 031	100000003100	RB 031 Shelf	31	1
	RB 048	100000004800	RB 048 Shelf	48	1
	RB 070	100000007000	RB 070 Shelf	70	1
	RB 092	100000009200	RB 092 Shelf	92	1
	RB 128	100000012800	RB 128 Shelf	128	1
	RB 167	100000016700	RB 167 Shelf	167	1
	RB 218	100000021800	RB 218 Shelf	218	1
	RTA 32	1000910100	RTA 32 Shelf support, external, incl. pin		1
	RTI 32	1000911100	RTI 32 Shelf support, internal, incl. pin		1

Shelving system

Lock grid spacing 5.60 mm

When used with at least two shelf supports (RTI/RTA) the shelf becomes a shelving system. The additional levels prevent cables from criss-crossing and therefore destroying each other, whilst also avoiding excessive friction. The shelf system can be pre-assembled on request.

RTA shelf supports are positioned on the outer edge of the internal chain compartment. RTI shelf supports are positioned in the centre of the internal chain compartment in case the shelf system does not span the entire width.

Dimensions in mm	
Type	TI
RTA / RTI	6.00



Shelving system



MP 32 - Accessories

Frame ridge connector

Type	Order no.	Description	Pack
RSV 32	032000009600	RSV 32 Frame ridge connector	1
RSV 32 A	032000009800	RSV 32 Aluminium frame ridge connector	1



Frame ridge connector

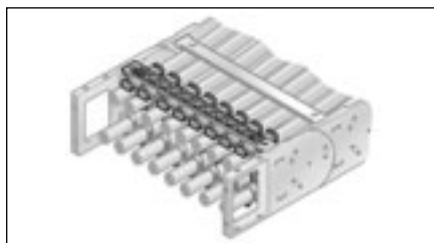
For frame ridges wider than 246 mm, we recommend the use of frame ridge connectors. These prevent deformation to the frame ridge under large amounts of additional weight of the chain assembly.

Type	TI	Dimensions in mm
RSV 32	7.50	



Strain relief RS-ZL

Type	Order no.	Description	Pack
RS-ZL 045-5	052004500010	RS-ZL 045-5 Frame ridge with strain relief	1
RS-ZL 062-5	052006200010	RS-ZL 062-5 Frame ridge with strain relief	1
RS-ZL 071-5	052007100010	RS-ZL 071-5 Frame ridge with strain relief	1
RS-ZL 084-5	052008400010	RS-ZL 084-5 Frame ridge with strain relief	1
RS-ZL 096-5	052009600010	RS-ZL 096-5 Frame ridge with strain relief	1
RS-ZL 107-5	052010700010	RS-ZL 107-5 Frame ridge with strain relief	1
RS-ZL 121-5	052012100010	RS-ZL 121-5 Frame ridge with strain relief	1
RS-ZL 144-5	052014400010	RS-ZL 144-5 Frame ridge with strain relief	1
RS-ZL 171-5	052017100010	RS-ZL 171-5 Frame ridge with strain relief	1
RS-ZL 182-5	052018200010	RS-ZL 182-5 Frame ridge with strain relief	1
RS-ZL 196-5	052019600010	RS-ZL 196-5 Frame ridge with strain relief	1
RS-ZL 220-5	052022000010	RS-ZL 220-5 Frame ridge with strain relief	1
RS-ZL 246-5	052024600010	RS-ZL 246-5 Frame ridge with strain relief	1



Strain relief RS-ZL

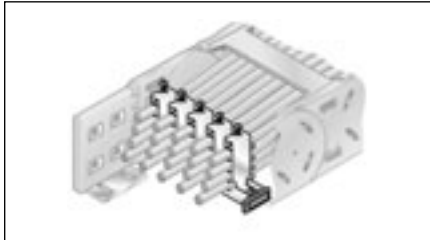
Frame ridges with strain relief that can be permanently integrated in the chain brackets.

Tailored to all frame ridge widths up to 246 mm.

May be mounted on the inside and outside bend on both ends of the chain.

MP 32 - Accessories

Strain relief with BAK



Strain relief with hooped clamps

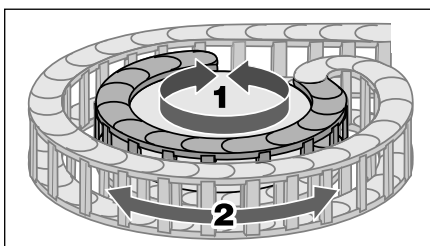
Type	Order no.	Description	Ø in mm	Pack
C-rail	81661610	C-profile rail		1
BAK 14	81661002	BAK 14 Hooped clamp	6-14	1
BAK 18	81661004	BAK 18 Hooped clamp	14-18	1
BAK 22	81661006	BAK 22 Hooped clamp	18-22	1
BAK 26	81661008	BAK 26 Hooped clamp	22-26	1
BAK 30	81661010	BAK 30 Hooped clamp	26-30	1
BAK 14/2	81661012	BAK 14/2 Hooped clamp	10-14	1
BAK 18/2	81661014	BAK 18/2 Hooped clamp	14-18	1
BAK 22/2	81661016	BAK 22/2 Hooped clamp	18-22	1
BAK 26/2	81661018	BAK 26/2 Hooped clamp	22-26	1
BAK 12/3	81661020	BAK 12/3 Hooped clamp	9-12	1
BAK 14/3	81661022	BAK 14/3 Hooped clamp	12-14	1
BAK 16/3	81661024	BAK 16/3 Hooped clamp	14-16	1
BAK 18/3	81661026	BAK 18/3 Hooped clamp	16-18	1
BAK 20/3	81661028	BAK 20/3 Hooped clamp	18-20	1
BAK 22/3	81661030	BAK 22/3 Hooped clamp	20-22	1

Strain relief plates that can be permanently integrated in the chain brackets. Available in all widths (including individual widths in aluminium frame ridges). May be mounted on the inside and outside bend at both ends of the chain. The chain configuration can be fixed using hooped clamps that are available in different sizes.

Material: Galvanised steel

Please indicate chain type and inside width when ordering.

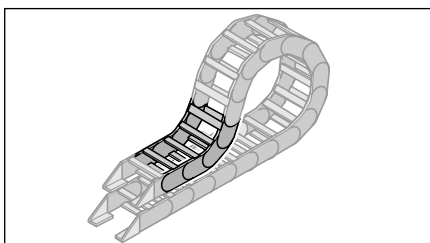
Back radius



Rotary movement

Type	Order no.	Radius	Back Radius	Pack
SR 32 (RÜ200/R120)	32000008060	120 mm	200 mm	1
SR 32 (RÜ200/R135)	32000010060	135 mm	200 mm	1
SR 32 (RÜ200/R150)	32000012060	150 mm	200 mm	1
SR 32 (RÜ200/R170)	32000015060	170 mm	200 mm	1
SR 32 (RÜ200/R200)	32000020060	200 mm	200 mm	1
SR 32 (RÜ200/R250)	32000025060	250 mm	200 mm	1

Side links with forward radius (R) and back radius (Rü) permit movement in two directions. Areas of application include rotary movements and low-lying chain brackets.

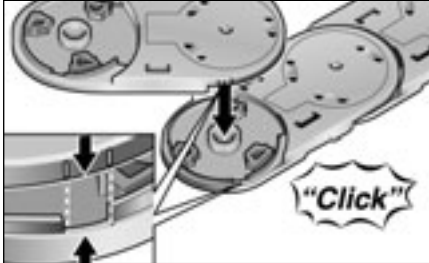


Low-lying chain connection

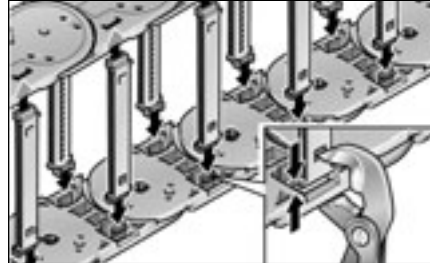


MP 32 - PowerLine

Assembly

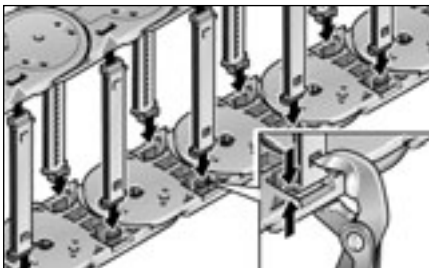


Step 1



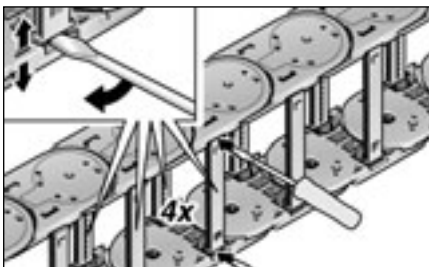
Step 2

The heavy-duty connection between the frame ridge and side wall has a positive fit. For this reason the frame ridges are fixed on one side over the entire chain length on one side panel first before being inserted into the opposite side panel.



Step 3

Disassembly

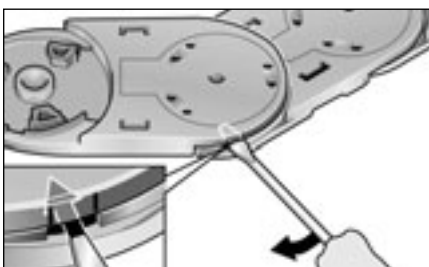


Step 1



Step 2

Disassembly is effected in the reverse sequence to assembly. First lever the ridges out of the side panel on one side, then on the other side.



Step 3