



# Cable drag chain systems

**MP 45.1, MP 45.2**

**Neue Kettenserie  
45 mm Innenhöhe  
Mit zusätzlicher  
Dämpfungsoption**

# MP 45.1

OPEN

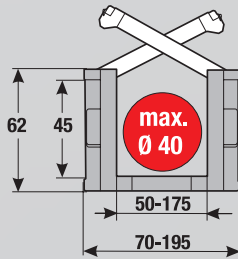


# MP 45.2

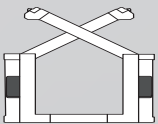
OPEN



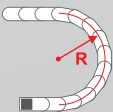
- REDUCED-COST
- SOFT-STOP SYSTEM
- UNIVERSAL USE
- CHAIN BRACKET WITH INTEGRATED STRAIN RELIEF
- BROAD INTERIOR LAYOUT



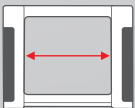
## TECHNICAL DATA



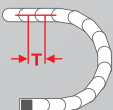
**Loading side**  
Inside or outside bend



**Available radii**  
75.0 – 300.0



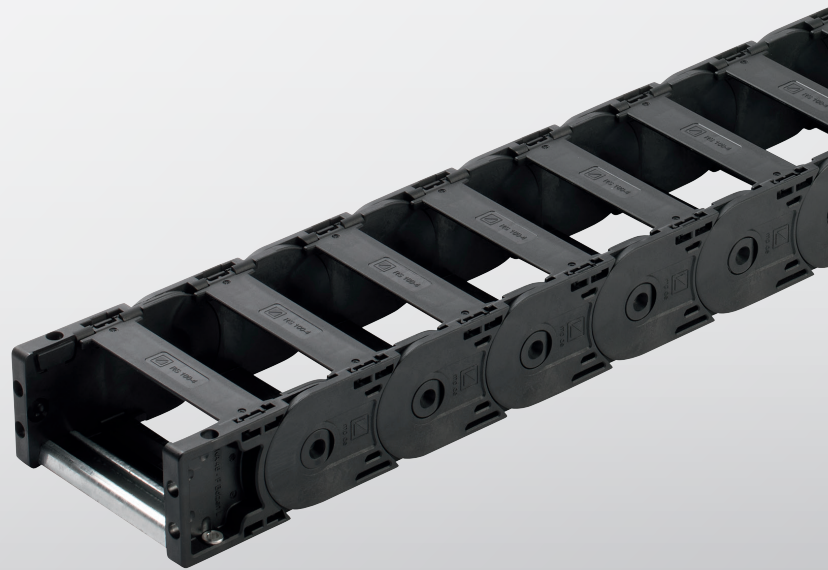
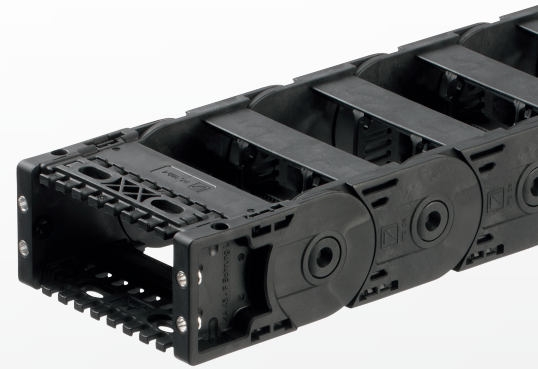
**Available interior widths**  
With plastic frame bridge  
50.0 – 175.0



**Pitch**  
T = 67.0 mm



**noise attenuator**  
Reduction of the noise emission by up to 10 dB(A) by the use of damping elements in the chain links.





## TECHNICAL SPECIFICATIONS

Travel distance gliding $L_g$ max.	80.0 m
Travel distance self-supporting $L_f$ max.	see diagram on page 5
Travel distance vertical, hanging $L_{vh}$ max.	10.0 m
Travel distance vertical, upright $L_{vs}$ max.	4.0 m
Rotated 90°, unsupported $L_{90f}$ max.	1.0 m
Speed, gliding $V_g$ max.	5.0 m/s
Speed, self-supporting $V_f$ max.	10.0 m/s

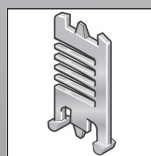
## MATERIAL PROPERTIES

Standard material	Polyamide (PA) black
Service temperature	-30.0 – 120.0 °C
Gliding friction factor	0.3
Static friction factor	0.45
Fire classification	UL 94 HB

Other material properties on request.

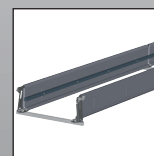
MP 45.1 OPEN / MP 45.2 OPEN

### SHELVING SYSTEM



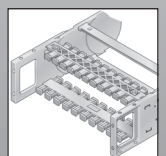
Separator TR

### GUIDE CHANNELS



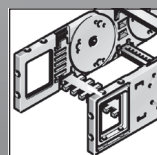
VAW stainless steel

### STRAIN RELIEF

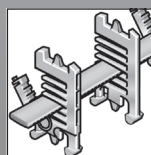


RS-ZL frame rail

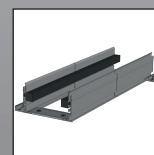
### CHAIN BRACKET



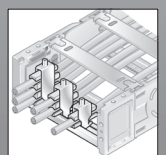
Chain bracket flexible



Shelving system RS



VAW aluminium

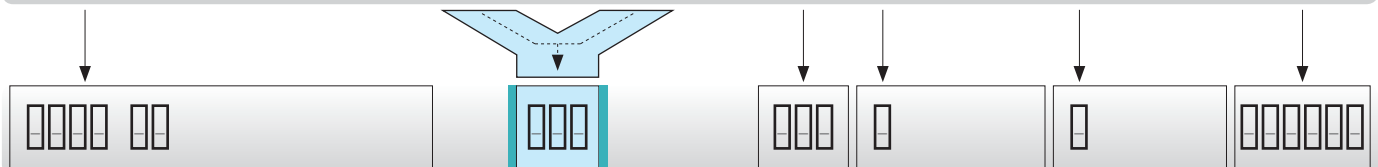


STF Steel Fix

**ORDERING KEY**

Dimensions in mm [US inch]

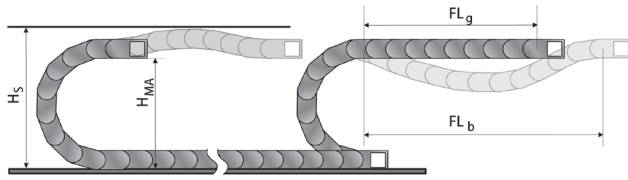
Type code	Variation	Inside width	Outside width	Inside width	Outside width	Radius	Rail variant	Material	Chain length
0451 01	MP 45.1 open Frame bridge on outside of radius Frame bridge on inside bend Opens on outside bend	050 [1.97]	070 [2.76]			075 [2.95]	0 Plastic, full-ridged with bias	2 Polyamide without attenuator (PA/black)	
		075 [2.95]	095 [3.74]						
0452 02	MP 45.2 open Frame bridge on outside of radius Frame bridge on inside bend Opens on inside of radius	100 [3.94]	120 [4.72]			100 [3.94]	1 Plastic, full-ridged without bias	3 Polyamide with attenuator (PA/black)	
		115 [4.53]	135 [5.31]						
		125 [4.92]	145 [5.71]			125 [4.92]		9 Special version (on request)	
		150 [5.91]	170 [6.69]			150 [5.91]			
		175 [6.89]	195 [7.68]			150 [5.91]			
						200 [7.87]			
						250 [9.84]			
						300 [11.81]			



**SAMPLE ORDER: 0452 02 075 100 0 3 2000**

Frame bridge in outside bend, frame bridge in inside bend, can be opened from inside bend  
 Inside width 075 mm, radius 100 mm  
 Plastic, full-ridged with bias, material polyamide with damper (PA/black)  
 Chain length 2000 mm (30 links)

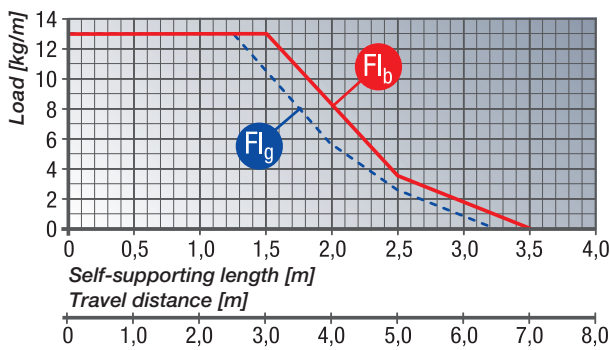
**SELF-SUPPORTING LENGTH**



The self-supporting length is the distance between the chain bracket on the moving end and the start of the chain arch. The installation variant  $FL_g$  offers the lowest load and wear for the cable drag chain. The maximum travel parameters (speed and acceleration) can be applied for this variant.

- $H_s$  = Installation height plus safety
- $H_{MA}$  = Height of moving end connection
- $FL_g$  = Self-supporting length, upper run straight
- $FL_b$  = Self-supporting length, upper run bent

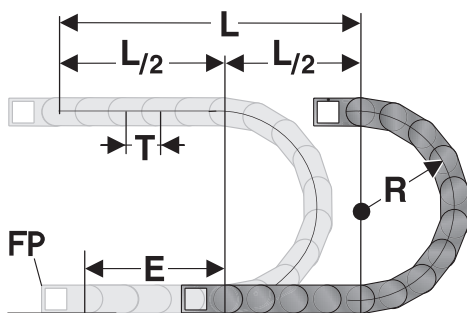
**LOAD DIAGRAM FOR SELF-SUPPORTING APPLICATIONS**



**$FL_g$  Self-supporting length, upper run straight**  
 In the  $FL_g$  range, the chain upper run still has a bias, is straight or has a maximum sag of 50.0 mm.

**$FL_b$  Self-supporting length, upper run bent**  
 In the  $FL_b$  range, the chain upper run has a sag of more than 50.0 mm, but this is still less than the maximum sag. Where the sag is greater than that permitted in the  $FL_b$  range, the application is critical and should be avoided. The self-supporting length can be optimized by using a support for the upper run or a more stable energy chain.

**DETERMINING THE CHAIN LENGTH**



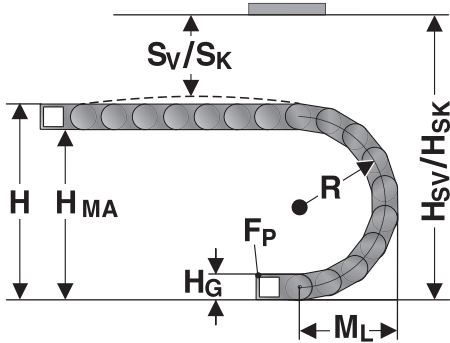
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point (FP) and the moving consumer and thus the most efficient chain length.

Chain length calculation =  $L/2 + \pi * R + E$   
 $\approx 1 \text{ m chain} = 15 \text{ qty.} \times 67.0 \text{ mm links.}$

- E = distance between entry point and middle of travel distance
- L = travel distance
- R = radius
- T = Pitch 67.0 mm

MP 45.1 OPEN / MP 45.2 OPEN

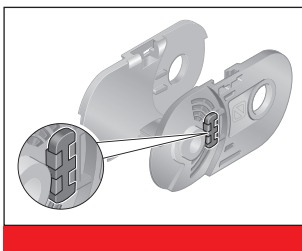
**EINBAUMASSE**



The moving end chain connection is to be screw fixed at height  $H_{MA}$  for the respective radius. Concerning the installed dimensions, you must take into consideration whether the chain links are equipped with damping elements or not. For chain links without damping elements, the value „Installed height with bias  $H_{SV}$  without damper“ or „Installed height without bias  $H_{SK}$  without damper“ must be taken into account. If the chain links are equipped with a damping element, the value „Installed height with bias  $H_{SV}$  with damper“ or „Installed height without bias  $H_{SK}$  with damper“ is to be taken into account.

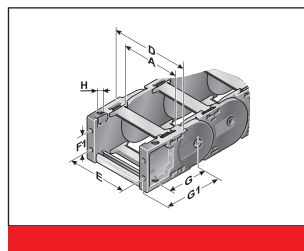
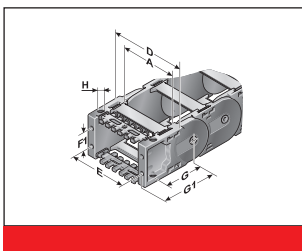
Radius R	75	100	125	150	200	250	300
Outside height of chain link ( $H_G$ )	62	62	62	62	62	62	62
Height of bend (H)	212	262	312	362	462	562	662
Height of moving end bracket ( $H_{MA}$ )	150	200	250	300	400	500	600
Safety margin with bias ( $S_V$ )	20	20	20	20	20	20	20
Installation height with bias ( $H_{SV}$ ) without damper	322	372	422	472	572	672	772
Installation height with bias ( $H_{SV}$ ) with damper	342	392	442	492	592	692	792
Safety margin without bias ( $S_K$ )	20	20	20	20	20	20	20
Installation height without bias ( $H_{SK}$ ) without damper	232	282	332	382	482	582	682
Installation height without bias ( $H_{SK}$ ) with damper	252	302	352	402	502	602	702
Arc projection ( $M_L$ )	173	198	223	248	298	348	398

**DAMPING ELEMENTS FOR THE CHAIN LINKS**



The damping elements in the stops facilitate a significantly quieter unrolling of the chain links. The dampers can be chosen optionally. A reduction of the noise emission by up to 10 dB(A) comparing to the variants without the use of damping elements is possible.

**FLEXIBLE CHAIN BRACKET KA 45**

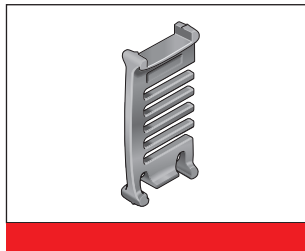
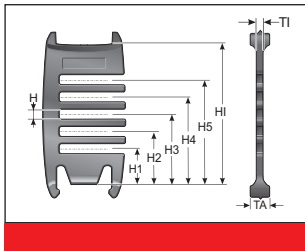


Type	Order No.	Material	Inside width						Outside width KA O
			A mm	E mm	F1 mm	G mm	G1 mm	H0 mm	
KA 45-F Female end, 050, complete	0450005050	Plastic	50.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0

## FLEXIBLE CHAIN BRACKET KA 45

Type	Order No.	Material	Inside width						Outside width KA	
			A mm	E mm	F1 mm	G mm	G1 mm	HØ mm	O mm	
KA 45-F Female end, 050, pendular, complete	0450005052	Plastic	50.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 050, complete	0450005051	Plastic	50.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 050, pendular, complete	0450005053	Plastic	50.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 075, complete	0450007550	Plastic	75.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 075, pendular, complete	0450007552	Plastic	75.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 075, complete	0450007551	Plastic	75.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 075, pendular, complete	0450007553	Plastic	75.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 100, complete	0450010050	Plastic	100.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 100, pendular, complete	0450010052	Plastic	100.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 100, complete	0450010051	Plastic	100.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 100, pendular, complete	0450010053	Plastic	100.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
	0450011550	Plastic	115.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
	0450011551	Plastic	115.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
	0450011552	Plastic	115.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
	0450011553	Plastic	115.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 125, complete	0450012550	Plastic	125.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 125, pendular, complete	0450012552	Plastic	125.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 125, complete	0450012551	Plastic	125.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 125, pendular, complete	0450012553	Plastic	125.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 150, complete	0450015050	Plastic	150.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 150, pendular, complete	0450015052	Plastic	150.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 150, complete	0450015051	Plastic	150.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 150, pendular, complete	0450015053	Plastic	150.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 175, complete	0450017550	Plastic	175.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Female end, 175, pendular, complete	0450017552	Plastic	175.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 175, complete	0450017551	Plastic	175.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	
KA 45-F Male end, 175, pendular, complete	0450017553	Plastic	175.0	A+13.0	22.0	60.0	82.0	5.5	A+24.0	

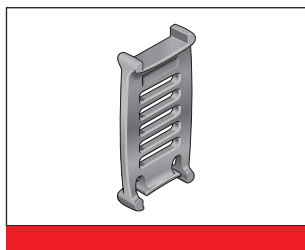
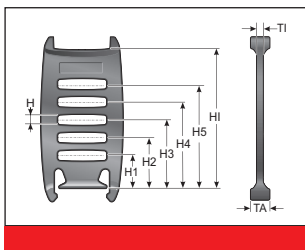
**TRT 45 DIVISIBLE SEPARATOR**



We recommend that separators be used if multiple round cables or conduits with differing diameters are to be installed.

Type	Order No.	Designation	Version	Tl mm	TA mm	H mm	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	Hl mm
TRT 45, divisible	045000009200	TRT 45, separator, divisible	lockable	3.0	8.0	3.2	11.3	16.9	22.5	28.1	33.7	45.0

**TR 45-V SEPARATOR**

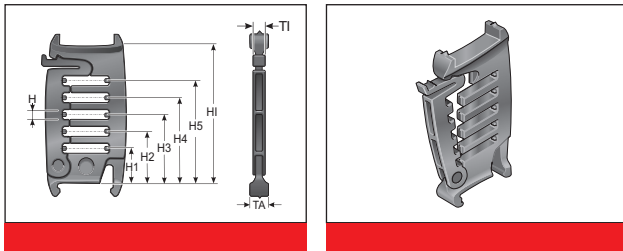


Das Verlegen mehrerer Rundleitungen oder Schläuche mit unterschiedlichen Durchmessern ist nur bei Verwendung von Trennstegen zu empfehlen.

Type	Order No.	Designation	Version	Tl mm	TA mm	H mm	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	Hl mm
TR 45-V	045000009300	TR 45-V Separator	moveable	3.0	8.0	3.2	11.3	16.9	22.5	28.1	33.7	45.0



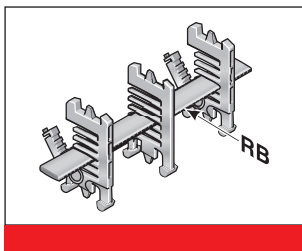
**RTT 45 SHELF SUPPORT, DIVISIBLE**



Zwei teilbare Regalträger (RTT) ergeben in Verbindung mit mindestens einem Regalboden (RB) ein einfach zu befüllendes Regalsystem. Die zusätzlichen Ebenen/Etagen verhindern das Verdrehen der Leitungen und minimieren die Reibung der Leitungen untereinander.

Type	Order No.	Designation	Version	TI mm	TA mm	H mm	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	H6	H7	HI mm
RTT 45	100090450000	Shelf support, divisible	lockable	5.0	8.0	3.2	11.3	16.9	22.5	28.1	33.7			45.0

**RB-3 SHELF**



In connection with at least two separable shelf supports (RTT), the shelf becomes a shelving system. The additional levels prevent cables from criss-crossing and minimise the friction between them.

Type	Order No.	Designation	Width mm	für Innenbreite mm
RB 039-3	030100003900	Shelf	38.6	40.0
RB 041-3 shelf 041-3 mm	1000004103	Shelf	41.1	50.0
RB 044-3 shelf 044-3 mm	1000004403	Shelf	43.6	50.0
RB 046-3 shelf 046-3 mm	1000004603	Shelf	46.1	50.0
RB 049-3	030100004900	Shelf	48.6	50.0
RB 051-3 shelf 051-3 mm	1000005103	Shelf	51.1	60.0
RB 054-3 shelf 054-3 mm	1000005403	Shelf	53.6	60.0
RB 056-3 shelf 056-3 mm	1000005603	Shelf	56.1	60.0
RB 059-3	030100005900	Shelf	58.6	60.0
RB 061-3 shelf 061-3 mm	1000006103	Shelf	61.1	75.0
RB 064-3 shelf 064-3 mm	1000006403	Shelf	63.6	75.0
RB 066-3 shelf 066-3 mm	1000006603	Shelf	66.1	75.0
RB 069-3 shelf 069-3 mm	1000006903	Shelf	68.6	75.0
RB 071-3 shelf 071-3 mm	1000007103	Shelf	71.1	75.0
RB 074-3	030100007400	Shelf	73.6	75.0
RB 076-3 shelf 076-3 mm	1000007603	Shelf	76.1	85.0
RB 079-3 shelf 079-3 mm	1000007903	Shelf	78.6	85.0
RB 081-3 shelf 081-3 mm	1000008103	Shelf	81.1	85.0

MP 45.1 OPEN / MP 45.2 OPEN

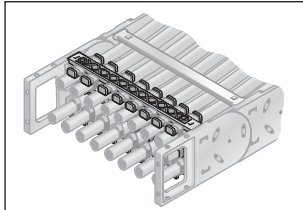
**RB-3 SHELF**

Type	Order No.	Designation	Width mm	für Innenbreite mm
RB 084-3	030100008400	Shelf	83.6	85.0
RB 086-3 shelf 086-3 mm	1000008603	Shelf	86.1	100.0
RB 089-3 shelf 089-3 mm	1000008903	Shelf	88.6	100.0
RB 091-3 shelf 091-3 mm	1000009103	Shelf	91.1	100.0
RB 094-3 shelf 094-3 mm	1000009403	Shelf	93.6	100.0
RB 096-3 shelf 096-3 mm	1000009603	Shelf	96.1	100.0
RB 099-3	030100009900	Shelf	98.6	100.0
RB 101-3 shelf 101-3 mm	1000010103	Shelf	101.1	115.0
RB 104-3 shelf 104-3 mm	1000010403	Shelf	103.6	115.0
	1000010603	Shelf	106.1	115.0
RB 109-3 shelf 109-3 mm	1000010903	Shelf	108.6	115.0
RB 111-3 shelf 111-3 mm	1000011103	Shelf	111.1	115.0
RB 114-3	030100011400	Shelf	113.6	115.0
RB 116-3 shelf 116-3 mm	1000011603	Shelf	116.1	125.0
RB 119-3 shelf 119-3 mm	1000011903	Shelf	118.6	125.0
RB 121-3 shelf 121-3 mm	1000012103	Shelf	121.1	125.0
RB 124-3	030100012400	Shelf	123.6	125.0
RB 126-3 shelf 126-3 mm	1000012603	Shelf	126.1	150.0
RB 129-3 shelf 129-3 mm	1000012903	Shelf	128.6	150.0
RB 131-3 shelf 131-3 mm	1000013103	Shelf	131.1	150.0
RB 134-3 shelf 134-3 mm	1000013403	Shelf	133.6	150.0
RB 136-3 shelf 136-3 mm	1000013603	Shelf	136.1	150.0
RB 139-3 shelf 139-3 mm	1000013903	Shelf	138.6	150.0
RB 141-3 shelf 141-3 mm	1000014103	Shelf	141.1	150.0
RB 144-3 shelf 144-3 mm	1000014403	Shelf	143.6	150.0
RB 146-3 shelf 146-3 mm	1000014603	Shelf	146.1	150.0
RB 149-3	030100014900	Shelf	148.6	150.0
RB 151-3 shelf 151-3 mm	1000015103	Shelf	151.1	175.0
	1000015403	Shelf	153.6	175.0
RB 156-3 shelf 156-3 mm	1000015603	Shelf	156.1	175.0
RB 159-3 shelf 159-3 mm	1000015903	Shelf	158.6	175.0
RB 161-3 shelf 161-3 mm	1000016103	Shelf	161.1	175.0
RB 164-3 shelf 164-3 mm	1000016403	Shelf	163.6	175.0
RB 166-3 shelf 166-3 mm	1000016603	Shelf	166.1	175.0
RB 169-3 shelf 169-3 mm	1000016903	Shelf	168.6	175.0
RB 174-3	030100017400	Shelf	173.6	175.0
RB 176-3 shelf 176-3 mm	1000017603	Shelf	176.1	200.0
RB 179-3 shelf 179-3 mm	1000017903	Shelf	178.6	200.0
RB 181-3 shelf 181-3 mm	1000018103	Shelf	181.1	200.0
RB 184-3 shelf 184-3 mm	1000018403	Shelf	183.6	200.0
RB 186-3 shelf 186-3 mm	1000018603	Shelf	186.1	200.0
RB 189-3 shelf 189-3 mm	1000018903	Shelf	188.6	200.0
RB 191-3 shelf 191-3 mm	1000019103	Shelf	191.1	200.0

**RB-3 SHELF**

Type	Order No.	Designation	Width mm	für Innenbreite mm
RB 194-3 shelf 194-3 mm	1000019403	Shelf	193.6	200.0
RB 196-3 shelf 196-3 mm	1000019603	Shelf	196.1	200.0
RB 199-3	030100019900	Shelf	198.6	200.0

**RS-ZL-3 ZLA MP 45 FRAME BRIDGE STRAIN RELIEF PLATE**

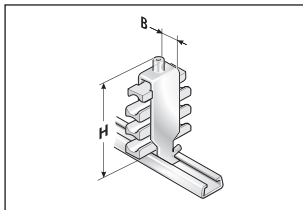


Frame bridge strain relief plate

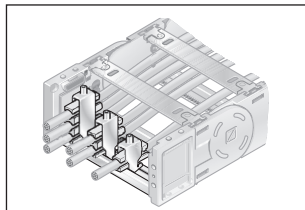
Fest integrierbare Rahmenstegzugentlastungen in den Kettenanschlüssen. Angepasst an alle Breiten der Rahmenstege bis zur Größe von 150 mm. Montierbar im Innen- und Außenbogen an beiden Kettenenden.

Type	Order No.	Designation	für Innenbreite mm
RS-ZL 050-3 ZLA MP 45	0451050010	Frame bridge strain relief plate	50.0
RS-ZL 075-3 ZLA MP 45	0451075010	Frame bridge strain relief plate	75.0
RS-ZL 100-3 ZLA MP 45	0451100010	Frame bridge strain relief plate	100.0
RS-ZL 115-3 ZLA MP 45	0451115010	Frame bridge strain relief plate	115.0
RS-ZL 125-3 ZLA MP 45	0451125010	Frame bridge strain relief plate	125.0
RS-ZL 150-3 ZLA MP 45	0451150010	Frame bridge strain relief plate	150.0
RS-ZL 175-3 ZLA MP 45	0451175010	Frame bridge strain relief plate	175.0

**STRAIN RELIEF WITH STEEL FIX**



STF Steel Fix



STF Steel Fix

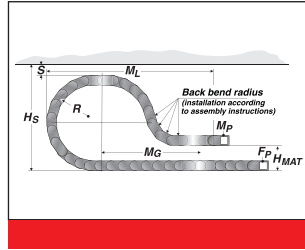
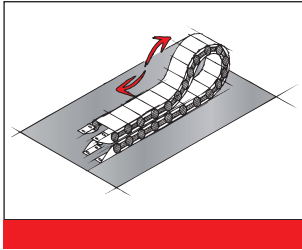
C-rails (cathodic dipped) for permanent integration, for accommodating the Steel Fix bow clamps in the chain brackets. The bow clamps can take up to 3 cables and are suitable for C-rails with a groove width of 11 mm. Due to the design of the trough elements, a cable preserving cable guidance is ensured. May be assembled on the inside and outside bends at both chain endings. The overall height stated is a guide only. The actual height is, amongst other things, dependent on the diameter and the quality of the cable. A safety distance of 10 mm at the fixed point above the strain relief must be kept during gliding applications.

Type	Order No.	Designation	Seats qty.	Cable Ø mm	Width (B) mm	Overall height (H) mm
<b>Single clamp (for two cables)</b>						
STF 12-1 Steel Fix	81661801	Hooped clamp	1	6.0 – 12.0	16.0	55.0
STF 14-1 Steel Fix	81661802	Hooped clamp	1	12.0 – 14.0	18.0	52.0
STF 16-1 Steel Fix	81661803	Hooped clamp	1	14.0 – 16.0	20.0	54.0
STF 18-1 Steel Fix	81661804	Hooped clamp	1	16.0 – 18.0	22.0	56.0
STF 20-1 Steel Fix	81661805	Hooped clamp	1	18.0 – 20.0	24.0	59.0
STF 22-1 Steel Fix	81661806	Hooped clamp	1	20.0 – 22.0	26.0	61.0
STF 26-1 Steel Fix	81661807	Hooped clamp	1	22.0 – 26.0	30.0	70.0
STF 30-1 Steel Fix	81661808	Hooped clamp	1	26.0 – 30.0	34.0	74.0
STF 34-1 Steel Fix	81661809	Hooped clamp	1	30.0 – 34.0	38.0	78.0
STF 38-1 Steel Fix	81661810	Hooped clamp	1	34.0 – 38.0	42.0	82.0
STF 42-1 Steel Fix	81661811	Hooped clamp	1	38.0 – 42.0	46.0	91.0
<b>Double clamp (for two cables)</b>						

### STRAIN RELIEF WITH STEEL FIX

Type	Order No.	Designation	Seats qty.	Cable Ø mm	Width (B) mm	Overall height (H) mm
STF 12-2 Steel Fix	81661821	Hooped clamp	2	6.0 – 12.0	16.0	73.0
STF 14-2 Steel Fix	81661822	Hooped clamp	2	12.0 – 14.0	18.0	74.0
STF 16-2 Steel Fix	81661823	Hooped clamp	2	14.0 – 16.0	20.0	82.0
STF 18-2 Steel Fix	81661824	Hooped clamp	2	16.0 – 18.0	22.0	86.0
STF 20-2 Steel Fix	81661825	Hooped clamp	2	18.0 – 20.0	24.0	91.0
STF 22-2 Steel Fix	81661826	Hooped clamp	2	20.0 – 22.0	26.0	95.0
STF 26-2 Steel Fix	81661827	Hooped clamp	2	22.0 – 26.0	30.0	108.0
STF 30-2 Steel Fix	81661828	Hooped clamp	2	26.0 – 30.0	34.0	121.0
STF 34-2 Steel Fix	81661829	Hooped clamp	2	30.0 – 34.0	38.0	129.0
<b>Triple clamp (for three cables)</b>						
STF 12-3 Steel Fix	81661841	Hooped clamp	3	6.0 – 12.0	16.0	98.0
STF 14-3 Steel Fix	81661842	Hooped clamp	3	12.0 – 14.0	18.0	98.0
STF 16-3 Steel Fix	81661843	Hooped clamp	3	14.0 – 16.0	20.0	105.0
STF 18-3 Steel Fix	81661844	Hooped clamp	3	16.0 – 18.0	22.0	111.0
STF 20-3 Steel Fix	81661845	Hooped clamp	3	18.0 – 20.0	24.0	118.0
STF 22-3 Steel Fix	81661846	Hooped clamp	3	20.0 – 22.0	26.0	130.0

**LOWERED FIXING POINT MP 45**



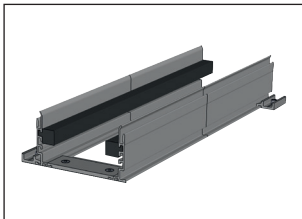
It is sometimes necessary to lower the height of the moving attachment point.

In such cases, modifications to the chain layout should be noted (e.g. extension of chain).

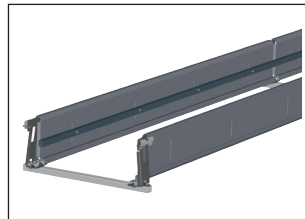
Please contact our application engineers.

Radius R mm	Height of moving end bracket (H <sub>MA</sub> ) mm	Safety margin (S) mm	Installation height incl. safety (H <sub>S</sub> ) mm	Projection (M <sub>L</sub> ) mm	Additional links qty.	of which additional back chain links qty.
150.0	200.0	50.0	412.0	630.0	12	3
200.0	200.0	50.0	512.0	760.0	13	3
250.0	200.0	50.0	612.0	930.0	18	4
300.0	200.0	50.0	712.0	1080.0	20	4

**GUIDE CHANNEL VAW (ALUMINIUM / STAINLESS STEEL)**



VAW aluminium



VAW stainless steel

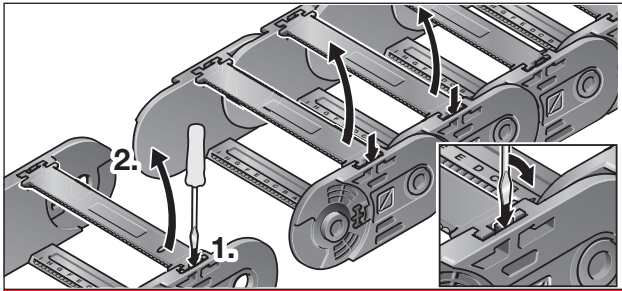
For this cable drag chain, a range of variable guide channel systems are available, constructed from aluminium or stainless steel sections.

The variable guide channel ensures that the cable drag chain is supported and guided securely.

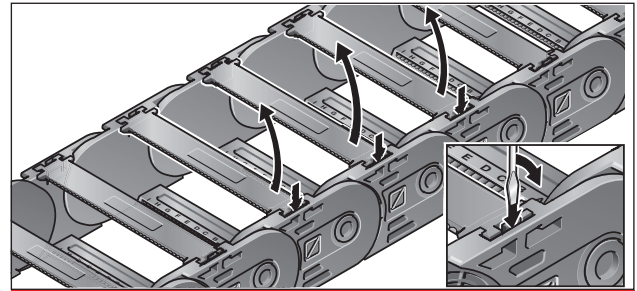
For help on choosing, please consult the chapter „Variable Guide Channel System“.

**ASSEMBLY**

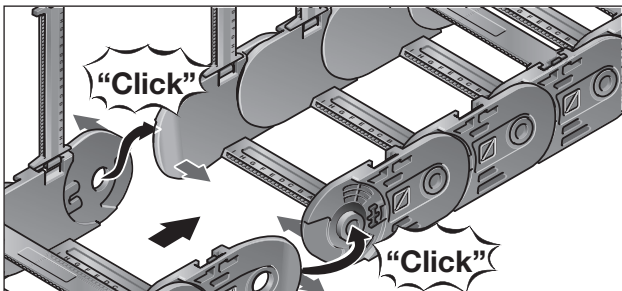
**DISASSEMBLY**



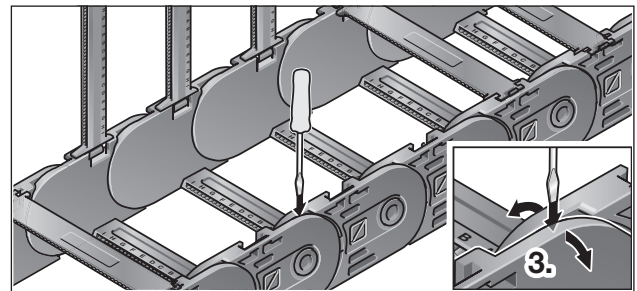
Step 1



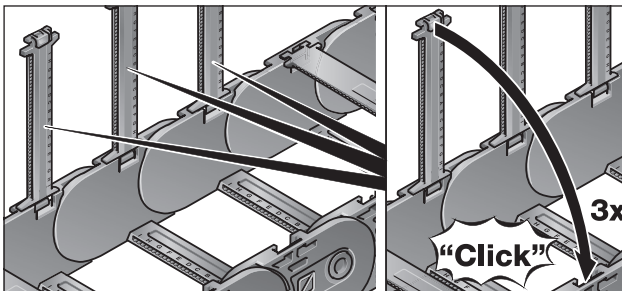
Step 1



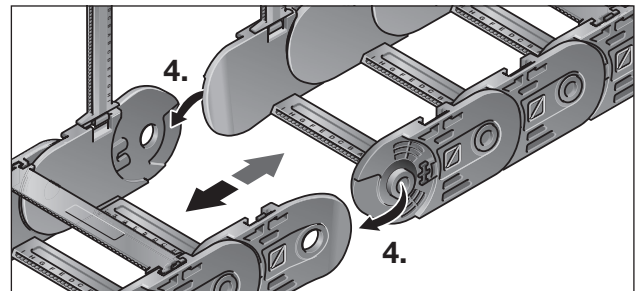
Step 2



Step 2



Step 3



Step 3

MP 45.1 OPEN / MP 45.2 OPEN

All details given in our sales material prospectuses and catalogues as well as the information available online are based on our current knowledge of the products described.  
 The electronic data and files made available by Murrplastik, particularly CAD files are based on our current knowledge of the product described.  
 A legally binding assurance of certain properties or the suitability for a certain purpose can not be determined from this information.  
 All information with respect to the chemical and physical properties of Murrplastik products as well as application advice given verbally, in writing or by tests, is given to the best of our knowledge.  
 This does not free the purchaser of carrying out their own inspections and tests in order to determine the suitability of a product for a specific purpose.  
 Murrplastik accepts no responsibility for the available information being up-to-date, correct or complete. Neither do we accept responsibility for the quality of this information.  
 Murrplastik accepts no liability for damage caused as a result of using our products.  
 Murrplastik reserves the right to make technical changes and improvements through constant further development of products and services.  
 Our General Terms and Conditions apply.