



cable drag chain systems

**MP 14**

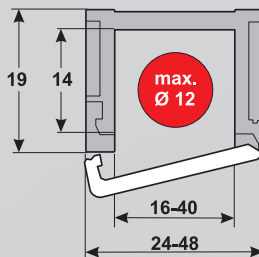
# MP 14

OPEN

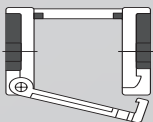


MULTILINE

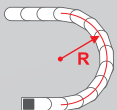
- LOW-COST VARIANT
- CHAIN BRACKET WITH INTEGRATED STRAIN RELIEF
- CAN BE EASILY SHORTENED AND LENGTHENED



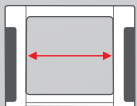
## TECHNICAL DATA



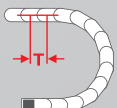
**Loading side**  
Outside bend



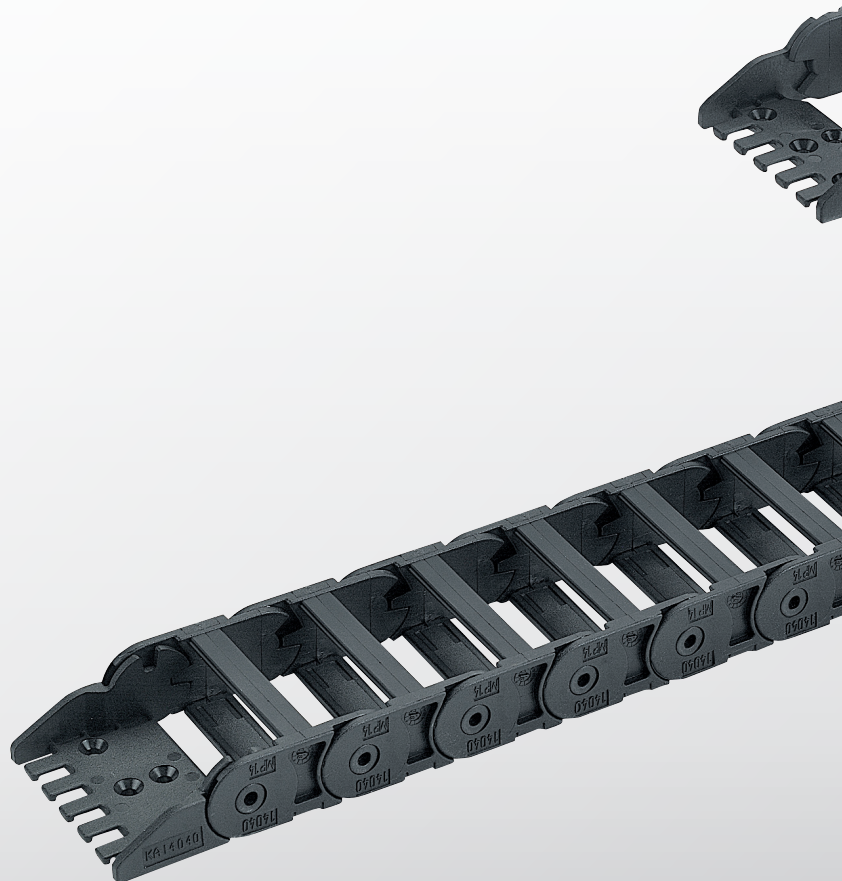
**Available radii**  
25.0 – 75.0 mm

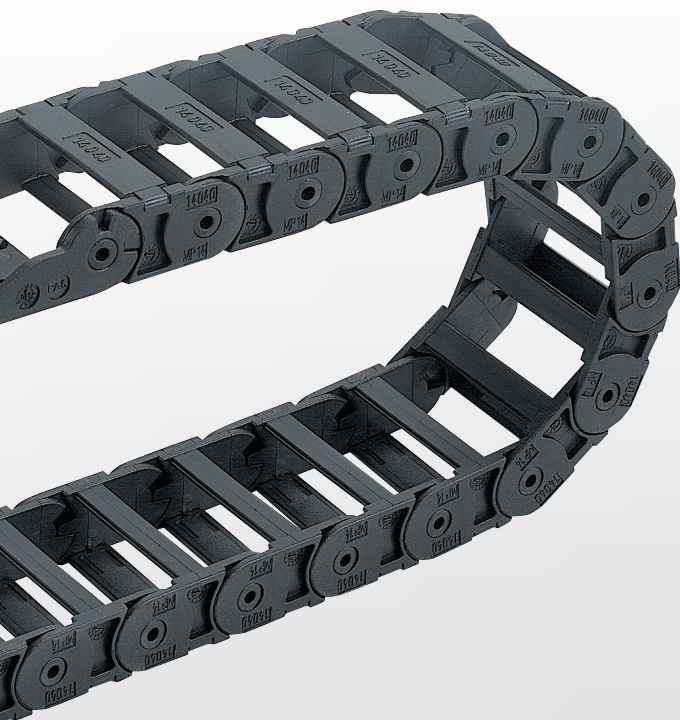


**Available interior widths**  
With plastic crossbar  
16.0 – 40.0 mm



**Pitch**  
T = 26.0 mm





## TECHNICAL SPECIFICATIONS

Travel distance gliding $L_g$ max.	12.0 m
Travel distance self-supporting $L_f$ max.	see diagram on page 5
Travel distance vertical, hanging $L_{vh}$ max.	3.0 m
Travel distance vertical, upright $L_{vs}$ max.	2.0 m
Rotated 90°, unsupported $L_{90f}$ max.	not recommended
Speed, gliding $V_g$ max.	2.0 m/s
Speed, self-supporting $V_f$ max.	4.0 m/s
Acceleration, gliding $a_g$ max.	2.0 m/s <sup>2</sup>
Acceleration, self-supporting $a_f$ max.	2.0 m/s <sup>2</sup>

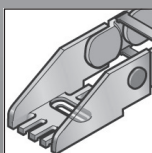
Contact our engineering department to meet any higher requirements: [efk@murrplastik.de](mailto:efk@murrplastik.de)

## 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	According to 94 HB

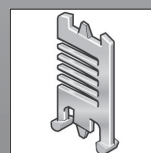
Other material properties on request.

### CHAIN BRACKET



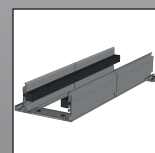
Chain bracket U-part

### SHELVING SYSTEM



Separator TR

### GUIDE CHANNELS



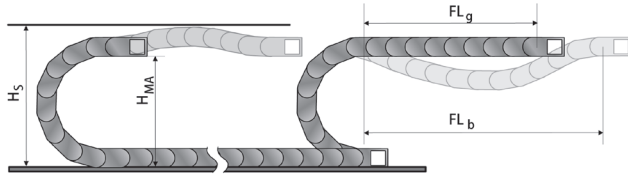
VAW aluminium

**Dimensions in mm [US inch]**

The diagram illustrates a multi-processor system. A central horizontal bus is shown at the top. Below the bus, there are four processing units. The first unit on the left is a single large rectangle containing six vertical bars. The second unit is a Y-shaped structure with a light blue top section and a darker blue bottom section containing three vertical bars. The third unit consists of two separate rectangles, each containing three vertical bars. The fourth unit on the right consists of two separate rectangles, each containing three vertical bars. Arrows point from the bus to each of these four processing units.

Crossbar in inside and outside bend; can be opened in outside bend  
Inside width 20 mm; radius 48 mm  
Full-ridged with bias, material black-coloured polyamide  
Chain length 988 mm (38 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.

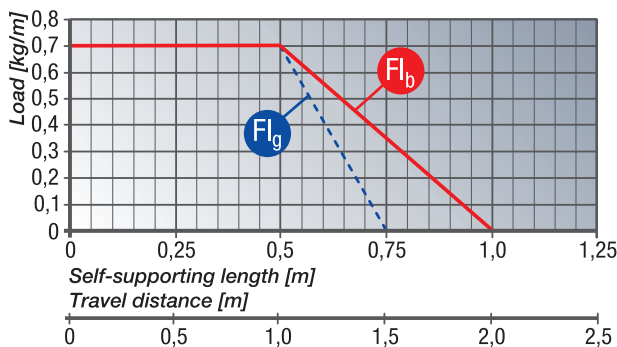
$H_S$  = Installation height plus safety

$H_{MA}$  = Height of moving end bracket

$FL_g$  = Self-supporting length, upper run straight

$FL_b$  = Self-supporting length, upper run bent

## LOAD DIAGRAM FOR SELF-SUPPORTING APPLICATIONS



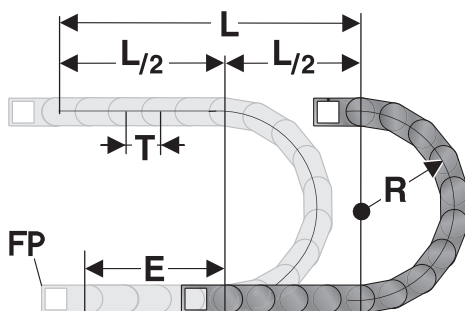
### $FL_g$ Self-supporting length, upper run straight

In the  $FL_g$  range, the chain upper run still has a bias, is straight or has a maximum sag of 30.0 mm.

### $FL_b$ Self-supporting length, upper run bent

In the  $FL_b$  range, the chain upper run has a sag of more than 30.0 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 optimised by using a support for the upper run or a more stable cable drag 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 and the moving consumer and thus the most efficient chain length.

Chain length calculation =  $L/2 + \pi \cdot R + 2 \cdot T + E$   
 $\approx 1 \text{ m chain} = 39 \text{ qty.} \times 26.0 \text{ mm links.}$

E = Distance between entry point and middle of travel distance

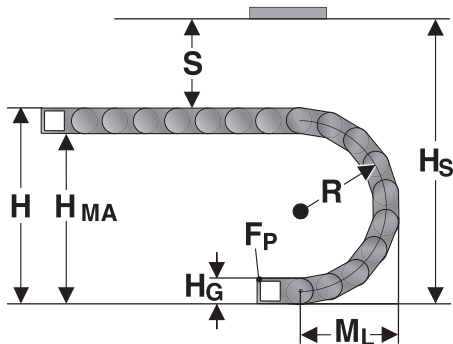
L = Travel distance

R = Radius

T = Pitch 26.0 mm



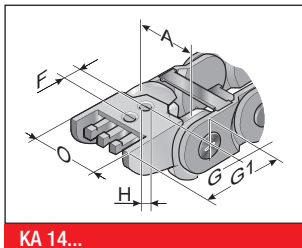
## INSTALLATION DIMENSIONS



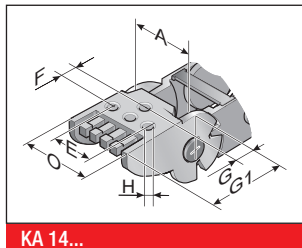
The moving end chain bracket is to be screw fixed at height  $H_{MA}$  for the respective radius.  
For the installed dimension the "Installed height  $H_S$ " value has to be taken into account.

Radius R	25	38	48	75
Outside height of chain link ( $H_G$ )	19	19	19	19
Height of bend (H)	69	95	115	169
Height of moving end bracket ( $H_{MA}$ )	50	76	96	150
Safety margin (S)	20	20	20	20
Installation height ( $H_S$ )	89	115	135	189
Arc projection ( $M_L$ )	61	74	84	111

## CHAIN BRACKET U-PART KA 14 / 15



KA 14...

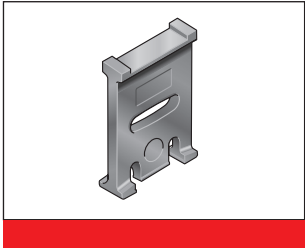
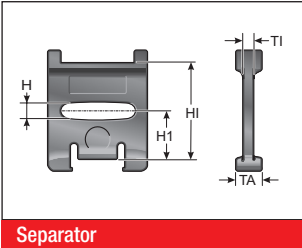


KA 14...

The chain bracket is an all-plastic part. The bracket is precisely adjusted to the respective chain width and only needs to be snapped in at the chain link. Please order one male and one female end bracket for each chain. The brackets should be fastened with M3 screws. The cables or conduits may be fastened with cable ties on the integrated strain relief of the chain bracket.

Type	Order No.	Material	Inside width					HØ	Outside width KA
			A	E	F	G	G1		
			mm	mm	mm	mm	mm	mm	mm
KA 14016 Female end	014000005000	Plastic	16.0		8.0	11.0	30.5	3.2	A+8.0
KA 14016 Male end	014000005100	Plastic	16.0		8.0	7.5	30.5	3.2	A+8.0
KA 14020 Female end	014000005200	Plastic	20.0		8.0	11.0	30.5	3.2	A+8.0
KA 14020 Male end	014000005300	Plastic	20.0		8.0	7.5	30.5	3.2	A+8.0
KA 14030 Female end	014000005400	Plastic	30.0	A-8.0	8.0	11.0	30.5	3.2	A+8.0
KA 14030 Male end	014000005500	Plastic	30.0	A-8.0	8.0	7.5	30.5	3.2	A+8.0
KA 14040 Female end	014000005600	Plastic	40.0	A-8.0	8.0	11.0	30.5	3.2	A+8.0
KA 14040 Male end	014000005700	Plastic	40.0	A-8.0	8.0	7.5	30.5	3.2	A+8.0

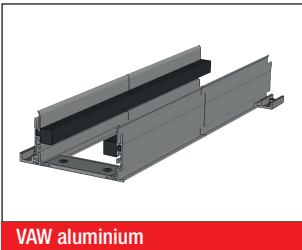
SEPARATOR TR 14



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

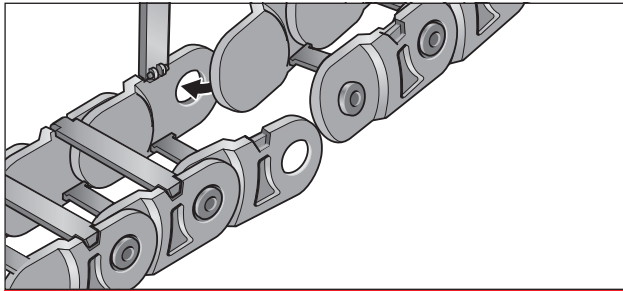
Type	Order No.	Description	Version	TI mm	TA mm	HI mm
TR 14	014000009200	Separator	moveable	1.5	6.0	14.0

GUIDE CHANNEL VAW (ALUMINIUM)

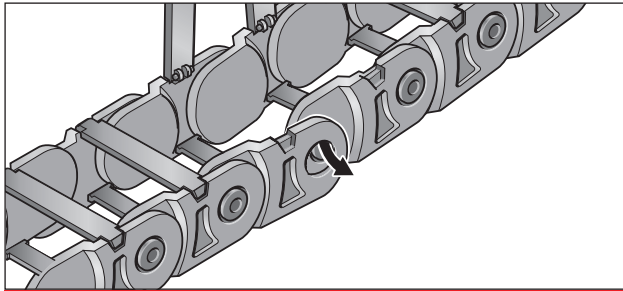


A variable guide channel system, constructed from aluminium sections, is available for this cable drag chain. The variable guide channel ensures that the cable drag chain is supported and guided securely. For help on choosing, please consult the chapter “Variable Guide Channel System”.

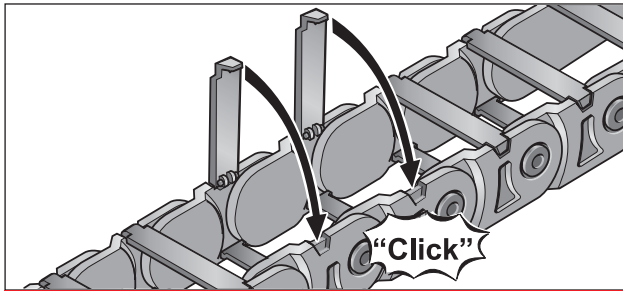
## ASSEMBLY



Step 1

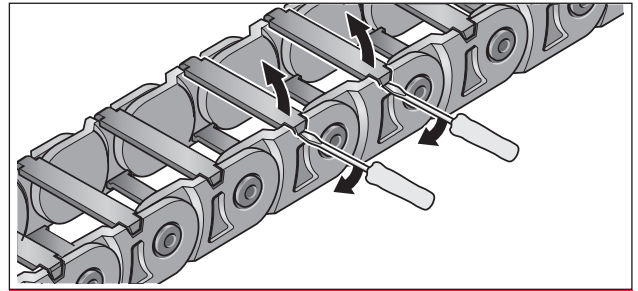


Step 2

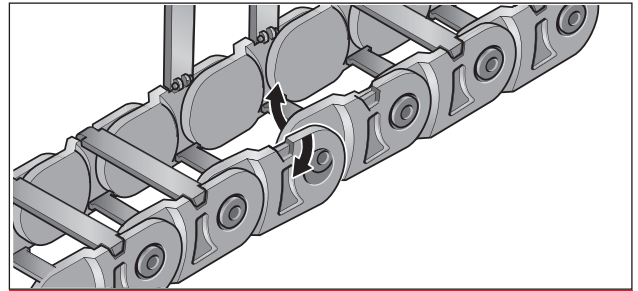


Step 3

## DISASSEMBLY



Step 1



Step 2

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