Data sheet
MULTILINE MP14

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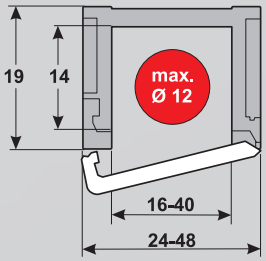
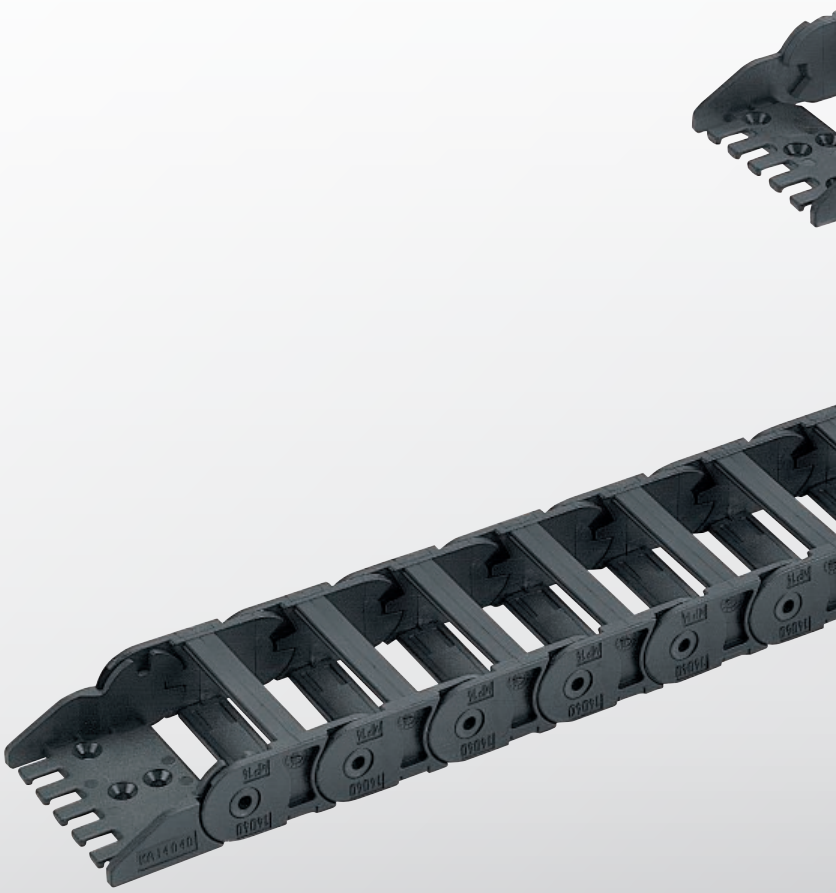
14
OPEN

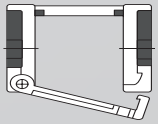
MULTILINE

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

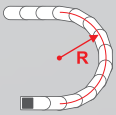




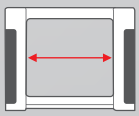
TECHNICAL DATA



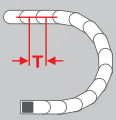
Loading side
Outside bend



Available radii
25.0 – 75.0 mm



Available interior widths
With plastic crossbar
16.0 – 40.0 mm



Grid
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 standing L_{vs} max.	2.0 m
Rotated 90°, self-supporting 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^2
Acceleration, self-supporting a_f max.	2.0 m/s^2

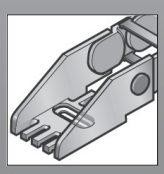
Contact our engineering department to meet any higher requirements: efk@murrplastik.de

MATERIAL PROPERTIES

Standard material	Polyamide (PA) black
Service temperature	-30.0 – 120.0 °C (-76 to 176 °F)
Gliding friction factor	0.3
Static friction factor	0.45
Fire classification	Based on UL 94 HB

Other material properties on request.

CHAIN BRACKET



Chain bracket U-part

SHELVING SYSTEM

TR separator

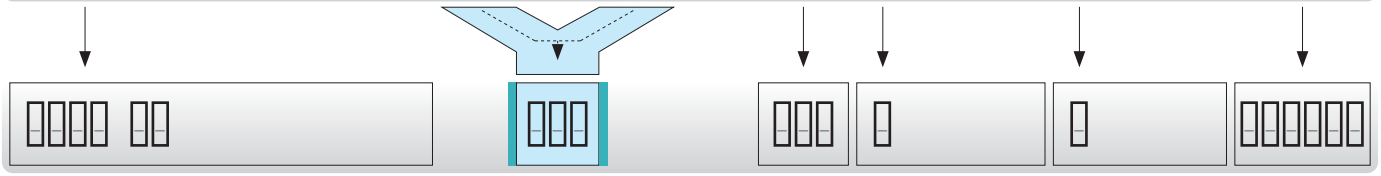
GUIDE CHANNELS

VAW aluminum

ORDER KEY

Dimensions in mm [US inch]

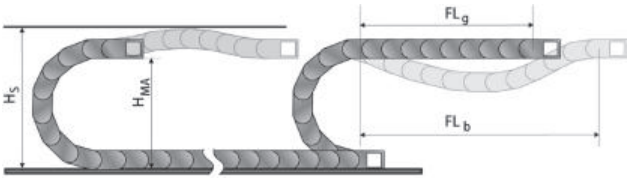
Type code	Variant	Inside width	Outside width	Inside width	Outside width	Radius	Crossbar variant	Material	Chain length
0140 01	Crossbar in outside bend Crossbar in inside bend Opens on outside bend	016 [0.63]	024 [0.94]			025 [0.98]	0 Plastic, full-ridged with bias	0 Polyamide (PA): standard (PA/black)	
		020 [0.79]	028 [1.10]						
		030 [1.18]	038 [1.50]			038 [1.50]			
		040 [1.57]	048 [1.89]						
						048 [1.89]			
						075 [2.95]			



ORDERING EXAMPLE: 0140 01 020 048 0 0 988

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-colored polyamide
Chain length 988 mm (38 links)

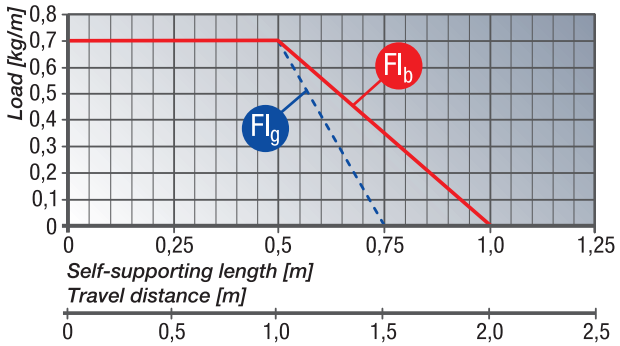
SELF-SUPPORTING LENGTH



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 energy 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

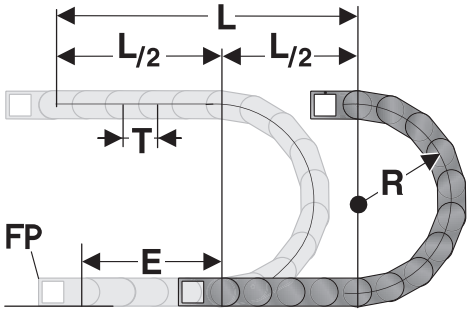
LOAD DIAGRAM FOR SELF-SUPPORTING APPLICATIONS



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 optimized by using a support for the upper run or a more stable energy chain.

DETERMINING THE CHAIN LENGTH

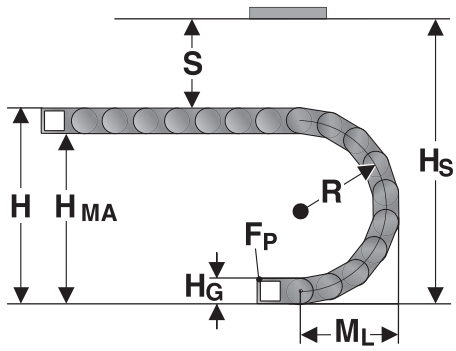


The fixed point of the energy chain should be connected in the middle of the travel distance.
This arrangement gives the shortest connection between the fixed point and the moving bracket and thus the most efficient chain length.

Chain length calculation = L/2 + π * R + 2 * T + E
≈ 1 m chain = 39 links, 26.0 mm each

E = Distance between entry point and middle of travel distance
L = Travel distance
R = Radius
T = Grid 26.0 mm

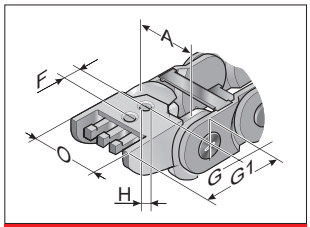
INSTALLATION DIMENSIONS



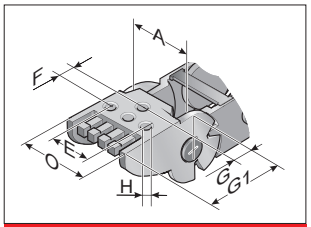
The moving end chain bracket is to be screw fixed at height H_{MA} for the respective radius.
For the installed dimension the "Installed height H_S" has to be taken into account.

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

KA 14 / 15 U-PART CHAIN BRACKET



KA 14...

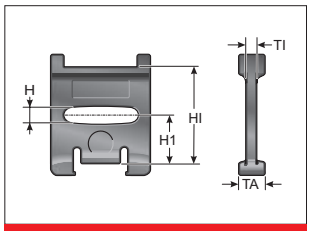


KA 14...

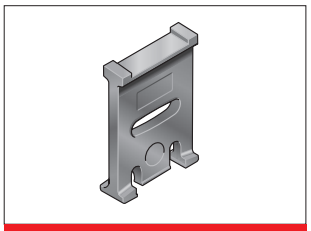
The chain bracket is an all-plastic part. The bracket is precisely adjusted to the respective chain width and only needs to be snapped in at the chain link. Please order one male and one female end bracket for each chain. The brackets should be fastened with M3 screws. The cables or conduits may be fastened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

Type	Order No.	Material	Inside width A mm	E mm	F mm	G mm	G1 mm	HØ mm	Outside width KA O mm
KA 14016 female	014000005000	Plastic	16.0		8.0	11.0	30.5	3.2	A+8.0
KA 14016 male	014000005100	Plastic	16.0		8.0	7.5	30.5	3.2	A+8.0
KA 14020 female	014000005200	Plastic	20.0		8.0	11.0	30.5	3.2	A+8.0
KA 14020 male	014000005300	Plastic	20.0		8.0	7.5	30.5	3.2	A+8.0
KA 14030 female	014000005400	Plastic	30.0	A-8,0	8.0	11.0	30.5	3.2	A+8.0
KA 14030 male	014000005500	Plastic	30.0	A-8,0	8.0	7.5	30.5	3.2	A+8.0
KA 14040 female	014000005600	Plastic	40.0	A-8,0	8.0	11.0	30.5	3.2	A+8.0
KA 14040 male	014000005700	Plastic	40.0	A-8,0	8.0	7.5	30.5	3.2	A+8.0

TR 14 SEPARATOR



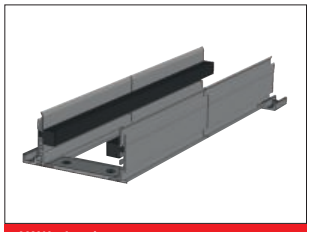
Separator



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	H mm	H1 mm	HI mm
TR 14	014000009200	Separator	movable	1.5	6.0	2.5	7.0	14.0

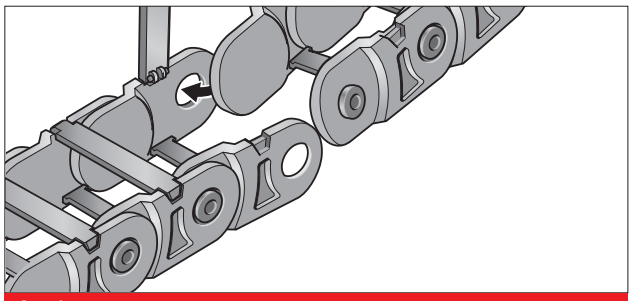
VAW 248 GUIDE CHANNEL



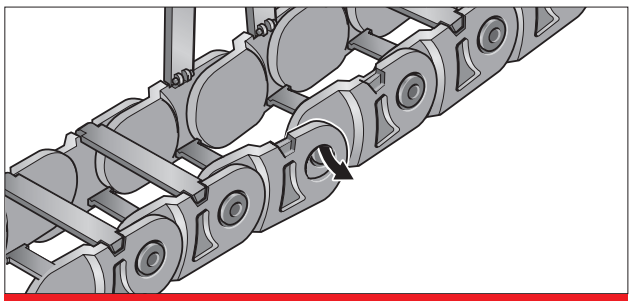
VAW aluminum

A variable guide channel system, constructed from aluminum sections, is available for this energy chain.
The variable guide channel ensures that the energy chain is supported and guided securely.

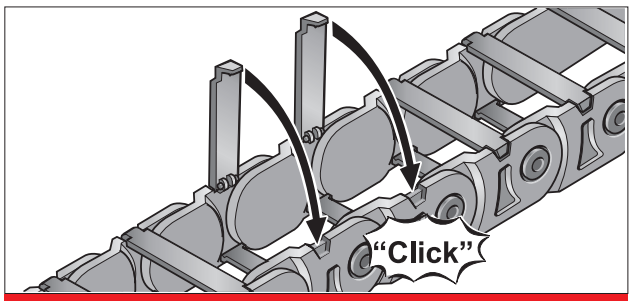
ASSEMBLY



Step 1

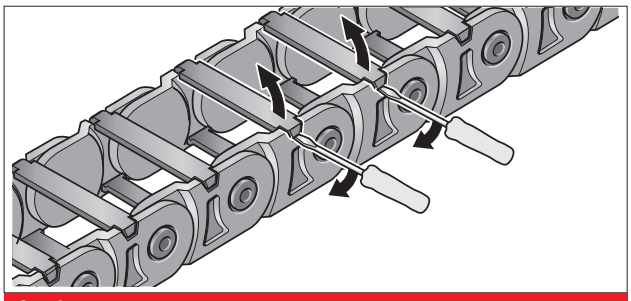


Step 2



Step 3

DISASSEMBLY



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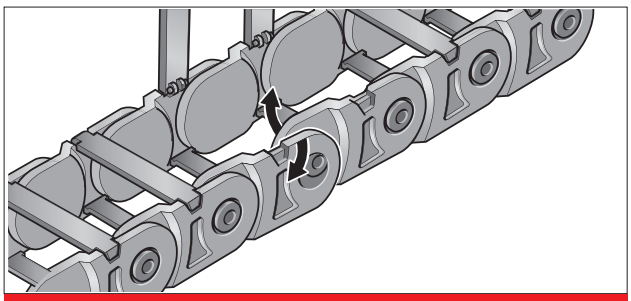

Step 2

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