Cable drag chain systems
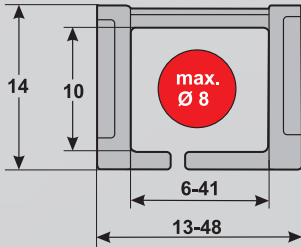
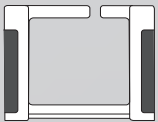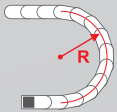# MP 10.1

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MP 10.1
OPEN

- **EASY (FILL) MECHANISM**
- **CHAIN BRACKET WITH INTEGRATED STRAIN RELIEF**
- **CAN BE EASILY SHORTENED AND LENGTHENED**
- **VERY FLEXIBLE, HIGH TORSION**

max. Ø 8
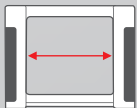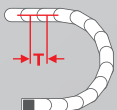
14   10

6–41

13–48

TECHNICAL DATA

Loading side
Outside bend slitted

Available radii
18.0 – 58.0 mm

Available interior widths
With plastic frame bridge
6.0 – 41.0 mm

Pitch
T = 15.0 mm

TECHNICAL SPECIFICATIONS

Travel distance gliding L_g max.	10.0 m
Travel distance self-supporting L_f max.	see diagram on page 5
Travel distance vertical, hanging L_{vh} max.	2.0 m
Travel distance vertical, upright L_{vs} max.	1.0 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/s²
Acceleration, self-supporting a_f max.	2.0 m/s²

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

MATERIAL PROPERTIES

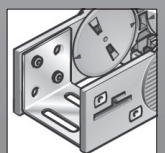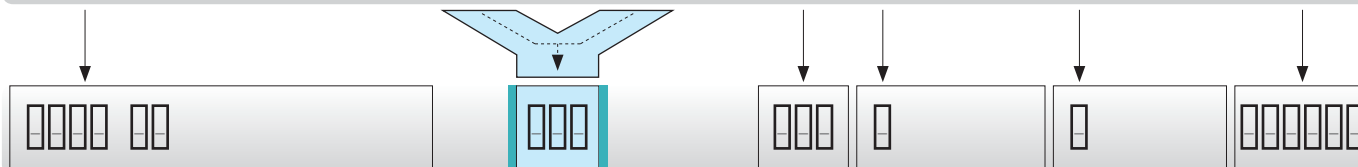|	
Standard material	Polyamide (PA) black
Service temperature	-30.0 – 120.0 °C
Gliding friction factor	0.3
Static friction factor	0.45
Fire classification	Based on UL 94 HB

Other material properties on request.

CHAIN BRACKET

Chain bracket U-part

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ORDERING KEY

Dimensions in mm [US inch]

Type code	Variation	Inside width	Outside width	Inside width	Outside width	Radius	Rail variant		Material		Chain length
0101 22	Frame bridge on outside of radius Frame bridge on inside bend Slotted on outside of radius	**006**[1] [0.24]	**013** [0.51]			**018** [0.71]	**0**	Plastic, full-ridged with bias	**0**	Polyamide standard (PA/black)	
		009 [0.35]	**016** [0.63]								
		015 [0.59]	**022** [0.87]			**028** [1.10]			**1**	UL94 / V0 (PA/oxide red)	
		021 [0.83]	**028** [1.10]								
		031 [1.22]	**038** [1.50]			**038** [1.50]			**7**	EMC (PA/light grey)	
		041 [1.61]	**048** [1.89]								
						048 [1.89]			**9**	Special version (on request)	
						058 [2.28]					

↓ 〔▢▢▢▢ ▢▢〕 ↓ 〔▢▢▢〕 ↓ 〔▢▢▢〕 ↓ 〔▢〕 ↓ 〔▢〕 ↓ 〔▢▢▢▢▢▢〕
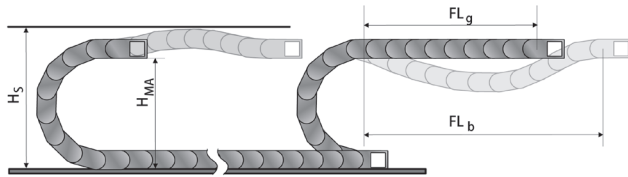
—— **ORDER SAMPLE: 0101 22 006 018 0 0 1065** ——

Frame bridge in outside bend, frame bridge in inside bend, slitted in outside bend
Inside width 6 mm; radius 18 mm
Plastic bridge, full-ridged with bias, material black-coloured polyamide
Chain length 1065 mm (71 links)

[1] max. line diameter 5 mm

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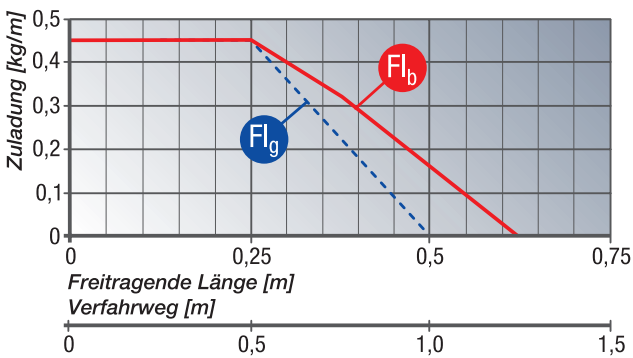
FL_g Self-supporting length, upper run straight
In the FL_g range, the chain upper run still has a bias, is straight or has a maximum sag of 30.0 mm.

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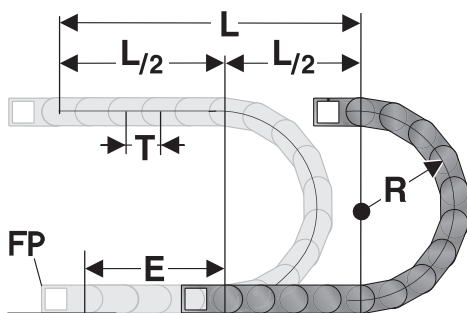
The fixed point of the cable drag chain should be connected in the middle of the travel distance.
This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

Chain length calculation = $L/2 + \pi * R + 2 * T + E$
$\approx$ 1 m chain = 67 qty. x 15.0 mm links.

E = distance between entry point and middle of travel distance
L = travel distance
R = radius
T = Pitch 15.0 mm

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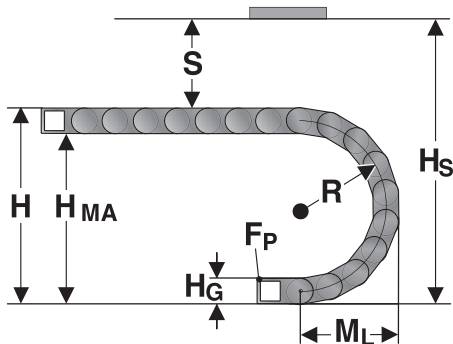
The moving end chain connection is to be screw fixed at height H_{MA} for the respective radius.
For the installed dimension the „Installed height H_S" value has to be taken into account.

| Radius R	18	28	38	48	58
Outside height of chain link (H_G)	14	14	14	14	14
Height of bend (H)	50	70	90	110	130
Height of moving end bracket (H_{MA})	36	56	76	96	116
Safety margin (S)	10	10	10	10	10
Installation height (H_S)	60	80	100	120	140
Arc projection (M_L)	40	50	60	70	80

MP 10.1 CHAMBER SIZE

Chamber configuration
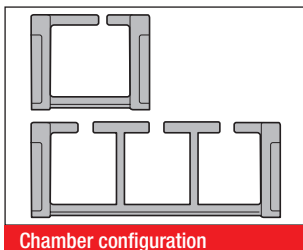
Depending on chain width, the MP10.1 is fitted with one, two, three or four chambers. This system of chambers enables cabling to be laid separately.

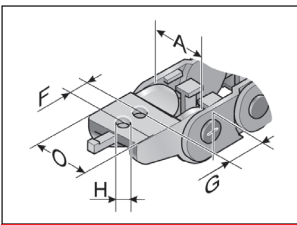| Type	Number of chambers qty.	Chamber width mm
10.1 006	1	6.5
10.1 009	1	9.5
10.1 015	1	15.5
10.1 021	2	9.5
10.1 031	3	9.5
10.1 041	4	9.0

WIRE INSERTION AID
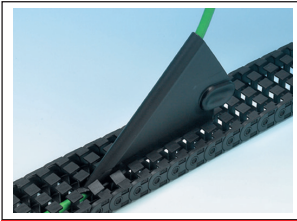
Wire insertion aid
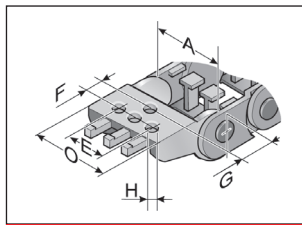
The wire insertion tool allows for quick and simple installation of cables and hoses into the cable drag chain.

Type	Order No.
KE	83729010

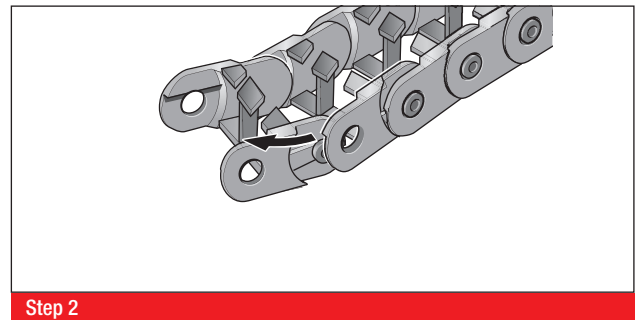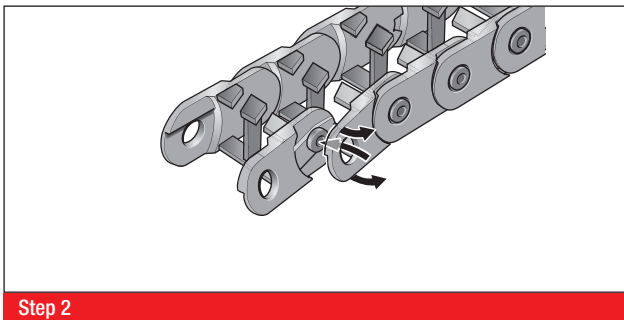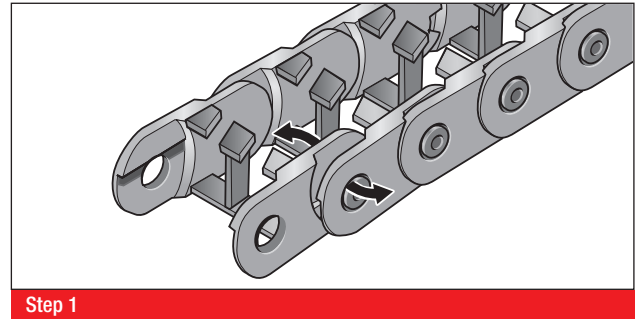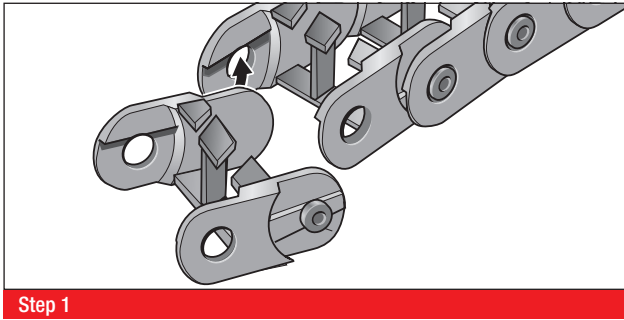## CHAIN BRACKET U-PART KA 10.1

KA 10.1 006 – 021

KA 10.1 031 – 041

The chain bracket is a fully 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	HØ mm	Outside width KA O mm
KA 10.1 006 Female end	010100005000	Plastic	6.0		8.0	11.0	3.2	A+7.0
KA 10.1 006 Male end	010100005100	Plastic	6.0		8.0	11.0	3.2	A+7.0
KA 10.1 009 Female end	010100005200	Plastic	9.0		8.0	11.0	3.2	A+7.0
KA 10.1 009 Male end	010100005300	Plastic	9.0		8.0	11.0	3.2	A+7.0
KA 10.1 015 Female end	010100005400	Plastic	15.0		8.0	11.0	3.2	A+7.0
KA 10.1 015 Male end	010100005500	Plastic	15.0		8.0	11.0	3.2	A+7.0
KA 10.1 021 Female end	010100005600	Plastic	21.0		8.0	11.0	3.2	A+7.0
KA 10.1 021 Male end	010100005700	Plastic	21.0		8.0	11.0	3.2	A+7.0
KA 10.1 031 Female end	010100005800	Plastic	31.0	A-9.0	8.0	11.0	3.2	A+7.0
KA 10.1 031 Male end	010100005900	Plastic	31.0	A-9.0	8.0	11.0	3.2	A+7.0
KA 10.1 041 Female end	010100006000	Plastic	41.0	A-9.0	8.0	11.0	3.2	A+7.0
KA 10.1 041 Male end	010100006100	Plastic	41.0	A-9.0	8.0	11.0	3.2	A+7.0

ASSEMBLY

Step 1

Step 2

DISASSEMBLY

Step 1

Step 2