

## E2 micro | Series 045

● ● ● Price index



IPA Qualification Certificate:  
Cleanroom test  
upon request



Special equipment:  
Electrically conductive ESD/ATEX  
version upon request



UL94-V2 classifications  
upon request

- ① Small pitch for very quiet operation
- ② Very light weight -  
ideal for low inertia applications
- ③ Dirt-repellent exterior
- ④ One-piece, non snap-open E-Chain®
- ⑤ Easy to fill configuration
- ▶ Series E06 Easy Chain® page 3.20
- ⑥ Snap-open configuration
- ▶ Series 047 Zipper page 4.6



Series 046 with full-width shelving  
046.16.018, 046.16.028, 046.16.038 available.  
Width Bi: 16 mm - Radii R: 018, 028, 038



Easy to assemble and to disassemble



#### When to use the Series 045:

- If very quiet operation is required
- Aesthetic design
- If excellent service life is required
- If price is an issue
- If small bending radii are required



#### When not to use it:

- If snap-open links are required
  - ▶ Series 047 Zipper, page 4.6
- If quick insertion of cables with  
preassembled connectors is required
  - ▶ Series E06 Easy Chain®, page 3.20
- If extra rigidity is required
  - ▶ Series 06 E2 micro, page 5.26



#### Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 1 m or 77 links

1 m 045.20.038.0



E-Chain®

1 set 0450.20.12

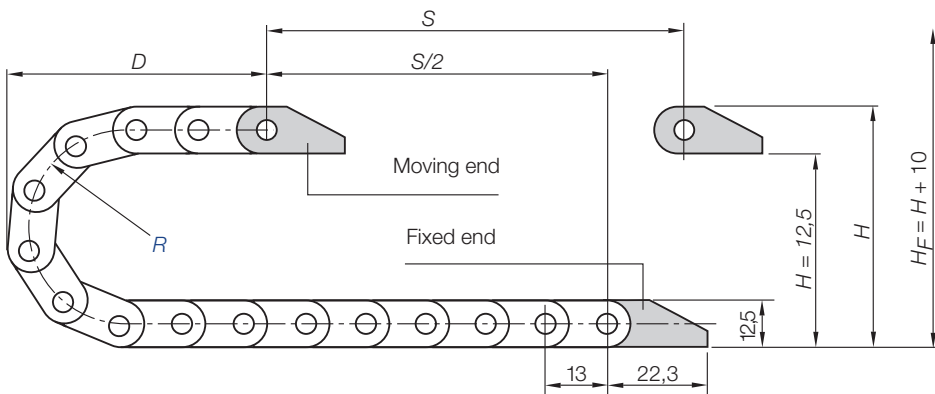
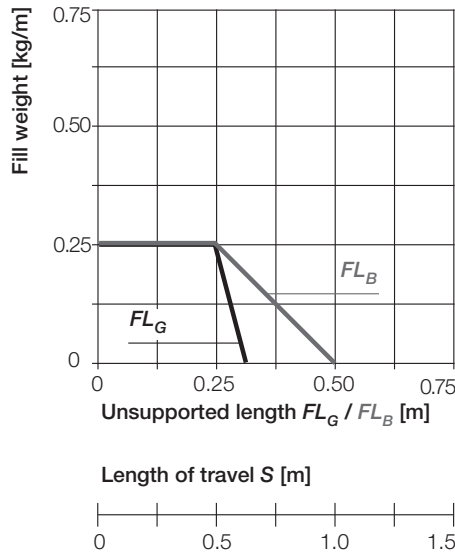
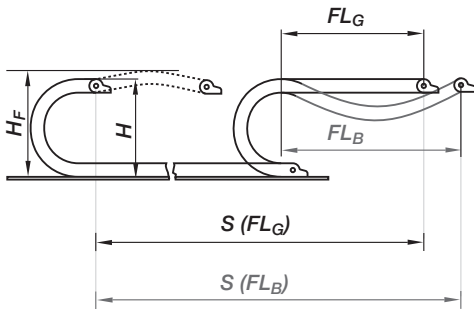


Mounting bracket

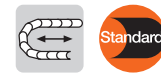


**Unsupported length**

$FL_G$  = with straight upper run  
 $FL_B$  = with permitted sag  
 Further information ► **Design, page 1.12**



- $S$  = Length of travel
- $R$  = Bending radius
- $H$  = Nominal clearance height
- $H_F$  = Required clearance height
- $D$  = Overlength E-Chain® radius in final position
- $K = \pi \cdot R + \text{"safety"}$



**Short travels - unsupported**

Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height  $H_F$ . Please consult igus® if space is particularly restricted.

**Pitch = 13 mm/link    Links/m = 77 (1.001 mm)    Chain length =  $S/2 + K$**

R	018	028	038
H	52	72	92
D	45	55	65
K	100	140	160

The required clearance height:  
 $H_F = H + 10 \text{ mm}$   
 (with 0,2 kg/m fill weight)

10,3

E2 micro  
 Inner height: 10,3 mm

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 Fax +49- (0) 22 03-96 49-222



Speed / acceleration $FL_G$	max. 20 [m/s] / max. 200 [m/s <sup>2</sup> ]
Speed / acceleration $FL_B$	max. 3 [m/s] / max. 6 [m/s <sup>2</sup> ]
Gliding speed / acceleration (maximum)	max. 3 [m/s] / max. 10 [m/s <sup>2</sup> ]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

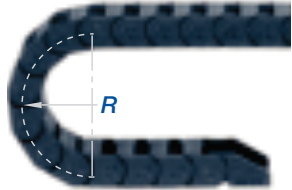
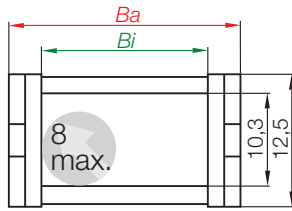
**Technical Data**



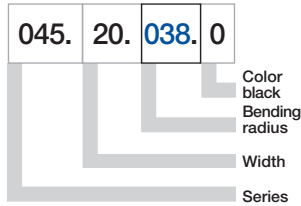
**Details of material properties**  
 ► page 1.38



► page 5.9



Part No. structure



## Series 045 E-Chain® - non snap-open

Part No.	$B_i$ [mm]	$B_a$ [mm]	$R$ [mm]	Bending radii	Weight [kg/m]
045.06.□.0	6	12	018	028 038	≈ 0,09
045.10.□.0	10	16	018	028 038	≈ 0,10
045.16.□.0	16	22	018	028 038	≈ 0,11
045.20.□.0	20	26	018	028 038	≈ 0,13
045.30.□.0	30	36	018	028 038	≈ 0,16
045.64.□.0	64	70	018	028 038	≈ 0,19

Supplement Part No. with required radius. Example: 045.20.038.0

0 = standard color, other colors ► page 1.39 · Pitch = 13 mm/link - Links/m = 77

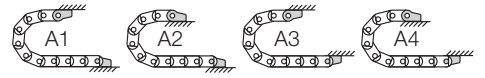
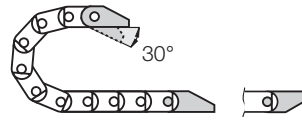




**Polymer, one-piece**

- One-piece mounting bracket
- Corrosion-resistant
- Available preassembled
- Inner and outer attachment possible

Moving end with bore  
(outer link) 0450...1(PZ)



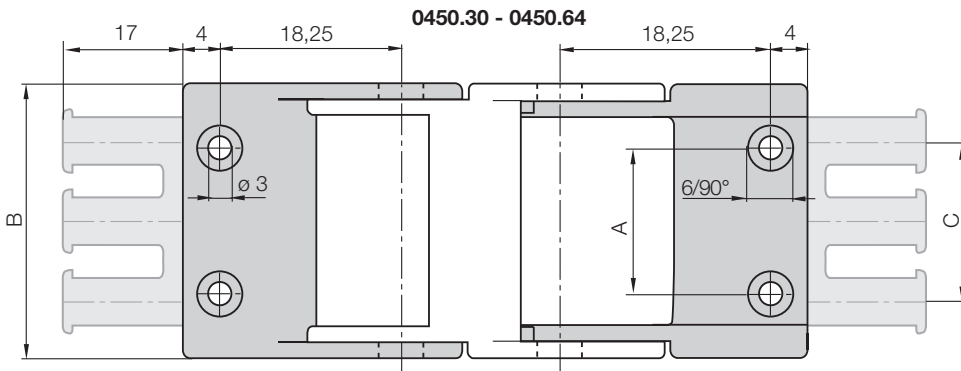
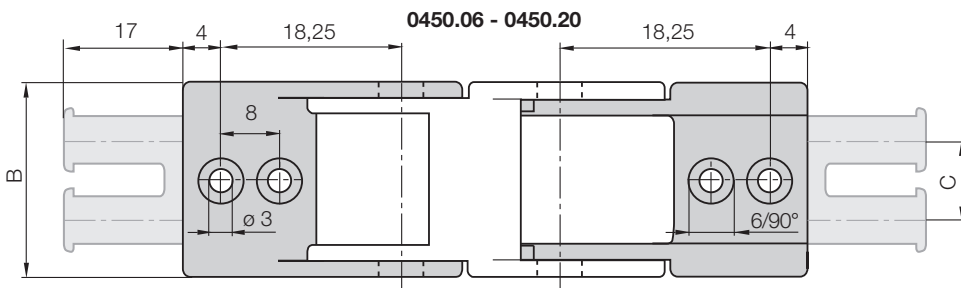
0450...2(PZ) Fixed end  
with pin (inner link)

Possible installation conditions for assembled mounting brackets ▶ Order example "preassembled" below

0450...1(PZ)  
Moving end

0450...2(PZ)  
Fixed end

**Dimensions and order configurations**



For E-Chain®	Part No. full set tiwrap plate	Part No. full set zahl tiwrap plate	Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]
045.06. ▶	0450.06. 12 PZ	0450.06. 12	1	-	12	-
045.10. ▶	0450.10. 12 PZ	0450.10. 12	1	-	16	-
045.16. ▶	0450.16. 12 PZ	0450.16. 12	2	-	22	10
045.20. ▶	0450.20. 12 PZ	0450.20. 12	2	-	26	10
045.30. ▶	0450.30. 12 PZ	0450.30. 12	3	22	36	20
045.64. ▶	0450.64. 12 PZ	0450.64. 12	6	56	70	50

For the **preassembled** mode please add the index 0450.20. 12 PZ A1

The mounting brackets are available upon request. Time of delivery approx. 6-8 weeks after order.

**Part No. structure**

0450. 10. 12 PZ A1

A...must be indicated on preassembled configurations

With assembled strain relief tiwrap plates

Full set = 12

Width

Mounting brackets for selected chain type

**Full set, for both ends:**

0450. 10. 12 PZ +tiwrap plate

**Single-part order:**

0450. 10. 1 PZ +tiwrap plate

Mounting bracket **with bore**

0450. 10. 2 PZ +tiwrap plate

Mounting bracket **with pin**

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