

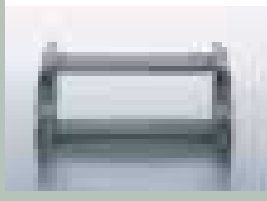


igus® Energy Chain
Systems®

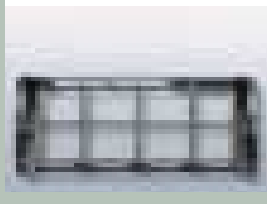
Price Index



7 Widths
8 Bending Radii



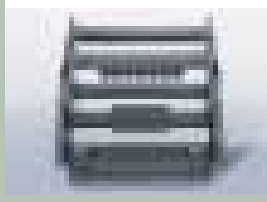
3 options for
interior separation



5 options for
mounting brackets



Various strain
relief options



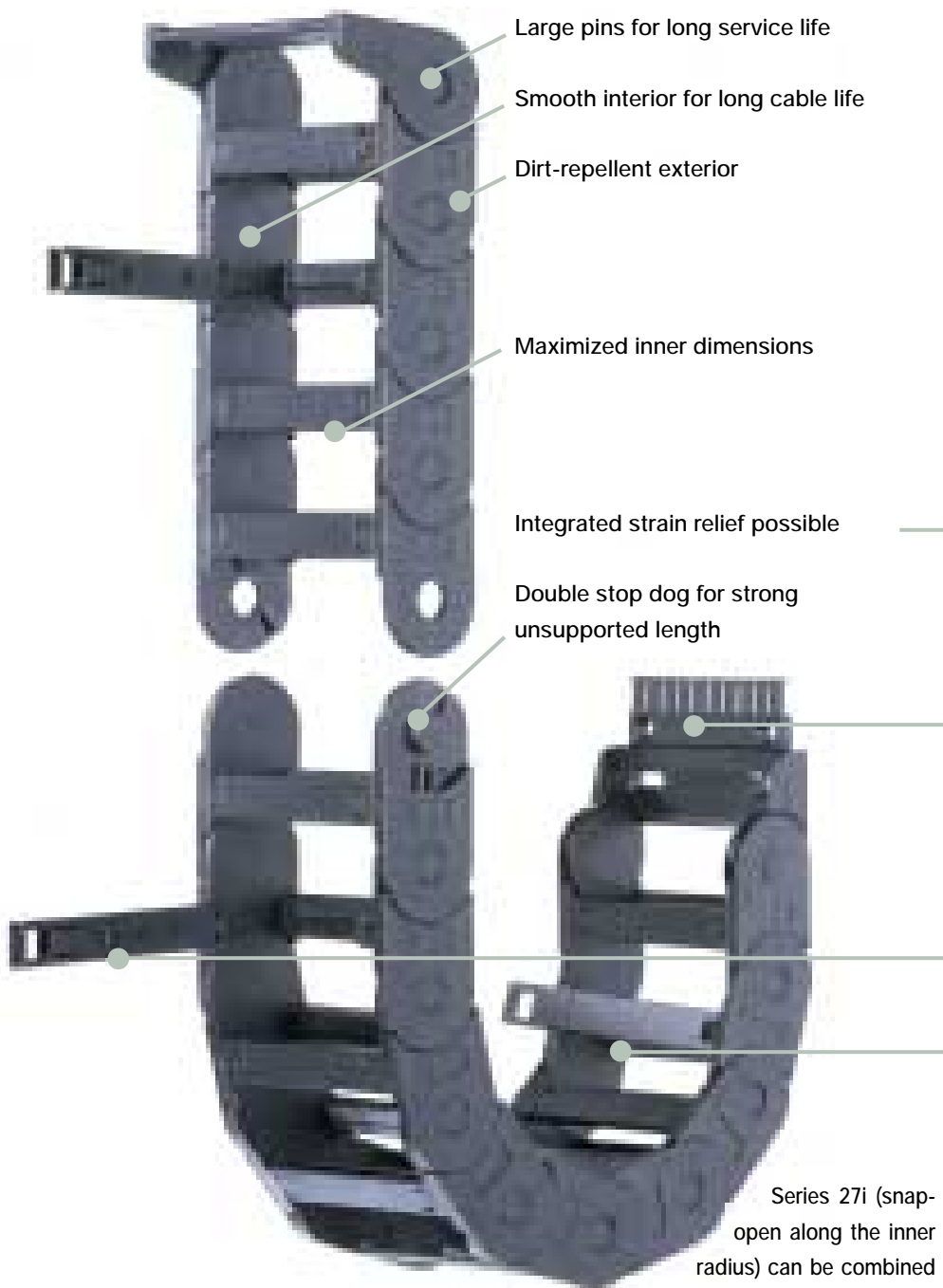
Available in a
range of colors



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

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51127 Cologne

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Series 27i (snap-open along the inner radius) can be combined with Series 27 (snap-open along the outer radius), and is accessible from the top, rather than from the side, of the link



When to use the Series 26/27/27i:

- If snap-open accessibility along inner or outer radius is required
- If stable chain of moderate size is required
- If cables up to Ø 32 mm diameter are involved
- If loads are moderate
- If integrated strain relief is required at the connection point
- If easy installation is required



When not to use them:

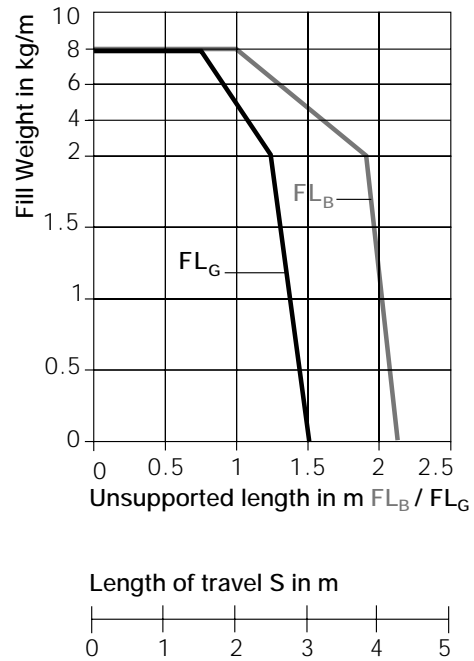
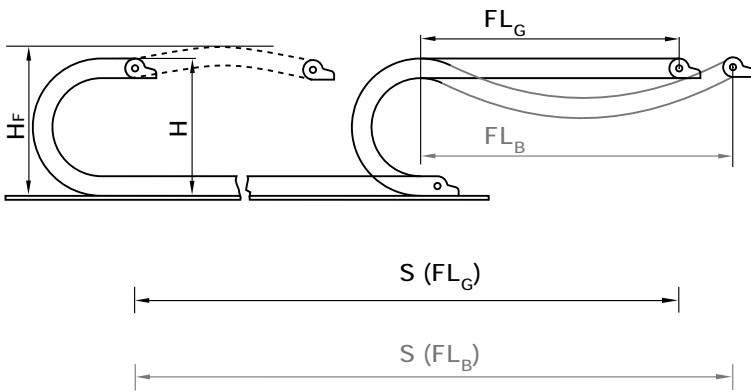
- If cables over Ø 32 mm diameter are involved
 - ▶ System E2, Series 340, 350, Page 5.116
- If maximum stability is required
 - ▶ System E4, Series 280, Page 7.30
- If chip protection is required
 - ▶ Energy Tubes E2, Series R58, Page 6.38 R157/R158, Page 6.10
- If the application is very simple
 - ▶ "Easy Chain®" Series E 26, Page 3.52

Product Range:

Inner Widths (Bi) in mm:	50, 75, 100, 125, 150, 175, 200
Bending Radii (R) in mm:	63, 75, 100, 125, 150, 175, 200, 250
Pitch:	56 mm/link = 18 links/m (1008 mm)

Unsupported length

- FL_B = unsupported with permitted sag
- FL_G = unsupported with straight upper run



Unsupported Energy Chains® ► **Design, Page 1.8** feature positive camber over short travels. This must be accounted for when specifying the clearance height. Please refer to **Installation Dimensions** for details.



If the unsupported length is exceeded, the Energy Chain® must glide on itself. This requires a guide trough. ► **Design, Page 8.8**

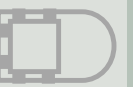
- Long travel
Max. = 120 m

Or, incorporation of igus® exclusive AUTO-GLIDE System guide elements, which are available for this chain series. ► **AUTO-GLIDE System, Page 8.31.**

Other Installation Methods

Vertical, hanging	= max. 50 m
Vertical, standing	= max. 3 m
Side-mounted, unsupported	= max. 1 m
Rotary	= requires further calculation

- Accessories for Guide Troughs
► Page 8.8, 8.17, 8.23, 8.25
- Further information
► Design, Page 1.1



Order Example

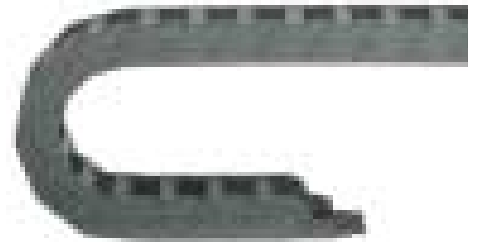
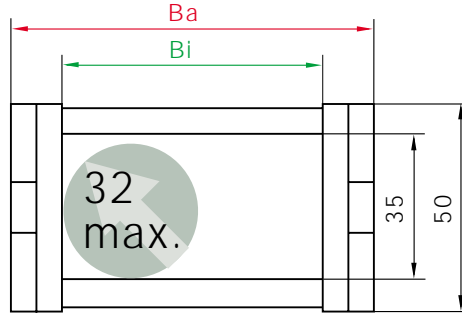


26.10.100.0

Standard color
0 = Black

- Other colors
- ▶ Design,
Page 1.62

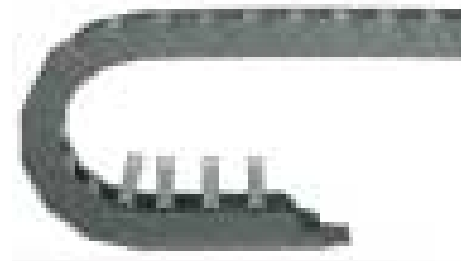
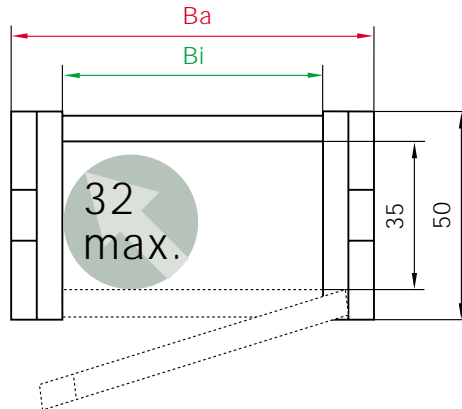
Series 26 Energy Chain® (non snap-open)



Part No.		Bi	Ba	Bending Radii
26.05.	Radius	50	66	63 75 100 125 150
26.07.	Radius	75	91	175 200 250
26.10.	Radius	100	116	
26.12.	Radius	125	141	
26.15.	Radius	150	166	These bending radii can be combined with every chain width!
26.17.	Radius	175	194	
26.20.	Radius	200	219	

Supplement part no. with required radius
for example 26.10.100.0

Series 27i Energy Chain® (snap-open along inner radius)

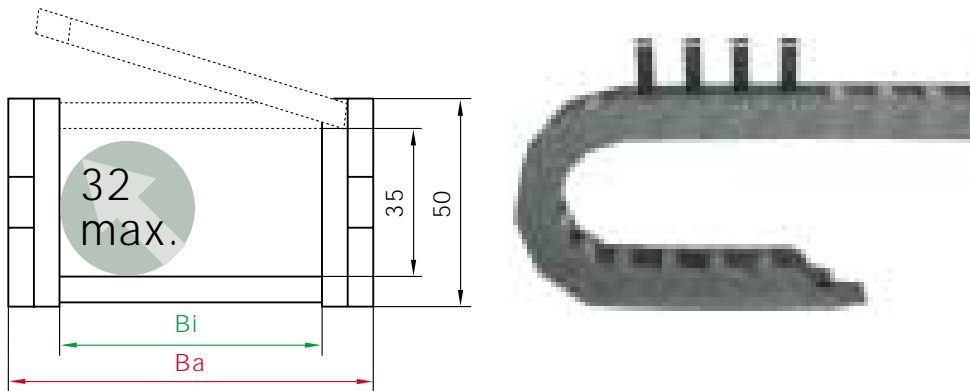


Part No.		Bi	Ba	Bending Radii
27i.05.	Radius	50	66	63 75 100 125 150
27i.07.	Radius	75	91	175 200 250
27i.10.	Radius	100	116	
27i.12.	Radius	125	141	
27i.15.	Radius	150	166	These bending radii can be combined with every chain width!
27i.17.	Radius	175	194	
27i.20.	Radius	200	219	

Supplement part no. with required radius
for example 27i.10.100.0

Product Range

Series 27 Energy Chain® (snap-open along outer radius)



! Series 27 is standard for long travels (gliding applications)

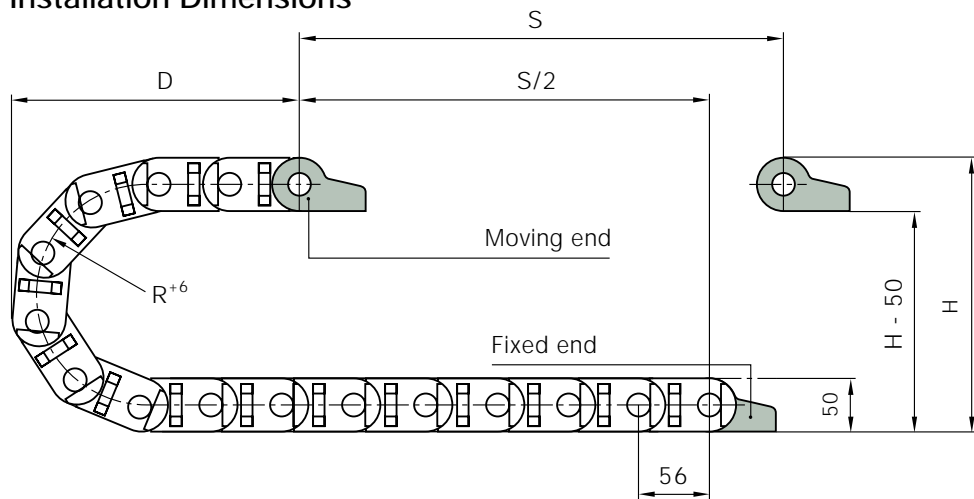
E2 medium

Part No.		Bi	Ba	Bending Radii
27.05.	Radius	50	66	63 75 100 125 150
27.07.	Radius	75	91	175 200 250
27.10.	Radius	100	116	
27.12.	Radius	125	141	
27.15.	Radius	150	166	These bending radii can be combined with every chain width!
27.17.	Radius	175	194	
27.20.	Radius	200	219	

Supplement part no. with required radius for example 27.10.100.0

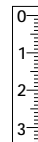
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Installation Dimensions



Pitch: = 56 mm per link
Links per m: = 18
Chain length: = $\frac{S}{2} + K$

R	63	75	100	125	150	175	200	250
H) ⁺⁵ ₀	180	200	250	300	350	400	450	550
D	140	150	175	200	225	250	275	325
K	335	375	475	550	650	750	825	925



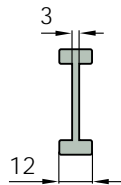
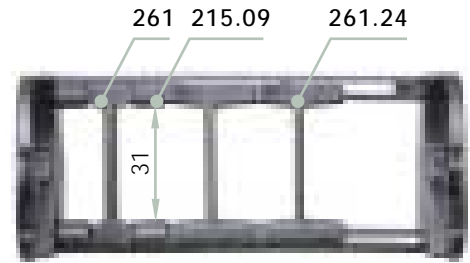
*The required clearance height is HF = H + 35 mm (with 2 kg/m fill weight)
Please consult igus® if space is particularly restricted.



- Option 1: vertical separator
- Option 2: full-width shelves
- Option 3: shelves

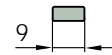
Option 1: Vertical Separator

Separators are the only option for compartmentalizing the interior of the Series 26 chain. If a large distance between separators is required, it is possible to use separators with wide feet (not Series 26) or spacers. Both are predominantly used for side-mounted Energy Chains®.



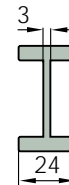
Vertical Separator

Unassembled	Part No. 260
Assembled	Part No. 261



Spacer

Unassembled	Part No. 205.09
Assembled	Part No. 215.09

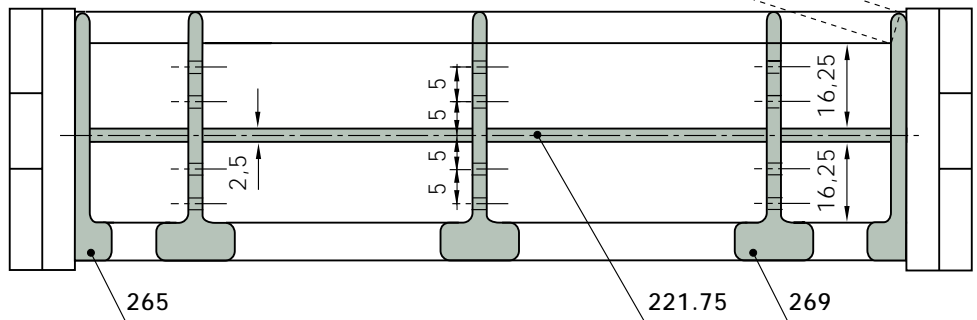
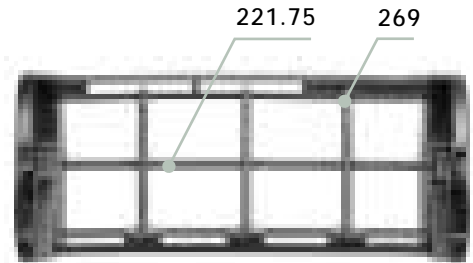


Vertical Separator

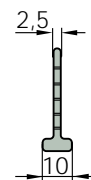
Unassembled	Part No. 260.24
Assembled	Part No. 261.24

Option 2: Full-Width Shelves

This option is available for the Series 27/27i snap-open chains. It is used most often with applications involving many thin cables with similar or identical diameters. This variation always fills the entire inner width of the chain.



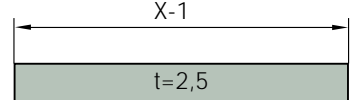
Width X in mm	Part No.	Part No.
	Unassembled	Assembled
50	220.50	221.50
75	220.75	221.75
100	220.100	221.100
125	220.125	221.125
150	220.150	221.150
175	220.175	221.175
200	220.200	221.200



Vertical Separator, Slotted

Unassembled	Part No. 268
Assembled	Part No. 269

Full-Width Shelves



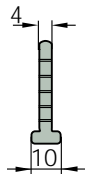
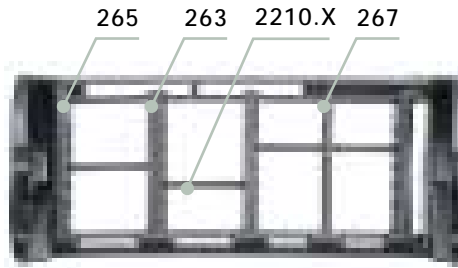
Interior Separation



26
27
27i

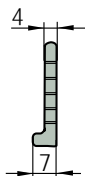
Option 3: Shelves

This option is available for the Series 27/27i snap-open chains. It is ideal for applications involving many cables with different diameters. It is not possible to achieve continuous interior separation across the entire width of these Chains. However, variable compartment heights and widths across the chain width are possible, with the maximum interior separation span equalling the Bi value of 20.



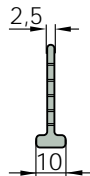
Vertical Separator, Slotted

Unassembled	Part No. 262
Assembled	Part No. 263



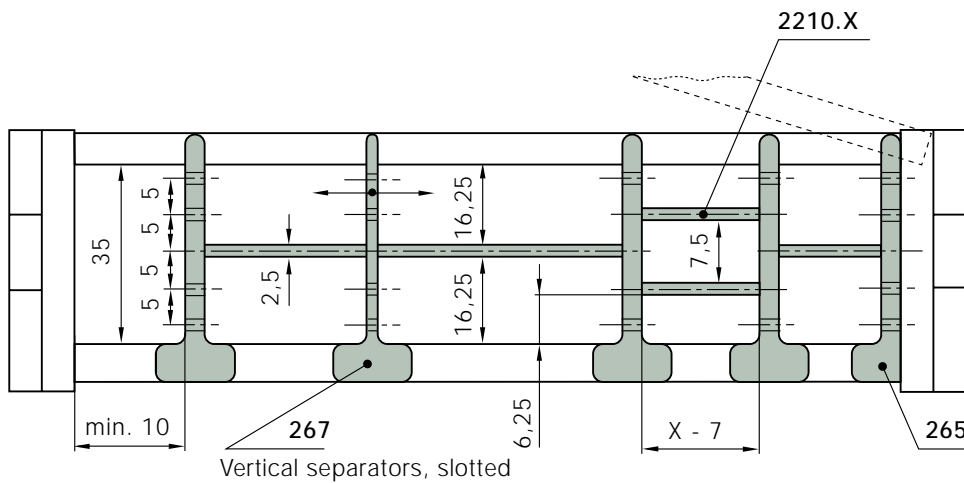
Side Plate

Unassembled	Part No. 264
Assembled	Part No. 265



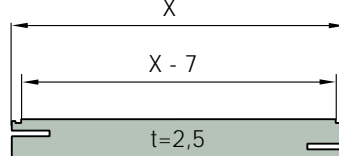
Vertical Separator, Slotted

Unassembled	Part No. 266
Assembled	Part No. 267



Width X in mm	Part No.	
	Unassembled	Assembled
18	2200.18	2210.18
23	2200.23	2210.23
28	2200.28	2210.28
33	2200.33	2210.33
38	2200.38	2210.38
43	2200.43	2210.43
58	2200.58	2210.58
48	2200.48	2210.48
68	2200.68	2210.68
73	2200.73	2210.73
88	2200.88	2210.88
99	2200.99	2210.99
124	2200.124	2210.124

Shelves



E2 medium

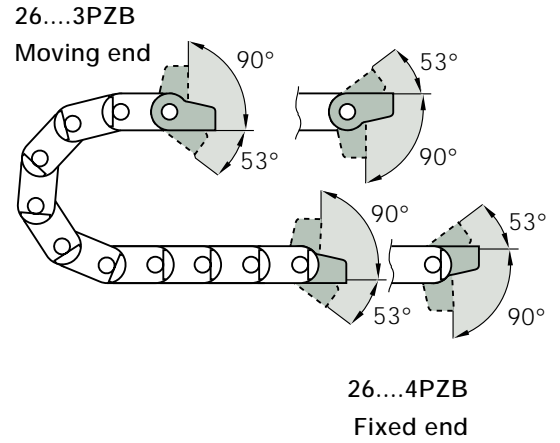
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5 options for all applications

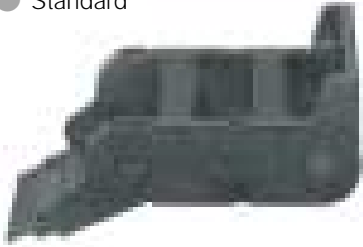
Option 1: Pivoting

- Standard
- Pivoting
- Short and long travels
- Confined installation conditions
- Corrosion-resistant
- Locked connections
- Vertical hanging / standing, unsupported



Option 1: polymer pivoting

- Standard



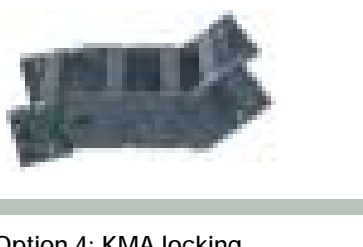
Option 2: polymer locking

- Locked connection



Option 3: KMA pivoting

- Universal use
- Optional C-profile



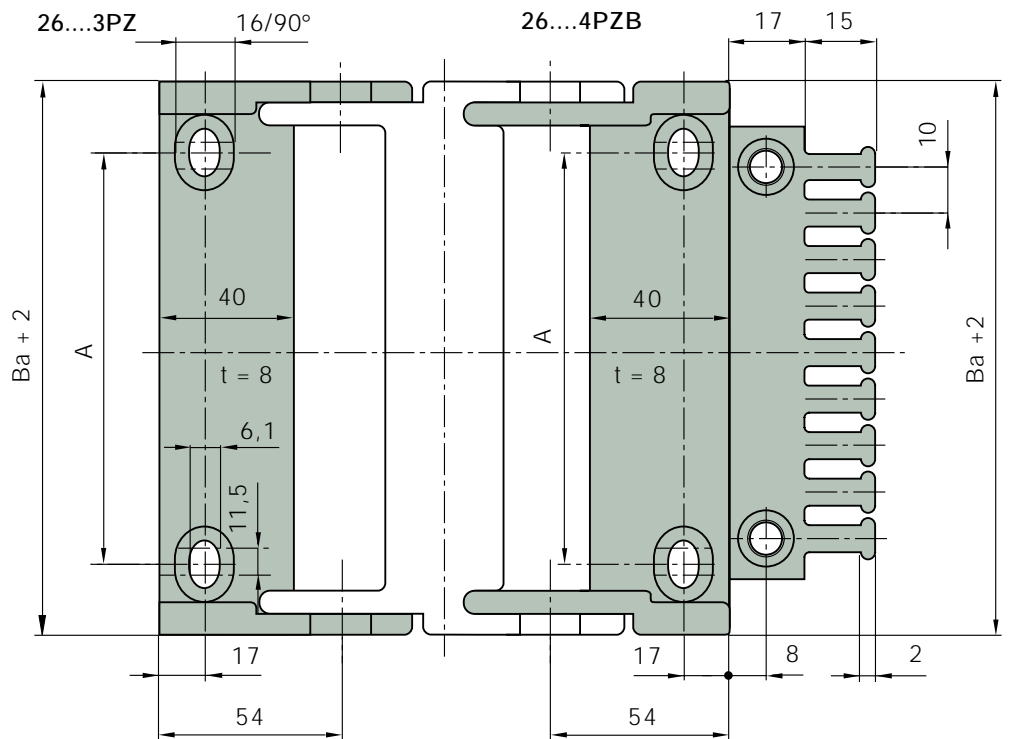
Option 4: KMA locking

- Universal use
- Optional C-profile



Option 5: steel

- Electrically conductive
- All chain widths



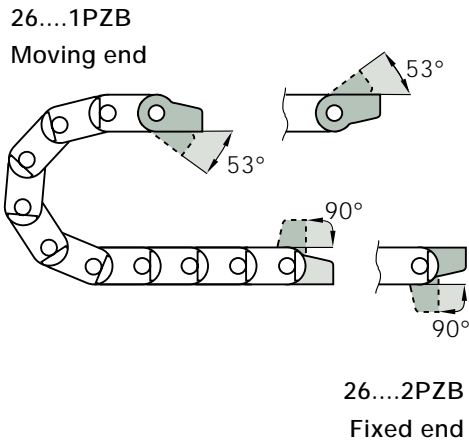
Chain Type	Part No. Full Set with Tiewrap Plates	Part No. with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in mm
26/27/27i.05	2605.34PZB	2605.34PZBK1	2605.34PZ	30
26/27/27i.07	2607.34PZB	2607.34PZBK1	2607.34PZ	55
26/27/27i.10	2610.34PZB	2610.34PZBK1	2610.34PZ	80
26/27/27i.12	2612.34PZB	2612.34PZBK1	2612.34PZ	105
26/27/27i.15	2615.34PZB	2615.34PZBK1	2615.34PZ	130
26/27/27i.17	2617.34PZB	2617.34PZBK1	2617.34PZ	155
26/27/27i.20	2620.34PZB	2620.34PZBK1	2620.34PZ	180

26...34 PZB = Full set, each part with pin/bore, including tiewrap plates
 26...3 PZB = Mounting bracket with bore, including tiewrap plates
 26...4 PZB = Mounting bracket with pin, including tiewrap plates

Mounting Brackets

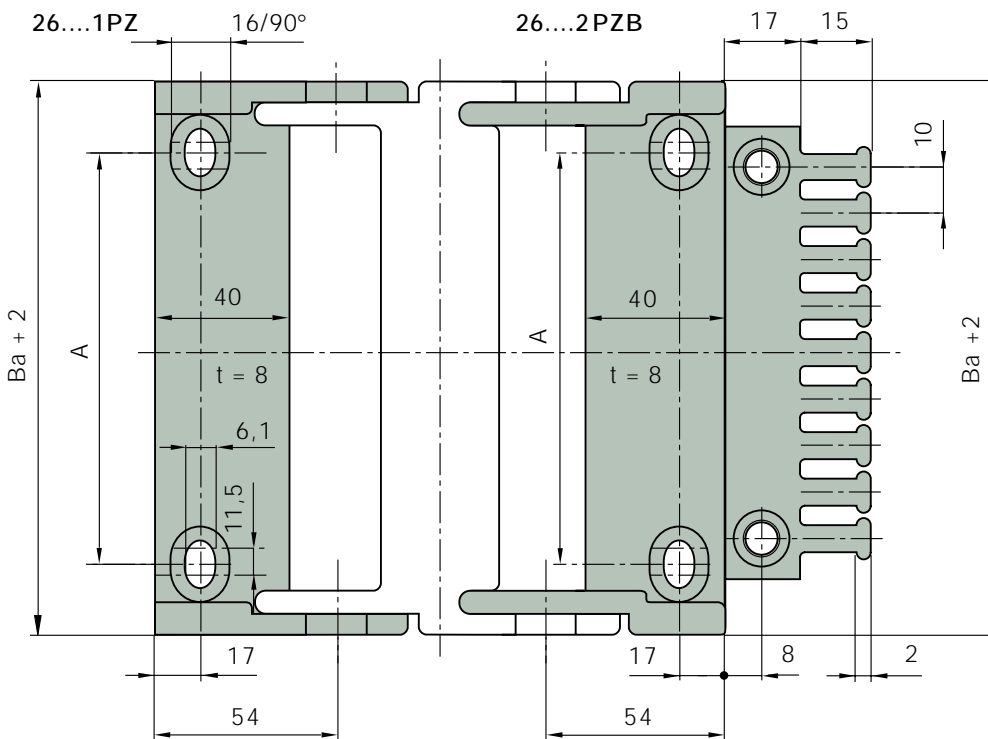
Option 2: Locking

- Locked connections
- Vertical hanging / standing travels
- Extreme accelerations
- Corrosion-resistant
- If the 1st chain link must pivot
- Gliding applications



Option 2: polymer locking

- Locked connection



Chain Type	Part No. Full Set with Tiewrap Plates	Part No. with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in mm
26/27/27i.05	2605.12PZB	2605.12PZBK1	2605.12PZ	30
26/27/27i.07	2607.12PZB	2607.12PZBK1	2607.12PZ	55
26/27/27i.10	2610.12PZB	2610.12PZBK1	2610.12PZ	80
26/27/27i.12	2612.12PZB	2612.12PZBK1	2612.12PZ	105
26/27/27i.15	2615.12PZB	2615.12PZBK1	2615.12PZ	130
26/27/27i.17	2617.12PZB	2617.12PZBK1	2617.12PZ	155
26/27/27i.20	2620.12PZB	2620.12PZBK1	2620.12PZ	180

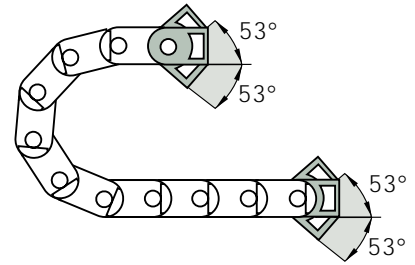
- 26...12 PZB = Full set, each part with pin/bore, including tiewrap plates
- 26...1 PZB = Mounting bracket with bore, including tiewrap plates
- 26...2 PZB = Mounting bracket with pin, including tiewrap plates

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Option 3: KMA Pivoting

- Pivoting
- Short and long travels
- Confined installation conditions
- Corrosion-resistant
- Universal use
- Optional integrated C-profile for strain relief
- Bolted connection outside of chain cross-section
- Locked connections
- Vertical hanging / standing, unsupported

26...1
Moving end



26...2
Fixed end

Option 3: KMA pivoting

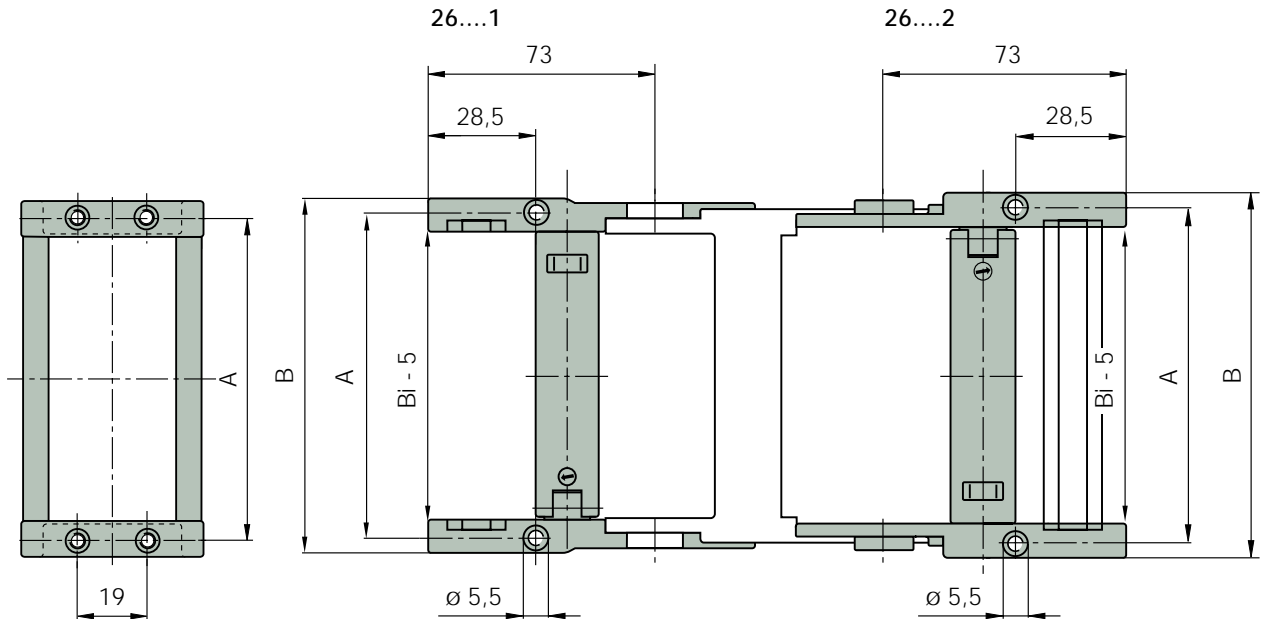
● Universal use



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email: info@igus.de



Chain Type	Part No. Full Set	Part No. with Assembled C-Profile	Dimension A in mm	Dimension B in mm
26/27/27i.05	2600.05.12	2600.05.12C	58	69
26/27/27i.07	2600.07.12	2600.07.12C	83	94
26/27/27i.10	2600.10.12	2600.10.12C	108	119
26/27/27i.12	2600.12.12	2600.12.12C	133	144
26/27/27i.15	2600.15.12	2600.15.12C	158	169
26/27/27i.17	2600.17.12	2600.17.12C	183	194
26/27/27i.20	2600.20.12	2600.20.12C	208	219

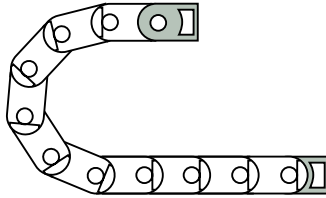
26...12 = Full set, each part with pin/bore
26...1 = Mounting bracket with bore
26...2 = Mounting bracket with pin

Mounting Brackets

Option 4: KMA Locking

- Locked connections
- Vertical hanging / standing travels
- Extreme accelerations
- Corrosion-resistant
- Universal use
- Optional integrated C-profile for strain relief
- Bolted connection outside of chain cross-section
- If the 1st chain link must pivot
- Gliding applications

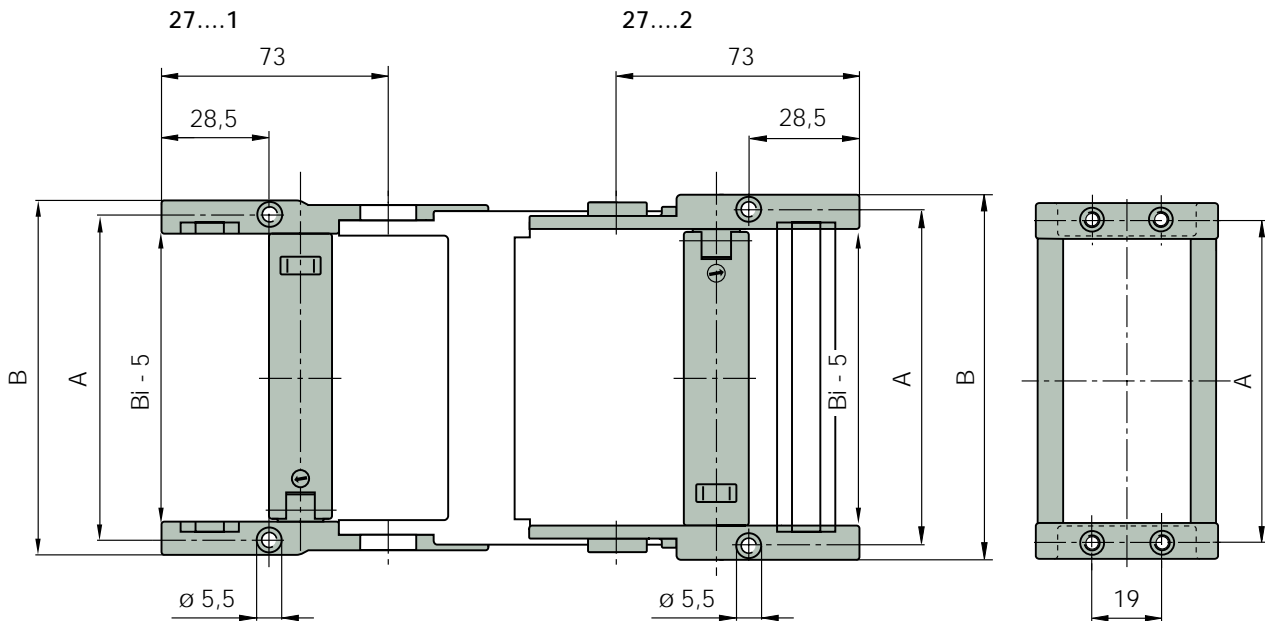
27....1
Moving end



27....2
Fixed end

Option 4: KMA locking

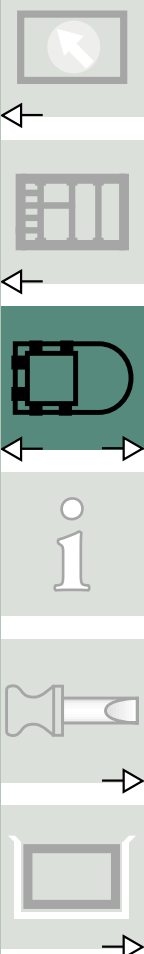
- Universal use



Chain Type	Part No. Full Set	Part No. with Assembled C-Profile	Dimension A in mm	Dimension B in mm
26/27/27i.05	2700.05.12	2700.05.12C	58	69
26/27/27i.07	2700.07.12	2700.07.12C	83	94
26/27/27i.10	2700.10.12	2700.10.12C	108	119
26/27/27i.12	2700.12.12	2700.12.12C	133	144
26/27/27i.15	2700.15.12	2700.15.12C	158	169
26/27/27i.17	2700.17.12	2700.17.12C	183	194
26/27/27i.20	2700.20.12	2700.20.12C	208	219

27...12 = Full set, each part with pin/bore
 27...1 = KMA with bore
 27...2 = KMA with pin

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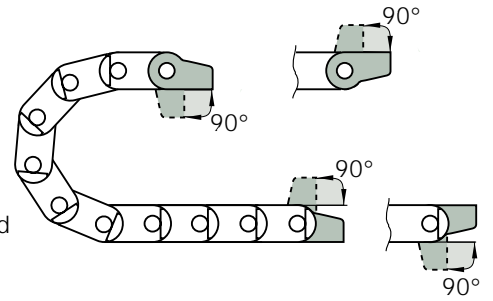


Option 5: Steel

- + One part for all chain widths
- + Electrically conductive
- + Bolted connection outside of chain cross-section
- Double the number of pins/bore required
- Multiple mounting options
- Pre-assembly (consult igus®)

260.1

Moving end



260.2

Fixed end

Option 5: steel

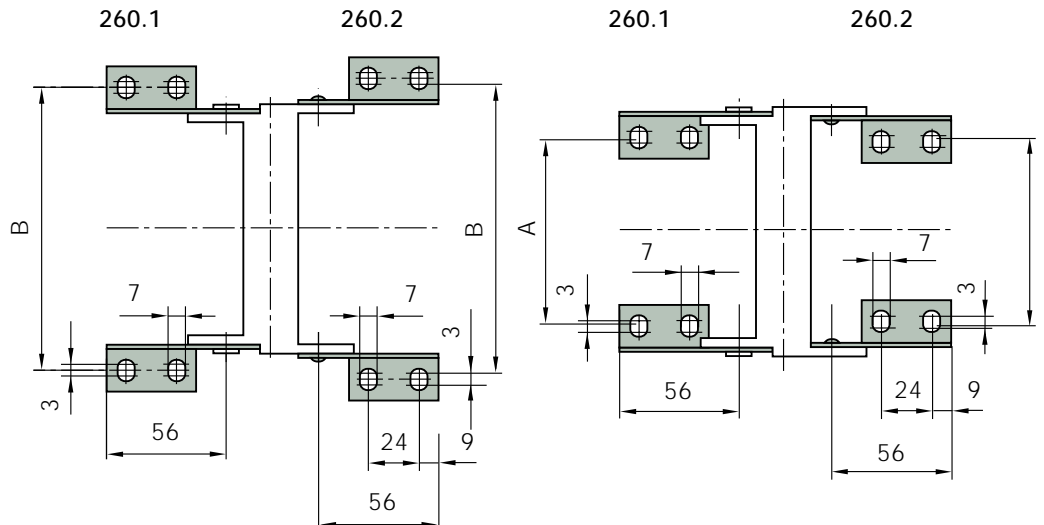
- Electrically conductive
- All chain widths



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51127 Cologne

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Chain Type	Part No. Full Set	Dimension A in mm	Dimension B in mm
26/27/27i.05	260.12	36,5	84
26/27/27i.07	260.12	62	108
26/27/27i.10	260.12	87	133
26/27/27i.12	260.12	112	158
26/27/27i.15	260.12	137	183
26/27/27i.17	260.12	163	209
26/27/27i.20	260.12	188	234

260.12 = Full set, 4 parts, 2 with pin, 2 with bore

260.1 = Mounting bracket with bore, 1 part left / right

260.2 = Mounting bracket with pin, 1 part left / right

Strain Relief for Polymer Mounting Brackets

(pivoting or locking)

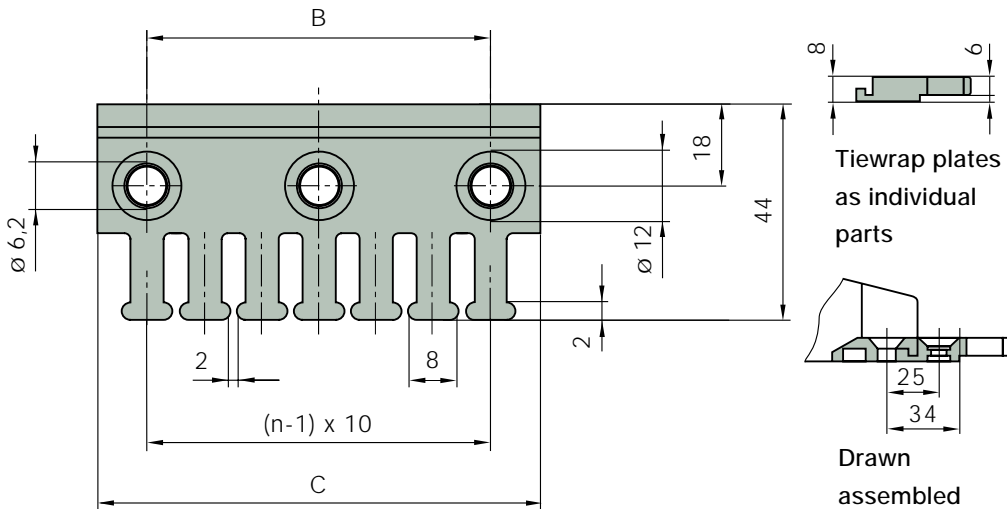
The strain relief plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the strain relief plates are also firmly connected to the machine surface. No separate installation is necessary. Cable tiewraps secure cables using the "teeth" of the tiewrap plate for time-saving, effective strain relief.



- Additional strain relief elements
- ▶ Strain Relief, Page 9.97

E2 medium

Tiewrap Plates as Individual Parts

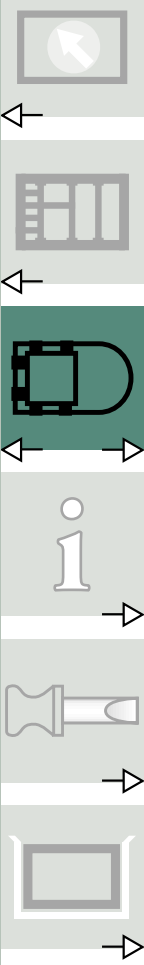


Tiewrap Plates	n Number of Teeth	C Overall Width	B = Distance Between Bore Holes	Center Bore Hole
3050.ZB	5	50 mm	30 mm	no
3075.ZB	7	75 mm	55 mm	no
3100.ZB	10	100 mm	80 mm	no
3125.ZB	12	125 mm	105 mm	no
3150.ZB	15	150 mm	130 mm	no
3175.ZB	17	175 mm	155 mm	no
3200.ZB	20	200 mm	180 mm	yes

Cable Tiewraps as Individual Parts

Cable Tiewraps (100-Piece Bag)	Width x Length	Max. Ø	Tensile Strength
CFB.001	4,8 x 150 mm	36 mm	222 N

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"Double" Strain Relief

If an Energy Chain® is harnessed with a very large number of cables, strain relief may be necessary at two levels. Our **2050.Z** strain relief system was developed for this purpose. It can be placed in any position along the Energy Chain®. The **2050.Z** strain relief system is simply clamped onto the opening crossbar or onto the fixed crossbar of the chain link, as needed. No additional installation elements are needed. Attachment directly onto the KMA crossbars is possible.



Part No.	Width, Strain Relief System, in mm
2050.Z	50 *

* Additional widths available upon request

Strain Relief for KMA

When a C-profile is used, the strain relief element can be attached directly to the KMA brackets without using any bolts. This is accomplished by simply clamping the tiewrap plate onto the C-profile. The C-profile can be placed at the top, bottom or both top and bottom of the KMA bracket to accommodate both tiewrap plates and strain relief clamps simultaneously.



Clip-on Tiewrap Plates for the C-Profile

For easy assembly without bolts, the **3050.ZC** and **3075.ZC** plates can be clipped directly into the C-profile without a bolt assembly.

Part No.	Width, strain relief system, in mm
3050.ZC	50
3075.ZC	75

Strain Relief for KMA and Steel Mounting Brackets

Clip-on connection is not possible with steel mounting brackets. In this case, the tiewrap plates must be bolted directly into separate bore holes in front of the mounting bracket.

► Page 9.97.

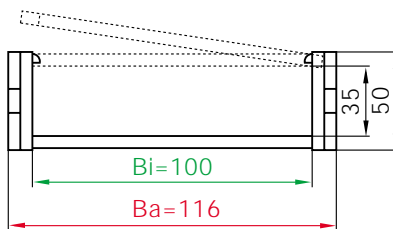


Order Example

27.10...

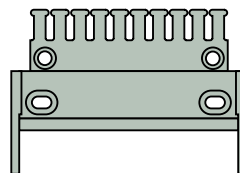
1. Chain selection:

27.10.100.0



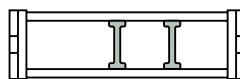
2. Mounting brackets:

2610.34.PZB



3. Interior separation:

2 separators, unassembled, (Part No. 260)
assembled every other chain link (Part No. 261)
Alternative interior separation configuration
according to design layout possible.



For 5 m chain, color black, with pivoting mounting brackets.

5 m 27.10.100.0 and 2610.34PZ



4. Other technical data on Guide Troughs ► Page 5.115



E2 medium

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Technical Data

Chain Type	Weight Per Link (kg)	Weight Per Meter (kg)
26/27/27i.05	0,065	1,17
26/27/27i.07	0,072	1,30
26/27/27i.10	0,077	1,39
26/27/27i.12	0,082	1,48
26/27/27i.15	0,09	1,62
26/27/27i.17	0,103	1,85
26/27/27i.20	0,109	1,96

Guide Troughs

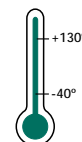


Further information on Guide Troughs, ► Page 8.8



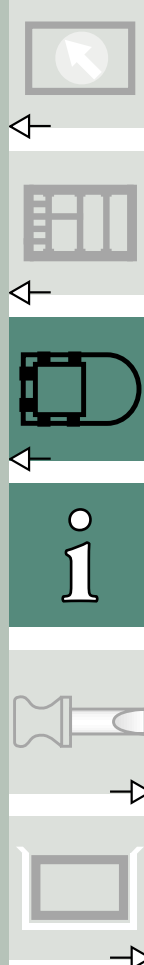
The following applies to all series listed here:

Material		igumid G
Permitted temperature	°C	-40/+130
Gliding speed (maximum)	m/s	5
Unsupported v (maximum)	m/s	10
Flammability class		VDE 0304 IIC UL94 HB



● Details of material properties

► Design, Page 8.61



igus® Energy Chain
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1. To open crossbars: press screwdriver into tab on top of link, lever screwdriver until crossbar opens



2. Repeat Step 1 on other side



3. To close crossbars: push down on crossbar with thumb or screwdriver until it snaps into place



4. Joining chain sections: push sections together; angle one side until pin snaps into bore; repeat on other side



5. Separating chain sections: insert screwdriver between two links



6. Twist until pin disengages from bore; pull sections apart



7. Attaching mounting brackets: snap bracket into link (see Step 4 - "Joining chain sections")



8. Snap tie-wrap plate into bottom groove of the mounting bracket

Guide Troughs: Series 26/27/27i "E2 medium"



26
27
27i

Guide troughs are used with applications where the upper run of the Energy Chain® glides on the lower run. If using igus® steel guide troughs, the following components are required:

- Guide troughs without glide bars
Part No. 95.30
- Guide troughs with glide bars
Part No. 95.31
- Installation sets as end connectors
Part No. 95.50.XX

.XX indicates the length of the C-profile on which the guide trough is mounted. The values and part numbers are specified in the table to the right.

Standard lengths of the trough components and glide bars = 2 m

The required overall length of the guide trough directly correlates to the length of travel.

Example:

Length of travel 50 m
Center mounted

Required guide troughs:

- 25 m guide trough without glide bar
- 25 m guide trough with glide bar
- = 13 profiles of 2 m guide trough without glide bar **Part No. 95.30**
- = 13 profiles of 2 m guide trough with glide bar **Part No. 95.31**



Width of selected Energy Chain®
27.05.200.0

Dimension D

Installation Part No.

.05	71	95.50.200
.07	96	95.50.200
.10	121	95.50.250
.12	146	95.50.250
.15	171	95.50.300
.17	199	95.50.300
.20	224	95.50.350

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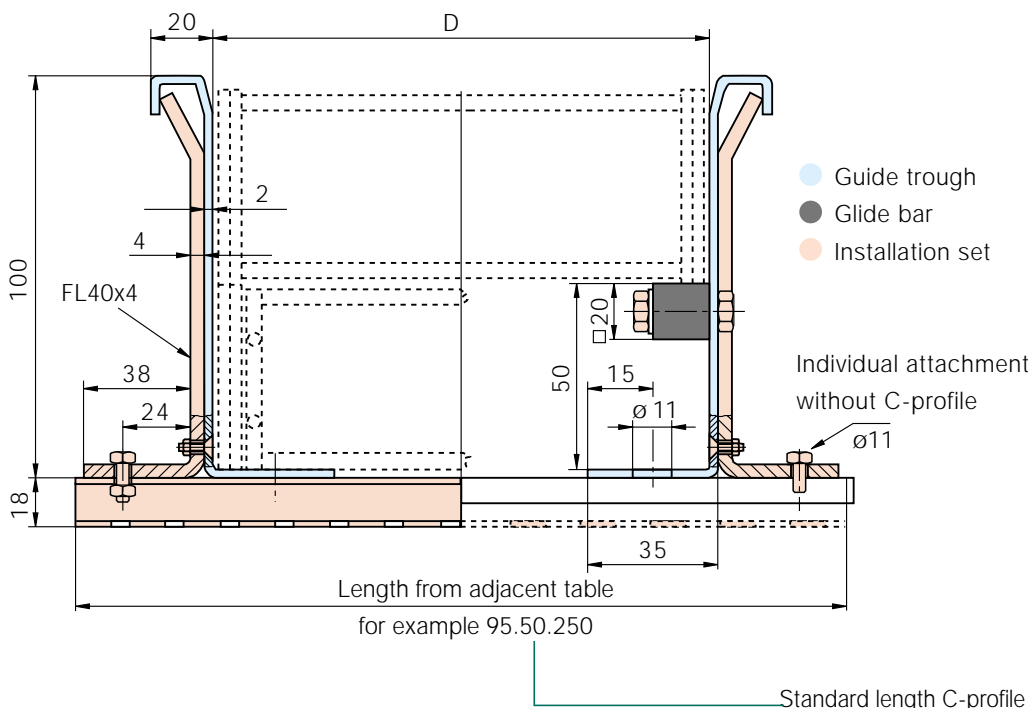
Required number of installation sets:

= Number of guide trough components + 1
= 13 + 13 + 1 = 27

Part No. of the installation sets **95.50.XXX**

Example:
95.50.250 for 250 mm long C-profile.

Specialized dimensions are also available if space is restricted.



- ▶ For this series there is also the tubular trough, which was presented with the "IF-Award 2000"
- ▶ Page 8.23
- ▶ For rapid installation: Snap-in trough system SP/AP from Page 8.25

