

When to use the Series 200/240/250:

- If snap-open accessibility along inner or outer radius is required
- If integrated strain relief is required at the connection point
- If modular interior separation is required
- If long service life is required
- If easy installation is required



When not to use them:

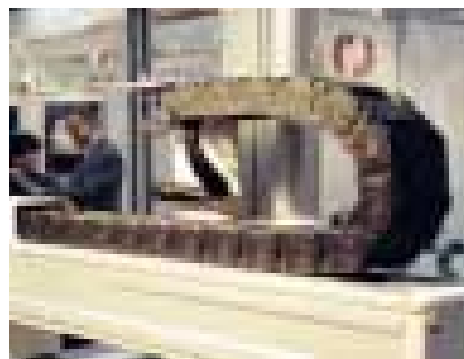
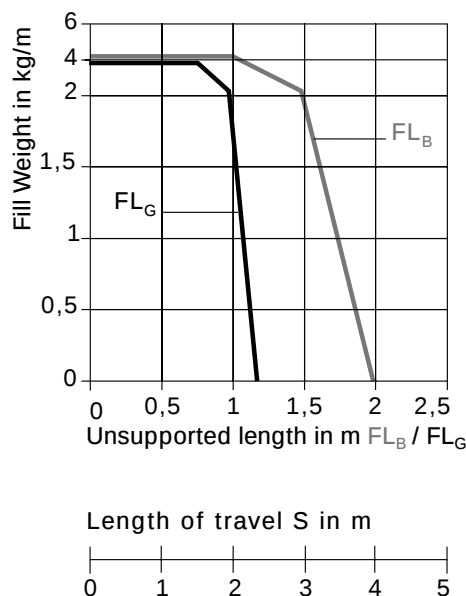
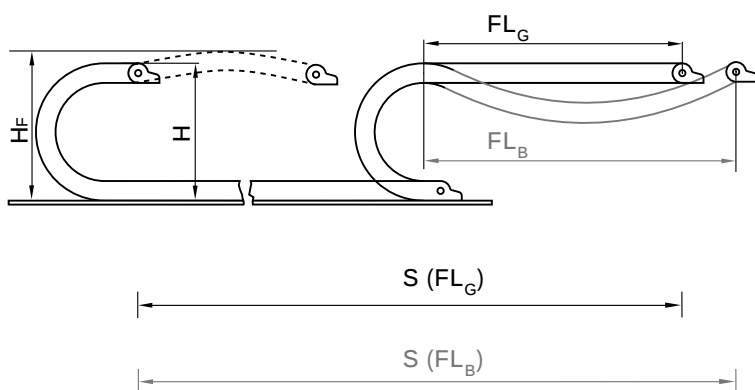
- If each link requires snap-open accessibility on both sides simultaneously
▶ System E4, Series 220 etc.), Page 7.6
- If maximum stability is required
▶ System E4, Series 220 etc.), Page 7.6
- If chip protection is required
▶ Energy Tubes E2, Series R48, Page 6.28
- If the application is very simple
▶ Easy Chain®, Series E 200, Page 3.36

Product Range:

Inner Widths (Bi) in mm:	25, 38, 57, 77, 90, 103, 125
Bending Radii (R) in mm:	055, 075, 100, 125, 150, 175, 200, 225, 250
Pitch:	46 mm/link = 22 links/m (1012 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 1.18.

- Long travel
Max. = 100 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. 40 m
Vertical, standing	= max. 3 m
Side-mounted, unsupported	= max. 1 m
Rotary	= requires further calculation

- Accessories for Guide Troughs
► Page 8.5, 8.16, 8.21, 8.24
- Further information
► Design, Page 1.1



Order Example



250.10.100.0

Standard color

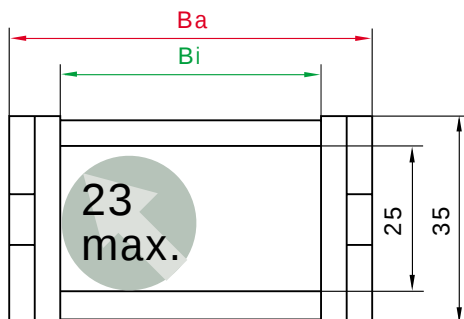
0 = Black

● Other colors

► Design,

Page 1.62

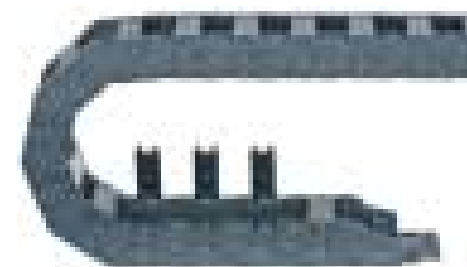
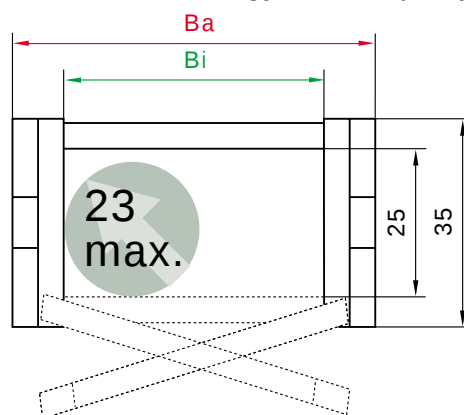
Series 200 Energy Chain® (non snap-open)



Part No.		Bi	Ba	Bending Radii
200.02.	Radius	25	41	055 075 100 125 150
200.03.	Radius	38	54	175 200 225 250
200.05.	Radius	57	73	
200.07.	Radius	77	93	
200.09.	Radius	90	106	These bending radii can be combined with every chain width!
200.10.	Radius	103	119	
200.12.	Radius	125	141	

Supplement part no. with required radius
for example 200.02.100.0

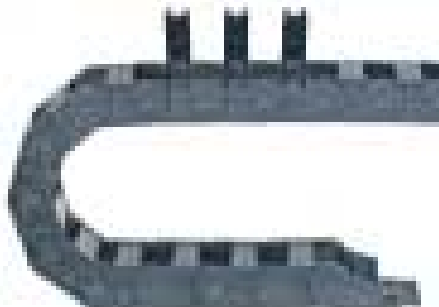
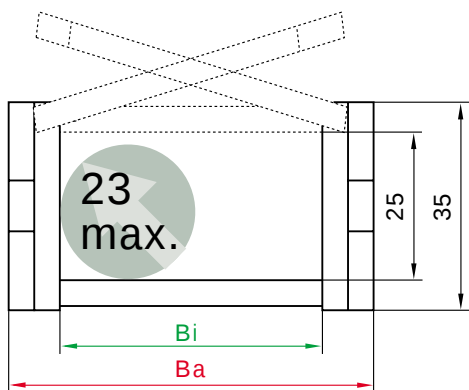
Series 240 Energy Chain® (snap-open along inner radius)



Part No.		Bi	Ba	Bending Radii
240.02.	Radius	25	41	055 075 100 125 150
240.03.	Radius	38	54	175 200 225 250
240.05.	Radius	57	73	
240.07.	Radius	77	93	
240.09.	Radius	90	106	These bending radii can be combined with every chain width!
240.10.	Radius	103	119	
240.12.	Radius	125	141	

Supplement part no. with required radius
for example 240.02.100.0

Series 250 Energy Chain® (snap-open along outer radius)

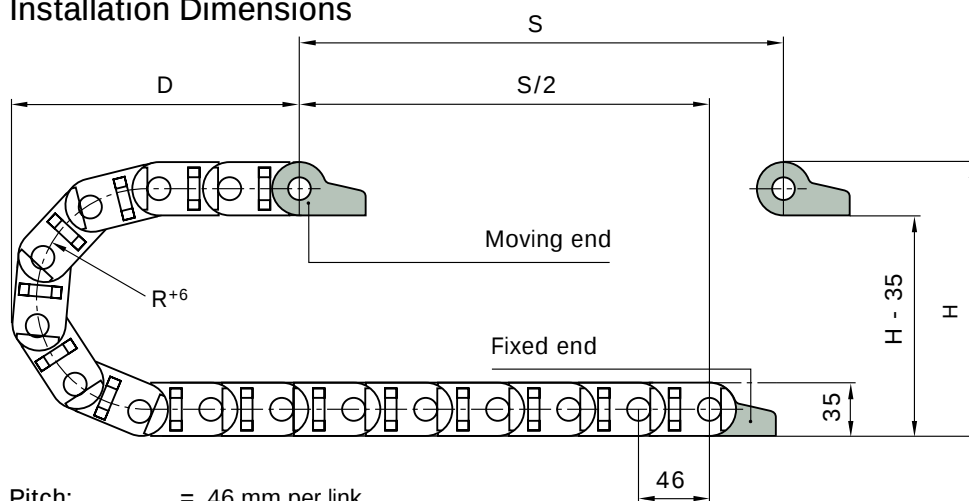


! Series 250 = standard for long-travel, gliding applications

Part No.		Bi	Ba	Bending Radii
250.02.	Radius	25	41	055 075 100 125 150
250.03.	Radius	38	54	175 200 225 250
250.05.	Radius	57	73	
250.07.	Radius	77	93	
250.09.	Radius	90	106	These bending radii can be combined with every chain width!
250.10.	Radius	103	119	
250.12.	Radius	125	141	

Supplement part no. with required radius
for example 250.02.100.0

Installation Dimensions

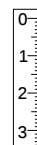


Pitch: = 46 mm per link

Links per m: = 22

Chain length: = $\frac{S}{2} + K$

R	55	75	100	125	150	175	200	225	250
H*) ⁺⁴ ₀	145	185	235	285	335	385	435	485	535
D	125	150	170	195	220	245	270	295	320
K	276	346	414	496	578	660	742	814	920

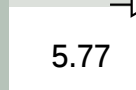


*The required clearance height is HF = H + 25 (with 1,5 kg/m fill weight)

Please consult igus® if space is particularly restricted.

E2 medium

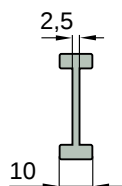
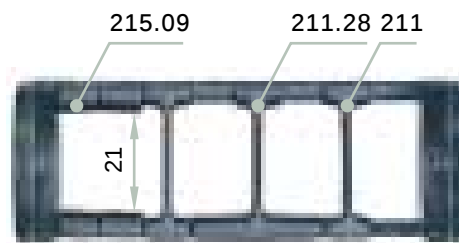
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- Option 1:
vertical
separators
- Option 2:
full-width
shelves
- Option 3:
shelves

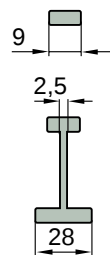
Option 1: Vertical Separators

Separators are the only option for compartmentalizing the interior of the non-snap-open chain (Series 200). If a large distance between separators is required, it is possible to use separators with wide feet (not Series 200) or spacers. Both are predominantly used for side-mounted Energy Chains®.



Vertical Separator

Unassembled	Part No. 201
Assembled	Part No. 211



Spacer

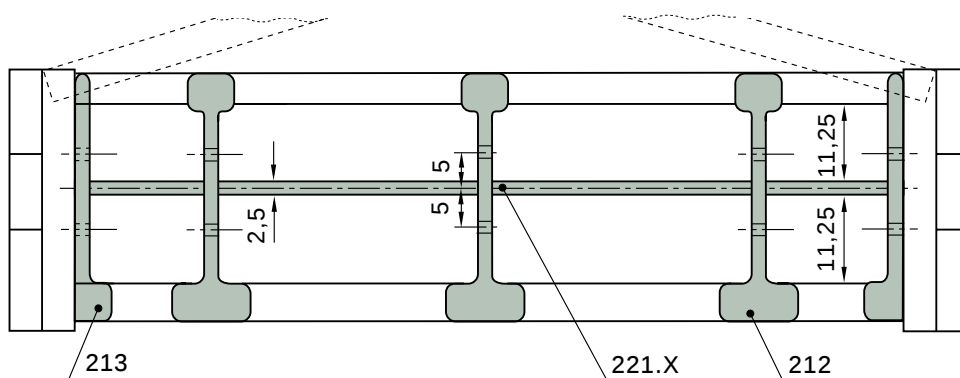
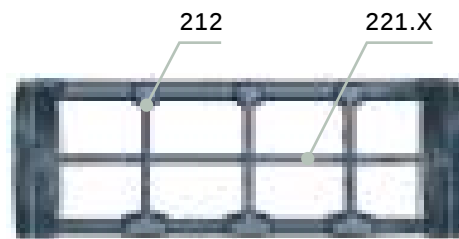
Unassembled	Part No. 205.09
Assembled	Part No. 215.09

Vertical Separator

Unassembled	Part No. 201.28
Assembled	Part No. 211.28

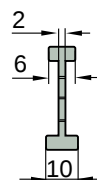
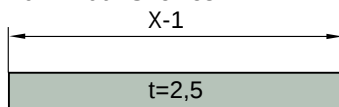
Option 2: Full-Width Shelves

This option is available for the snap-open Series 240/250 chains. It is ideal for use in applications involving many thin cables with similar or identical diameters. This shelf slides into place and spans the entire width of the chain.



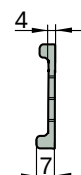
BWidth X in mm	Part No. Unassembled	Part No. Assembled
25	220.25	221.25
38	220.38	221.38
57	220.57	221.57
77	220.77	221.77
90	220.90	221.90
103	220.103	221.103
125	220.125	221.125

Full-Width Shelves



Vertical Separator, Slotted

Unassembled	Part No. 202
Assembled	Part No. 212

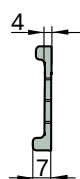
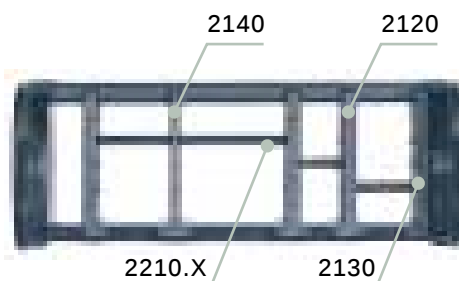


Side Plate

Unassembled	Part No. 203
Assembled	Part No. 213

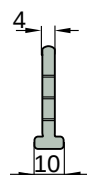
Option 3: Shelves

This option is available for the Series 240/250 snap-open chains. It is ideal for use in applications involving many cables with different diameters. This option allows for variable compartment heights and widths across the chain width, but can also be used for level separation across the entire width.



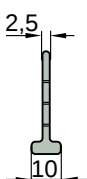
Side Plate

Unassembled	Part No. 2030
Assembled	Part No. 2130



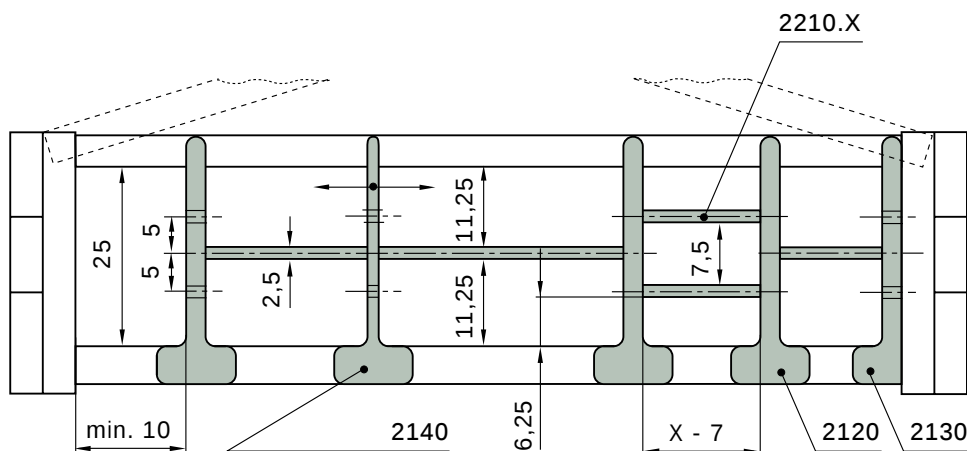
Vertical Separator

Unassembled	Part No. 2020
Assembled	Part No. 2120



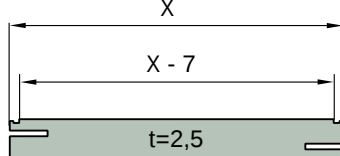
Vertical Separator, Slotted

Unassembled	Part No. 2040
Assembled	Part No. 2140



Width X in mm	Part No. Unassembled	Part No. 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
48	2200.48	2210.48
58	2200.58	2210.58
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



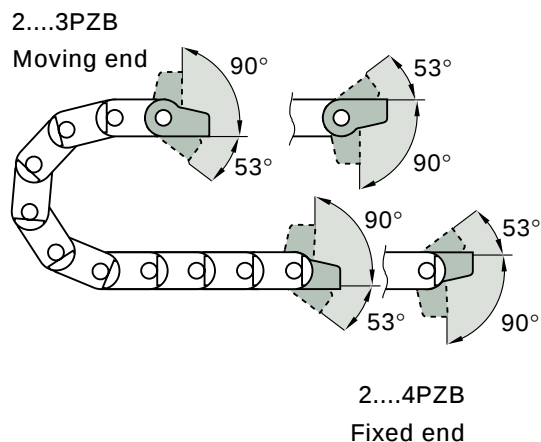
E2 medium

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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



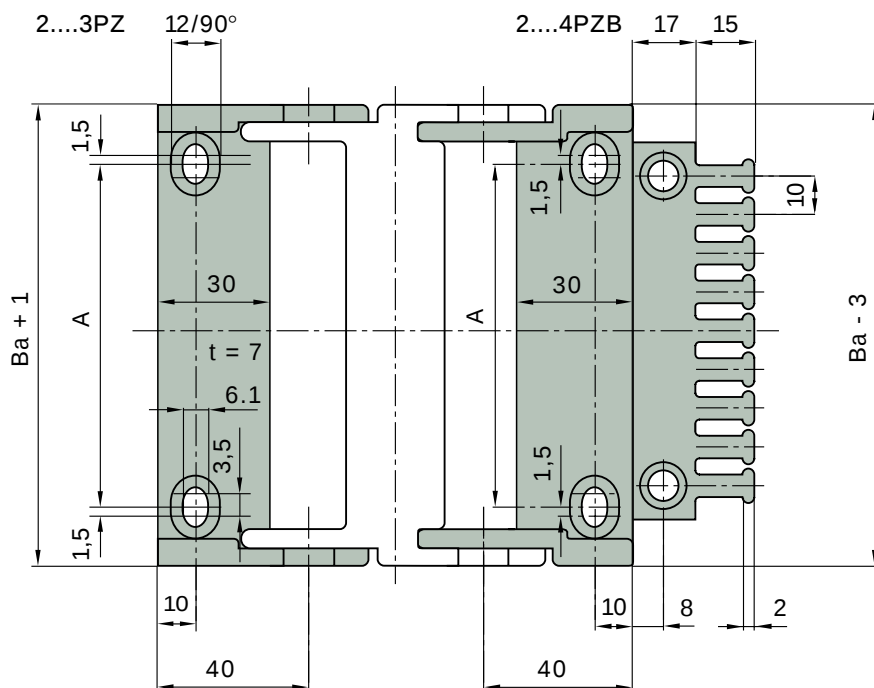
Option 4: KMA locking

-  Universal use



Option 5: steel

-  Electrically conductive
-  For all chain widths

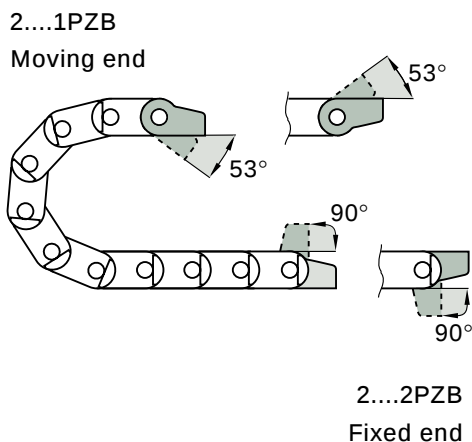


Chain Type	Part No. Full Set with Tiewrap Plates	Part No. with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in mm
200/240/250.02	2020.34PZB	2020.34PZBK1	2020.34PZ	12
200/240/250.03	2030.34PZB	2030.34PZBK1	2030.34PZ	25
200/240/250.05	2050.34PZB	2050.34PZBK1	2050.34PZ	44
200/240/250.07	2070.34PZB	2070.34PZBK1	2070.34PZ	64
200/240/250.09	2090.34PZB	2090.34PZBK1	2090.34PZ	77
200/240/250.10	2100.34PZB	2100.34PZBK1	2100.34PZ	90
200/240/250.12	2125.34PZB	2125.34PZBK1	2125.34PZ	112

- 2...34 PZB = Full set, each part with pin/bore, with tie-wrap plates
- 2...3 PZB = Mounting bracket with bore, including tie-wrap plates
- 2...4 PZB = Mounting bracket with pin, including tie-wrap plates

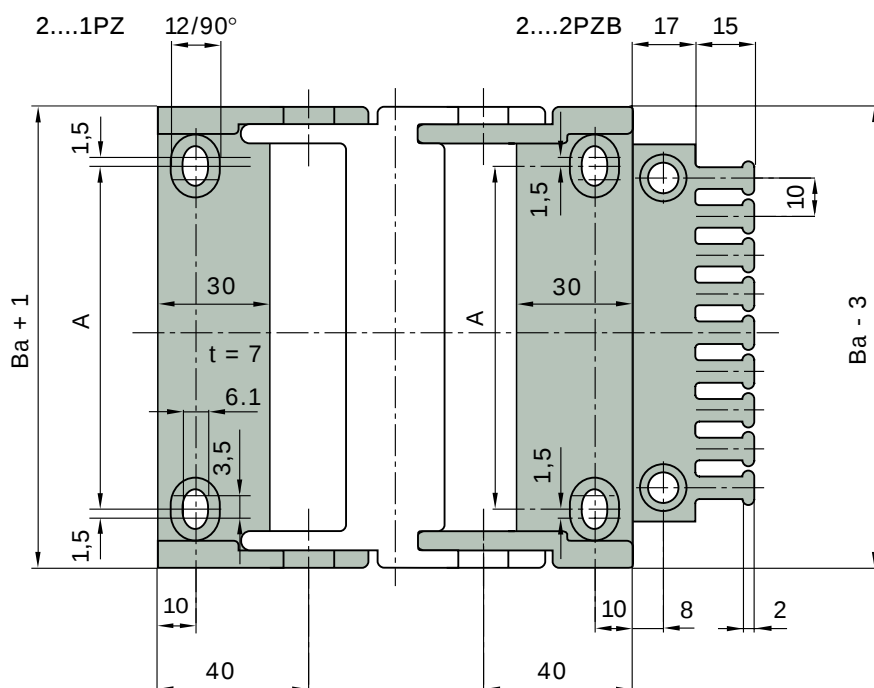
Option 2: Locking

- 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
200/240/250.02	2020.12PZB	2020.12PZBK1	2020.12PZ	12
200/240/250.03	2030.12PZB	2030.12PZBK1	2030.12PZ	25
200/240/250.05	2050.12PZB	2050.12PZBK1	2050.12PZ	44
200/240/250.07	2070.12PZB	2070.12PZBK1	2070.12PZ	64
200/240/250.09	2090.12PZB	2090.12PZBK1	2090.12PZ	77
200/240/250.10	2100.12PZB	2100.12PZBK1	2100.12PZ	90
200/240/250.12	2125.12PZB	2125.12PZBK1	2125.12PZ	112

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

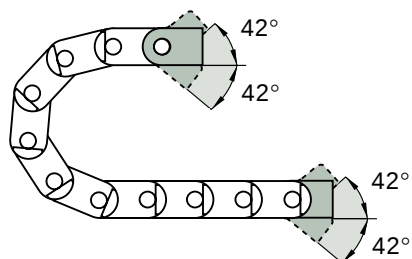
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Option 3: KMA pivoting

- ☒ Pivoting
- ☒ Short travels
- ☒ Confined installation conditions
- ☒ Corrosion-resistant
- ☒ "Stackable"
- ☒ Bolted connection outside of chain cross-section
- ☐ Locked connections
- ☐ Vertical hanging / standing, unsupported
- ☐ Gliding applications

2....1
Moving end



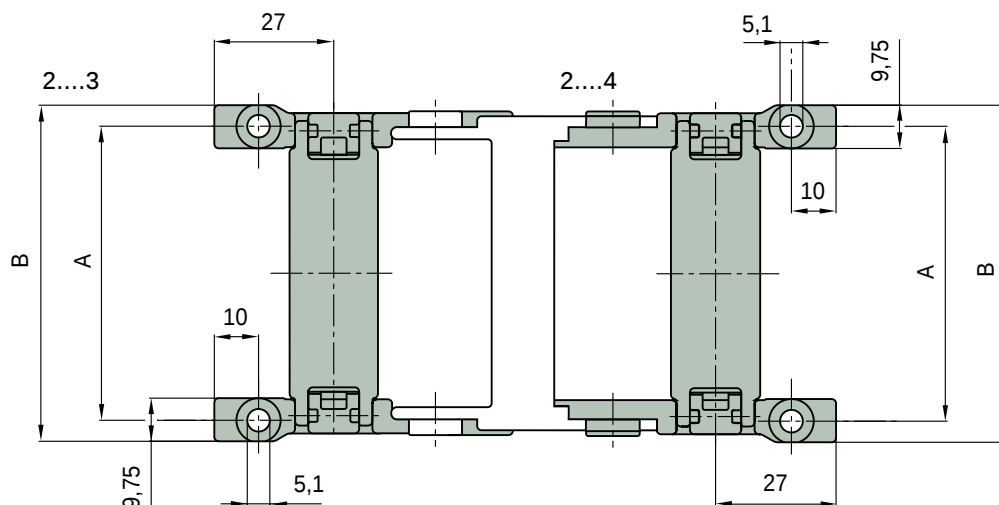
2....2
Fixed end

Option 3: KMA pivoting

● Universal use



● "Stackable"



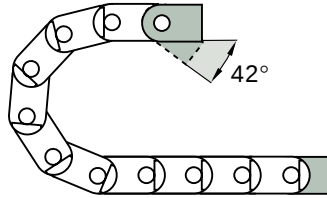
Chain Type	Part No. Full Set	Dimension A in mm	Dimension B in mm
200/240/250.02	2000.02.12	34,5	44
200/240/250.03	2000.03.12	47,5	57
200/240/250.05	2000.05.12	66,5	76
200/240/250.07	2000.07.12	86,5	96
200/240/250.09	2000.09.12	99,5	109
200/240/250.10	2000.10.12	112,5	122
200/240/250.12	2000.12.12	134,5	144

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

Option 4: KMA Locking

- Locked connections
- Vertical hanging / standing travels
- Extreme accelerations
- Corrosion-resistant
- "Stackable"
- Bolted connection outside of chain cross-section
- If the 1st chain link must pivot
- Gliding applications

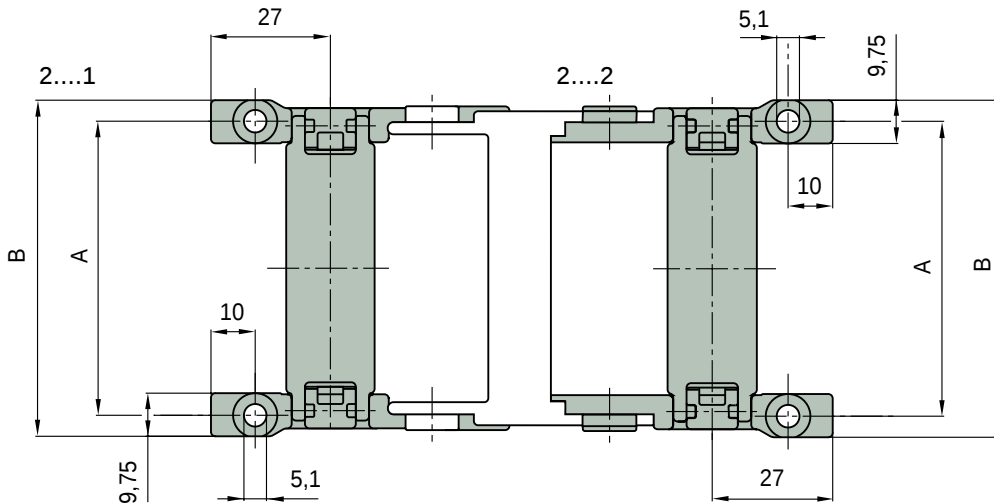
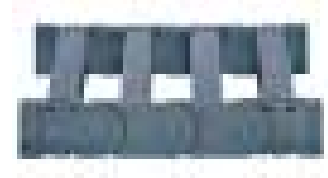
2....1
Moving end



2....2
Fixed end

Option 4: KMA locking

Universal use



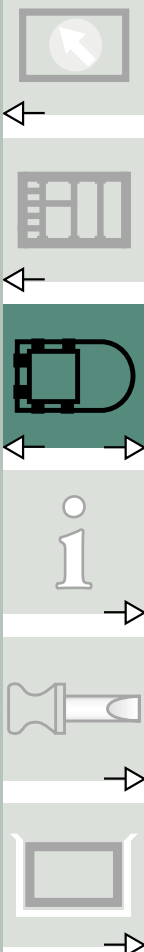
Chain Type	Part No. Full Set	Dimension A in mm	Dimension B in mm
200/240/250.02	2100.02.12	34,5	44
200/240/250.03	2100.03.12	47,5	57
200/240/250.05	2100.05.12	66,5	76
200/240/250.07	2100.07.12	86,5	96
200/240/250.09	2100.09.12	99,5	109
200/240/250.10	2100.10.12	112,5	122
200/240/250.12	2100.12.12	134,5	144

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

2...1 = KMA with bore

2...2 = KMA with pin

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Option 5: Steel

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

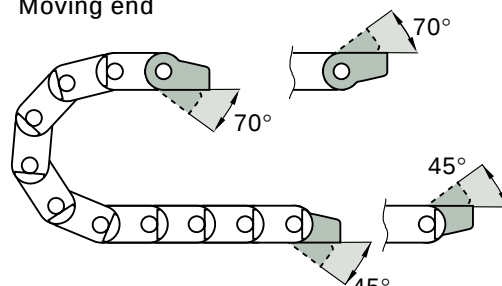
Option 5: steel

-  Electrically conductive
-  For all chain widths



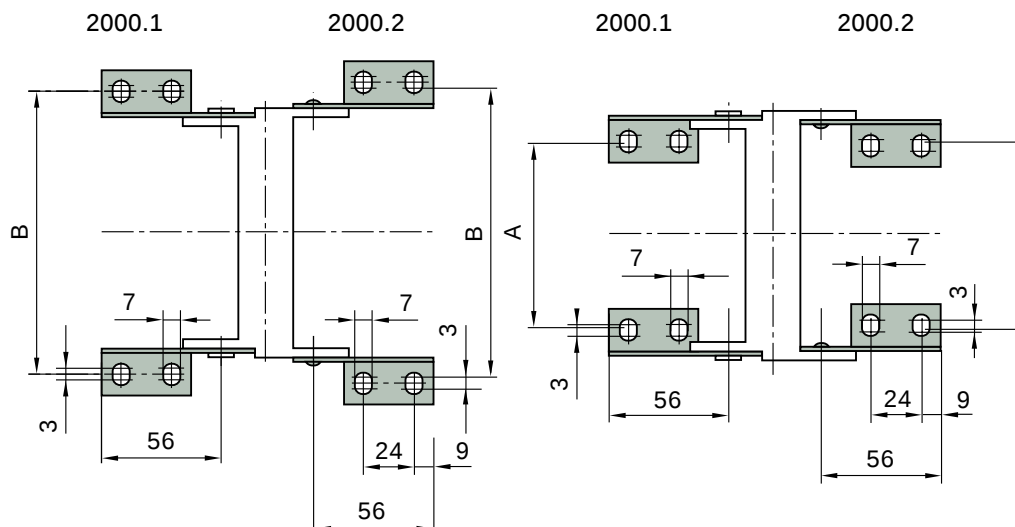
2000.1

Moving end



2000.2

Fixed end



Chain Type	Part No. Full Set	Dimension A in mm	Dimension B in mm
200/240/250.02	2000.12	–	60
200/240/250.03	2000.12	25	73
200/240/250.05	2000.12	44	92
200/240/250.07	2000.12	64	112
200/240/250.09	2000.12	76	124
200/240/250.10	2000.12	90	138
200/240/250.12	2000.12	112	160

2000.12 = Full set, 4 parts, 2 with pin, 2 with bore

2000.1 = Mounting bracket with bore, 1 part left / right

2000.2 = Mounting bracket with pin, 1 part left / right

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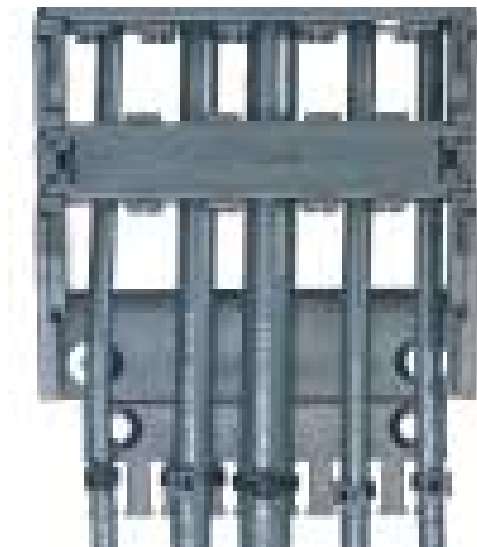
igus® GmbH
51127 Cologne

Internet: <http://www.igus.de>
email: info@igus.de

Strain Relief for Polymer Mounting Brackets

(pivoting or locking)

The strain relief tiewrap plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the tiewrap plates are also connected firmly 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

Strain Relief for KMA and Steel Mounting Brackets

With these mounting brackets, strain relief tiewrap plates may be bolted into the bores in front of the mounting bracket.



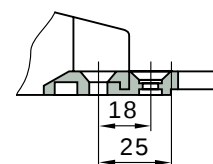
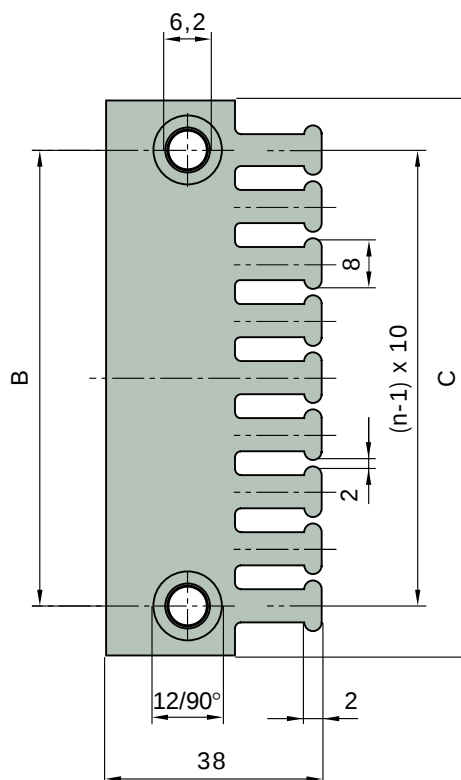
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Tiewrap Plates as Individual Parts

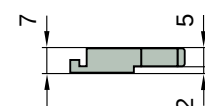
Tiewrap Plates	n Number of Teeth	C Overall Width	B = Distance Between Bore Holes
2020.ZB	3	30 mm	15 mm
2030.ZB	4	40 mm	20 mm
2040.ZB	5	50 mm	30 mm
2050.ZB	6	60 mm	40 mm
2070.ZB	8	80 mm	60 mm
2090.ZB	9	90 mm	70 mm
2100.ZB	10	100 mm	80 mm
2120.ZB	12	120 mm	100 mm

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



Drawn assembled



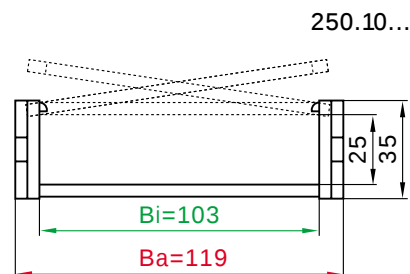
Tiewrap plates as individual parts



Order Example

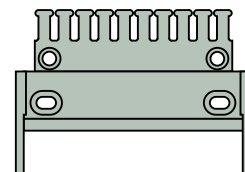
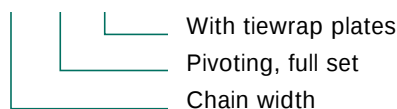
1. Chain selection:

250.10.100.0



2. Mounting brackets:

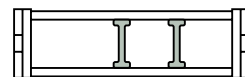
2100.34.PZB



3. Interior separation:

2 separators, unassembled, (Part No. 201) or
assembled every other chain link (Part No. 211)

Alternative interior separation configuration
according to design layout possible.



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

5 m 250.10.100.0 and 2100.34PZ

110 links (22 links/m)

4. Other technical data on Guide Troughs ► Page 5.88

Guide Troughs



- Further
information on
Guide Troughs,
► Page 8.5

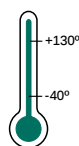


Technical Data

Chain Type	Weight Per Link (kg)	Weight Per Meter (kg)
200/240/250.02	0,034	0,74
200/240/250.03	0,037	0,81
200/240/250.05	0,041	0,90
200/240/250.07	0,046	1,01
200/240/250.09	0,052	1,08
200/240/250.10	0,058	1,15
200/240/250.12	0,064	1,22

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 1H



- Details of material properties

- Design, Page 1.61



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



Width of selected
Energy Chain®
250.05.200.0

Dimension D

Installation
Part No.

.02*	46	92.50.150
.03	59	92.50.175
.05	78	92.50.175
.07	98	92.50.200
.09	111	92.50.250
.10	124	92.50.250
.12	146	92.50.300

* Specialized guide
trough available
upon request

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. 92.30
- Guide troughs with glide bars
Part No. 92.31
- Installation sets as section connectors
Part No. 92.50.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 adjacent table.

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 sections of 2 m guide trough

without glide bar Part No. 92.30

= 13 sections of 2 m guide trough

with glide bar Part No. 92.31



Required number of installation sets:

= Number of guide trough components + 1

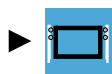
= 13 + 13 + 1 = 27

Part No. of the installation sets 92.50.XXX

Example:

92.50.200 for 200m 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 8.21



- For rapid installation: Snap-in trough system SP/AP

► Page 8.24

