

1400
1450
1480
1500

igus®

E2/000 | 1400·1450·1480·1500



Price index



IPA Qualification Certificate Air
Cleanless Class ISO Class 3
(at $v = 2 \text{ m/s}$) upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request



UL94 V2 classifications
upon request



Snap-open mechanism, choice of snap-open on left or right. Hinged crossbar can be swiveled by more than 180° on both sides. Lightning-fast closing by hand. Secure fit without additional locking devices.



When to use the Series 1400/1450/1480/1500:

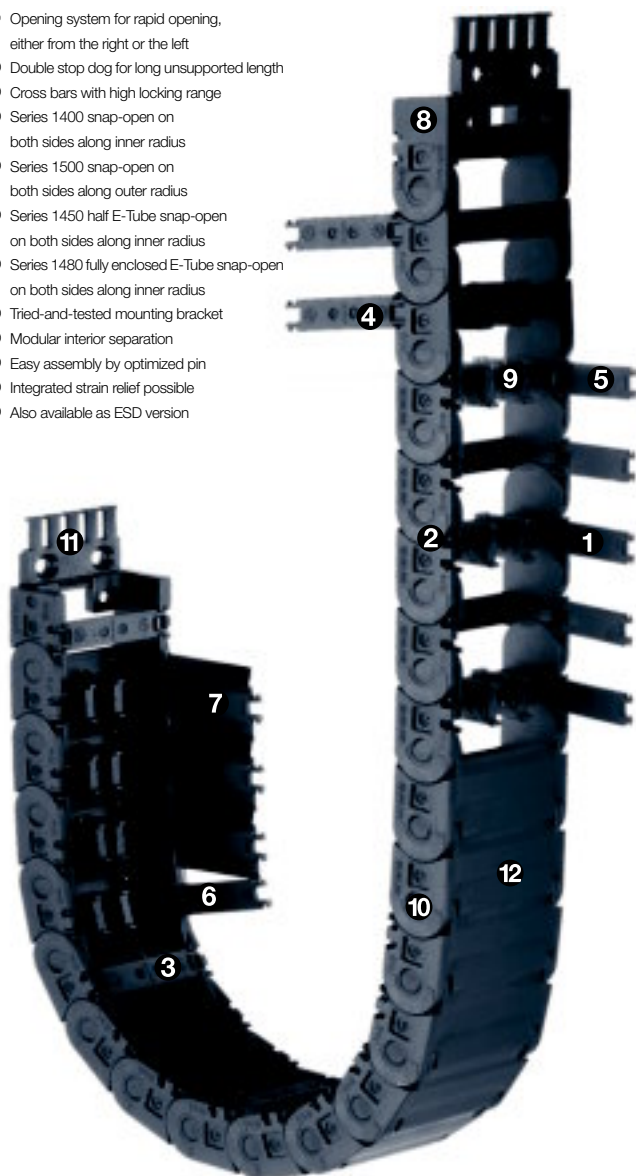
- If snap-open accessibility along inner or outer radius is required
- If integrated strain relief is required at the connection point
- If half E-Tube is required (Series 1450)
- If fully enclosed E-Tube is required (Series 1480)
- If long service life is required
- If easy installation is required
- Standard product with many accessories



When not to use it:

- If the application is very simple
 - ▶ Easy Chain®, Series E14, page 3.32

- ❶ Opening system for rapid opening, either from the right or the left
- ❷ Double stop dog for long unsupported length
- ❸ Cross bars with high locking range
- ❹ Series 1400 snap-open on both sides along inner radius
- ❺ Series 1500 snap-open on both sides along outer radius
- ❻ Series 1450 half E-Tube snap-open on both sides along inner radius
- ❼ Series 1480 fully enclosed E-Tube snap-open on both sides along inner radius
- ❽ Tried-and-tested mounting bracket
- ❾ Modular interior separation
- ❿ Easy assembly by optimized pin
- ⓫ Integrated strain relief possible
- ⓬ Also available as ESD version



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 3 m or 90 links

3 m 1400.038.100.0



E-Chain®

with 2 separators 14011 assembled every 2nd link



Interior separation

1 set 15000.038.34PZB



Mounting bracket

5.92

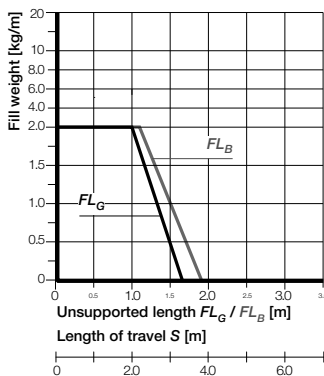
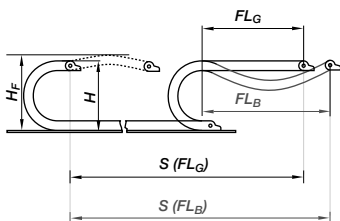


Available from stock. **Delivery in 24h or today!** (Delivery time means time until shipping of goods)

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

 H_{RI} = Trough inner height

 D = Overlength E-Chain®

radius in final position

 $K = \pi \cdot R + \text{"safety"}$
 D_2 = Over length - long travels, gliding

 K_2 = "Further add-on"

 H_2 = "Mounting height"

*If the mounting bracket location is set lower

Other installation methods

Vertical, hanging ≤ 20 m

Vertical, standing ≤ 2 m

Side mounted, unsp. $\leq 0,7$ m

Rotary requires further calculation

Unsupported length of upper run

= upon request



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.

The required

clearance height:

 $H_F = H + 25$ mm

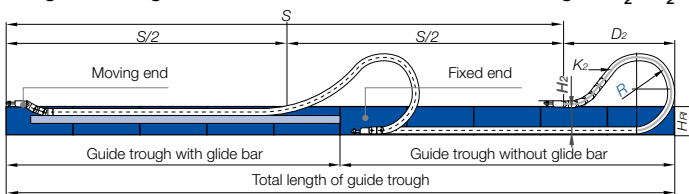
(with 0,5 kg/m fill weight)

Pitch = 33,3 mm/link Links/m = 30 (1000 mm) Chain length = $S_2 + K$

	035*	038*	048*	075	100	125	145	180
H	98	104	124	178	228	278	318	388
D	85	90	100	125	150	175	195	230
K	180	190	220	305	385	460	525	635
H_2	98	104	124	178	100	100	100	100
D_2^{+25}	85	90	100	125	340	495	540	690
K_2	180	190	220	305	600	800	940	1170

*for Series 1450/1480 upon request

Long travel lengths from 10 m to max. 75 m

Chain length = $S_2 + K_2$


In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 75 m)

In this case the E-Chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



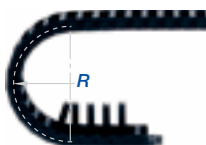
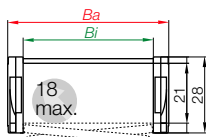
Details of material properties

► page 1.38

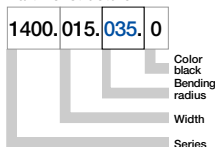


► page 5.91





Part No. structure



Series 1400 - E-Chain® - snap-open along inner radius

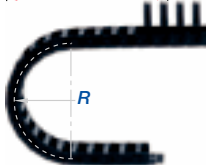
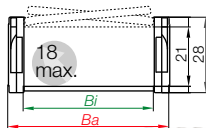
Part No.	Bi [mm]	Ba [mm]	R [mm]	Bending radii								Weight [kg/m]
1400.015.	.0 15	28,5	035	038	048	075	100	125	145	180		≈ 0,46
1400.020.	.0 20	33,5	035	038	048	075	100	125	145	180		≈ 0,47
1400.025.	.0 25	38,5	035	038	048	075	100	125	145	180		≈ 0,49
1400.038.	.0 38	51,5	035	038	048	075	100	125	145	180		≈ 0,53
1400.050.	.0 50	63,5	035	038	048	075	100	125	145	180		≈ 0,56
1400.068.	.0 68	81,5	035	038	048	075	100	125	145	180		≈ 0,63
1400.080.	.0 80	93,5	035	038	048	075	100	125	145	180		≈ 0,67
1400.100.	.0 100	113,5	035	038	048	075	100	125	145	180		≈ 0,74
1400.125.	.0 125	138,5	035	038	048	075	100	125	145	180		≈ 0,83

Supplement Part No. with required radius. Example: 1400.015.035.0

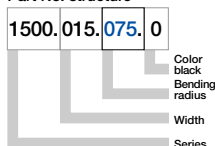
0 = standard color, other colors ► page 1.39 · Pitch = 33,3 mm/link - Links/m = 30



Please note: For using this series for long travels (gliding), please consult with igus® first. For long travels, igus® specifies E-Chains® that snap open on the outer radius.



Part No. structure



Series 1500 - E-Chain® - snap-open along outer radius - Standard!

Part No.	Bi [mm]	Ba [mm]	R [mm]	Bending radii								Weight [kg/m]
1500.015.	.0 15	28,5	035	038	048	075	100	125	145	180		≈ 0,46
1500.020.	.0 20	33,5	035	038	048	075	100	125	145	180		≈ 0,47
1500.025.	.0 25	38,5	035	038	048	075	100	125	145	180		≈ 0,49
1500.038.	.0 38	51,5	035	038	048	075	100	125	145	180		≈ 0,53
1500.050.	.0 50	63,5	035	038	048	075	100	125	145	180		≈ 0,56
1500.068.	.0 68	81,5	035	038	048	075	100	125	145	180		≈ 0,63
1500.080.	.0 80	93,5	035	038	048	075	100	125	145	180		≈ 0,67
1500.100.	.0 100	113,5	035	038	048	075	100	125	145	180		≈ 0,74
1500.125.	.0 125	138,5	035	038	048	075	100	125	145	180		≈ 0,83

Supplement Part No. with required radius. Example: 1500.015.075.0

0 = standard color, other colors ► page 1.39 · Pitch = 33,3 mm/link - Links/m = 30



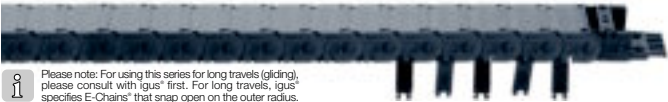
Series 1450 - half E-Tube - snap-open along inner radius

Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	<i>R</i> [mm]	Bending radii	Weight [kg/m]
1450.015.	.0	15	28,5	075 100 125 145 180	≈ 0,48
1450.025.	.0	25	38,5	075 100 125 145 180	≈ 0,57
1450.038.	.0	38	51,5	075 100 125 145 180	≈ 0,59
1450.050.	.0	50	63,5	075 100 125 145 180	≈ 0,65
1450.068.	.0	68	81,5	075 100 125 145 180	≈ 0,74
1450.080.	.0	80	93,5	075 100 125 145 180	≈ 0,80
1450.100.	.0	100	113,5	075 100 125 145 180	≈ 0,90
1450.125.	.0	125	138,5	075 100 125 145 180	≈ 1,03

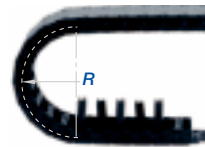
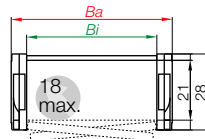
The bending radii 035038048 are available upon request.

Supplement Part No. with required radius. Example: 1450.015.075.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 33,3 mm/link - Links/m = 30



 Please note: For using this series for long travels (gliding), please consult with igus® first. For long travels, igus® specifies E-Chains® that snap open on the outer radius.



Part No. structure

1450.015.075.0

Color
black
Bending
radius
Width
Series

E2/000 medium
Inner height: 21 mm

Series 1480 - E-Tube - snap-open along inner radius

Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	<i>R</i> [mm]	Bending radii	Weight [kg/m]
1480.015.	.0	15	28,5	075 100 125 145 180	≈ 0,48
1480.025.	.0	25	38,5	075 100 125 145 180	≈ 0,54
1480.038.	.0	38	51,5	075 100 125 145 180	≈ 0,61
1480.050.	.0	50	63,5	075 100 125 145 180	≈ 0,67
1480.068.	.0	68	81,5	075 100 125 145 180	≈ 0,77
1480.080.	.0	80	93,5	075 100 125 145 180	≈ 0,84
1480.100.	.0	100	113,5	075 100 125 145 180	≈ 0,95
1480.125.	.0	125	138,5	075 100 125 145 180	≈ 1,08

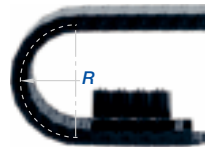
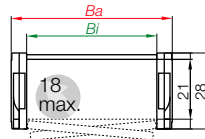
The bending radii 035038048 are available upon request.

Supplement Part No. with required radius. Example: 1480.038.075.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 33,3 mm/link - Links/m = 30



 Please note: For using this series for long travels (gliding), please consult with igus® first. For long travels, igus® specifies E-Chains® that snap open on the outer radius.



Part No. structure

1480.038.075.0

Color
black
Bending
radius
Width
Series

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



▶ page 5.91

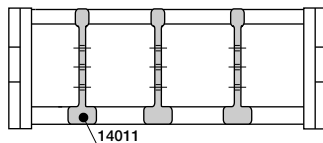
Vert. Separator, slotted		
unassembled	14001	
assembled	14011	

Option 1: Vertical Separators for E-Chains® Series 1400 · 1500

Vertical Separators are used if a vertical subdivision of the E-Chain® interior is required -

By standard Vertical Separators are assembled every other E-Chain® link

- Standard subdivision with Vertical Separator, slotted 14011, for combinations with Full-Width Shelf 111.X



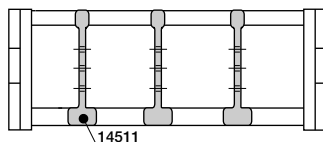
Vert. Separator, slotted		
unassembled	14501	
assembled	14511	

Option 2: Vertical Separators for E-Tubes Series 1450 · 1480

Vertical Separators are used if a vertical subdivision of the half E-Tube (Series 1450) and the fully enclosed E-Tube (Series 1480) interior is required -

By standard Vertical Separators are assembled every other E-Chain® link

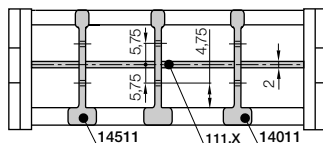
- Standard subdivision with Vertical Separator, slotted 14511, for combinations with Full-Width Shelf 111.X



Option 3: Full-Width Shelves for E-Chains® Series 1400 · 1500 and E-Tubes Series 1450 · 1480

For applications involving many cables with similar or identical diameters

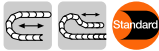
- Full-Width Shelf 111.X can be combined with Vertical Separator, slotted 14011 (E-Chain®) and Vertical Separator, slotted 14511 (E-Tube/half E-Tube)



Full-Width Shelf	
X	
t = 2	

Width X [mm]	Part No. unassembled	Part No. assembled
015	110.15	111.15
020	110.20	111.20
025	110.25	111.25
038	110.38	111.38
050	110.50	111.50

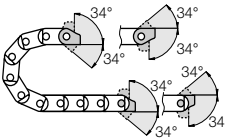
Width X [mm]	Part No. unassembled	Part No. assembled
068	110.68	111.68
080	110.80	111.80
100	110.100	111.100
125	110.125	111.125



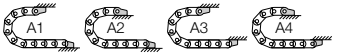
The Standard - one-piece mounting brackets - pivoting

- Recommended for unsupported and gliding applications
- Well suited for tight installation conditions
- Integrated multist strain relief
- Easy to assembly
- Various mounting positions

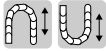
Moving end with bore (outer link) 14...3PZ



14...4PZ Fixed end with pin (inner link)



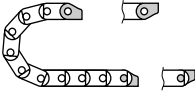
Possible installation conditions for assembled mounting brackets ► Order example "preassembled" below



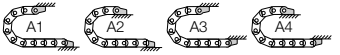
One-piece mounting brackets - locking

- Recommended for unsupported and gliding applications
- Furthermore:
- At very high speed and/or acceleration
 - If space is limited for height (the H_F measurement)
 - Various mounting positions

Moving end with bore (outer link) 14...1PZ



14...2PZ Fixed end with pin (inner link)



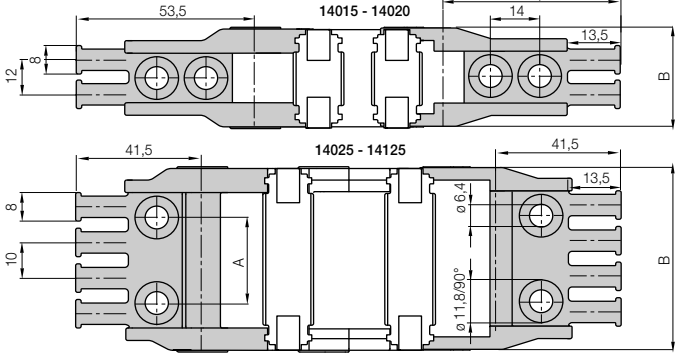
Possible installation conditions for assembled mounting brackets ► Order example "preassembled" below

14...3PZ Standard! (pivoting)
14...1PZ (locking)

Moving end

Standard! (pivoting) 14...4PZ (locking) 14...2PZ

Fixed end



For E-Chain:	Part No. full set with tiewrap plate	Dim.A [mm]	Dim.B [mm]	Number of teeth
1400 - 1500.015 ►	14015. ☐ PZ	–	28,5	2
1400 - 1500.020 ►	14020. ☐ PZ	–	33,5	2
1400 - 1500.025 ►	14025. ☐ PZ	13	38,5	2
1400 - 1500.038 ►	14038. ☐ PZ	24	51,5	4
1400 - 1500.050 ►	14050. ☐ PZ	36	63,5	6
1400 - 1500.068 ►	14068. ☐ PZ	54	81,5	7
1400 - 1500.080 ►	14080. ☐ PZ	66	93,5	8
1400 - 1500.100 ►	14100. ☐ PZ	86	113,5	10
1400 - 1500.125 ►	14125. ☐ PZ	111	138,5	13

Please add the Part No. with the requested index - 34 for the pivoting configuration

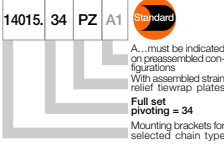
e.g. 14015. ☐ 34 PZ or 12 for the locking configuration e.g. 14015. ☐ 12 PZ

For the preassembled mode please add the index ☐ A1 ... ☐ A4 e.g. 14015. ☐ 34 PZ ☐ A1

Dimensions and order configurations

Strain relief is possible on the moving end and/or the fixed end.

Part No. structure (pivoting)



Full set, for both ends:

☐ 14015. ☐ 34 PZ +tiewrap plate

Single-part order:

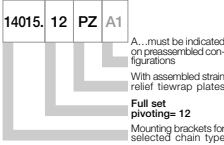
☐ 14015. ☐ 3 PZ +tiewrap plate

Mounting bracket with bore

☐ 14015. ☐ 4 PZ +tiewrap plate

Mounting bracket with pin

Part No. structure (locking)



Full set, for both ends:

☐ 14015. ☐ 12 PZ +tiewrap plate

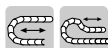
Single-part order:

☐ 14015. ☐ 1 PZ +tiewrap plate

Mounting bracket with bore

☐ 14015. ☐ 2 PZ +tiewrap plate

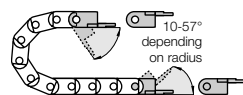
Mounting bracket with pin



Mounting bracket - polymer

- Recommended for unsupported and gliding applications
- Well suited for tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle for flexible assembly
- The twistability of the E-Chain® and the option to assemble the mounting brackets on the fixed end and/or the moving end, enable various installation options

Moving end with bore
(outer link) 15000...3PZ(B)



15000...4PZ(B) Fixed end
with pin (inner link)



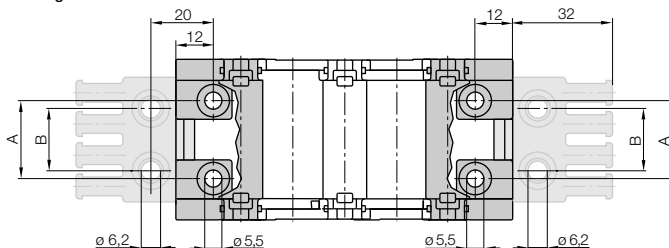
Possible installation conditions for assembled mounting brackets ► Order example "preassembled" below

Dimensions and order configurations

Strain relief is possible on the moving end and/or the fixed end.

15000...3PZ(B)
Moving end

15000...4PZ(B)
Fixed end



Part No. structure

15000	038	34	P7B	A1
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A...must be indicated on preassembled configurations.

With assembled strain relief tie-wrap plates

Full set

pivoting = 34

Width

Mounting brackets for selected chain type

Full set, for both ends:

15000.038.34 PZB +tiewrap plate

Single-part order:

15000.038. 3 PZB +tiewrap plate

Mounting bracket with bore

15000.038.	4	PZB +tiewrap plate
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Mounting bracket with pin

For E-Chain®	Part No. full set with tiewrap plate	Part No. full set without tiewrap plate	Dim. A [mm]	Dim. B [mm]
1400 - 1500.015 ►	–	–	–	–
1400 - 1500.020 ►	–	–	–	–
1400 - 1500.025 ►	15000.025. 34 PZB	15000.025. 34 PZ	12	15
1400 - 1500.038 ►	15000.038. 34 PZB	15000.038. 34 PZ	25	20
1400 - 1500.050 ►	15000.050. 34 PZB	15000.050. 34 PZ	37	30
1400 - 1500.068 ►	15000.068. 34 PZB	15000.068. 34 PZ	55	40
1400 - 1500.080 ►	15000.080. 34 PZB	15000.080. 34 PZ	67	60
1400 - 1500.100 ►	15000.100. 34 PZB	15000.100. 34 PZ	87	80
1400 - 1500.125 ►	15000.125. 34 PZB*	15000.125. 34 PZ	112	105

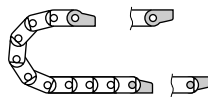
For the **preassembled** mode please add the index **A1** ... **A4** e.g. 15000.038. **34** PZB **A1**

*Tie wrap plate (consists of 2 x 2050.ZB) does not snap on but needs to be bolted down separately

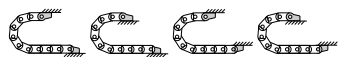
**Steel mounting bracket - locking**

- Locked connections
- One part for all chain widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible

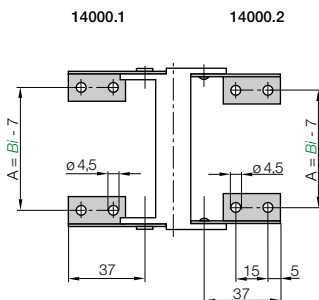
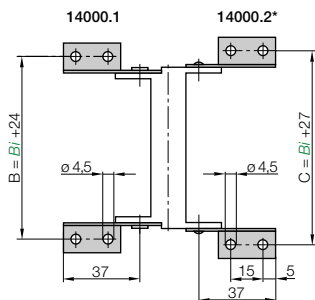
Moving end with bore
(outer link) 14000....1



14000....2 Fixed end
with pin (inner link)



Possible installation conditions -
Further installation angles ► installation sketch

**Dimensions and
order configurations**

*pivoting with no stop, (360°).
Screw-on area of the mounting
brackets can be on the interior
or exterior.

For E-Chain®	Part No. full set	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]
1400 - 1500.015 ►	14000.12	8	39	42
1400 - 1500.020 ►	14000.12	13	44	47
1400 - 1500.025 ►	14000.12	18	49	52
1400 - 1500.038 ►	14000.12	31	62	65
1400 - 1500.050 ►	14000.12	43	74	77
1400 - 1500.068 ►	14000.12	61	92	95
1400 - 1500.080 ►	14000.12	73	104	107
1400 - 1500.100 ►	14000.12	93	124	127
1400 - 1500.125 ►	14000.12	118	149	152

14000.12 Full set, 4 parts
2 with pin / 2 with bore

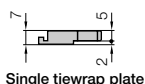
Single-part order:

14000.1 Mounting bracket
with bore, 1 part left / right

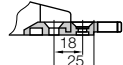
14000.2 Mounting bracket
with pin, 1 part left / right

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





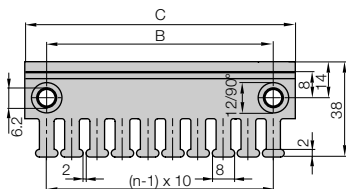
Single tie-wrap plate



Shown assembled

Tie-wrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



Tie-wrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]
2020.ZB	3	30	15
2030.ZB	4	40	20
2040.ZB	5	50	30
2050.ZB	6	60	40
2070.ZB	8	80	60
2090.ZB =			
(2030.ZB + 2040.ZB)	9	90	–
2100.ZB	10	100	80
2125.ZB =			
(2050.ZB + 2050.ZB)	12	120	–



Cable tie-wraps as individual part

Cable tie-wraps (100-piece bag)	Width x length	max. Ø	Tensile strength
CFB.001	4,8 x 150 mm	36 mm	222 N



Strain relief for steel mounting brackets

Clip-on connection is not possible with steel mounting brackets. In this case, the tie-wrap plates must be bolted directly into separate bore holes in front of the mounting bracket. Alternatively the tie-wrap plates 20XX.ZB can be also used here. **Details ► chapter 10**



Other strain relief elements - optional ► chapter 10

