



Price index

UL94-V2 classifications  
upon requestESD classification:  
Electrically conductive  
ESD/ATEX version upon requeste-tubes with HT-material  
for hot chips up to 850°C  
available upon requestTo open the e-tube Series R100 lift  
up the lid and swivel lid to the side

When to use the Series R167/R168:

- If snap-open accessibility along inner or outer radius is required
- If a low-cost, lightweight e-tube for many types of applications required
- If flush attachment is required
- If chip-repellent features are required



When not to use it:

- For extremely chip repellent e-tubes  
► **System RX, Series RX40, page 6.64**
- If snap-open accessibility along both sides is required  
► **System E4.1, Series R4.42, page 7.60**
- If very smooth travel due to small pitch is required  
► **Type R, Series R68, page 6.42**

- 1 Double stop dog for strong unsupported length
- 2 Effective chip protection, even against hot metal chips
- 3 Covered pin/bore connection
- 4 Lateral glide surfaces for side-mounted operation
- 5 Snap-open lids along inner or outer radius
- 6 Lids can be swivelled from the left to the right
- 7 Space-efficient with optimized ratio of inner dimension to outer dimension
- 8 Universal KMA mounting brackets with attachment capability on all sides
- 9 **Strain relief separator** - Separator with integrated strain relief for the use in the first or last chain link ► **page 6.25**



## Order example complete e-tube

Please indicate e-tube-lengths or number of links **Example: 1 m or 17 links**1 m **167.100.100.0**

e-tube

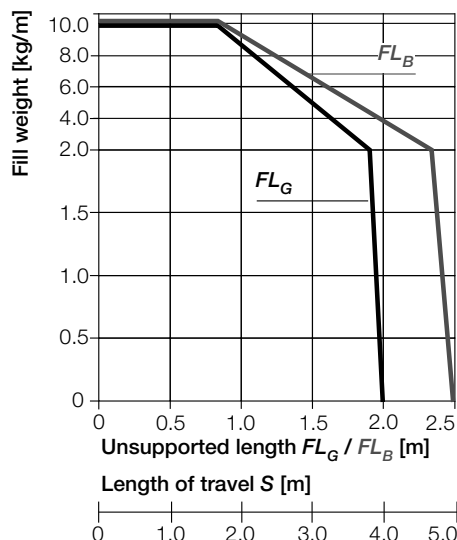
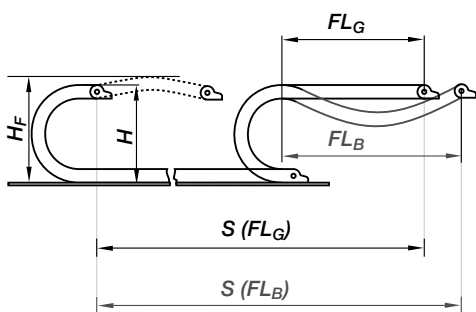
with 2 separators **1686.01** assembled every 2<sup>nd</sup> link

Interior separation

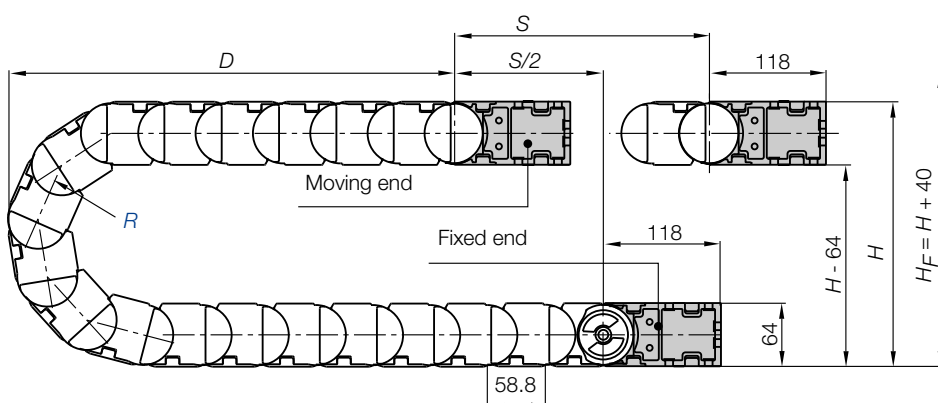
1 set **1680.100.12**

Mounting bracket



**Unsupported length** $FL_G$  = with straight upper run $FL_B$  = with permitted sagFurther 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 = 58,8 mm/link    Links/m = 17 (999,6 mm)    Chain length =  $S/2 + K$

| R | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300  |
|---|-----|-----|-----|-----|-----|-----|-----|------|
| H | 264 | 314 | 364 | 414 | 464 | 514 | 564 | 664  |
| D | 220 | 245 | 270 | 295 | 320 | 345 | 370 | 420  |
| K | 435 | 515 | 590 | 670 | 750 | 825 | 905 | 1065 |

The required clearance height:  
 $H_F = H + 40 \text{ mm}$   
 (with 2,0 kg/m fill weight)

**Hot Chips up to 850°C**

e-tubes that repel hot chips, up to 850 °C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material.

**Order example - Full e-tube made of HT\*: 168.100.100.0.HT**

**Order example - Lids made of HT: 168.100HT.100.0**

\*for long travels upon request

**Delivery time up to 4 weeks!** Further Information: [www.igus.de/en/HT](http://www.igus.de/en/HT)

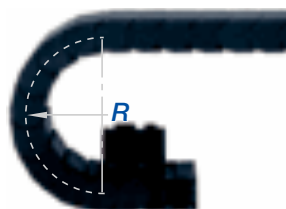
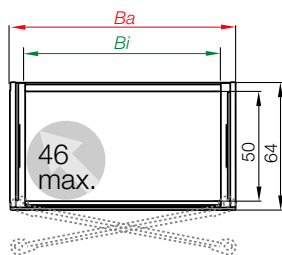


|                                        |                                 |
|----------------------------------------|---------------------------------|
| Speed / acceleration $FL_G$            | max. 10 [m/s] / max. 100 [m/s²] |
| Speed / acceleration $FL_B$            | max. 3 [m/s] / max. 6 [m/s²]    |
| Gliding speed / acceleration (maximum) | max. 0,5 [m/s] / max. 5 [m/s²]  |
| 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





Part No. structure

|      |      |      |   |
|------|------|------|---|
| 167. | 100. | 100. | 0 |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |

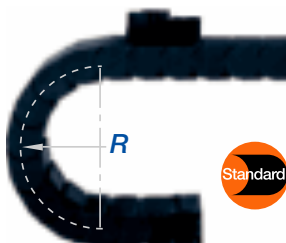
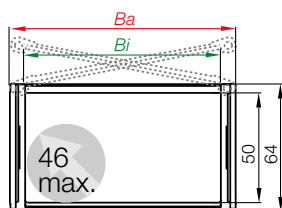
Color  
black  
Bending  
radius  
Width  
Series

## Series R167 - hinged, snap-open on both sides of the inner radius

| Part No. | Bi [mm] | Ba [mm] | R [mm] | Bending radii |     |     |     |     |     |     |     |  |  | Weight [kg/m] |
|----------|---------|---------|--------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|---------------|
| 167.050. | .0      | 50      | 68     | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 1,58        |
| 167.075. | .0      | 75      | 93     | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 1,84        |
| 167.100. | .0      | 100     | 118    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,09        |
| 167.115. | .0      | 115     | 133    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,24        |
| 167.125. | .0      | 125     | 143    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,35        |
| 167.150. | .0      | 150     | 168    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,60        |
| 167.175. | .0      | 175     | 193    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,86        |
| 167.200. | .0      | 200     | 218    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,11        |
| 167.225. | .0      | 225     | 243    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,37        |
| 167.250. | .0      | 250     | 268    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,62        |

Supplement Part No. with required radius. Example: 167.100.100.0

0 = standard color, other colors ► page 1.39 · Pitch = 58,8 mm/link - Links/m = 17



Part No. structure

|      |      |      |   |
|------|------|------|---|
| 168. | 100. | 100. | 0 |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |
|      |      |      |   |

Color  
black  
Bending  
radius  
Width  
Series

## Series R168 - hinged, snap-open on both sides of the outer radius

| Part No. | Bi [mm] | Ba [mm] | R [mm] | Bending radii |     |     |     |     |     |     |     |  |  | Weight [kg/m] |
|----------|---------|---------|--------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|---------------|
| 168.050. | .0      | 50      | 68     | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 1,58        |
| 168.075. | .0      | 75      | 93     | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 1,84        |
| 168.100. | .0      | 100     | 118    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,09        |
| 168.115. | .0      | 115     | 133    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,24        |
| 168.125. | .0      | 125     | 143    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,35        |
| 168.150. | .0      | 150     | 168    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,60        |
| 168.175. | .0      | 175     | 193    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 2,86        |
| 168.200. | .0      | 200     | 218    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,11        |
| 168.225. | .0      | 225     | 243    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,37        |
| 168.250. | .0      | 250     | 268    | 100           | 125 | 150 | 175 | 200 | 225 | 250 | 300 |  |  | ≈ 3,62        |

The sizes 125 / 225 / 250 are available upon request. Delivery time: approx. 8-10 weeks after receipt of order

Supplement Part No. with required radius. Example: 168.100.100.0

0 = standard color, other colors ► page 1.39 · Pitch = 58,8 mm/link - Links/m = 17

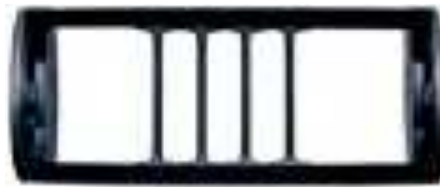
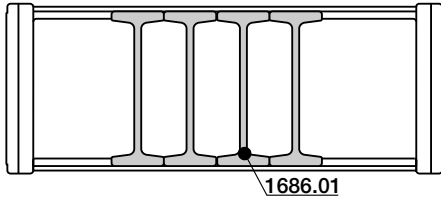


**Option 1: Vertical Separators**

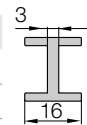
Vertical Separators are used if a vertical subdivision of the e-chain® interior is required -

By standard Vertical Separators are assembled every other e-chain® link

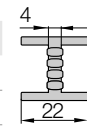
- **Standard** subdivision with Vertical Separator 1686.01
- **Strain Relief Separator 1686.01.Z**, integrable in the mounting bracket, to position at any point - can be combined with Full-Width Shelf 321.X and Shelf 2210.X

**Vertical Separator**

|             |         |
|-------------|---------|
| unassembled | 1685.01 |
| assembled   | 1686.01 |

**Strain Relief Separator**

|             |           |
|-------------|-----------|
| unassembled | 1685.01.Z |
| assembled   | 1686.01.Z |

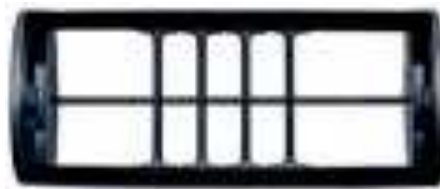
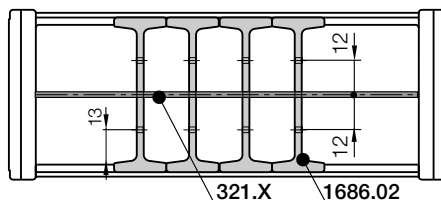


E2 e-tubes Type R  
Inner height: 50 mm

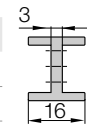
**Option 2: Full-Width Shelves**

For applications involving many thin cables with similar or identical diameters

- Vertical Separator, slotted 1686.02 for applications with Full-Width Shelf 321.X

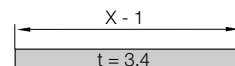
**Vert. Separator, slotted**

|             |         |
|-------------|---------|
| unassembled | 1685.02 |
| assembled   | 1686.02 |



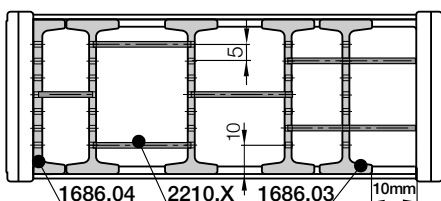
| Width<br>X [mm] | Part No.<br>unassembled | Part No.<br>assembled |
|-----------------|-------------------------|-----------------------|
| 050             | 320.050                 | 321.050               |
| 075             | 320.075                 | 321.075               |
| 100             | 320.100                 | 321.100               |
| 115             | 320.115                 | 321.115               |
| 125             | 320.125                 | 321.125               |

| Width<br>X [mm] | Part No.<br>unassembled | Part No.<br>assembled |
|-----------------|-------------------------|-----------------------|
| 150             | 320.150                 | 321.150               |
| 175             | 320.175                 | 321.175               |
| 200             | 320.200                 | 321.200               |
| 225             | 320.225                 | 321.225               |
| 250             | 320.250                 | 321.250               |

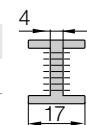
**Full-Width Shelf****Option 3: Shelves**

For applications involving many cables with similar or identical diameters. Partial separation into individual chambers can be achieved and the entire width *Bi*-10 mm can be used

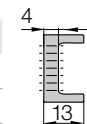
- Shelf 2210.X can be combined with Middle Plate 1686.03 and Side Plate 1686.04

**Middle Plate**

|             |         |
|-------------|---------|
| unassembled | 1685.03 |
| assembled   | 1686.03 |

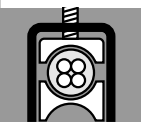
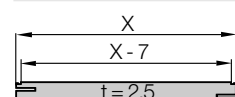
**Side Plate**

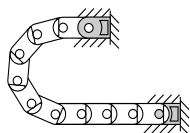
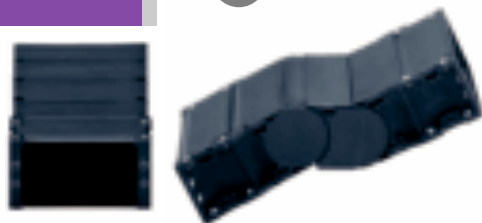
|             |         |
|-------------|---------|
| unassembled | 1685.04 |
| assembled   | 1686.04 |



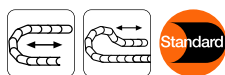
| Width<br>X [mm] | Part No.<br>unassembled | Part No.<br>assembled |
|-----------------|-------------------------|-----------------------|
| 018             | 2200.18                 | 2210.18               |
| 023             | 2200.23                 | 2210.23               |
| 028             | 2200.28                 | 2210.28               |
| 033             | 2200.33                 | 2210.33               |
| 038             | 2200.38                 | 2210.38               |
| 043             | 2200.43                 | 2210.43               |
| 048             | 2200.48                 | 2210.48               |

| Width<br>X [mm] | Part No.<br>unassembled | Part No.<br>assembled |
|-----------------|-------------------------|-----------------------|
| 058             | 2200.58                 | 2210.58               |
| 068             | 2200.68                 | 2210.68               |
| 073             | 2200.73                 | 2210.73               |
| 088             | 2200.88                 | 2210.88               |
| 099             | 2200.99                 | 2210.99               |
| 124             | 2200.0124               | 2210.124              |
| 149             | 2200.0149               | 2210.149              |

**Shelf**



The attachment variants arising automatically by the choice of the KMA mounting bracket

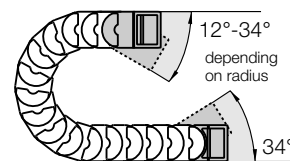


### Option KMA\* - pivoting

- Recommended for unsupported and gliding applications
- Option - KMA with Quickflange, bolted connection outside of e-tube cross-section
- Universally mountable with attachment capability on all sides
- Locked connection to e-tube
- Long travels with lowered mounting height possible
- Corrosion-resistant

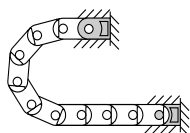
\*KMA = Polymer Metal Mounting Bracket

Moving end (outer link)  
1680...1

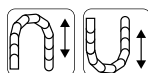


1680...2

Fixed end (inner link)



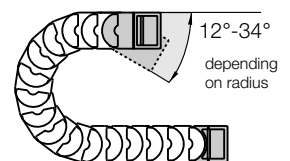
The attachment variants arising automatically by the choice of the KMA mounting bracket



### Option KMA - locking

- Recommended for vertical hanging / standing applications
- Option - KMA with Quickflange, bolted connection outside of e-tube cross-section
- At very high speed and acceleration
- Universally mountable with attachment capability on all sides
- Flush mounting at both ends of the e-tube

Moving end (outer link)  
1680...1



1680...4

Fixed end (inner link)

## Dimensions and order configurations



Quickflange  
upon request

### Part No. structure (pivoting)

1680.100.12.A



A... must be indicated on preassembled configurations  
Full set pivoting = 12  
Width  
KMA for selected chain type

### Full set, for both ends:

1680.100.12

### Single-part order:

1680.100.1

Mounting bracket with bore

1680.100.2

Mounting bracket with pin

### Part No. structure (locking)

1680.100.14.A

A... must be indicated on preassembled configurations  
Full set locking = 14  
Width  
KMA for selected chain type

### Full set, for both ends:

1680.100.14

### Single-part order:

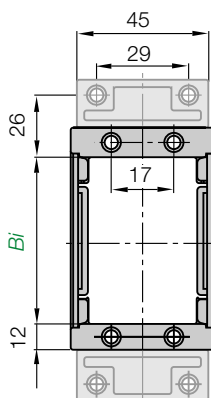
1680.100.1

Mounting bracket with bore

1680.100.4

Mounting bracket with pin

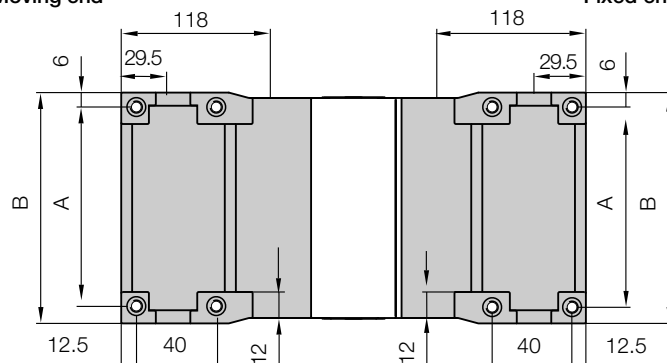
### Quickflange



### 1680...1 Standard! (pivoting)

### 1680...1 (locking)

### Moving end



### Standard! (pivoting) 1680...2

### (locking) 1680...4

### Fixed end

| For Series  | Part No. full set              | Part No. full set with Quickflange | Dim. A [mm] | Dim. B [mm] |
|-------------|--------------------------------|------------------------------------|-------------|-------------|
| 167-168.050 | 1680.050. <input type="text"/> | 1680.050. <input type="text"/> QF  | 62          | 74          |
| 167-168.075 | 1680.075. <input type="text"/> | 1680.075. <input type="text"/> QF  | 87          | 99          |
| 167-168.100 | 1680.100. <input type="text"/> | 1680.100. <input type="text"/> QF  | 112         | 124         |
| 167-168.115 | 1680.115. <input type="text"/> | 1680.115. <input type="text"/> QF  | 127         | 139         |
| 167-168.125 | 1680.125. <input type="text"/> | 1680.125. <input type="text"/> QF  | 137         | 149         |
| 167-168.150 | 1680.150. <input type="text"/> | 1680.150. <input type="text"/> QF  | 162         | 174         |
| 167-168.175 | 1680.175. <input type="text"/> | 1680.175. <input type="text"/> QF  | 187         | 199         |
| 167-168.200 | 1680.200. <input type="text"/> | 1680.200. <input type="text"/> QF  | 212         | 224         |
| 167-168.225 | 1680.225. <input type="text"/> | 1680.225. <input type="text"/> QF  | 237         | 249         |
| 167-168.250 | 1680.250. <input type="text"/> | 1680.250. <input type="text"/> QF  | 262         | 274         |

Please add the Part No. with the requested index - 12 for the pivoting configuration

e.g. 1680.100.12 or 14 for the locking configuration e.g. 1680.100.14

For the preassembled mode please add the index  A e.g. 1680.100.12  A

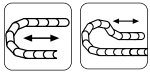
Quickflange unassembled: Part No. 16800.QF

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8



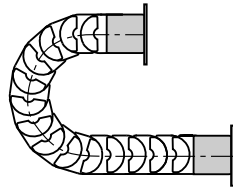




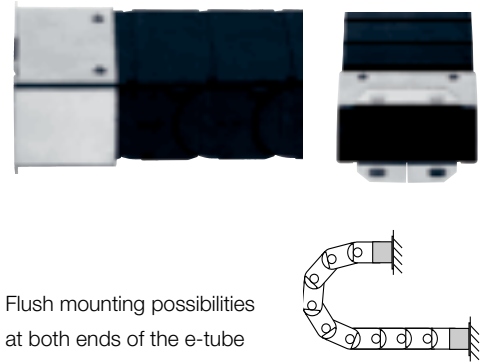
### Flange mounting brackets made of steel

- Metallic flange brackets with popular hole patterns, easily be replaced by their modern successors, without having to alter the hole pattern
- Bolted connection outside of chain cross-section possible
- Universally mountable with attachment capability on all sides
- Steel, galvanized
- One-piece mounting bracket
- High stability

Moving end (outer link)  
905.050.X

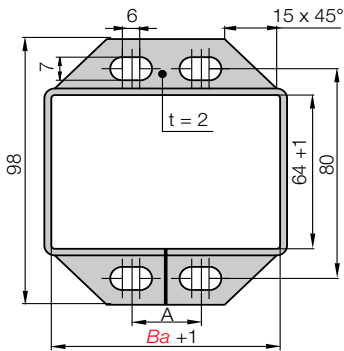


905.050.X  
Fixed end (inner link)

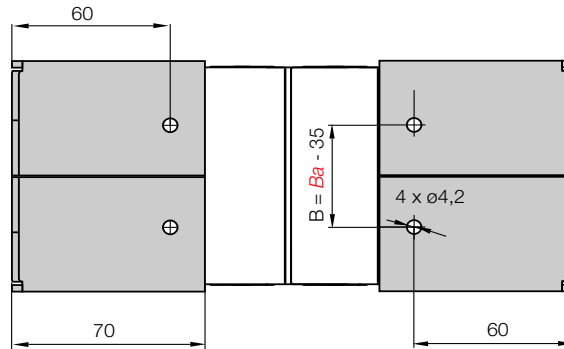


Flush mounting possibilities  
at both ends of the e-tube

Hole patterns flange steel  
mounting brackets 905.050.X

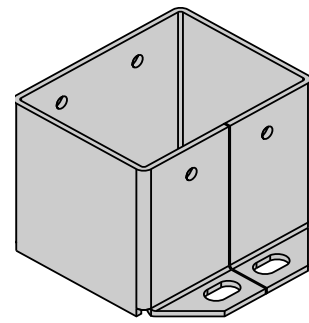


905.050.X  
Moving end



905.050.X  
Fixed end

Dimensions and  
order configurations



Principle sketch flange  
steel mounting brackets



Mounting only with hexa-  
gon socket DIN 912 M6 and  
washer DIN 125, 6,3 mm

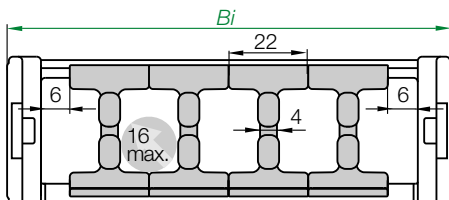
| For Series | Hole pattern | Part No. full set | Bi [mm] | Ba [mm] | Dim. A [mm] | Dim. B [mm] |
|------------|--------------|-------------------|---------|---------|-------------|-------------|
| R168.075 ▶ | 68.01        | 905.050.1         | 75      | 93      | 30          | 58          |
| R168.115 ▶ | 68.02        | 905.050.2         | 115     | 133     | 50          | 98          |
| R168.175 ▶ | 68.03        | 905.050.3         | 175     | 193     | 100         | 158         |

## R100 | Serie R167·R168 | Accessories | Strain Relief

### Strain relief separator

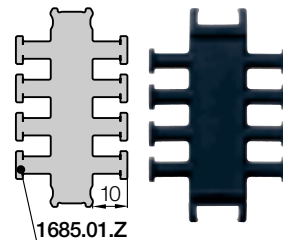
Separator with integrated strain relief, for use in the first or last chain link. For manufacturing of switchgear cabinets or for the assembly of machines. Easy to assemble without any fastening device. Separator base **1658.01.Z** is 22 mm wide. The possible number of separators per e-chain® is defined by its inner width *Bi* and by the cable-diameter. **Details ▶ chapter 10**

| Part No.  | Number of teeth | For Series      |
|-----------|-----------------|-----------------|
| 1658.01.Z | 4 both sides    | R167/168 e-tube |



**Strain Relief Separator** - The number of separators is depending on the cables and the available inner space. Example: e-chain® inner width *Bi* 100 mm: 4 Strain Relief Separator, max. cable diameter 16 mm.

**Details ▶ chapter 10**



1658.01.Z



Other strain relief elements  
▶ chapter 10



▶ chapter 10



▶ page 6.5