Fast opening and closing with “zipper”
Zip fastening 
**e-chains® e-tubes - zipper**

**zipper e-chains® convince in practicality and performance.** The "zipper" function makes them a very useful product to reduce assembly time. The small pitch, the tough-elastic zipperband, and the sturdy link work well in high-acceleration environments. The zipper Series is one of the most popular e-chain® Series in demanding applications.

- Zipper-like design for quick opening and closing of lids
- Zipper lids can be separated and joined at each chain link
- Small pitch for low noise and smooth operation
- High accelerations: 100 m/s² and more are possible
- Interior separation possible for larger versions (Series 09, 15, 17)

**Typical industries and applications**
- Pick & place robots
- Semi-conductor machines
- Linear motors, actuators
- Measuring equipment
- Machine tools (zipper e-tube)

- Cleanroom Class 1 (ISO class 3) for zipper Series 15, tested by the Dryden Engineering Company, California
- 58 dB(A) tested in igus® lab, \( v = 1.0 \text{ m/s} \) unsupported, Series 09.50.028.0
- UL94-V0 classifications upon request
- Electrically conductive ESD/ATEX versions several Series available from stock

**Contents, selection table and assembly instructions next page**
### zipper | Contents | Selection Table

#### zipper - two-piece e-chains
zip-open along outer radius

<table>
<thead>
<tr>
<th>Series</th>
<th>inner height</th>
<th>inner width</th>
<th>outer width</th>
<th>outer height</th>
<th>bending radius</th>
<th>unsupported length max.</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>047</td>
<td>9,0</td>
<td>10 - 16</td>
<td>16,0 - 22,0</td>
<td>12,5</td>
<td>18 - 38</td>
<td>0,40</td>
<td>238</td>
</tr>
<tr>
<td>07</td>
<td>10,3</td>
<td>6 - 64</td>
<td>12,5 - 71,0</td>
<td>15,0</td>
<td>18 - 48</td>
<td>0,55</td>
<td>242</td>
</tr>
<tr>
<td>09</td>
<td>15,0</td>
<td>10 - 50</td>
<td>18,2 - 58,2</td>
<td>19,3</td>
<td>28 - 48</td>
<td>1,00</td>
<td>250</td>
</tr>
<tr>
<td>15</td>
<td>17,0</td>
<td>15 - 100</td>
<td>26,0 - 113,0</td>
<td>24,0</td>
<td>38 - 180</td>
<td>1,20</td>
<td>260</td>
</tr>
<tr>
<td>17</td>
<td>32,0</td>
<td>15 - 100</td>
<td>25,5 - 113,0</td>
<td>39,0</td>
<td>63 - 125</td>
<td>1,00</td>
<td>276</td>
</tr>
</tbody>
</table>

#### zipper - two-piece e-tubes
Protection against dirt and chips, zip-open along outer radius

<table>
<thead>
<tr>
<th>Series</th>
<th>inner height</th>
<th>inner width</th>
<th>outer width</th>
<th>outer height</th>
<th>bending radius</th>
<th>unsupported length max.</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>R07</td>
<td>10,3</td>
<td>10 - 50</td>
<td>16,5 - 57,0</td>
<td>15,0</td>
<td>38 - 48</td>
<td>0,55</td>
<td>246</td>
</tr>
<tr>
<td>R09</td>
<td>15,0</td>
<td>10 - 50</td>
<td>18,2 - 58,2</td>
<td>19,3</td>
<td>48 - 100</td>
<td>1,00</td>
<td>256</td>
</tr>
<tr>
<td>R15</td>
<td>17,0</td>
<td>25 - 80</td>
<td>36,0 - 94,0</td>
<td>24,0</td>
<td>63 - 180</td>
<td>1,20</td>
<td>268</td>
</tr>
<tr>
<td>R17</td>
<td>32,0</td>
<td>15 - 63</td>
<td>26,0 - 74</td>
<td>39,0</td>
<td>63 - 125</td>
<td>1,20</td>
<td>282</td>
</tr>
</tbody>
</table>

---

**Assembly instructions**

1. Push and click
2. Snap lids together, position, push and snap
3. Simple opening and closing - all lids fit like a “zipper”
4. For separating release side link, then twist and pull apart

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*Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)*

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- Technical Data, overview | page 234
- e-chain® links as single parts, overview | page 235
- Configuration options and order keys, overview | page 236

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Assembly video available online at | www.igus.eu/eu/zipper_assembly
### Technical Data - zipper

**Gilding speed / acceleration (maximum)**

| Speed / acceleration FlG max. | max. 10 [m/s] / max. 50 [m/s²] |
| Speed / acceleration FlB max. | max. 20 [m/s] / max. 200 [m/s²] |

**Material lower part - permitted temperature °C, igumid G**

-40° up to +120° C

**Material lid - permitted temperature °C, igumid TE**

-40° up to +70° C

**Flammability class, igumid G**

VDE 0304 IIC UL94-HB

### Installation methods overview, maximum travels - zipper

<table>
<thead>
<tr>
<th>Series</th>
<th>Unsupported application</th>
<th>Vertical hanging</th>
<th>Vertical standing</th>
<th>Side mounted unsupported</th>
</tr>
</thead>
<tbody>
<tr>
<td>047</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
</tr>
<tr>
<td>07</td>
<td>≤ 0,40 m</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
</tr>
<tr>
<td>09</td>
<td>≤ 0,55 m</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
</tr>
<tr>
<td>15</td>
<td>≤ 1,0 m</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
</tr>
<tr>
<td>17</td>
<td>≤ 1,2 m</td>
<td>upon request</td>
<td>upon request</td>
<td>upon request</td>
</tr>
</tbody>
</table>

**Part No. two-piece e-chain links as single parts - zipper**

<table>
<thead>
<tr>
<th>e-chains® - zip-open along outer radius</th>
<th>e-tubes - zip-open along outer radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>047 Bi00.R</td>
<td>R07 Bi00.R</td>
</tr>
<tr>
<td>07 Bi00.R</td>
<td>R09 Bi00.R</td>
</tr>
<tr>
<td>09 Bi00.R</td>
<td>R15 Bi00.R</td>
</tr>
<tr>
<td>15 Bi00.R</td>
<td>R17 Bi00.R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Series</th>
<th>e-chain® links as single parts</th>
<th>e-tube links as single parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>047</td>
<td>047.Bi00.R</td>
<td>R07.Bi00.R</td>
</tr>
<tr>
<td>07</td>
<td>07.Bi00.R</td>
<td>R09.Bi00.R</td>
</tr>
<tr>
<td>09</td>
<td>09.Bi00.R</td>
<td>R15.Bi00.R</td>
</tr>
<tr>
<td>15</td>
<td>15.Bi00.R</td>
<td>R17.Bi00.R</td>
</tr>
<tr>
<td>17</td>
<td>17.Bi00.R</td>
<td></td>
</tr>
</tbody>
</table>

**Material lower part - permitted temperature °C, igumid G**

-40° up to +120° C

**Material lid - permitted temperature °C, igumid TE**

-40° up to +70° C

**Flammability class, igumid G**

VDE 0304 IIC UL94-HB

### Available from stock. Delivery time in 24h or today!

*Delivery time means time until shipping of goods (after technical release)*

---

234 3D-CAD files, configurators, PDF | www.igus.eu/eu/zipper
**Configuration options and order key** (based on Series 15)

<table>
<thead>
<tr>
<th>Standard</th>
<th>NC-Version - (no camber) without pretension</th>
<th>ATEX / ESD classified e-chains*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No.</td>
<td>Standard e-chains*</td>
<td>Part No.</td>
</tr>
<tr>
<td>15.025.R.0</td>
<td></td>
<td>15.025.R.0.ESD</td>
</tr>
<tr>
<td>Delivery time*</td>
<td>24h or today!</td>
<td>Delivery time*</td>
</tr>
</tbody>
</table>

*Delivery time means time until shipping of goods (after technical release)

---

**Order example | Order key and color options**

**Order example for complete e-chain** Series 15 (1.0 m), color black, with mounting brackets and interior separation:

**e-chain** (1,0 m) Please indicate e-chain length or number of links: 1,0 m or 33 links

<table>
<thead>
<tr>
<th>+ Mounting brackets</th>
<th>1 set (with integrated strain relief)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1025.34PZ</td>
</tr>
<tr>
<td>+ Interior separation</td>
<td>with 2 separators assembled every 2nd link</td>
</tr>
<tr>
<td></td>
<td>2 x 154</td>
</tr>
</tbody>
</table>

Order text: 1,0 m 15.025.038.0 + 1025.34PZ + 2 x 154

---

**Color options for e-chains® and e-tubes**

<table>
<thead>
<tr>
<th>Color</th>
<th>Order index</th>
<th>Color</th>
<th>Order index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>.0</td>
<td>White</td>
<td>.1</td>
</tr>
<tr>
<td>Slate grey</td>
<td>.0</td>
<td>Slate grey</td>
<td>.15</td>
</tr>
<tr>
<td>Gray</td>
<td>.0</td>
<td>Gray</td>
<td>.2</td>
</tr>
<tr>
<td>Dusty grey</td>
<td>.3</td>
<td>Dusty grey</td>
<td>.4</td>
</tr>
<tr>
<td>Light grey</td>
<td>.31</td>
<td>Light grey</td>
<td>.14</td>
</tr>
</tbody>
</table>

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)
Fast opening, small pitch, smooth running

When to use Series 047:
- If a very small e-chain® with an inner height of 9 mm and smallest bending radii are required
- For inner widths up to 16 mm
- For unsupported lengths up to 0.40 m and fill weights up to 0.25 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

When to use a different igus® Series:
- If easy filling without opening and closing is required
  - Series E04 easy chain®, page 160

Unsupported applications
Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height HF. Please consult igus® if space is particularly restricted. More information ➤ Design, page 95

Technical Data
Speed, material, temperature and flammability class ➤ page 234

<table>
<thead>
<tr>
<th>R</th>
<th>018</th>
<th>028</th>
<th>038</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>48.5</td>
<td>68.5</td>
<td>88.5</td>
</tr>
<tr>
<td>D</td>
<td>44</td>
<td>54</td>
<td>64</td>
</tr>
<tr>
<td>K</td>
<td>85</td>
<td>115</td>
<td>150</td>
</tr>
</tbody>
</table>

The required clearance height: \( HF = H + 10 \text{ mm} \) (with 0.2 kg/m fill weight)
zipper | e-chains® | Series 047 | Product Range | Standard

**e-chain® | Series 047 | zip-open along outer radius**

<table>
<thead>
<tr>
<th>e-chain® zip-open along outer radius</th>
<th>Bi</th>
<th>Ba</th>
<th>R</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>047. 10.R.0</td>
<td>10</td>
<td>16</td>
<td>-</td>
<td>0.10</td>
</tr>
<tr>
<td>047. 16.R.0</td>
<td>16</td>
<td>22</td>
<td>-</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Supplement Part No. with required radius (%): Example: 047.10.038.0

**Order key**

047. 10.038.0 e-chain®

**Configuration options and order keys, overview**

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type

**Possible installation conditions:**

- Universal for e-chains®
- Recommended for unsupported applications

**Part No. structure**

- Available from stock. Delivery time in 24h or today!

---

**Polymer one-piece, one side pivoting**

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>0450.10.12PZ</td>
<td>0450.10.12PZ</td>
<td>16</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>16.</td>
<td>0450.16.12PZ</td>
<td>0450.16.12PZ</td>
<td>22</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

**Possible installation conditions:**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

**Part No. structure**

- Single-part order
- Mounting bracket Moving end
- Mounting bracket Fixed end

---

**Mounting bracket with strain relief tiewrap plate has reductions of ø 3 mm / ø 6 mm 90°**

**Mounting bracket without strain relief tiewrap plate only has holes of ø 3 mm**

---

**3D-CAD files, configurators, PDF**

www.igus.eu/eu/047
Fast opening, for smallest spaces

When to use Series 07:
- If a very small e-chain® with an inner height of 10.3 mm and smallest bending radii are required
- For inner widths up to 64 mm
- For unsupported lengths up to 0.55 m and fill weights up to 0.4 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

When to use a different igus® Series:
- If a fully enclosed e-tube with zipper opening mechanism is required
  - Series R07 zipper e-tube, page 246
- If a cheaper, easy openable e-chain® is required
  - Series B07 E2 micro, page 322
- If cable installation without opening of lids is required
  - Series E06 easy chain®, page 168
- If opening of the links is not necessary
  - Series 06 E2 micro, page 318

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height HF. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95
**e-chain® Series 07 | zip-open along outer radius**

<table>
<thead>
<tr>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>R [mm]</th>
<th>Weight [kg/mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>06</td>
<td>12,5</td>
<td>018</td>
</tr>
<tr>
<td>10</td>
<td>06</td>
<td>16,5</td>
<td>018</td>
</tr>
<tr>
<td>16</td>
<td>06</td>
<td>22,5</td>
<td>018</td>
</tr>
<tr>
<td>20</td>
<td>06</td>
<td>27</td>
<td>018</td>
</tr>
<tr>
<td>30</td>
<td>06</td>
<td>37</td>
<td>018</td>
</tr>
<tr>
<td>40</td>
<td>06</td>
<td>47</td>
<td>018</td>
</tr>
<tr>
<td>50</td>
<td>06</td>
<td>57</td>
<td>018</td>
</tr>
<tr>
<td>64</td>
<td>06</td>
<td>71</td>
<td>018</td>
</tr>
</tbody>
</table>

*Radius 048 only for Series 07.64 - for other widths, available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R) Example: 07.40.038.R

---

**Polymer locking, one-piece | Universal for e-chains®**

Recommemded for unsupported applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full-set with tiewrap plates</th>
<th>Part No. full-set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>06.</td>
<td>06.06.06.12PZ</td>
<td>06.06.12</td>
<td>12.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>06.10.12PZ</td>
<td>06.10.12</td>
<td>16.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>06.16.12PZ</td>
<td>06.16.12</td>
<td>22.5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>06.20.12PZ</td>
<td>06.20.12</td>
<td>27.0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>06.30.12PZ</td>
<td>06.30.12</td>
<td>37.0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>06.40.12PZ</td>
<td>06.40.12</td>
<td>47.0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>06.50.12PZ</td>
<td>06.50.12</td>
<td>57.0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>64.</td>
<td>06.64.12PZ</td>
<td>06.64.12</td>
<td>71.0</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

---

**Order key**

07. 040.038.0 e-chain®

- Standard color block
- Bending radius R
- Width index depends on Bi
- Series / Type

---

**e-chain® links as single parts, overview ➤ page 235**

**Configuration options and order keys, overview ➤ page 236**

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release).

- ESD/ATEX permanently conductive e-chains® - Several widths with delivery from stock
- Inner widths Bi 10 - 50, Bending radii R 018 - 038. Full ESD product range ➤ www.igus.eu/ESD

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**Additional Features**

- **Quicksnap** - the complete, detachable mounting unit Part Nos. 06.10.05S, 06.16.05S, 06.20.05S, 06.40.05S available from stock
- **Quickfix** - mounting bracket with dowel, available upon request
**Fast opening, enclosed zipper-band**

*When to use Series R07:*
- If a very small e-tube with an inner height of 10.3 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 0.55 m and fill weights up to 0.4 kg/m
- If chip protection is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

*When to use a different igus® Series:*
- If an e-chain® with zipper opening mechanism is required
  - Series 07 zipper e-chain®, page 242
- If a cheaper, easy operable e-chain® is required
  - Series R07 E2 micro, page 322
- If cable installation without opening of lids is required
  - Series E06 easy chain®, page 168
- If opening of the links is not necessary
  - Series 06 E2 micro, page 318

---

**Dimensions**

Unsupported applications

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. More information on Design, page 95

**Technical Data**

- **Pitch** = 20 mm/link
- **Links/m** = 50 (1000 mm)
- **Chain length** = $S/2 + K$

<table>
<thead>
<tr>
<th></th>
<th>038</th>
<th>048</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>91</td>
<td>111</td>
</tr>
<tr>
<td>D</td>
<td>76</td>
<td>86</td>
</tr>
<tr>
<td>K</td>
<td>160</td>
<td>195</td>
</tr>
</tbody>
</table>

The required clearance height: $H_F = H + 10$ mm (with 0.2 kg/m fill weight)
**zipper** | **e-tubes** | **Series R07** | **Product Range** | **Standard**

---

**e-tube | Series R07 | zip-open along outer radius**

<table>
<thead>
<tr>
<th>e-tube zip-open along outer radius</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>R Bending radii [mm]</th>
<th>Weight [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>R07. 06. R0</td>
<td>06</td>
<td>12.5</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 10. R0</td>
<td>10</td>
<td>16.5</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 16. R0</td>
<td>16</td>
<td>22.5</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 20. R0</td>
<td>20</td>
<td>27</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 30. R0</td>
<td>30</td>
<td>37</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 40. R0</td>
<td>40</td>
<td>47</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 50. R0</td>
<td>50</td>
<td>57</td>
<td>03B</td>
<td>04B</td>
</tr>
<tr>
<td>R07. 64. R0</td>
<td>64</td>
<td>71</td>
<td>03B</td>
<td>04B</td>
</tr>
</tbody>
</table>

*Width available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R) Example: R07.40.038.0

---

**Order key**

R07. 40. 038. 0 e-tube

Standard color black
Bending radius R
Width index depends on Bi
Series / Type

---

**Polymer locking, one-piece | Universal for e-tubes**

**Recommended for unsupported applications**

<table>
<thead>
<tr>
<th>Width</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>060.06.12PZ</td>
<td>060.06.12</td>
<td>12.5</td>
<td>1</td>
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</tr>
<tr>
<td>10</td>
<td>060.10.12PZ</td>
<td>060.10.12</td>
<td>16.5</td>
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<tr>
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<td>060.16.12PZ</td>
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<tr>
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<td>060.20.12</td>
<td>27.0</td>
<td>2</td>
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<tr>
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<td>060.30.12PZ</td>
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</tr>
<tr>
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<td>4</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>060.50.12PZ</td>
<td>060.50.12</td>
<td>57.0</td>
<td>5</td>
<td></td>
</tr>
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<td>060.64.12</td>
<td>71.0</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

*Width available upon request, please consult igus® for delivery time

---

**Possible installation conditions for assembled mounting brackets:**

For the preassembled mode please add index A1...A4 | e.g. 060.40.12PZ A1

---

**Configuration options and order keys, overview ➤ page 236**

---

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods after technical release

---

**igus® GmbH Germany | Phone +49 2203 9649-800 Fax -222 | info@igus.de | www.igus.eu**
**Fast opening, high accelerations**

*When to use Series 09:*
- If a very small e-chain® with an inner height of 15 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 1.0 m and fill weights up to 0.7 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

*When to use a different igus® Series:*
- If a fully enclosed e-tube with zipper opening mechanism is required
  - **Series R09 zipper e-tube, page 256**
- If a cheaper, easy openable e-chain® is required
  - **Series B09 E2 micro, page 340**
- If cable installation without opening of lids is required
  - **Series E08 easy chain®, page 176**
- If an e-chain® snap-open along inner radius with film-hinge is required
  - **Series 094 E2 micro, page 330**
- If opening of the links is not necessary
  - **Series 08 E2 micro, page 334**

---

**Unsupported e-chains®** feature positive camber over short travels. This must be accounted for when specifying the clearance height **HF**. Please consult igus® if space is particularly restricted. More information on designs **Design, page 95**

---

### Dimensions

** Unsupported applications **

<table>
<thead>
<tr>
<th>Pitch</th>
<th>20 mm/link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Links/m</td>
<td>50 (1000 mm)</td>
</tr>
<tr>
<td>Chain length</td>
<td>( \frac{S}{2} + K )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R</th>
<th>028</th>
<th>038</th>
<th>048</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>75</td>
<td>95</td>
<td>115</td>
</tr>
<tr>
<td>D</td>
<td>68</td>
<td>78</td>
<td>88</td>
</tr>
<tr>
<td>K</td>
<td>130</td>
<td>160</td>
<td>195</td>
</tr>
</tbody>
</table>

The required clearance height: **HF** = **H** + 15 mm (with 0.3 kg/m fill weight)

---

**To be ordered with:**

- **FLG** = with straight upper run
- **FLB** = with permitted sag
- **S** = Length of travel
- **R** = Bending radius
- **H** = Nominal clearance height
- **HF** = Required clearance height
- **D** = Overlength e-chain®, radius in final position
- **K** = \( \pi \times R \) = “safety”

---

3D-CAD files, configurators, PDF ➤ www.igus.eu/eu/09
**Series 09 | Product Range | Standard**

### e-chain® | Series 09 | zip-open along outer radius

<table>
<thead>
<tr>
<th>e-chain® zip-open</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>R</th>
<th>Bending radii [mm]</th>
<th>Weight [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>09. 10. R0</td>
<td>10</td>
<td>18.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
<tr>
<td>09. 16. R0</td>
<td>16</td>
<td>24.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
<tr>
<td>09. 20. R0</td>
<td>20</td>
<td>28.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
<tr>
<td>09. 30. R0</td>
<td>30</td>
<td>38.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
<tr>
<td>09. 40. R0</td>
<td>40</td>
<td>48.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
<tr>
<td>09. 50. R0</td>
<td>50</td>
<td>58.2</td>
<td>028</td>
<td>038</td>
<td>048</td>
</tr>
</tbody>
</table>

Supplement Part No. with required radius (R) Example: 09.40.048.0

### Zipper e-chain® Series 09

- **Slotted separator B09.2** is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.
- **Full-width shelf 110.X** this option makes sense in applications with many thin cables with similar diameters.  
  For a consequent subdivision.

### Full-width shelves

<table>
<thead>
<tr>
<th>Width X [mm]</th>
<th>unassembled</th>
<th>assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>016</td>
<td>110.16</td>
<td>111.16</td>
</tr>
<tr>
<td>020</td>
<td>110.20</td>
<td>111.20</td>
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<tr>
<td>030</td>
<td>110.30</td>
<td>111.30</td>
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<tr>
<td>040</td>
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<td>111.40</td>
</tr>
<tr>
<td>050</td>
<td>110.50</td>
<td>111.50</td>
</tr>
</tbody>
</table>

### ESD/ATEX permanently conductive e-chains® - Several widths with delivery from stock:

Inner widths Bi 16 - 50, Bending radii R 028 - 048. Full ESD product range | www.igus.eu/ESD

---

**Configuration options and order keys, overview | page 236**

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)**

**ESD/ATEX permanently conductive e-chains® - Several widths with delivery from stock:**

Inner widths Bi 16 - 50, Bending radii R 028 - 048. Full ESD product range | www.igus.eu/ESD

---

**3D-CAD files, configurators, PDF | www.igus.eu/eu/09**
### Polymer locking, one-piece | Universal for e-chains®

Recommended for unsupported applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>080.10. 12PZ</td>
<td>080.10. 12</td>
<td>18.2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>16.</td>
<td>080.16. 12PZ</td>
<td>080.16. 12</td>
<td>24.2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>20.</td>
<td>080.20. 12PZ</td>
<td>080.20. 12</td>
<td>28.2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>30.</td>
<td>080.30. 12PZ</td>
<td>080.30. 12</td>
<td>38.2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>40.</td>
<td>080.40. 12PZ</td>
<td>080.40. 12</td>
<td>48.2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>50.</td>
<td>080.50. 12PZ</td>
<td>080.50. 12</td>
<td>58.2</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

**Possible installation conditions for assembled mounting brackets:**
For the preassembled mode please add index A1 - A4 e.g. 080.40.12PZ A1

**Additional Features**

- **Quicksnap** - the complete, detachable mounting unit. Part Nos. 080.20.QS, 080.30.QS available from stock
- **Quickfix** - mounting bracket with dowet, available upon request

**Single-part order**
- **Mounting bracket Moving end**
  - 080.40.1 PZ A1 (preass. + tiewrap plate)
- **Mounting bracket Fixed end**
  - 080.40.2 PZ A1 (preass. + tiewrap plate)
**Fast opening, enclosed zipper-band**

**When to use Series R09:**
- If a very small e-tube with an inner height of 15 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 1.0 m and fill weights up to 0.7 kg/m
- If chip protection is required
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

**When to use a different igus® Series:**
- If an e-chain® with zipper opening mechanism is required
  - **Series 09 zipper e-chain®, page 250**
- If a cheaper, easy openable e-chain® is required
  - **Series 09 E2 micro, page 340**
- If cable installation without opening of lids is required
  - **Series E08 easy chain®, page 176**
- If an e-chain® snap-open along inner radius with film-hinge is required
  - **Series 094 E2 micro, page 330**
- If opening of the links is not necessary
  - **Series 08 E2 micro, page 334**

**Dimensions**

- **Unsupported**:
  - Pitch = 20 mm/link
  - Links/m = 50 (1000 mm)
  - Chain length = \( \frac{S}{2} + K \)

**Fast Opening**

- Moving end
- Fixed end
- D
- S/2
- \( R \)
- \( R_3 \)

**Example**

- Fill weight = 0,5 [kg/m]
- Unsupported length FL = 0,43 m
- Length of travel = 1,26 m

**The required clearance height:**

\[ H_F = H + 15 \text{ mm} \]

(with 0,3 kg/m fill weight)
### zipper e-tubes Series R09 Product Range Standard

#### e-tube | Series R09 | zip-open along outer radius

<table>
<thead>
<tr>
<th>e-tube zip-open along outer radius</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>R</th>
<th>Bending radii [mm]</th>
<th>Weight [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>R09. 10</td>
<td>R, 0</td>
<td>10</td>
<td>18.2</td>
<td>048</td>
<td>075</td>
</tr>
<tr>
<td>R09. 16</td>
<td>R, 0</td>
<td>16</td>
<td>24.2</td>
<td>048</td>
<td>075</td>
</tr>
<tr>
<td>R09. 20</td>
<td>R, 0</td>
<td>20</td>
<td>28.2</td>
<td>048</td>
<td>075</td>
</tr>
<tr>
<td>R09. 30</td>
<td>R, 0</td>
<td>30</td>
<td>38.2</td>
<td>048</td>
<td>075</td>
</tr>
<tr>
<td>R09. 40</td>
<td>R, 0</td>
<td>40</td>
<td>48.2</td>
<td>048</td>
<td>075</td>
</tr>
<tr>
<td>R09. 50</td>
<td>R, 0</td>
<td>50</td>
<td>58.2</td>
<td>048</td>
<td>075</td>
</tr>
</tbody>
</table>

Supplement Part No. with required radius (R) Example: R09.40.048.0

### Polymer locking, one-piece | Universal for e-tubes

#### Recommended for unsupported applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>080.10.12 PZ 080.10.12</td>
<td>– 18.2 1</td>
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<td></td>
<td></td>
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<tr>
<td>16.</td>
<td>080.16.12 PZ 080.16.12</td>
<td>– 24.2 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>080.20.12 PZ 080.20.12</td>
<td>– 28.2 2</td>
<td></td>
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</tr>
<tr>
<td>30.</td>
<td>080.30.12 PZ 080.30.12</td>
<td>22 32 3</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>080.40.12 PZ 080.40.12</td>
<td>32 48.2 4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>080.50.12 PZ 080.50.12</td>
<td>42 58.2 5</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Additional Features

- Quickfix - mounting bracket with dowel, available upon request
- Quicksnap - the complete, detachable mounting unit. Part Nos. 080.20.05, 080.30.05 available from stock

### Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

---

**Configuration options and order keys, overview ➔ page 236

**e-chain links as single parts, overview ➔ page 235

258 3D-CAD files, configurators, PDF ➔ www.igus.eu/eu/R09

igus® GmbH Germany | Phone +49 2203 9649-800 | Fax -222 | info@igus.de | www.igus.eu 259
**Fast opening, high stability**

**When to use Series 15:**
- If a very small e-chain® with an inner height of 17 mm and smallest bending radii are required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,20 m and fill weights up to 1,5 kg/m
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

**When to use a different igus® Series:**
- If a fully enclosed e-tube with zipper opening mechanism is required
  - Series R15 zipper e-tube, page 268
- If snap-open accessibility along the inner radius is required
  - Series B151 E2 mini, page 380
- If snap-open links are not necessary
  - Series 10 E2 mini, page 356
- If torsion occurs
  - Series E14 easy chain®, page 180

___

**Dimensions**

- **Unsupported e-chains® Series 15**

**Introduction**

- Fast opening, high stability
- When to use Series 15:
- When to use a different igus® Series:

**Technical Data**

- **Pitch** = 30,5 mm/link
- **Links/m** = 33 (1006,5 mm)
- **Chain length** = \( \frac{S}{2} + K \)

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)

**3D-CAD files, configurators, PDF** - www.igus.eu/eu/15

**igus® GmbH Germany | Phone +49 2203 9649-800 Fax -222 | info@igus.de | www.igus.eu**
**Slotted separator 153**

Is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

**Side plate 155**

Side plate for use with full-width shelf 110.X and slotted separator 153.

**Full-width shelf 110.X**

This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision, full-width shelves can be arranged at 3 different heights (in 5 mm increments).

### Order key

**15. 025. 038. 0 e-chain**

Before using this Series on long travels please consult igus®.

### Supplement Part No. with required radius (R) Example: 15.025.038.0

### Full-width shelves

<table>
<thead>
<tr>
<th>Width X [mm]</th>
<th>unassembled</th>
<th>assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>110.15</td>
<td>111.15</td>
</tr>
<tr>
<td>025</td>
<td>110.25</td>
<td>111.25</td>
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<tr>
<td>038</td>
<td>110.38</td>
<td>111.38</td>
</tr>
<tr>
<td>100</td>
<td>110.100</td>
<td>111.100</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Weight [kg/mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.35</td>
</tr>
<tr>
<td>0.40</td>
</tr>
<tr>
<td>0.46</td>
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<tr>
<td>0.52</td>
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<tr>
<td>0.63</td>
</tr>
<tr>
<td>0.70</td>
</tr>
<tr>
<td>0.76</td>
</tr>
</tbody>
</table>
Polymer pivoting, one-piece | Standard | Universal for e-chains®
Recommended for unsupported and gliding applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>015.</td>
<td>1015.34PZ</td>
<td>1015.34P</td>
<td>-</td>
<td>25.5</td>
<td>2</td>
</tr>
<tr>
<td>025.</td>
<td>1025.34PZ</td>
<td>1025.34P</td>
<td>10</td>
<td>35.5</td>
<td>3</td>
</tr>
<tr>
<td>038.</td>
<td>1038.34PZ</td>
<td>1038.34P</td>
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<td>48.5</td>
<td>4</td>
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<td>050.</td>
<td>1050.34PZ</td>
<td>1050.34P</td>
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<td>60.5</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>105.34P</td>
<td>105.34P</td>
<td>48</td>
<td>75.0</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>106.34P</td>
<td>106.34P</td>
<td>65</td>
<td>92.0</td>
<td>8</td>
</tr>
<tr>
<td>7.</td>
<td>107.34P</td>
<td>107.34P</td>
<td>85</td>
<td>112.0</td>
<td>10</td>
</tr>
</tbody>
</table>

Part No. structure
1025. 34PZ A1
A...must be indicated on preassembled
Moving end
Moving bracket Moving end
1025. 3 PZ A1 (mass. + tiewrap plate)
Mounting bracket Fixed end
1025. 4PZ A1 (mass. + tiewrap plate)

Polymer locking, one-piece | Universal for e-chains®
Recommended for vertical hanging and standing applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>015.</td>
<td>1015.12PZ</td>
<td>1015.12P</td>
<td>-</td>
<td>25.5</td>
<td>2</td>
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<tr>
<td>025.</td>
<td>1025.12PZ</td>
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<td>10</td>
<td>35.5</td>
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<tr>
<td>038.</td>
<td>1038.12PZ</td>
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<td>48.5</td>
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<tr>
<td>050.</td>
<td>1050.12PZ</td>
<td>1050.12P</td>
<td>35</td>
<td>60.5</td>
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</tr>
<tr>
<td>5.</td>
<td>105.12P</td>
<td>105.12P</td>
<td>48</td>
<td>75.0</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>106.12P</td>
<td>106.12P</td>
<td>65</td>
<td>92.0</td>
<td>8</td>
</tr>
<tr>
<td>7.</td>
<td>107.12P</td>
<td>107.12P</td>
<td>85</td>
<td>112.0</td>
<td>10</td>
</tr>
</tbody>
</table>

Part No. structure (locking)
1025. 12PZ A1
A...must be indicated on preassembled
Moving end
Moving bracket Moving end
1025. 1 PZ A1 (mass. + tiewrap plate)
Mounting bracket Fixed end
1025. 2 PZ A1 (mass. + tiewrap plate)
Aluminum SuperTrough | Basic Version
Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

Installation set “Basic”
with C-Profile
Bottom clamp optionally attached inwards or outwards

<table>
<thead>
<tr>
<th>Width Index [mm]</th>
<th>B_Ri [mm]</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>30</td>
<td>upon request</td>
<td>960.30.125</td>
</tr>
<tr>
<td>0.40</td>
<td>40</td>
<td>upon request</td>
<td>960.30.190</td>
</tr>
<tr>
<td>0.50</td>
<td>53</td>
<td>upon request</td>
<td>960.30.260</td>
</tr>
<tr>
<td>0.80</td>
<td>80</td>
<td>960.30.125</td>
<td>960.30.125</td>
</tr>
<tr>
<td>1.00</td>
<td>80</td>
<td>960.30.175</td>
<td>960.30.175</td>
</tr>
<tr>
<td>1.25</td>
<td>98</td>
<td>960.30.200</td>
<td>960.30.200</td>
</tr>
<tr>
<td>1.50</td>
<td>127</td>
<td>960.30.225</td>
<td>960.30.225</td>
</tr>
</tbody>
</table>

Components, trough “Basic”:
- Trough side parts, aluminum, 2 m
- Glide bar, plastic, 2 m
- Glide strips, plastic, 2 m (without glide strips on request)

Components, installation set “Basic”:
- Bottom clamp, aluminum
- C-profile, galvanized steel
- Screw M6 x 16
- Sliding nut M6
- Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 15.025,038.0 with B_Ri = 40

Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar [8 x 2 m sections] Part No. 970.30.SL

Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar [8 x 2 m sections] Part No. 970.31.SL

Installation set “Basic” complete (guide trough sets + 1)
Order text: 17 installation sets Part No. 960.30.150

Module for the fixed end
Order text: 1 set Part No. 970.80

Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough “Basic” in detail | from page 1190
**Fast opening, enclosed zipper-band**

**When to use Series R15:**
- If a very small e-tube with an inner height of 17 mm and smallest bending radii are required
- For inner widths up to 80 mm
- For unsupported lengths up to 1,20 m and fill weights up to 1.5 kg/m
- If chip protection is required
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

**When to use a different igus® Series:**
- If an e-chain® with zipper opening mechanism is required
  - Series 15 zipper e-chain®, page 260
- If snap-open accessibility along the inner radius is required
  - Series B15i E2 mini, page 380
- If snap-open links are not necessary
  - Series 10 E2 mini, page 356
- If torsion occurs
  - Series E14 easy chain®, page 180

---

**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. More information on page 95.

---

**Dimensions**

![Diagram showing dimensions and calculations](image)

**Technical Data**

- **Pitch** = 30.5 mm/link
- **Links/m** = 33 (1,006,5 mm)
- **Chain length** = $S/2 + K$

The required clearance height: $H_F = H + 20$ mm (with 1.0 kg/m fill weight)

Before using this Series on long travels please consult igus®.

---

**Available from stock. Delivery time in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)*

---

**3D-CAD files, configurators, PDF**

[www.igus.eu/eu/R15](http://www.igus.eu/eu/R15)
e-tube | Series R15 | zip-open along outer radius

| R15.063.R0° | 15 | 26 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.40 |
| R15.025.R0° | 25 | 36 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.45 |
| R15.038.R0° | 38 | 49 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.51 |
| R15.050.R0° | 50 | 61 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.57 |
| R15.063.R0° | 63 | 76 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.68 |
| R15.080.R0° | 80 | 94 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.75 |
| R15.100.R0° | 100 | 113 | 063 | 075 | 100 | 110 | 125 | 145 | 180 | 0.81 |

Weight (kg/m)

Order key

Supplement Part No. with required radius (R) Example: R15.063.063.0

Before using this Series on long travels please consult igus®.

Full-width shelves

<table>
<thead>
<tr>
<th>Width X [mm]</th>
<th>unassembled</th>
<th>assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>110.25</td>
<td>111.25</td>
</tr>
<tr>
<td>038</td>
<td>110.38</td>
<td>111.38</td>
</tr>
<tr>
<td>080</td>
<td>110.80</td>
<td>111.80</td>
</tr>
</tbody>
</table>

Slotted separator R153

This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release).
zipper | e-tubes | Series R15 | Mounting brackets **pivoting**
For tight installation conditions

- **Polymer pivoting, one-piece | Standard | Universal for e-tubes**
  Recommended for unsupported and gliding applications

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>1015.34PZ</td>
<td>1015.34P</td>
<td>-</td>
<td>25.5</td>
<td>2</td>
<td>Standard</td>
<td>For tight installation conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>1025.34PZ</td>
<td>1025.34P</td>
<td>10</td>
<td>35.5</td>
<td>3</td>
<td>Strain relief with detachable tiewrap plates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>038</td>
<td>1038.34P</td>
<td>1038.34P</td>
<td>23</td>
<td>48.5</td>
<td>4</td>
<td>Variable traverse angle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>050</td>
<td>1050.34P</td>
<td>1050.34P</td>
<td>35</td>
<td>60.5</td>
<td>5</td>
<td>Corrosion-resistant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>063</td>
<td>105. 34P</td>
<td>105. 34P</td>
<td>48</td>
<td>75.0</td>
<td>6</td>
<td>Various installation options on the fixed end and/or the moving end</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>080</td>
<td>106. 34P</td>
<td>106. 34P</td>
<td>65</td>
<td>92.0</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>107. 34P</td>
<td>107. 34P</td>
<td>85</td>
<td>112.0</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Width available upon request, please consult igus® for delivery time

Possible installation conditions for assembled, pivoting mounting brackets. For the preassembled mode please add index A1, A4. e.g. 105.34PZ A1

---

zipper | e-tubes | Series R15 | Mounting brackets **locking**
For very high speed and acceleration

- **Polymer locking, one-piece | Universal for e-tubes**
  Recommended for vertical hanging and standing applications

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>1015.12PZ</td>
<td>1015.12P</td>
<td>-</td>
<td>25.5</td>
<td>2</td>
<td>Locked connections</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>1025.12PZ</td>
<td>1025.12P</td>
<td>10</td>
<td>35.5</td>
<td>3</td>
<td>At very high speed and/or acceleration</td>
<td></td>
</tr>
<tr>
<td>038</td>
<td>1038.12PZ</td>
<td>1038.12P</td>
<td>23</td>
<td>48.5</td>
<td>4</td>
<td>If space is limited for height (the H measurement)</td>
<td></td>
</tr>
<tr>
<td>050</td>
<td>1050.12PZ</td>
<td>1050.12P</td>
<td>35</td>
<td>60.5</td>
<td>5</td>
<td>Various installation options on the fixed end and/or the moving end</td>
<td></td>
</tr>
<tr>
<td>063</td>
<td>105. 12P</td>
<td>105. 12P</td>
<td>48</td>
<td>75.0</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>080</td>
<td>106. 12P</td>
<td>106. 12P</td>
<td>65</td>
<td>92.0</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>107. 12P</td>
<td>107. 12P</td>
<td>85</td>
<td>112.0</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Width available upon request, please consult igus® for delivery time

Possible installation conditions for assembled, locking mounting brackets. For the preassembled mode please add index A1, A4. e.g. 105.12PZ A1

---

Part No. structure (locking)

- **Single-part order**
  Mounting bracket Moving end
  105. 3 PZ A1 [mass. + tiewrap plate]
  Mounting bracket Fixed end
  105. 4 PZ A1 [mass. + tiewrap plate]

Part No. structure

- **Single-part order**
  Mounting bracket Moving end
  105. 3 PZ A1 [mass. + tiewrap plate]
  Mounting bracket Fixed end
  105. 2 PZ A1 [mass. + tiewrap plate]
**Aluminum SuperTrough** | **Basic Version**

Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

---

### Installation set “Basic” with C-Profile

Bottom clamp optionally attached inwards or outwards

<table>
<thead>
<tr>
<th>Width Index B</th>
<th>Part No.</th>
<th>Part No. of installation set “Basic”</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>960.30.100</td>
<td>960.30.300</td>
</tr>
<tr>
<td>800</td>
<td>960.30.200</td>
<td>960.30.300</td>
</tr>
</tbody>
</table>

---

Length of the C-profile according to dimension $B_{Ri}$ (see table)

- **Components**, trough “Basic”:
  - Trough side parts, aluminum, 2 m
  - Glide bar, plastic, 2 m
  - Glide strips, plastic, 2 m (without glide strips on request)

- **Components**, installation set “Basic”:
  - Bottom clamp, aluminum
  - C-profile, galvanized steel
  - Screw M6 x 16
  - Sliding nut M6
  - Interface connector, plastic

---

**Order example:** Length of travel 30 m - Center mounted for Series R15.080.063.0 with $B_{Ri} = 98$

Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 970.30.SL

Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 970.31.SL

Installation set “Basic” complete (guide trough sets + 1)

Order text: 17 installation sets Part No. 960.30.150

Module for the fixed end

Order text: 1 set Part No. 970.80

---

**Principle sketch:** Number of installation sets to be installed = Number of trough sections + 1

---

**Aluminum SuperTrough “Basic” in detail** from page 1190
**Fast opening, large inner height**

**When to use Series 17 E2 mini:**
- If an e-chain® with an inner height of 32 mm is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1 m and fill weights up to 1.5 kg/m
- If a very small e-chain® with a large inner height is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

**When to use a different igus® Series:**
- If a fully enclosed e-tube with zipper opening mechanism is required
  - Series R17 zipper e-tube, page 282
- If snap-open accessibility along the inner radius is required
  - Series B17i E2 mini, page 388
- If maximum stability is required
  - Series R.4.32, page 646
- If torsion occurs
  - Series E16/Z16 easy chain®, page 190

---

**Dimensions**

Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height HF. Please consult igus® if space is particularly restricted. More information ➤ Design, page 95

### Unsupported Applications

- **Pitch**: 30.5 mm/link
- **Links/m**: 33 (1006.5 mm)
- **Chain length**: \( S/2 + K \)

The required clearance height: \( H_F = H + 25 \text{ mm} \) (with 1.5 kg/m fill weight)

---

**3D-CAD files, configurators, PDF ➤ www.igus.eu/eu/17**
### Zipper e-chains® Series 17 | Interior Separation

#### Separators, full-width shelves - in the standard configuration separators are assembled every 2nd e-chain link!

#### Slotted separator 171 (17.1 up to 17.4)
This is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

#### Side plate 175 (17.1 up to 17.4)
Side plate for use with full-width shelf 110.X and slotted separator 171.

#### Slotted separator 173 (17.5 up to 17.7)
This is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

#### Side plate 177 (17.5 up to 17.7)
Side plate for use with full-width shelf 110.X and slotted separator 171.

### Full-width shelf 110.X (for all widths)
This option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

### Configuration options and order keys, overview ▶ page 236
Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

<table>
<thead>
<tr>
<th>Width index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>117.1.12PZ</td>
<td>117.1.12P</td>
<td>25.5</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>117.2.12PZ</td>
<td>117.2.12P</td>
<td>35.5</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>117.3.12PZ</td>
<td>117.3.12P</td>
<td>48.5</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>117.4.12PZ</td>
<td>117.4.12P</td>
<td>60.5</td>
<td>48.5</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>117.5.12PZ</td>
<td>117.5.12P</td>
<td>76</td>
<td>65</td>
<td>8</td>
</tr>
<tr>
<td>6.</td>
<td>117.6.12PZ</td>
<td>117.6.12P</td>
<td>93</td>
<td>85</td>
<td>10</td>
</tr>
</tbody>
</table>

Part No. structure
117.2.12PZ A1

Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1...A4 e.g. 117.2.12PZ A1

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible

Single-order
Mounting bracket Moving end
117.2.1PZ A1 (preassembled + tiewrap plates)
Mounting bracket Fixed end
117.2.2PZ A1 (preassembled + tiewrap plates)
**Fast opening, enclosed zipper-band**

When to use Series R17:
- If a very small e-tube with an inner height of 32 mm and smallest bending radii are required
- For inner widths up to 63 mm
- For unsupported lengths up to 1.20 m and fill weights up to 1.5 kg/m
- If chip protection is required
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

When to use a different igus® Series:
- If an e-chain® with zipper opening mechanism is required
  - Series 17 zipper e-chain®, page 276
- If snap-open accessibility along the inner radius is required
  - Series B17i E2 mini, page 388
- If maximum stability is required
  - Series R4.32, page 645
- If torsion occurs
  - Series E16/Z16 easy chain®, page 190
- For gliding applications
  - Series 2600/2700/2630/2680 E2/000, page 444

**Speed, material, temperature and flammability class** page 234

### Dimensions

<table>
<thead>
<tr>
<th>Pitch</th>
<th>Links/m</th>
<th>Chain length</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.5 mm/link</td>
<td>33 (1006.5 mm)</td>
<td>$\frac{S}{2} + K$</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>R</th>
<th>063</th>
<th>075</th>
<th>100</th>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>165</td>
<td>189</td>
<td>239</td>
<td>289</td>
</tr>
<tr>
<td>D</td>
<td>128</td>
<td>140</td>
<td>165</td>
<td>190</td>
</tr>
<tr>
<td>K</td>
<td>260</td>
<td>300</td>
<td>380</td>
<td>455</td>
</tr>
</tbody>
</table>

The required clearance height: $H_F = H + 30$ mm (with 1.0 kg/m fill weight)
**Order key**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Weight [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>R17.015.R0</td>
<td>15 26</td>
<td>approx. 0.57</td>
</tr>
<tr>
<td>R17.025.R0</td>
<td>25 36</td>
<td>approx. 0.64</td>
</tr>
<tr>
<td>R17.063.R0</td>
<td>63 74</td>
<td>approx. 0.88</td>
</tr>
</tbody>
</table>

Supplement Part No. with required radius (R) Example: R17.015.063.0

**Slotted separator R171**

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

**Full-width shelf 110.X**

this option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

---

**Available from stock. Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)
Polymer locking, one-piece | Universal for e-tubes
Recommended for unsupported applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set with tiewrap plates</th>
<th>Part No. full set without tiewrap plates</th>
<th>Dim. A [mm]</th>
<th>Dim. B [mm]</th>
<th>Number of Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>015.</td>
<td>117.015.12PZ</td>
<td>117.015.12P</td>
<td>25.7</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>025.</td>
<td>117.025.12PZ</td>
<td>117.025.12P</td>
<td>35.7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>063.</td>
<td>117.063.12PZ</td>
<td>117.063.12P</td>
<td>73.7</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible

Part No. structure

117.015.12 PZ A1

A... must be indicated on preassembled.
Strain relief with chainfix tiewrap plates.

Single-part order
Mounting bracket Moving end
117.015.12 PZ A1 (preas. + tiewrap plate)

Mounting bracket Fixed end
117.015.2 PZ A1 (preas. + tiewrap plate)