E4.1

ONE e-chain® series for almost any application

Advantages of the E4.1 system:
- Undercut design for high lateral stability, high strength for long travels and for large unsupported lengths
- Especially suited for side-mounted applications
- Noise-reducing brake and optional noise dampers
- Inner and outer links for quick assembly, with or without pretension
- Many modular options and accessories available

When to use another e-chain® series:
- When the e-chain® needs to be extremely quiet with very low vibration
  ➤ E6.1, page 750
- When an e-chain® must fulfill ISO Class 1 cleanroom standard
  ➤ E6.1, page 750
- When a light, cost-effective e-chain®/e-tube with higher dynamics is needed
  ➤ E4.1L, page 524
- When a larger inner space is required with the same exterior dimensions
  ➤ E4.1L, page 524
System E4.1 | Introduction | Advantages

ONE series for almost any application - E4.1

System E4.1 combines all the advantages of the previous three versions and is the best igus® e-chain® in the product range. Series E4.1 is stronger whilst having the same or even smaller dimensions than previous versions. Almost all accessories and mounting dimensions are identical. You can increase the service life of your application with the igus® system E4.1 whilst reducing cost.

- Undercut design for high lateral stability
- High push/pull strength for long travels and large unsupported lengths
- Especially suited for side-mounted applications
- Noise-reducing brake and optional noise dampers
- Inner and outer links for quick assembly, with or without pretension

Typical industries and applications
- Cranes
- Indoor cranes
- Composting plants
- Sewage plants
- Machine tools
- General mechanical engineering
- Material handling technology
- Cooling technology
- Construction machinery
- Woodworking
- Robots and handling equipment

Explain the benefits of System E4.1

ISO Class 2, according to DIN EN ISO 14644-1 for System E4.1

IPA Qualification Certificate - Report IG 1303-640-1: ISO Class 2, according to DIN EN ISO 14644-1 for System E4.1, Series E4.32, 10,063.0.CFR at v = 0.5 / 1.0 / 2.0

41 dB(A) - level determined at the igus® test lab, v = 1.8 m/s unsupported, series E4.21, 060.0.CSB.0

Electrically conductive ESD e-chains® - several series available from stock

Explore the benefits | www.igus.eu/best/E4.1

System E4.1 | Selection table

<table>
<thead>
<tr>
<th>Series</th>
<th>Inner height</th>
<th>Inner width</th>
<th>Outer width</th>
<th>Outer height</th>
<th>Bend radius</th>
<th>Unsupported length ≤ [m]</th>
<th>Page</th>
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<tbody>
<tr>
<td>E4.21</td>
<td>21</td>
<td>30 - 140</td>
<td>44 - 154</td>
<td>28</td>
<td>038 - 200</td>
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<tr>
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<td>50 - 600</td>
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<td>5.00</td>
<td>612</td>
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<tr>
<td>H4.80</td>
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<td>50 - 600</td>
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<td>108</td>
<td>150 - 1000</td>
<td>6.20</td>
<td>624</td>
</tr>
</tbody>
</table>

E-chains® with crossbars every 2nd link

E-chains® for almost any application - standard

- e-chains® with crossbars every link

- e-chains® for particularly demanding applications

H4.32  | 32           | 50 - 400    | 73 - 423    | 54           | 063 - 300   | 3.30                    | 590  |
| H4.42  | 42           | 50 - 400    | 76 - 426    | 64           | 075 - 350   | 4.00                    | 600  |
| H4.56  | 56           | 50 - 600    | 84 - 634    | 84           | 135 - 500   | 5.00                    | 612  |
| H4.80  | 80           | 50 - 600    | 100 - 650   | 108          | 150 - 1000  | 6.20                    | 624  |

E-chains® with crossbars every 2nd link

E-chains® for almost any application - standard

- e-chains® with crossbars every link

- e-chains® for particularly demanding applications

R4.28  | 28           | 50 - 300    | 70 - 320    | 42           | 075 - 250   | 2.50                    | 582  |
| R4.32  | 32           | 50 - 300    | 73 - 323    | 54           | 125 - 300   | 3.30                    | 590  |
| R4.42  | 42           | 50 - 300    | 76 - 326    | 64           | 125 - 350   | 4.00                    | 600  |
| R4.56  | 56           | 75 - 462    | 109 - 497   | 84           | 135 - 500   | 5.00                    | 612  |
| R4.80  | 80           | 100 - 462   | 150 - 513   | 108          | 200 - 1000  | 6.20                    | 624  |
| R4.112 | 108          | 200 - 500   | 252 - 552   | 140          | 250 - 1000  | 6.50                    | 636  |

Available from stock. Ready to ship in 24 - 48 hrs.*

*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

3D CAD, configurators, service life calculation and more | www.igus.eu/E4.1

Page 569
System E4.1 | Any application with one e-chain®
Undercut design combined with the inner/outer-link solution

- Smooth, cable-friendly inner surfaces
- Low-noise operation due to integrated brake on the radial stop-dogs
- Smooth and wear-resistant gliding surface - no additional glide shoes required
- Option with or without camber simply by reversing outer links

System E4.1 | Moving energy made easy
High stability and strength and easy installation

- ESD version ideal with large undercut contact area
- Strong crossbars with double locking
- Double vertical stop-dog system for larger unsupported lengths
- Very high stability due to the undercut design
- Cable-friendly, rounded crossbar
- Integrated lateral wear pads for a long service life (also for side-mounted applications)

More information ➤ www.igus.eu/E4.1
**System E4.1 | Features | Accessories**

- Lean separators enable extremely fast cable filling in several layers
- KMA mounting brackets with attachment options from any side
- Strain relief e.g. clamps, tie-wrap plates, nuggets, etc. [From page 1300]
- Aluminium and steel support tray for support of the lower run [From page 1264]
- Aluminium “Super Trough” - the standard igus® guide trough [From page 1208]
- Safe parallel guiding of corrugated tubes with the optional, external TUB guidance
- Up to 25% more unsupported length with XXL material [www.igus.eu/E4.1]
- Quick opening crossbar - reduce assembly time up to 25% [www.igus.eu/E4.1]
- Autoglide crossbars - long travels without guide troughs
- Flexible extender crossbar range - e-chain® extender for enlarging the interior, large range of widths possible
- Round or square extender crossbar with fixed width - safe guiding for large hoses
- The extension link design allows virtually unlimited side-by-side extension

**System E4.1 | Technical data | Overview**

**Technical data**

- **Speed gliding / acceleration gliding**
  - FL ≤ 10 [m/s] / ≤ 50 [m/s²]
  - FLG ≤ 20 [m/s] / ≤ 200 [m/s²]
  - FLB ≤ 3 [m/s] / ≤ 6 [m/s²]
- **Material - permitted temperature °C, igumid G**
  - Min. -40°C / +120°C
- **Flammability class, igumid G**
  - VDE 0304 IIC UL94-HB
  - FLG unsupported with straight upper run
  - FLB unsupported with permitted sag

**Installation types, maximum travels**

<table>
<thead>
<tr>
<th>Series</th>
<th>Unsupported</th>
<th>Gliding</th>
<th>Vertical hanging</th>
<th>Vertical standing</th>
<th>Side mounted unsupported</th>
<th>Rotary</th>
<th>Zig-zag</th>
<th>Unsupported length lower run</th>
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<tbody>
<tr>
<td>E4.21</td>
<td>≤ 5.0m</td>
<td>≤ 120m</td>
<td>≤ 40m</td>
<td>≤ 1.0m</td>
<td>with rework</td>
<td>upon request</td>
<td>upon request</td>
<td></td>
</tr>
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<td>E4.28/ R4.28</td>
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<td>≤ 200m</td>
<td>≤ 80m</td>
<td>≤ 1.2m</td>
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<td>upon request</td>
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<tr>
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<td>≤ 200m</td>
<td>≤ 80m</td>
<td>≤ 1.5m</td>
<td>with rework</td>
<td>upon request</td>
<td>upon request</td>
<td></td>
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<td>≤ 300m</td>
<td>≤ 100m</td>
<td>≤ 2.0m</td>
<td>with rework</td>
<td>upon request</td>
<td>upon request</td>
<td></td>
</tr>
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<td>≤ 400m</td>
<td>≤ 100m</td>
<td>≤ 2.5m</td>
<td>with rework</td>
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<td>upon request</td>
<td></td>
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<td>≤ 120m</td>
<td>≤ 3.0m</td>
<td>with rework</td>
<td>upon request</td>
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<td>E4.112/ R4.112</td>
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<td>≤ 450m</td>
<td>≤ 120m</td>
<td>≤ 3.0m</td>
<td>with rework</td>
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<td>upon request</td>
<td></td>
</tr>
<tr>
<td>E4.162</td>
<td>≤ 13.5m</td>
<td>≤ 450m</td>
<td>≤ 120m</td>
<td>≤ 6.0m</td>
<td>with rework</td>
<td>upon request</td>
<td>upon request</td>
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<tr>
<td>800</td>
<td>≤ 16.0m</td>
<td>≤ 450m</td>
<td>≤ 120m</td>
<td>≤ 6.0m</td>
<td>with rework</td>
<td>upon request</td>
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<tr>
<td>840</td>
<td>≤ 16.0m</td>
<td>≤ 450m</td>
<td>≤ 120m</td>
<td>≤ 6.0m</td>
<td>with rework</td>
<td>upon request</td>
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<td>E4.350</td>
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<td>upon request</td>
<td>upon request</td>
<td>with rework</td>
<td>upon request</td>
<td>upon request</td>
<td></td>
</tr>
</tbody>
</table>

More information [www.igus.eu/E4.1]
### System E4.1 | Options and order keys

#### Options with order keys | Examples based on series E4.56/H4.56/R4.56

<table>
<thead>
<tr>
<th>Standard</th>
<th>Optional noise dampers</th>
<th>Quick opening crossbar - reduce assembly time by up to 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No.</td>
<td>Part No. - low noise (with dampeners)</td>
<td>QuickLock crossbar along the inner radius</td>
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<tr>
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<td>E4.56.30.R.0</td>
<td>E4.56.30R.Z.R.0</td>
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<td>H4.56.30.R.0</td>
<td>H4.56.30Q.Z.R.0</td>
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<tr>
<td>R4.56.30.R.0</td>
<td>R4.56.30.R.0</td>
<td>R4.56.30Q.Z.R.0</td>
</tr>
</tbody>
</table>

#### Delivery times

- Delivery time*: 3-5 business days
- Delivery time*: 3-5 business days
- Delivery time*: 3-5 business days
- Delivery time*: 3-5 business days

*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

#### Order example | Examples based on series E4.56

**Order example for complete e-chain® (3.0m), colour black, with mounting brackets and interior separation:**

- e-chain® (3.0m) - please indicate e-chain® length or number of links: 3.0m or 33 links: E4.56.30.300.0
- 1 set (with odd number of links and integrated C-profiles): E4.56.30.112.C
- with 2 separators assembled every 2nd link: 2 x 561.1

**Order text:** 3 m E4.56.30.300.0 + E4.56.30.112.C + 2 x 561.1

**Magnetically detectable plastic e-chains®**

- For the food and tobacco industry
- igumid DT - automatic detection by all common metal detection systems
- Particles as small as 1.0mm can be recognised for fragments passing at speeds of 20m/min

More information ➤ www.igus.eu/detectable-chain

### System E4.1 | Options and order keys

#### Order key and colour examples | Examples based on series E4.56/H4.56/R4.56

**Order key**

- e-chain® with crossbars every link
- e-chain® with crossbars every 2nd link
- e-tube fully enclosed

**Order index for colour options**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Order index</th>
<th>Colour</th>
<th>Order index</th>
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<td>Standard .0</td>
<td>Orange Special colour .2</td>
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<tr>
<td>Silver-grey Special colour .31</td>
<td>Yellow Special colour .4</td>
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<td>White</td>
<td>Special colour .1</td>
<td>Light grey Special colour .14</td>
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<tr>
<td>Grey-white Special colour .15</td>
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</table>

**Black e-chains® available from stock**

Above special colours upon request.

**Aluminium lid for plastic e-tube R4.1**

- Lid notches allow easy positioning of the interior separation
- Special plastic clips facilitate easy assembly
- Any width possible, operable lids from both sides (material: aluminium EN AW-6005A)

More information ➤ www.igus.eu/alulid

3D CAD, configurators, service life calculation and more ➤ www.igus.eu/E4.1
**Series E4.21**

**Product range**

Stable due to undercut design, small inner height

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**e-chains® | Series E4.21 | Crossbars every link**

(crossbars removable along the inner and outer radius)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>E4.21 [kg/m]</th>
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**Part No. | Bi [mm] | Ba [mm] | E4.21 [kg/m] |
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<td>0.89</td>
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**Notes:**

1. Available as ESD Version from stock
2. Standardised product made from igumid ESD
3. ESD material tested with over 10 million cycles for the toughest requirements
4. Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information: [www.igus.eu/esd](http://www.igus.eu/esd)

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**ESD - many sizes from stock**

- Standardised product made from igumid ESD
- ESD material tested with over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

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**Installation dimensions**

Unsupported applications | Short travels

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**Gliding applications | For long travels from 10m to max. 120m**

- LK = S/2 + K2

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**Notes:**

- We recommend the project planning of such a system to be carried out by igus®.
- In case of travels between 4 and 10m we recommend an e-chain® with a longer unsupported length.

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**More information** [www.igus.eu/E4.21](http://www.igus.eu/E4.21)
KMA pivoting | Recommended for unsupported and gliding applications

<table>
<thead>
<tr>
<th>Width index</th>
<th>Part No. full set</th>
<th>Bi [mm]</th>
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<tbody>
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<td>050</td>
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</tr>
<tr>
<td>080</td>
<td>E4.210.080.1.12</td>
<td>80</td>
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</table>

(KMA = polymer metal mounting bracket)

Special mounting bracket feature - E4.21

- Special hexagonal design of the counterbore allowing the M4 nut and M4 hexagon socket-head screw to engage

- **Note:** KMA pivoting always needs to end with an inner link (odd number of links). To receive brackets pre-fitted, please add index A.

**Strain relief**

- e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options. From page 1300

**Order example**

- To indicate option with brackets pre-fitted
- Full set
- Odd numbers of links
- Width index
- Series

**Slotted separator**

- For a vertical subdivision. The slot allows basic vertical/horizontal shelving arrangements.

**Slotted notch separator**

- Can be locked/selected securely due to special recesses on the crossbars of the chainfix®. The separator cannot slide sideways during operation.

**Full-width shelf**

- This option is for applications with many small cables with similar diameters. For full-width separation.

*Note: not suitable for Bi 030
Lean separators

New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

Aluminium support tray

- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
- Noise-reducing glide strip integrated as standard
- Easy installation and connection of the e-chain®

More information ➤ From page 1270

Reduce assembly time - E4 e-chain® opener

- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime

Separator with integrated strain relief teeth

- Can be integrated into the mounting bracket or placed at any point in the e-chain®
- Combines strain relief and interior separation, for restricted space conditions
- Strain relief separator is easy to assemble without any screws

Part No. T2103.Z. More information ➤ From page 1326

Note: Please be aware of the minimum lateral gap to the side links! e-chain® = 1mm

As standard separators are fitted every 2nd e-chain® link!
E4.1 | Series E4.28-R4.28 | Product range
Stable due to undercut design, small inner height

![Image of product range]

- e-chains® Series E4.28
- Crossbars every link (crossbars removable along the inner and outer radius)
- e-tubes | Series R4.28
- Fully enclosed (links operable along the outer radius, from one side)

### E4.1) Product range

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>E4.28 [kg/m]</th>
<th>R4.28 [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.28  2.8</td>
<td>28.040</td>
<td>60</td>
<td>1.06</td>
<td>–</td>
</tr>
<tr>
<td>E4.28  2.8</td>
<td>28.050</td>
<td>70</td>
<td>1.11</td>
<td>2.20</td>
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<tr>
<td>E4.28  2.8</td>
<td>28.052</td>
<td>72</td>
<td>1.13</td>
<td>–</td>
</tr>
<tr>
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<td>28.062</td>
<td>82</td>
<td>1.17</td>
<td>–</td>
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<tr>
<td>E4.28  2.8</td>
<td>28.070</td>
<td>90</td>
<td>1.20</td>
<td>–</td>
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<tr>
<td>E4.28  2.8</td>
<td>28.075</td>
<td>95</td>
<td>1.23</td>
<td>2.02</td>
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<tr>
<td>E4.28  2.8</td>
<td>28.087</td>
<td>107</td>
<td>1.28</td>
<td>–</td>
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<tr>
<td>E4.28  2.8</td>
<td>28.100</td>
<td>120</td>
<td>1.37</td>
<td>2.54</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi [mm]</th>
<th>Ba [mm]</th>
<th>E4.28 [kg/m]</th>
<th>R4.28 [kg/m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.28  2.8</td>
<td>125</td>
<td>145</td>
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<td>2.78</td>
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<td>150</td>
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<td>1.61</td>
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<td>E4.28  2.8</td>
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<td>195</td>
<td>1.71</td>
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<td>E4.28  2.8</td>
<td>200</td>
<td>220</td>
<td>1.84</td>
<td>3.50</td>
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<tr>
<td>E4.28  2.8</td>
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<td>245</td>
<td>1.99</td>
<td>3.82</td>
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<tr>
<td>E4.28  2.8</td>
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<td>270</td>
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</tr>
<tr>
<td>E4.28  2.8</td>
<td>275</td>
<td>295</td>
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<td>–</td>
</tr>
<tr>
<td>E4.28  2.8</td>
<td>300</td>
<td>320</td>
<td>2.39</td>
<td>4.46</td>
</tr>
</tbody>
</table>

### E4.28 - Many sizes from stock

- Standardised product made from igumid ESD
- ESD material tested with over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information ➤ www.igus.eu/esd

---

E4.1 | Series E4.28-R4.28 | Installation dimensions
Unsupported applications | Short travels

### Gliding applications | For long travels from 10m to max. 200m

#### Gliding applications

- Total length of guide trough
- E-chain® length \( L_e = H + 40 \text{mm} \) (with 1.0kg/m fill weight)

*Radius not available for e-tubes

### Notes:

- We recommend the project planning of such a system to be carried out by igus®.
- In case of travels between 5 and 10m we recommend an e-chain® with a longer unsupported length.

---

E4.28 R4.28

---


3D CAD, configurators, service life calculation and more ➤ www.igus.eu/E4.1

---


583
The e-chains® may end with either an inner or an outer index.

KMA pivoting | Recommended for unsupported and gliding applications
KMA locking | Recommended for vertical hanging and standing applications

KMA pivoting

KMA locking

KMA mounting brackets | Attachment from any side | Pivoting | Locking

- **Fixed end**
  - E4.280/281 ...

- **Moving end**
  - E4.280/281 ...

- **Front view**
  - KMA

**Width index**

<table>
<thead>
<tr>
<th>Bi</th>
<th>Width index</th>
<th>Part No. full set</th>
<th>Part No. full set</th>
<th>Part No. full set</th>
<th>Part No. full set</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>175. E4.280.175</td>
<td>E4.281.175</td>
<td>E4.281.175</td>
<td>E4.281.175</td>
<td>E4.281.175</td>
</tr>
</tbody>
</table>

**KMA pivoting**

**KMA locking**

**Note:**
- The e-chains® may end with either an inner or an outer side link. An outer side link should always be the first e-chain® link at the moving end. Please specify the index A2 for even or odd numbers of links required. Please add the index A2 for the preassembled standard version, with C-profile in the inner radius at the moving end and in the outer radius at the fixed end.

**Order example**

- E4.280.100 A2

**Strain relief**
- e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ➔ From page 1300
E4.1 | e-chains® E4.28 | Accessories
Interior separation | Increase cable service life | Only for e-chains®

Previous generation of interior separation with other options: www.igus.eu/E4.28

No lateral gap to side links necessary. As standard separators are fitted every 2nd e-chain® link!

Standard - for any application
Separator with a wide base for maximum holding force in the e-chain®.

For even faster installation
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

Spacer
Separators can be fixed in position using spacers. The available interior height is reduced by 2mm per spacer (4mm when spacers are fitted on both sides). To avoid this, the parts can also be installed on the outside of the opening crossbar.

Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Separator with integrated strain relief teeth
- Can be integrated into the mounting bracket or placed at any point in the e-chain®
- Combines strain relief and interior separation, for restricted space conditions
- Strain relief separator is easy to assemble without any screws

Part No. 28.Z (e-chains®) / Part No. 28.ZT (e-tubes)
More information: From page 1326

Separator, wide base
unassembled 28.1
assembled 28.1.1

Separator, narrow top
unassembled 28.2
assembled 28.2.1

Spacer for e-chains®
unassembled 205.09
assembled 215.09

Shelf, lockable
unassembled 2300.X
assembled 2310.X

Shelves
Width = X [mm]
X [mm] unassembled assembled unassembled assembled unassembled assembled unassembled assembled
015 2300.015 2310.015 005 2300.005 2310.005
025 2300.025 2310.025 002 2300.002 2310.002
030 2300.030 2310.030 000 2300.000 2310.000
038 2300.038 2310.038 008 2300.008 2310.008
040 2300.040 2310.040 005 2300.005 2310.005
050 2300.050 2310.050 000 2300.000 2310.000
057 2300.057 2310.057 000 2300.000 2310.000

E4.1 | e-tubes R4.28 | Accessories
Interior separation | Option 1 | Option 2 | Only for e-tubes

Separator with a wide base for maximum holding force in the e-chain®. Combines strain relief and interior separation, for restricted space conditions. Strain relief separator is easy to assemble without any screws.

Part No. 28.Z (e-chains®) / Part No. 28.ZT (e-tubes)
More information: From page 1326

Standard separator, wide base
unassembled 28.1
assembled 28.1.1

Separator, narrow top
unassembled 28.2
assembled 28.2.1

Full-width shelf for e-tubes
unassembled 220.X
assembled 221.X

Full-width shelf
For applications with many small cables with similar diameters. For full width separation.

Slotted separator for full-width shelves
For a vertical subdivision. The slot allows basic vertical/horizontal shelving arrangements.

Slotted separator for partial shelves
Allows modular shelving arrangements.

Shelf
For applications involving many cables with different diameters, shelves can be fitted at different heights.

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Full-width shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slotted separator for full-width shelves</td>
<td></td>
</tr>
</tbody>
</table>
For a vertical subdivision. The slot allows basic vertical/horizontal shelving arrangements.

<table>
<thead>
<tr>
<th>Option 2</th>
<th>Shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slotted separator for partial shelves</td>
<td></td>
</tr>
</tbody>
</table>
Allows modular shelving arrangements.

| Shelves |
|---|---|
| Width = X [mm] |
| X [mm] unassembled assembled unassembled assembled unassembled assembled unassembled assembled |
| 018 | 2200.18 | 2210.18 | 043 | 2200.43 | 2210.43 |
| 023 | 2200.23 | 2210.23 | 048 | 2200.48 | 2210.48 |
| 028 | 2200.28 | 2210.28 | 058 | 2200.58 | 2210.58 |
| 033 | 2200.33 | 2210.33 | 068 | 2200.68 | 2210.68 |
| 038 | 2200.38 | 2210.38 | 073 | 2200.73 | 2210.73 |

For even faster installation
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

Shelf, lockable
unassembled 2300.X
assembled 2310.X

Note: Please be aware of the minimum lateral gap to the side links! e-tubes: 15mm
As standard separators are fitted every 2nd e-chain® link!
Aluminium support tray
- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
- Noise-reducing glide strip integrated as standard
- Easy installation and connection of the e-chain®
- Open design - dirt and debris fall through
More information ► From page 1270

Swarf up to +850°C
- e-tubes to withstand 850°C swarf, as a special option
- No hot swarf melting or embedding into the chain
- igus® igumid HT material
More information ► www.igus.eu/HT

Reduce assembly time - E4 e-chain® opener
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction
More information ► www.igus.eu/E4savetime

E4.1 e-chains®, supplied as readychains®, reliably supply power and data to different axes of this machine tool
**E4.32 | H4.32 | R4.32**  
**Product range**  
Stable due to undercut design, medium inner height

**e-chains®**  
Series E4.32  
Crossbars every link (crossbars removable along the inner and outer radius)

**e-chains®**  
Series H4.32  
Crossbars every 2nd link (crossbars removable along the inner and outer radius)

**e-tubes**  
Series R4.32  
Fully enclosed (crossbars operable along the outer radius, from one side)

---

**Part No.** | **E4.32** | **H4.32** | **R4.32**  
--- | --- | --- | ---  
E4.32/H4.32/R4.32 | 32. 05. | 50 | 73  
E4.32/H4.32/R4.32 | 32. 06. | 68 | 91  
E4.32/H4.32/R4.32 | 07. | 75 | 98  
E4.32/H4.32/R4.32 | 07. | 87 | 110  
E4.32/H4.32/R4.32 | 09. | 97 | 120  
E4.32/H4.32/R4.32 | 10. | 106 | 123  
E4.32/H4.32/R4.32 | 11. | 108 | 131  
E4.32/H4.32/R4.32 | 11. | 112 | 136  
E4.32/H4.32/R4.32 | 12. | 125 | 148  
E4.32/H4.32/R4.32 | 12. | 137 | 161  
E4.32/H4.32/R4.32 | 15. | 150 | 173  
E4.32/H4.32/R4.32 | 162. | 162 | 186  
E4.32/H4.32/R4.32 | 17. | 168 | 191  
E4.32/H4.32/R4.32 | 18. | 175 | 198  
E4.32/H4.32/R4.32 | 18. | 187 | 211  
E4.32/H4.32/R4.32 | 20. | 200 | 223

---

**Part No.** | **Bi** | **Ba**  
--- | --- | ---  
E4.32/H4.32/R4.32 | 05. | 50  
E4.32/H4.32/R4.32 | 06. | 68  
E4.32/H4.32/R4.32 | 07. | 75  
E4.32/H4.32/R4.32 | 07. | 87  
E4.32/H4.32/R4.32 | 09. | 97  
E4.32/H4.32/R4.32 | 10. | 106  
E4.32/H4.32/R4.32 | 11. | 108  
E4.32/H4.32/R4.32 | 11. | 112  
E4.32/H4.32/R4.32 | 12. | 125  
E4.32/H4.32/R4.32 | 12. | 137  
E4.32/H4.32/R4.32 | 15. | 150  
E4.32/H4.32/R4.32 | 162. | 162  
E4.32/H4.32/R4.32 | 17. | 168  
E4.32/H4.32/R4.32 | 18. | 175  
E4.32/H4.32/R4.32 | 18. | 187  
E4.32/H4.32/R4.32 | 20. | 200

---

**Bi** | **Ba**  
--- | ---  
E4.32/H4.32/R4.32 | 05. | 50  
E4.32/H4.32/R4.32 | 06. | 68  
E4.32/H4.32/R4.32 | 07. | 75  
E4.32/H4.32/R4.32 | 07. | 87  
E4.32/H4.32/R4.32 | 09. | 97  
E4.32/H4.32/R4.32 | 10. | 106  
E4.32/H4.32/R4.32 | 11. | 108  
E4.32/H4.32/R4.32 | 11. | 112  
E4.32/H4.32/R4.32 | 12. | 125  
E4.32/H4.32/R4.32 | 12. | 137  
E4.32/H4.32/R4.32 | 15. | 150  
E4.32/H4.32/R4.32 | 162. | 162  
E4.32/H4.32/R4.32 | 17. | 168  
E4.32/H4.32/R4.32 | 18. | 175  
E4.32/H4.32/R4.32 | 18. | 187  
E4.32/H4.32/R4.32 | 20. | 200

---

**Notes:**  
- ESD - many sizes from stock  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  
- 24 hrs, from stock  

**More information**  
- www.igus.eu/esd  

---

**ESD**  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

**More information**  
- www.igus.eu/esd  

---

**E4.32 | H4.32 | R4.32**  
**Installation dimensions**  
Unsupported applications | Short travels

---

**E4.32 | H4.32 | R4.32**  
**Crossbars every link (crossbars removable along the inner and outer radius)**

**Crossbars every 2nd link (crossbars removable along the inner and outer radius)**

**Fully enclosed (crossbars operable along the outer radius, from one side)**

---

**Note:**  
- The required clearance height: $H_y = H + 40\text{mm}$ (with 2.0kg/m fill weight)

---

**ESD**  
- Many sizes from stock  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

---

**More information**  
- www.igus.eu/esd  

---

**ESD**  
- Many sizes from stock  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

---

**More information**  
- www.igus.eu/esd  

---

**ESD**  
- Many sizes from stock  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

---

**More information**  
- www.igus.eu/esd  

---

**ESD**  
- Many sizes from stock  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

---

**More information**  
- www.igus.eu/esd  

---

**ESD**  
- Many sizes from stock  
- Standardised product made from FDA-approved ESD  
- ESD material tested with over 10 million cycles for the toughest requirements  
- Short delivery times including mounting brackets and inner separation  

---

**More information**  
- www.igus.eu/esd
E4.1 | Series E4.32-H4.32-R4.32 | Accessories

Interior separation | Increase cable service life

Note: Please be aware of the minimum lateral gap to the side links! e-tubes: 30mm
As standard separators are fitted every 2nd e-chain® link!

Standard - for any application
Separator with a wide base for maximum holding force in the e-chain®.

For even faster installation
Separator for igus® QuickLock crossbars 385.X.Q. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

For small cables
Separator with a narrow base for a large number of small cables side by side. Saves space in the e-chain®. Also available for QuickLock crossbars.

For side-mounted applications
Asymmetrical separator, for defined gap distance. No additional spacers required.

Locks securely in preset increments
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

E4.1 | Series E4.32-H4.32-R4.32 | Further accessories

TUB New

TUB | Safe guidance for corrugated tubes parallel to the e-chain®
- Additional, simple guidance for corrugated tubes on the outside of the e-chain®
- PMACLIP allows corrugated tubes with nominal widths 07, 10, 12, 17mm to be easily clipped on
- Easy access to the corrugated tubes, fast replacement of the hoses
- Reduce assembly time and cost – easy to assemble, without any additional screws or tools
- The part number includes the e-chain® with TUB side sections; the PMACLIP support and the hose are ordered separately

Part No. TUB | Part No. TUB | Part No. TUB | For corrugated tube nominal diameter
--- | --- | --- | ---
Outer link right* | Outer link left* | Outer link at both ends* | Ø [mm]
E4.32.XXXTUB.R,0 | E4.32.XXXTUB.L,0 | E4.32.XXXTUB.R,0 | 07 / 10 / 12 / 17

*As viewed from the fixed end
Part number appended with width index XXX: ø7, ø10, ø12, ø17
E4.32L.100TUB.150,0 = with TUB outer sections every 2nd right hand link

Product range | PMACLIP | Support, one-piece, with safety clip

PMACLIP support - one-piece construction with safety clip, suitable for corrugated tubes

Part No. | NW | A | B | C | H | E | M
--- | --- | --- | --- | --- | --- | --- | ---
PMACLIP | Ø [mm] | mm | mm | mm | mm | mm | mm
I-BFH-07-0 | 07 | 17.0 | 20.0 | 21.5 | 13.5 | 40.5 | M4
I-BFH-10-0 | 10 | 20.5 | 20.0 | 24.5 | 15.5 | 47.5 | M5
I-BFH-12-0 | 12 | 24.0 | 20.0 | 27.0 | 16.5 | 54.5 | M5
I-BFH-17-0 | 17 | 30.0 | 20.0 | 34.0 | 20.0 | 68.0 | M6

Shelves
Width = X [mm]

3D CAD, configurators, service life calculation and more | www.igus.eu/E4.1


More information | www.igus.eu/E4.32
Extender crossbars with flexible width | Safe guiding for large hoses

- For guiding and protecting large hoses
- With mounting for noise dampers
- Cable-friendly design, high crossbar holding force
- The openable extender crossbars can be fitted in different ways and combinations
- Optionally openable along the inner or outer radius

### Versions Hose Extender crossbar crossbars every link crossbars every 2nd link

<table>
<thead>
<tr>
<th>e-chain® with extender crossbar</th>
<th>Ø ≤ [mm]</th>
<th>Part No. crossbars every link</th>
<th>Part No. crossbars every 2nd link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extender crossbar and standard crossbar alternating along the inner and outer radius</td>
<td>34</td>
<td>E4.32.XXXB50.R0</td>
<td>-</td>
</tr>
<tr>
<td>Extender crossbar on both sides along the inner and outer radius</td>
<td>120</td>
<td>E4.32.XXXB50.R0</td>
<td>H4.32.XXXB50.R0</td>
</tr>
<tr>
<td>Extender crossbar along the outer radius</td>
<td>72</td>
<td>E4.32.XXXB50.R0</td>
<td>H4.32.XXXB50.R0</td>
</tr>
<tr>
<td>Extender crossbar along the inner radius</td>
<td>72</td>
<td>E4.32.XXXB50.R0</td>
<td>H4.32.XXXB50.R0</td>
</tr>
<tr>
<td>Extender crossbar and standard crossbar alternating along the inner radius</td>
<td>34</td>
<td>E4.32.XXXHE50.R0</td>
<td>-</td>
</tr>
<tr>
<td>Extender crossbar and standard crossbar alternating along the outer radius</td>
<td>34</td>
<td>E4.32.XXXHE50.R0</td>
<td>-</td>
</tr>
</tbody>
</table>

### Available inner widths

<table>
<thead>
<tr>
<th>BI [mm]</th>
<th>Available inner widths</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>300</td>
<td>282</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index XXX BI and the minimum bend radius R. Example:
E4.32.100B50.150.0 = crossbars every link, extender crossbar on both sides along the inner and outer radius

The E4.1 can be fitted with openable extender crossbars, which increase the size of the interior of the e-chain®. Crossbars can be fitted in various ways: from one or both sides, alternating with standard crossbars and or any combination.
Extension links | For extremely wide e-chains® up to 3.0m
● Virtually unlimited side-by-side extension
● For extremely wide e-chains® up to 3,000mm
● Unsupported length $L_{FL}$ max. can be increased when heavy fill weights are required
● e-chains® and e-tubes can be combined
● Attached with KMA or steel mounting brackets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension link e-chain®</td>
<td>Extension link e-tube</td>
<td>Extension link as an individual part</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index $Bi1$/Bi2/Bi3/etc. and the radius (R). Example: E4.32.10/20/10.200.0

Hinged crossbars | Swivel clip | Openable crossbar remains attached to the e-chain®
● When opening crossbars must remain attached to the e-chain®
● Hinged crossbars consist of a swivel clip and a shortened crossbar
● Openable crossbar (shortened): $Bi$-37.5mm (smallest inner width $Bi = 87.5$)
● Please consult igus® for assistance with this product

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-chain® with hinged crossbar</td>
<td>swivel clip as an individual part</td>
<td>openable crossbar as an individual part</td>
</tr>
<tr>
<td>E4.32.Bi.Z.R.0</td>
<td>385.02</td>
<td>385.03</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index $Bi$, the index Z for the required option and the radius (R). Example: E4.32.137.1.200.0

Aluminium support tray
● Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
● Noise-reducing glide strip integrated as standard
● Easy installation and connection of the e-chain®
● Open design - dirt and debris fall through

More information ▶ From page 1270

Swarf up to +850°C
● e-tubes to withstand 850°C swarf, as a special option
● No hot swarf melting or embedding into the chain

More information ▶ www.igus.eu/HT

Reduce assembly time - E4 e-chain® opener
● e-chain® opener tools for easy opening and closing of e-chains®
● Simple opening and closing of e-chain® crossbars
● Also for use in hard to reach locations
● Significant assembly time reduction

More information ▶ www.igus.eu/E4savetime

Roller crossbars - increase the service life of cables and hoses
● Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
● For sensitive hoses in restricted space
● Usable along the inner and/or outer radius, retrofit possible

More information ▶ www.igus.eu/roller-crossbar

e-chains® | Series E4.42 | e-tubes® | Series H4.42 | Crossbars every linkK (crossbars removable along the inner and outer radius)

e-chains® | Series E4.42 | Crossbars every 2nd linkK (crossbars removable along the inner and outer radius)

e-chains® | Series E4.42 | Fully enclosed

Part No. / e-tubes
<table>
<thead>
<tr>
<th>Bi</th>
<th>Ba</th>
<th>E4.42</th>
<th>H4.42</th>
<th>R4.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4/H4, R4</td>
<td>42, 05</td>
<td>R, 0</td>
<td>50</td>
<td>76</td>
</tr>
<tr>
<td>H4/R4, R4</td>
<td>07</td>
<td>75</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 087</td>
<td>R, 0</td>
<td>67</td>
<td>114</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 097</td>
<td>R, 0</td>
<td>97</td>
<td>123</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 10</td>
<td>R, 0</td>
<td>102</td>
<td>126</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 11</td>
<td>R, 0</td>
<td>108</td>
<td>134</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 112</td>
<td>R, 0</td>
<td>112</td>
<td>139</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 12</td>
<td>R, 0</td>
<td>125</td>
<td>151</td>
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<tr>
<td>E4/H4, R4</td>
<td>42, 137</td>
<td>R, 0</td>
<td>137</td>
<td>164</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 15</td>
<td>R, 0</td>
<td>150</td>
<td>176</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 162</td>
<td>R, 0</td>
<td>162</td>
<td>189</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 17</td>
<td>R, 0</td>
<td>168</td>
<td>194</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 18</td>
<td>R, 0</td>
<td>175</td>
<td>201</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 187</td>
<td>R, 0</td>
<td>187</td>
<td>214</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 20</td>
<td>R, 0</td>
<td>200</td>
<td>226</td>
</tr>
</tbody>
</table>

Part No. / e-tubes
<table>
<thead>
<tr>
<th>Bi</th>
<th>Ba</th>
<th>E4.42</th>
<th>H4.42</th>
<th>R4.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4/H4, R4</td>
<td>42, 102</td>
<td>R, 0</td>
<td>102</td>
<td>126</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 104</td>
<td>R, 0</td>
<td>104</td>
<td>128</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 115</td>
<td>R, 0</td>
<td>115</td>
<td>139</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 126</td>
<td>R, 0</td>
<td>126</td>
<td>150</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 137</td>
<td>R, 0</td>
<td>137</td>
<td>161</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 148</td>
<td>R, 0</td>
<td>148</td>
<td>172</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 159</td>
<td>R, 0</td>
<td>159</td>
<td>183</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 170</td>
<td>R, 0</td>
<td>170</td>
<td>194</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 181</td>
<td>R, 0</td>
<td>181</td>
<td>205</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 192</td>
<td>R, 0</td>
<td>192</td>
<td>219</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 203</td>
<td>R, 0</td>
<td>203</td>
<td>227</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 214</td>
<td>R, 0</td>
<td>214</td>
<td>238</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 225</td>
<td>R, 0</td>
<td>225</td>
<td>249</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 236</td>
<td>R, 0</td>
<td>236</td>
<td>260</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 247</td>
<td>R, 0</td>
<td>247</td>
<td>271</td>
</tr>
<tr>
<td>E4/H4, R4</td>
<td>42, 258</td>
<td>R, 0</td>
<td>258</td>
<td>285</td>
</tr>
</tbody>
</table>

Available bend radii

Radius not available for e-tubes

*ESD material tested with over 10 million cycles for the toughest requirements

ESD - many sizes from stock

Standardised product made from genuine ESD

ESD material tested with over 10 million cycles for the toughest requirements

Short delivery times including mounting brackets and internal separation; 24 hrs, from stock

More information ▶ www.igus.eu/esd


More information ▶ www.igus.eu/E4.1

ESD version available from stock 2: Removable lid, non-operable

In case of travels between 8 and 12m we recommend an e-chain® with a longer unsupported length.
E4.1 | e-chains® E4.42-H4.42 | Accessories
KMA mounting brackets | Attachment from any side | Pivoting | Locking

KMA pivoting | Recommended for unsupported and gliding applications
KMA locking | Recommended for vertical hanging and standing applications

<table>
<thead>
<tr>
<th>Width index</th>
<th>Part no. full set KMA pivoting</th>
<th>Part no. full set KMA locking</th>
<th>Bi [mm]</th>
</tr>
</thead>
</table>

(KMA = polymer metal mounting bracket) For the C-profile option please add index C.

E4.1 | e-tubes R4.42 | Accessories
KMA mounting brackets | Attachment from any side | Pivoting | Locking

KMA pivoting | Recommended for unsupported and gliding applications
KMA locking | Recommended for vertical hanging and standing applications

<table>
<thead>
<tr>
<th>Width index</th>
<th>Part no. full set KMA pivoting</th>
<th>Part no. full set KMA locking</th>
<th>Bi [mm]</th>
</tr>
</thead>
</table>

(KMA = polymer metal mounting bracket) For the C-profile option please add index C.

Note: The e-chains® may end with either an inner or an outer side link. An outer side link should always be the first e-chain® link at the moving end. Please specify the index C (for odd) or C (for even) depending on an even or odd number of links required. Please add index A2 for the preassembled standard version with C-profile in the inner radius at the moving end and in the outer radius at the fixed end.

Strain relief e.g. clamps, tiwwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options From page 1300
E4.1 | Series E4.42 H4.42 R4.42 | Accessories

Interior separation | Increase cable service life

Previous generation of interior separation with other options: [www.igus.eu/E4.42](http://www.igus.eu/E4.42)

---

**Standard - for any application**
Separator with a wide base for maximum holding force in the e-chain®.

**For even faster installation**
Separator for igus® QuickLock crossbar 385.X.Q. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**For small cables**
Separator with a narrow base for a large number of small cables side by side. Saves space in the e-chain®. Also available for QuickLock crossbars.

**For side-mounted applications**
Asymmetrical separator, for defined gap distance. No additional spacers required.

**Locks securely in preset increments**
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

**Horizontal separation**
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

---

**Split separators**
In order to fill e-chains® more easily and effectively, these separators can be split in the middle. This allows easier access to middle shelf partitions. Fast assembly and easy retrofit. 2 types available: with wide or narrow top.

**Lean separators**
New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

**Lean separator design - several layers of cables fitted quickly, save up to 50%* assembly time**
(“Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)

---

**More interior separation options**

---

**Shelves**
Width = X [mm]

<table>
<thead>
<tr>
<th>X [mm]</th>
<th>unassembled</th>
<th>assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>050</td>
<td>3200.050</td>
<td>3210.050</td>
</tr>
<tr>
<td>075</td>
<td>3200.075</td>
<td>3210.075</td>
</tr>
<tr>
<td>100</td>
<td>3200.100</td>
<td>3210.100</td>
</tr>
<tr>
<td>115</td>
<td>3200.115</td>
<td>3210.115</td>
</tr>
</tbody>
</table>

---

E4.1 | Series E4.42-H4.42-R4.42 | Further accessories

**TUB New**

<table>
<thead>
<tr>
<th>TUB</th>
<th>Safe guidance for corrugated tubes parallel to the e-chain®</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Additional, simple guidance for corrugated tubes on the outside of the e-chain®</td>
<td></td>
</tr>
<tr>
<td>● PMACLIP allows corrugated tubes with nominal widths 07, 10, 12, 17 mm to be easily clipped on</td>
<td></td>
</tr>
<tr>
<td>● Easy access to the corrugated tubes, fast replacement of the hoses</td>
<td></td>
</tr>
<tr>
<td>● Reduce assembly time and cost - easy to assemble, without any additional screws or tools</td>
<td></td>
</tr>
<tr>
<td>● The part number includes the e-chain® with TUB side sections; the PMACLIP support and the hose are ordered separately</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No. TUB</th>
<th>Outer link right*</th>
<th>Outer link left*</th>
<th>Outer link at both ends*</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.42.XXXTUBL.R.0</td>
<td>E4.42.XXXTUBL.R.0</td>
<td>E4.42.XXXTUBL.R.0</td>
<td>07 / 10 / 12 / 17</td>
</tr>
<tr>
<td>*No viewed from the fixed end</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Part number appended with width index XXXBi and radius (R) e.g.

| E4.42.100TUBL.150.0 = with TUB outer sections every 2nd right hand link |

**Product range | PMACLIP | Support, one-piece, with safety clip**

<table>
<thead>
<tr>
<th>Part No. PMACLIP</th>
<th>NW</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>H</th>
<th>E</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-BFH-07-0</td>
<td>Ø [mm]</td>
<td>07</td>
<td>17.0</td>
<td>20.0</td>
<td>21.5</td>
<td>13.5</td>
<td>40.5</td>
</tr>
<tr>
<td>I-BFH-10-0</td>
<td>10</td>
<td>20.5</td>
<td>20.0</td>
<td>24.5</td>
<td>15.5</td>
<td>47.5</td>
<td>M5</td>
</tr>
<tr>
<td>I-BFH-12-0</td>
<td>12</td>
<td>24.0</td>
<td>20.0</td>
<td>27.0</td>
<td>16.5</td>
<td>54.5</td>
<td>M5</td>
</tr>
<tr>
<td>I-BFH-17-0</td>
<td>17</td>
<td>30.0</td>
<td>20.0</td>
<td>34.0</td>
<td>20.0</td>
<td>68.0</td>
<td>M6</td>
</tr>
</tbody>
</table>

**PMACLIP support - one-piece construction with safety clip, suitable for corrugated tubes**

---

E4.4.1 | Series E4.42-H4.42-R4.42 | Further accessories

**e-chain® with openable extender crossbars New**

<table>
<thead>
<tr>
<th>Extender crossbars with flexible width</th>
<th>Safe guiding for large hoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>● For guiding and protecting large hoses</td>
<td></td>
</tr>
<tr>
<td>● With mounting for noise dampers</td>
<td></td>
</tr>
<tr>
<td>● Cable-friendly design, high crossbar holding force</td>
<td></td>
</tr>
<tr>
<td>● The openable extender crossbars can be fitted in different ways and combinations</td>
<td></td>
</tr>
<tr>
<td>● Optionally openable along the inner or outer radius</td>
<td></td>
</tr>
</tbody>
</table>

**Versions**

<table>
<thead>
<tr>
<th>e-chain® with extender crossbar</th>
<th>Hose Ø [mm]</th>
<th>Part No. crossbars every link</th>
<th>Part No. crossbars every 2nd link</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Extender crossbar and standard crossbar alternating along the inner and outer radius</td>
<td>34</td>
<td>E4.42.XXXHB50.R.0</td>
<td>E4.42.XXXBB50.R.0</td>
</tr>
<tr>
<td>2) Extender crossbar on both sides along the inner and outer radius</td>
<td>130</td>
<td>E4.42.XXXBB50.R.0</td>
<td>E4.42.XXXBB50.R.0</td>
</tr>
<tr>
<td>3) Extender crossbar along the outer radius</td>
<td>85</td>
<td>E4.42.XXXBB50.R.0</td>
<td>E4.42.XXXBB50.R.0</td>
</tr>
<tr>
<td>4) Extender crossbar along the inner radius</td>
<td>85</td>
<td>E4.42.XXXBB50.R.0</td>
<td>E4.42.XXXBB50.R.0</td>
</tr>
<tr>
<td>5) Extender crossbar and standard crossbar alternating along the outer radius</td>
<td>34</td>
<td>E4.42.XXXHB50.R.0</td>
<td>E4.42.XXXHB50.R.0</td>
</tr>
<tr>
<td>6) Extender crossbar and standard crossbar alternating along inner radius</td>
<td>34</td>
<td>E4.42.XXXHB50.R.0</td>
<td>E4.42.XXXHB50.R.0</td>
</tr>
</tbody>
</table>

*Minimum bend radius: R125 |

**Available inner widths**

<table>
<thead>
<tr>
<th>NW</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>125</td>
</tr>
<tr>
<td>262</td>
<td>275</td>
</tr>
</tbody>
</table>

| Complete Part No. with the width index XXXBi and the minimum bend radius (R) | Example: E4.42.100/B50,150.0 = crossbars every link, extender crossbar on both sides along the inner and outer radius |

The E4.1 can be fitted with openable extender crossbars, which increase the size of the interior of the e-chain®. Crossbars can be fitted in various ways: from one or both sides, alternating with standard crossbars and or any combination.

---

3D CAD, configurators, service life calculation and more ▶ [www.igus.eu/E4.1](http://www.igus.eu/E4.1)
Extenor crossbars with fixed width | Safe guiding for large hoses

- Suitable for hoses with a maximum outer diameter of 105mm.
- Variant 1: Extender crossbar with fixed width to combine with straight crossbars
- Variant 2: Extender crossbar with fixed width attached directly on the side link
- Optionally openable along the inner "Z" or outer "E" radius
- Gliding with crossbars assembled along the outer radius and a special guide trough

<table>
<thead>
<tr>
<th>Part No. extender crossbar with fixed width, as individual parts</th>
<th>Hose Ø ≤ [mm]</th>
<th>Extender crossbar shape</th>
<th>Fitted to side link</th>
<th>Combine with openable crossbars</th>
</tr>
</thead>
<tbody>
<tr>
<td>385.15RHD115</td>
<td>105</td>
<td>∅ round</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>385.18RD115</td>
<td>105</td>
<td>∅ round</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Order example: ∅ combined with openable crossbars
To receive extender crossbar RHD115 pre-fitted along the outer radius of the-chain®, please add index E: E4.42.10/15RHD115/10.0
To receive extender crossbar RD115 pre-fitted along the inner radius of the-chain®, please add index Z: E4.42.10/15RD115/10.0

Extension links | For extremely wide e-chains® up to 3.0m

- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3,000mm
- Unsupported length FLg max. can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension link e-chain®</td>
<td>Extension link e-tube</td>
<td>Extension link as an individual part</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index Bi1/Bi2/Bi3/etc. and the radius (R). Example: E4.42.10/20/10.200.0

Hinged crossbars | Swivel clip | Openable crossbar remains attached to the e-chain®

- When opening, crossbars must remain attached to the e-chain®
- Hinged crossbars consist of a swivel clip and a shortened crossbar
- Openable crossbar (shortened: Bi=37.5mm (smallest inner width Bi = 87.5)
- Please consult igus® for assistance with this product

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part No.</th>
<th>Part No. openable crossbar as an individual part</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-chain® with hinged crossbar</td>
<td>swivel clip as an individual part</td>
<td>openable crossbar as an individual part</td>
</tr>
<tr>
<td>E4.42.B1/B2/B3/Bi/R,0</td>
<td>385.02</td>
<td>385.03</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index Bi, the index Z for the required option and the radius (R). Example: E4.42.137.1/200.0
**Steel support tray for support of the lower run**
- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available

More information ➤ From page 1264

**Swarf up to +850°C**
- e-tubes to withstand 850°C swarf, as a special option
- No hot swarf melting or embedding into the chain
- igus® igumid HT material

More information ➤ www.igus.eu/HT

**Reduce assembly time - E4 e-chain® opener**
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime

**Roller crossbars - increase the service life of cables and hoses**
- Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
- For sensitive hoses in restricted space
- Usable along the inner and/or outer radius, retrofit possible

More information ➤ www.igus.eu/roller-crossbar

Igus® e-chains® can even withstand the difficult conditions in stone processing facilities. The task of this e-chain® is to supply the tool carriage with energy (up to 100 A), signals, compressed air and water. It can travel up to 12m and achieves speeds of up to 32m/min.
E4.56 | H4.56 | R4.56

**Product range**

Stable due to undercut design, large inner height

---

**Series E4.56**

**Series H4.56**

**Series R4.56**

---

**Part No.**

**Bi**

**Ba**

**E4.56**

**H4.56**

**R4.56**

---

**Part No.**

**Bi**

**Ba**

**E4.56**

**H4.56**

**R4.56**

---

Crossbars every link (crossbars removable along the inner and outer radius)

Crossbars every 2\* link (crossbars removable along the inner and outer radius)

Fully enclosed (crossbars operable along the outer radius, from one side)

---

**E4.56**

56. 05

56. 06

56. 07

56. 08

56. 09

56. 10

56. 11

56. 12

56. 13

56. 14

56. 15

56. 16

56. 17

56. 18

56. 19

56. 20

56. 21

56. 22

56. 23

56. 24

56. 25

56. 26

56. 27

**H4.56**

56. 05

56. 06

56. 07

56. 08

56. 09

56. 10

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**R4.56**

56. 05

56. 06

56. 07

56. 08

56. 09

56. 10

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56. 26

56. 27

---

**Notes:**

- Standardized product made from gummidal ESD
- ESD material tested with over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information | www.igus.eu/esd

---

**Giding applications | For long travels from 12m to max. 400m**

**L** = **S/2** + **K**

**FLB**

**LK** = **S/2** + **K**

**Ba**

**Ba**

**Ba**

---

**FLB**

**FLB**

**FLB**

---

**Notes:**

- We recommend the project planning of such a system to be carried out by igus®.
- In case of travels between 10 and 12m we recommend an e-chain® with a longer unsupported length.

---

**ESD - many sizes from stock**

- Standardized product made from gummidal ESD
- ESD material tested with over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information | www.igus.eu/esd

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**3D CAD, configurators, service life calculation and more** | www.igus.eu/E4.1
E4.1 | Series E4.56-H4.56-R4.56 | Accessories

**Interior separation | Increase cable service life**

As standard separators are fitted every 2nd e-chain® link!

### Standard - for any application

Separator with a wide base for maximum holding force in the e-chain®.

### For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

### For small cables

Separator with a narrow base for a large number of small cables side by side. Saves space in the e-chain®. Also available for QuickLock crossbars.

### For side-mounted applications

Asymmetrical separator, for defined gap distance. No additional spacers required.

### Locks securely in preset increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

### Horizontal separation

Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

### Shelf, lockable

<table>
<thead>
<tr>
<th>Width X (mm)</th>
<th>Unassembled</th>
<th>Assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>050</td>
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</tbody>
</table>

---

**E4.1 | Series E4.56-H4.56-R4.56 | Accessories**

**Interior separation | To allow faster filling**

As standard separators are fitted every 2nd e-chain® link!

### Split separators

In order to fill e-chains® more easily and effectively, these separators can be split in the middle. This allows easier access to middle shelf partitions. Fast assembly and easy retrofit. 2 types available: with wide or narrow top.

### Lean separators

New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

**Lean separator design - several layers of cables fitted quickly, save up to 50%* assembly time**

(*Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)
E4.1 | Series E4.56·H4.56·R4.56 | Accessories

More interior separation options

**Note:** Please be aware of the minimum lateral gap to the side links! e-tube: 40mm | e-chain®: 16mm

As standard separators are fitted every 2nd e-chain® link!

---

**Notch locking separator for increased holding force**

Notch locking separators offer higher crossbar opening forces for high humidity and/or large hydraulic hoses. They can be positioned precisely and then locked in position.

---

**Partial height separator**

In conjunction with an additional opening crossbar, part no. 450.Bi.S, it provides the option to separate the upper and lower halves of the e-chain® independently of each other.

---

**Rollclip**

Minimises abrasion of sensitive hoses. Simply clamps onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

---

**Roller separator**

The roller separator is used in a similar way to the rollclip. It is used like a separator. For rigid cables and hoses.

*Only for e-chains®*

---

**TUB | Safe guidance for corrugated tubes parallel to the e-chain®**

- Additional, simple guidance for corrugated tubes on the outside of the e-chain®
- PMACLIP allows corrugated tubes with nominal widths 17, 23, 29, 36, 48mm to be easily clipped on
- Easy access to the corrugated tubes, fast replacement of the hoses
- Reduce assembly time and cost - easy to assemble, without any additional screws or tools
- The part number includes the e-chain® with TUB side sections; the PMACLIP support and the hose are ordered separately

**Part No. TUB**

<table>
<thead>
<tr>
<th>Outer link right*</th>
<th>Outer link left*</th>
<th>Outer link at both ends*</th>
<th>For corrugated tube nominal diameter Ø [mm]</th>
</tr>
</thead>
</table>

*As viewed from the fixed end

Part number appended with width index XXX: Bi and radius (R) e.g.
E4.56.100TUBR.150.0 = with TUB outer sections every 2nd right hand link

---

**Product range | PMACLIP | Support, one-piece, with safety clip**

PMACLIP support - one-piece construction with safety clip, suitable for corrugated tubes

---

**Part No.**

<table>
<thead>
<tr>
<th>PMACLIP</th>
<th>NW</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>H</th>
<th>E</th>
<th>M</th>
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<td>68.0</td>
<td>37.0</td>
<td>143.0</td>
<td>M6</td>
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</tbody>
</table>
**Extender crossbars with fixed width | Safe guiding for large hoses**

- Suitable for hoses with a maximum outer diameter of 245mm.
- Variant 1 extender crossbar with fixed width to combine with standard crossbars
- Variant 2 extender crossbar with fixed width attached directly on the side link
- Optionally openable along the inner “Z” or outer “E” radius
- Gliding with crossbars assembled along the outer radius and a special guide trough

### Part No. extender crossbar with fixed width, as individual parts

<table>
<thead>
<tr>
<th>Part No. extender crossbar with fixed width, as individual parts</th>
<th>Hose Ø z [mm]</th>
<th>Extender crossbar shape</th>
<th>Fitted to side link</th>
<th>Combine with openable crossbars</th>
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</thead>
<tbody>
<tr>
<td>450.15RHD115</td>
<td>115</td>
<td>ø round</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.25D150</td>
<td>150</td>
<td>ø square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.30D200</td>
<td>180</td>
<td>ø square</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>450.35D250</td>
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<td>ø square</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>450.40D300</td>
<td>245</td>
<td>ø square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.20HD150</td>
<td>150</td>
<td>ø square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.25HD200</td>
<td>180</td>
<td>ø square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.30HD250</td>
<td>195</td>
<td>ø square</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Order example:** 1 combined with openable crossbars

To receive extender crossbar RHD115 pre-fitted along the outer radius of the-chain®, please add index E: E4.56.10RHD115/10.200.0

To receive extender crossbar RHD115 pre-fitted along the inner radius of the-chain®, please add index Z: E4.56.10RHD115/10.200.0

**Extension links | For extremely wide e-chains® up to 3.0m**

- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3,000mm
- Unsupported length FLmax can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

### Part No. Extension link e-chain® | Part No. Extension link e-tube | Part No. Extension link as an individual part

<table>
<thead>
<tr>
<th>Extension link e-chain®</th>
<th>Extension link e-tube</th>
<th>Extension link as an individual part</th>
</tr>
</thead>
</table>

Complete Part No. with the width index Bi1/Bi2/Bi3/etc. and the radius (R). Example: E4.56.10/20/10/200.0

With the E4.1 TUB, corrugated tubes can be reliably guided in parallel, saving space.
E4 snapclip - clip-on tiewrap
- For side-mounted applications, compatible with many E4 e-chains®
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
More information ► www.igus.eu/E4.56

Steel support tray for support of the lower run
- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available
More information ► From page 1264

Swarf up to +850°C
- e-tubes to withstand 850°C swarf, as a special option
- No hot swarf melting or embedding into the chain
- igus® igumid HT material
More information ► www.igus.eu/HT

Reduce assembly time - E4 e-chain® opener
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction
More information ► www.igus.eu/E4savetime

Heavy-duty version - for very long travels or heavy fill weights
- High torsional rigidity and tensile strength
- Robust steel mounting brackets
- For long-term operation in very humid environments
Series 4040HD·R8840HD. More information ► www.igus.eu/4040HD

 Roller crossbars - increase the service life of cables and hoses
- Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
- For sensitive hoses in restricted space
- Usable along the inner and/or outer radius, retrofit possible
More information ► www.igus.eu/roller-crossbar

E4.1 as a noise-optimised version with extension links. Unsupported application with high fill weight. Harnessed with rigid hydraulic hoses. The max. noise level can be reduced up to 9dB(A) using the optional rubber dampers
### E4.80 | H4.80 | R4.80

**Product range**

Stable due to undercut design, new very large inner height

---

**e-chains®** Series E4.80 - e-chains® Series H4.80 - e-chains® Series R4.80

**Crossbars every link** (crossbars removable along the inner and outer radius)

**Crossbars every 2nd link** (crossbars removable along the inner and outer radius)

**Fully enclosed** (id's operable along the outer radius, from one side)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi</th>
<th>Ba</th>
<th>E4.80</th>
<th>H4.80</th>
<th>R4.80</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4. H4.</td>
<td>80. R0</td>
<td>50</td>
<td>100</td>
<td>5.73</td>
<td>5.72</td>
</tr>
<tr>
<td>E4. H4.</td>
<td>80. G55</td>
<td>55</td>
<td>105</td>
<td>5.77</td>
<td>5.74</td>
</tr>
<tr>
<td>E4. H4.</td>
<td>80. R6</td>
<td>65</td>
<td>115</td>
<td>5.80</td>
<td>5.76</td>
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<td>E4. H4/R4.</td>
<td>80. R7</td>
<td>75</td>
<td>125</td>
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<td>E4. H4/R4.</td>
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<td>150</td>
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<td>5.85</td>
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<td>150</td>
<td>200</td>
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<td>6.01</td>
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</tbody>
</table>

**E4.80.30.300 = crossbars every link | H4.80.30.300 = crossbars every 2nd link | R4.80.30.300 = fully enclosed**

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### ESD - many sizes from stock

- Standardised product made from igumid ESD
- ESD material tested with over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information: [www.igus.eu/esd](http://www.igus.eu/esd)

---

### Installation dimensions

**Unsupported applications** | **Short travels**

---

**E4.1** | **E4.80-H4.80-R4.80**

**3D CAD, configurators, service life calculation and more** | [www.igus.eu/E4.1](http://www.igus.eu/E4.1)

---

More information: [www.igus.eu/E4.80](http://www.igus.eu/E4.80) | [www.igus.eu/H4.80](http://www.igus.eu/H4.80) | [www.igus.eu/R4.80](http://www.igus.eu/R4.80)
The e-chains® may end with either an inner or an outer link.

**KMA pivoting**
- Recommended for unsupported and gliding applications
- Recommended for vertical hanging and standing applications

**KMA locking**
- Recommended for unsupported and gliding applications
- Recommended for vertical hanging and standing applications

<table>
<thead>
<tr>
<th>Width Index</th>
<th>Part No. full set KMA pivoting</th>
<th>Part No. full set KMA locking</th>
<th>Width Index</th>
<th>Part No. full set KMA pivoting</th>
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<td>60</td>
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<td>E4.801.60</td>
</tr>
</tbody>
</table>

**Note:** The e-chains® may end with either an inner or an outer link. An outer link should always be the first e-chain® link at the moving end. Please specify the index A2 for event depending on an even or odd number of links required. Please add index A2 for the preassembled standard version with C-profile in the inner radius at the moving end and in the outer radius at the fixed end.

**E4.1 | e-chains® E4.80-H4.80 | Accessories**
- KMA mounting brackets
- Attachment from any side
- Pivoting
- Locking

**E4.1 | e-tubes R4.80 | Accessories**
- KMA mounting brackets
- Attachment from any side
- Pivoting
- Locking

www.igus.eu/E4.80
www.igus.eu/H4.80
www.igus.eu/R4.80
www.igus.eu/E4.1
3D CAD, configurators, service life calculation and more

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**More information:**
- 3D CAD, configurators, service life calculation and more
- Strain relief e.g. clamps, tie strap washers, nuts and plug-in clips are available from stock. The complete chainfix range with ordering options. From page 1300
E4.1 | Series E4.80-H4.80-R4.80 | Accessories

Interior separation | Increase cable service life

Previous generation of interior separation with other options ➤ www.igus.eu/E4.80

Note: Please be aware of the minimum lateral gap to the side links! e-tube: 40mm | e-chain®: 16mm

As standard separators are fitted every 2nd e-chain® link!

Standard - for any application
Separator with a wide base for maximum holding force in the e-chain®.

For even faster installation
Separator for igus® QuickLock crossbar 450.X.Q. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

For small cables
Separator with a narrow base for a large number of small cables side by side. Saves space in the e-chain®. Also available for QuickLock crossbars.

For side-mounted applications
Asymmetrical separator, for defined gap distance. No additional spacers required.

Locks securely in preset increments
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]

<table>
<thead>
<tr>
<th>X [mm]</th>
<th>un assembled</th>
<th>assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>050</td>
<td>520.050</td>
<td>521.050</td>
</tr>
<tr>
<td>065</td>
<td>520.065</td>
<td>521.065</td>
</tr>
<tr>
<td>075</td>
<td>520.075</td>
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<tr>
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<td>521.100</td>
</tr>
<tr>
<td>125</td>
<td>520.125</td>
<td>521.125</td>
</tr>
</tbody>
</table>

E4.1 | Series E4.80-H4.80-R4.80 | Accessories

Interior separation | To allow faster filling

Note: Please be aware of the minimum lateral gap to the side links! e-tube: 40mm | e-chain®: 16mm

As standard separators are fitted every 2nd e-chain® link!

Split separators
In order to fill e-chains® more easily and effectively, these separators can be split in the middle. This allows easier access to middle shelf partitions. Fast assembly and easy retrofit. 2 types available: with wide or narrow top.

Lean separators New
New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

Lean separator design - several layers of cables fitted quickly, save up to 50%* assembly time (*Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)
More interior separation options

Notch locking separator for increased holding force
Notch locking separators offer higher crossbar opening forces for high humidity and/or large hydraulic hoses. They can be positioned precisely and then locked in position.

Separator, one end locking
Offset slots for more variability

Rollclip*
Minimises abrasion of sensitive hoses. Simply clamps onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.
*Only for e-chain®

TUB | Safe guidance for corrugated tubes parallel to the e-chain®
- Additional, simple guidance for corrugated tubes on the outside of the e-chain®
- PMACLIP allows corrugated tubes with nominal widths 17, 23, 29, 36, 48mm to be easily clipped on
- Easy access to the corrugated tubes, fast replacement of the hoses
- Reduce assembly time and cost - easy to assemble, without any additional screws or tools
- The part number includes the e-chain® with TUB side sections; the PMACLIP support and the hose are ordered separately

<table>
<thead>
<tr>
<th>Part No. TUB</th>
<th>Part No. TUB</th>
<th>Part No. TUB</th>
<th>For corrugated tube nominal diameter Ø [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer link right*</td>
<td>Outer link left*</td>
<td>Outer link at both ends*</td>
<td>E4.80.XXXTUB.R,0</td>
</tr>
<tr>
<td>E4.80.100TUB.R,0</td>
<td>E4.80.100TUBL,R,0</td>
<td>E4.80.100TUB.R,0</td>
<td>17 / 23 / 29 / 36 / 48</td>
</tr>
</tbody>
</table>

*As viewed from the fixed end

Part number appended with width index XXX: Bi and radius (R) e.g.
E4.80.100TUB,R.150.0 = with TUB outer sections every 2nd right hand link

Product range | PMACLIP | Support, one-piece, with safety clip

PMACLIP support - one-piece construction with safety clip, suitable for corrugated tubes

<table>
<thead>
<tr>
<th>Part No.</th>
<th>NW</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>H</th>
<th>E</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-BFH-17-0</td>
<td>17</td>
<td>30.0</td>
<td>20.0</td>
<td>34.0</td>
<td>20.0</td>
<td>68.0</td>
<td>M6</td>
</tr>
<tr>
<td>I-BFH-23-0</td>
<td>23</td>
<td>38.5</td>
<td>20.0</td>
<td>42.0</td>
<td>24.0</td>
<td>85.0</td>
<td>M6</td>
</tr>
<tr>
<td>I-BFH-29-0</td>
<td>29</td>
<td>45.5</td>
<td>20.0</td>
<td>48.0</td>
<td>27.0</td>
<td>99.0</td>
<td>M6</td>
</tr>
<tr>
<td>I-BFH-36-0</td>
<td>36</td>
<td>55.5</td>
<td>20.0</td>
<td>56.0</td>
<td>31.0</td>
<td>119.0</td>
<td>M6</td>
</tr>
<tr>
<td>I-BFH-48-0</td>
<td>48</td>
<td>67.5</td>
<td>20.0</td>
<td>68.0</td>
<td>37.0</td>
<td>143.0</td>
<td>M6</td>
</tr>
</tbody>
</table>
Extender crossbars with fixed width | Safe guiding for large hoses

- Suitable for hoses with a maximum outer diameter of 270mm
- Variant 1 extender crossbar with fixed width to combine with standard crossbars
- Variant 2 extender crossbar with fixed width attached directly on the side link
- Optionally operable along the inner “Z” or outer “E” radius
- Gliding with crossbars assembled along the outer radius and a special guide trough

<table>
<thead>
<tr>
<th>Part No. extender crossbar with fixed width, as individual parts</th>
<th>Hose Ø [mm]</th>
<th>Extender crossbar shape</th>
<th>1 Fitted to side link</th>
<th>2 Combine with openable crossbars</th>
</tr>
</thead>
<tbody>
<tr>
<td>450.15RD115</td>
<td>115</td>
<td>round</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.25D150</td>
<td>150</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.30D200</td>
<td>200</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.35D250</td>
<td>220</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.40D300</td>
<td>270</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.20HD150</td>
<td>150</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.25HD200</td>
<td>200</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.30HD250</td>
<td>220</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Order example: 1 combined with openable crossbars
To receive extender crossbar RHD115 pre-fitted along the outer radius of the chain®, please add index E: E4.80.10/15RHD115/10.200.0
To receive extender crossbar RHD115 pre-fitted along the inner radius of the chain®, please add index Z: E4.80.10/15RHDZ115/10.200.0

Order example: 2 fitted to side link
To receive extender crossbar RD115 pre-fitted along the outer radius of the chain®, please add index E: E4.80.17RD115/10.200.0
To receive extender crossbar RD115 pre-fitted along the inner radius of the chain®, please add index Z: E4.80.17RDZ115/10.200.0

Extension links | For extremely wide e-chains® up to 3.0m

- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3,000mm
- Unsupported length FLG max. can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

<table>
<thead>
<tr>
<th>Part No. extension link as an individual part</th>
<th>Part No. extension link e-chain®</th>
<th>Part No. extension link e-tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.80M.02.R,0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Complete Part No. with the width index B1/B2/B3/etc. and the radius (R). Example: E4.80.10/20/10.200.0

Due to the undercut design igus® E4.1 series feature high lateral stability. High lateral accelerations of up to 8 m/s² can be managed on this milling machine for bicycles.
E4.80 H4.80 R4.80

E4 snapclip - clip-on tiewrap
- For side-mounted applications, compatible with many E4 e-chains®
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
More information ➤ www.igus.eu/E4.80

Steel support tray for support of the lower run
- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available
More information ➤ From page 1264

Swarf up to +850°C
- e-tubes to withstand 850°C swarf, as a special option
- No hot swarf melting or embedding into the chain
- igus® igumid HT material
More information ➤ www.igus.eu/HT

Reduce assembly time - E4 e-chain® opener
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction
More information ➤ www.igus.eu/E4savetime

Heavy-duty version - for very long travels or heavy fill weights
- High torsional rigidity and tensile strength
- Robust steel mounting brackets
- For long-term operation in very humid environments
Series 5050HD-9850HD. More information ➤ www.igus.eu/5050HD

Roller crossbars - increase the service life of cables and hoses
- Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
- For sensitive hoses in restricted space
- Usable along the inner and/or outer radius, retrofit possible
More information ➤ www.igus.eu/roller-crossbar

E4.1 | Application example

igus® E4.1 in an earth drilling machine. This vertically standing installation works even under strong vibration and harsh environments due to its plastic construction and having no loose parts such as rivets or screws.

More information ➤ www.igus.eu/E4.1

3D CAD, configurators, service life calculation and more ➤ www.igus.eu/E4.1
e-chains® | Series E4.112 | Crossbars every link (crossbars removable along the inner and outer radius)
e-tubes | Series R4.112 | Fully enclosed (lids openable along the outer radius, from one side)

Part No. | Bi | Ba | E4.112 \( R_{4.112} \)
--- | --- | --- | ---
E4. – | 112, 05, \( R_0 \) | 50 | 102 ± 7.78 –
E4. – | 112, 055, \( R_0 \) | 55 | 107 ± 7.81 –
E4. – | 112, 06, \( R_0 \) | 55 | 117 ± 7.84 –
E4. – | 112, 07, \( R_0 \) | 55 | 127 ± 7.88 –
E4. – | 112, 08, \( R_0 \) | 67 | 139 ± 7.94 –
E4. – | 112, 10, \( R_0 \) | 100 | 152 ± 7.99 –
E4. – | 112, 11, \( R_0 \) | 112 | 164 ± 8.07 –
E4. – | 112, 12, \( R_0 \) | 125 | 177 ± 8.12 –
E4. – | 112, 13, \( R_0 \) | 137 | 189 ± 8.20 –
E4. – | 112, 15, \( R_0 \) | 150 | 202 ± 8.23 –
E4. – | 112, 16, \( R_0 \) | 162 | 214 ± 8.30 –
E4. – | 112, 169, \( R_0 \) | 169 | 222 ± 8.35 –
E4. – | 112, 17, \( R_0 \) | 175 | 227 ± 8.38 –
E4. – | 112, 182, \( R_0 \) | 182 | 235 ± 8.41 –
E4. – | 112, 18, \( R_0 \) | 187 | 239 ± 8.45 –
E4. – | 112, 20, \( R_0 \) | 200 | 252 ± 8.49 ± 0.15
E4. – | 112, 207, \( R_0 \) | 207 | 260 ± 8.52 –
E4. – | 112, 21, \( R_0 \) | 212 | 264 ± 8.53 –
E4. – | 112, 22, \( R_0 \) | 225 | 277 ± 8.58 –
E4. – | 112, 23, \( R_0 \) | 237 | 289 ± 8.68 –
E4. – | 112, 24, \( R_0 \) | 250 | 302 ± 8.72 ± 0.19
E4. – | 112, 26, \( R_0 \) | 262 | 314 ± 8.78 –
E4. – | 112, 27, \( R_0 \) | 275 | 327 ± 8.84 –

Part No. | Bi | Ba | E4.112 \( R_{4.112} \)
--- | --- | --- | ---
E4. – | 28, \( R_0 \) | 287 | 339 ± 8.88 –
E4. – | 30, \( R_0 \) | 300 | 352 ± 9.07 ± 1.42
E4. – | 31, \( R_0 \) | 312 | 364 ± 9.00 –
E4. – | 32, \( R_0 \) | 325 | 377 ± 9.06 –
E4. – | 33, \( R_0 \) | 337 | 389 ± 9.14 –
E4. – | 35, \( R_0 \) | 350 | 402 ± 9.27 ± 1.07
E4. – | 36, \( R_0 \) | 362 | 414 ± 9.21 –
E4. – | 37, \( R_0 \) | 375 | 427 ± 9.27 –
E4. – | 38, \( R_0 \) | 387 | 439 ± 9.35 –
E4. – | 40, \( R_0 \) | 400 | 452 ± 9.52 ± 1.27
E4. – | 41, \( R_0 \) | 412 | 464 ± 9.47 –
E4. – | 42, \( R_0 \) | 425 | 477 ± 9.66 –
E4. – | 43, \( R_0 \) | 437 | 489 ± 9.56 –
E4. – | 45, \( R_0 \) | 450 | 502 ± 9.77 –
E4. – | 46, \( R_0 \) | 462 | 514 ± 9.74 –
E4. – | 47, \( R_0 \) | 475 | 527 ± 9.76 –
E4. – | 48, \( R_0 \) | 487 | 539 ± 9.92 –
E4. – | 50, \( R_0 \) | 500 | 552 ± 9.98 ± 1.39
E4. – | 51, \( R_0 \) | 512 | 564 ± 9.92 –
E4. – | 52, \( R_0 \) | 525 | 577 ± 10.09 –
E4. – | 53, \( R_0 \) | 537 | 589 ± 10.09 –
E4. – | 55, \( R_0 \) | 550 | 602 ± 10.36 –
E4. – | 60, \( R_0 \) | 600 | 652 ± 10.51 –

*Radius not available for e-tubes

Available bend radii

- \( R \) (mm): 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 750 | 1,000
- Complete Part No. with required radius \( R \). Example:
  - E4.112, 30.300.0 x e-chains every link / R4.112, 30.300.0 x fully enclosed

---

**Gliding applications | For long travels from 14m to max. 450m**

- **Formula**: \( LK = S/2 + K2 \)
- **Note**: We recommend the project planning of such a system to be carried out by igus®. In case of travels between 11 and 14m we recommend an e-chain® with a longer unsupported length.
Steel pivoting | Recommended for unsupported and gliding applications
Steel locking | Recommended for vertical hanging and vertical standing applications

### Steel pivoting

<table>
<thead>
<tr>
<th>Part No. full set</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.11210.34.VS.E</td>
<td>Full set (both ends), ending with outer side link, screwed - standard</td>
<td></td>
</tr>
<tr>
<td>E4.11210.34.VS.E</td>
<td>Full set (both ends) - beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - standard</td>
<td></td>
</tr>
</tbody>
</table>

Stainless steel version available. Please add index E (Material: stainless steel 1.4301)

### Steel locking

<table>
<thead>
<tr>
<th>Part No. full set</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.11210.12.VS.E</td>
<td>Full set (both ends), ending with outer side link, screwed - standard</td>
<td></td>
</tr>
<tr>
<td>E4.11210.12.VS.E</td>
<td>Full set (both ends) - beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - standard</td>
<td></td>
</tr>
</tbody>
</table>

Stainless steel version available. Please add index E (Material: stainless steel 1.4301)

**Note:** Depending on the chain length, the e-chain® may end with either an outer or an inner side link. For the best appearance, make sure the e-chain® ends with outer side links whenever possible. (with odd number of links)

**Strain relief**

E.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300
E4.1 | e-tubes R4.112 | Accessories (e-chains® ➤ previous page)

Interior separation | Increase cable service life | Only for e-tubes

Previous generation of interior separation with other options ➤ www.igus.eu/R4.112

Note: Please be aware of the minimum lateral gap to the side links! e-tubes: 32mm
As standard separators are fitted every 2nd e-chain® link!

Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Standard - for any application
Separator with a wide base for maximum holding force in the e-chain®.

Split separators*
In order to fill e-chains® more easily and effectively, these separators can be split in the middle. This allows easier access to middle shelf partitions. Fast assembly and easy retrofit. 2 types available: with wide or narrow top.

Lean separators*
New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

*Only for e-chains®

Lean separator design - several layers of cables fitted quickly, save up to 50% assembly time
(‘Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)

More interior separation options

Notch locking separator for increased holding force
Notch locking separators* offer higher crossbar opening forces with high humidity and/or large hydraulic hoses. They can be positioned precisely and then locked in position.

Rollclip*
Minimises abrasion of sensitive hoses. Simply clamps onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

*Only for e-chain®


E4.1 | e-chains® E4.112 | Accessories

Interior separation | To allow faster filling

Split separators* 16mm
As standard separators are fitted every 2nd e-chain® link!

Lean separator* new
New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

*Only for e-chains®

Lean separator design - several layers of cables fitted quickly, save up to 50% assembly time
(‘Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)

More interior separation options

Notch locking separator for increased holding force
Notch locking separators* offer higher crossbar opening forces with high humidity and/or large hydraulic hoses. They can be positioned precisely and then locked in position.

Rollclip*
Minimises abrasion of sensitive hoses. Simply clamps onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

*Only for e-chain®

E4.1 | Series E4.112-R4.112 | Further accessories

Extender crossbar with fixed width

- Suitable for hoses with a maximum outer diameter of 270mm
- Variant: extender crossbar with fixed width to combine with standard crossbars
- Variant: extender crossbar with fixed width attached directly on the side link
- Optionally openable along the inner “Z” or outer “E” radius
- Gliding with crossbars assembled along the outer radius and a special guide trough

Extender crossbars with fixed width | Safe guiding for large hoses

<table>
<thead>
<tr>
<th>Part No. extender crossbar with fixed width, as individual parts</th>
<th>Hose Ø [mm]</th>
<th>Extender crossbar shape</th>
<th>Fitted to side link</th>
<th>Combine with openable crossbars</th>
</tr>
</thead>
<tbody>
<tr>
<td>450.15RHD115</td>
<td>115</td>
<td>round</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.17RD115</td>
<td>115</td>
<td>round</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.25D150</td>
<td>150</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.30D200</td>
<td>200</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.35D250</td>
<td>220</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.40D300</td>
<td>270</td>
<td>square</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>450.20HD150</td>
<td>150</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.25HD200</td>
<td>200</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>450.30HD250</td>
<td>220</td>
<td>square</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Order example: Combined with openable crossbars

To receive extender crossbar RH115 pre-fitted along the outer radius of the chain®, please add index E4.112.10/RHDE115/10.R.0

To receive extender crossbar RH115 pre-fitted along the inner radius of the chain®, please add index E4.112.10/RHDE115/10.R.0

Extension links

- For extremely wide e-chains® up to 3.0m
- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3,000mm
- UnsUPPORTED length FLg max. can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension link e-chain®</td>
<td>Extension link e-tube</td>
<td>Extension link as an individual part</td>
</tr>
</tbody>
</table>

Complete Part No. with the width index Bi1/Bi2/Bi3/etc. and the radius (R). Example: E4.112.10/R20/10.R.0

Swarf up to +850°C

- e-tubes to withstand 850°C swarf, as a special option
- No hot swarf melting or embedding into the chain
- igumid® HT material

More information ► www.igus.eu/HT

Reduce assembly time - E4 e-chain® opener

- e-chain® opener tools for easy opening and closing of e-chains®
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ► www.igus.eu/E4savetime

Roller crossbars - increase the service life of cables and hoses

- Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
- For sensitive hoses in restricted space
- Usable along the inner and/or outer radius, retrofit possible

More information ► www.igus.eu/roller-crossbar

e-chains® | Series E4.162 | Crossbars every link (crossbars removable along the inner and outer radius)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi</th>
<th>Ba</th>
<th>E4.162</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.162 .20 . R.0</td>
<td>200</td>
<td>256</td>
<td>162</td>
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<tr>
<td>E4.162 .25 . R.0</td>
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<tr>
<td>E4.162 .32 . R.0</td>
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<td>162</td>
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<tr>
<td>E4.162 .35 . R.0</td>
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<td>406</td>
<td>162</td>
</tr>
</tbody>
</table>

Available bend radii

<table>
<thead>
<tr>
<th>R (mm)</th>
<th>250</th>
<th>300</th>
<th>350</th>
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<th>450</th>
<th>500</th>
<th>550</th>
<th>600</th>
<th>750</th>
<th>1,000</th>
</tr>
</thead>
</table>

Part No. with required radius (R). Example: E4.162.40.350.0 = crossbars every link

Reduce assembly time - E4 e-chain® opener

- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime

E4.162 | Series E4.162 | Product range

heavy fill weights, new large inner height

E4.162 | Series E4.162 | Installation dimensions

Unsupported applications | Short travels

Gliding applications | For long travels from 14m to max. 450m

The required clearance height:

\[ H_F = H + 100 \text{mm} \]

(with 5.0kg/m fill weight)

Reduce assembly time - E4 e-chain® opener

- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime
Steel pivoting | Recommended for unsupported and gliding applications
Steel locking | Recommended for vertical hanging and vertical standing applications

### Steel pivoting

- **Part No. full set**
- **Description**
  - **mounting bracket**
    - E4.16210.0.F.1.12.VS.E: Full set (both ends), ending with outer side link, **screwed** - standard
    - E4.16210.0.F.1.12.VS.E: Full set (both ends) - beginning with outer side link (moving end), ending with inner side link (fixed end), **screwed** - standard

Stainless steel version available. Please add index [E](Material: stainless steel 1.4301)

### Steel locking

- **Part No. full set**
- **Description**
  - **mounting bracket**
    - E4.16210.0.F.1.12.VS.E: Full set (both ends), ending with outer side link, **screwed** - standard
    - E4.16210.0.F.1.12.VS.E: Full set (both ends) - beginning with outer side link (moving end), ending with inner side link (fixed end), **screwed** - standard

Stainless steel version available. Please add index [E](Material: stainless steel 1.4301)

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**Note:** Depending on the chain length, the e-chain® may end with either an outer or an inner side link. For the best appearance, make sure the e-chain® ends with outer side links whenever possible. (with odd number of links)

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**Strain relief** e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300

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**E4.1 | Series E4.162 | Accessories**

**Steel mounting brackets | Pivoting | Locking**

- **Fixed end**
  - E4.16210.4
  - E4.16210.2

- **Moving end**
  - E4.16210.3
  - E4.16210.0.40
  - E4.16210.10

---

**E4.1 | Series E4.162 | Accessories**

**Interior separation | Increase cable service life**

**Note:** Please be aware of the minimum lateral gap to the side links! e-chain® 5mm

As standard separators are fitted every 2nd e-chain® link!

**Standard - for any application**
Separator with a wide base for maximum holding force in the e-chain®.

**Horizontal separation**
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

**Shelves Width = X [mm]**

<table>
<thead>
<tr>
<th>X [mm]</th>
<th>unassembled</th>
<th>assembled</th>
<th>unassembled</th>
<th>assembled</th>
<th>unassembled</th>
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<tbody>
<tr>
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<td>1121.050</td>
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<td>1121.150</td>
<td>1120.300</td>
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</tbody>
</table>

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**3D CAD, configurators, service life calculation and more ► [www.igus.eu/E4.1](http://www.igus.eu/E4.1) | 647**
E4.1 | Series 800 | Product range
For tough applications, very large inner height

Part No. | Bi [mm] | Ba [mm] | 800 [kg/m]
--- | --- | --- | ---
800.20, R.0 | 200 | 260 | 15.09
800.25, R.0 | 250 | 310 | 15.50
800.30, R.0 | 300 | 360 | 15.89
800.32, R.0 | 325 | 385 | 16.15
800.35, R.0 | 350 | 410 | 16.22

Available bend radii
R [mm]: 325, 350, 400, 450, 500, 600, 750, 1,000
Complete Part No. with required radius (R). Example: 800.40, 400.0 = crossbars every link

Reduction assembly time - E4 e-chain® opener
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime

E4.1 | Series 800 | Installation dimensions
Unsupported applications | Short travels

The required clearance height: \( H_F = H + 100 \text{mm} \) (with 5.0 kg/m fill weight)

Gliding applications | For long travels from 15m to max. 450m

Reduce assembly time - E4 e-chain® opener
- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ➤ www.igus.eu/E4savetime
E4.1 | Series 800 | Accessories
Steel mounting brackets | Pivoting

Steel pivoting | For unsupported, gliding, vertical hanging and vertical standing applications
Part No. full set | Description
--- | ---
steel pivoting | mounting bracket
8000.12 VS | Full set (both ends), ending with outer side link, screwed - standard
8000.12 VS | Full set (both ends) - beginning with outer side link (moving end) - ending with inner side link (fixed end), screwed only on the moving end - standard

Steel version available. Please add index E! (Material: stainless steel 1.4301)

Note: Depending on the chain length, the e-chain® may end with an either an outer or an inner side link. For the best appearance, make sure the e-chain® ends with outer side links whenever possible. (with odd number of links)

Strain relief e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options | From page 1300

E4.1 | Series 800 | Accessories
Interior separation

Slotted separator
For a vertical subdivision. The slot allows basic vertical/horizontal shelving arrangements.

Spacer
Separators can be fixed in position using spacers. The available interior height is reduced by 2mm per spacer (4mm when spacers are fitted on both sides). To avoid this, the parts can also be installed on the outside of the opening crossbar.

Modular shelving system | Series 800

Secure separation even for large cables. Easy assembly. Robust, even for large cable diameters. Modular. Widths from 50 to 600mm

Part No. | Part No. | Design | Part No. | Part No. | Width (mm)
--- | --- | --- | --- | --- | ---
un assembled | assembled | Snap in tab | Separator | Crossbar | 50-600
8001H1 | 8011H1 | one side | 8001 | 450.XX.A | 50-600
8001H2 | 8011H2 | both sides | 8001 | 450.XX.A | 50-600

Note: Please be aware of the minimum lateral gap to the side links! e-chain®: 6mm
As standard separators are fitted every 2nd e-chain® link!

More information | www.igus.eu/800
3D CAD, configurators, service life calculation and more | www.igus.eu/E4.1

Slotted separator unassembled assembled 6005.XX Spacer for e-chains® unassembled 6005.XX assembled 6015.XX
XX (mm) = 10, 15, 20

Spacer
for e-chains® unassembled assembled 6005.XX 6015.XX
XX

Part no. Part no. Design Part no. Part no. Width
unassembled assembled Snap in tab Separator Crossbar

---

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**E4.1 | Series 840 | Product range**

For tough applications, very large inner height

---

**e-chains® | Series 840 | Crossbars every link** (crossbars removable along the inner and outer radius)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bi (mm)</th>
<th>Ba (mm)</th>
<th>840</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-chains®</td>
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<tr>
<td>840.13, R.0</td>
<td>100</td>
<td>160</td>
<td>13.84</td>
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<tr>
<td>840.15, R.0</td>
<td>113</td>
<td>173</td>
<td>13.87</td>
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<tr>
<td>840.16, R.0</td>
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<td>185</td>
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<td>840.17, R.0</td>
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<td>210</td>
<td>14.13</td>
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<tr>
<td>840.20, R.0</td>
<td>163</td>
<td>223</td>
<td>14.17</td>
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<td>840.21, R.0</td>
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<td>840.23, R.0</td>
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<td>840.25, R.0</td>
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<td>840.26, R.0</td>
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<tr>
<td>840.35, R.0</td>
<td>313</td>
<td>373</td>
<td>15.06</td>
</tr>
</tbody>
</table>

Available bend radii

\[ R \text{ [mm]} = 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1,000 \]

Complete Part No. with required radius (R). Example: 840.40.400.0 = crossbars every link

---

Reduce assembly time - E4 e-chain® opener

- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information - www.igus.eu/E4savetime

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**E4.1 | Series 840 | Installation dimensions**

Unsupported applications | Short travels

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**More information** - www.igus.eu/840
Steel pivoting | For unsupported, gliding, vertical hanging and vertical standing applications

<table>
<thead>
<tr>
<th>Part No. full set</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4.12.VS.E</td>
<td>Steel pivoting mounting bracket</td>
</tr>
<tr>
<td>8000.2</td>
<td>Full set (both ends), ending with outer side link, screwed - standard</td>
</tr>
<tr>
<td>8000.3</td>
<td>Full set (both ends) - beginning with outer side link (moving end) - ending with inner side link (fixed end), screwed only on the moving end - standard</td>
</tr>
</tbody>
</table>

Stainless steel version available. Please add index .E (Material: stainless steel 1.4301)

Note: Depending on the chain length, the e-chain® may end with either an outer or an inner side link. For the best appearance, make sure the e-chain® ends with outer side links whenever possible. (with odd number of links)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ➤ From page 1300

Separator
For a vertical subdivision. Offers security due to its wide base design, also when used with large cables or hoses.

Spacer
Separators can be fixed in position using spacers. The available interior height is reduced by 2mm per spacer (4mm when spacers are fitted on both sides). To avoid this, the parts can also be installed on the outside of the opening crossbar.
E4.350 • Series E4.350 | Product range
The largest plastic e-chain® - inner height 350mm

E4.350 • Series E4.350 | Crossbars every link (crossbars removable along the inner and outer radius)

Part No. | \( E_4 \) | \( E_3 \) | \( E_{350} \)
--- | --- | --- | ---
E4.350.400.R.0 | 400 | 540 | 61.9
E4.350.500.R.0 | 500 | 640 | 65.7
E4.350.600.R.0 | 600 | 740 | 69.6

Available bend radii
\( R \) (mm) | 500 | 750 | 1,000
--- | --- | --- | ---
Complete Part No. with required radius (\( R \)). Example: E4.350.500.500.0 = crossbars every link

igus® Series E4.350 - inner height: 350mm
- Please ask for our advice when using this series
- Please design with support from the igus® project team
- Please consult igus®
  Phone +49 2203 9649-800

igus® Series E4.350 now available as ESD-version
- Safe electrostatic discharge through material and design
- Permanently constant discharge due to a positive connection of the e-chain® links to one another
More information ➤ www.igus.eu/ESD

E4.350 • Series E4.350 | Installation dimensions
Unsupported applications | Short travels

The largest plastic e-chain® - inner height 350mm

If a gliding application is required for a long travel, please consult igus®.

Steel e-chains® |
Series E4.350 |
Crossbars every link (crossbars removable along the inner and outer radius)

Part No. | \( \text{Bi} \) [mm] | \( \text{Ba} \) [mm] | \( E_{350} \) [kg/m]
--- | --- | --- | ---
E4.350.400.R.0 | 700 | 840 | 73.4
E4.350.500.R.0 | 800 | 940 | 77.2

The required clearance height: \( H_F = H + 150 \text{mm} \)

igus® Series E4.350 - inner height: 350mm
- Please ask for our advice when using this series
- Please design with support from the igus® project team
- Please consult igus®
  Phone +49 2203 9649-800

More information ➤ www.igus.eu/ESD

igus® Series E4.350 now available as ESD-version
- Safe electrostatic discharge through material and design
- Permanently constant discharge due to a positive connection of the e-chain® links to one another
More information ➤ www.igus.eu/ESD

The world’s largest polymer e-chain®: lighter than comparable steel chains, it effortlessly carries more than 100kg of fill weight per metre on a 138m travel.

More information ➤ www.igus.eu/E4.1

3D CAD, configurators, service life calculation and more ➤ www.igus.eu/E4.1
Steel mounting brackets

Mounting brackets for series E4.350 according to your requirements. Steel or stainless steel available. (Material: stainless steel 1.4301)

Robust steel mounting bracket for secure fixation and connection.