e-chain system® E2 Micro
Series 03

Features & Benefits
1. Mounting bracket with integrated strain relief
2. One-piece, non snap-open e-chain®
3. Very lightweight - low price
4. igus® smallest e-chain® - interior dimensions .20” x .20” (5 x 5 mm)
5. Dirt-repellant exterior
6. Available as E-Z style e-chain, See Chapter 2
7. Patented push-button design for better stability

Assembly Tips
Easy to assemble and disassemble

Usage Guidelines
• If quieter operation is required
• If cost is a factor
• If snap-open links are not necessary

Order Example: Complete e-chain®
Please indicate chain length or number of links. Example:

3.28 ft (1 m) 03-05-028-0
e-chain®
1 Set 03-05-12Z
Mounting Bracket
e-chain system® E2 Micro
Series 03
Installation Dimensions

Short travel, unsupported length
- FLB = unsupported with permitted sag
- FLG = unsupported with straight upper run

Further information ➤ Design, Chapter 1

Un-supported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height. Please refer to Installation dimensions for further details.

Legend
- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- D = Overlength e-chain® radius in final position
- K = π • R + safety buffer
- HF = Required clearance height

*If the mounting bracket location is set lower

The required clearance height: \( H_F = H + 0.20 \text{ in. (5 mm)} \) (with 0.067 lbs/ft (0.1 kg/m) fill weight.

Please consult igus® if space is particularly restricted.

<table>
<thead>
<tr>
<th>R</th>
<th>FLB (in)</th>
<th>FLG (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.39 (10)</td>
<td>0.47 (12)</td>
<td>0.59 (15)</td>
</tr>
<tr>
<td>1.10 (28)</td>
<td>1.26 (32)</td>
<td>1.50 (38)</td>
</tr>
<tr>
<td>1.14 (29)</td>
<td>1.22 (31)</td>
<td>1.34 (34)</td>
</tr>
<tr>
<td>2.17 (55)</td>
<td>2.36 (60)</td>
<td>2.76 (70)</td>
</tr>
</tbody>
</table>

Pitch per link: = \( 0.39 \) (10 mm)

Links per ft (m): = 30.47 (100)

For center mount applications:

Chain length = \( \frac{S}{2} + K \)

Speed / acceleration FLG
max. 65.6 ft/s (20 m/s) / max. 656 ft/s² (200 m/s²)

Speed / acceleration FLB
max. 9.84 ft/s (3 m/s) / max. 19.69 ft/s² (6 m/s²)

Gliding speed / acceleration (maximum)
max. 9.84 ft/s (3 m/s) / max. 32.8 ft/s² (10 m/s²)

Material - permitted temperature
igumid NB / -40°F (-40°C) up to +176°F (+80°C)

Flammability Class, igumid NB
VDE 0304 IIC UL94 V2

Technical Data
Details of material properties ➤ Chapter 1
## Series 03 - e-chain® non snap-open

### Part Number Structure

```
<table>
<thead>
<tr>
<th>Color - Black</th>
<th>Width</th>
<th>Bending radius</th>
<th>Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>05</td>
<td>028</td>
<td>0</td>
</tr>
</tbody>
</table>
```

### Part Numbering System
- **Bi**: Color - Black
- **Ba**: Bending radius
- **Series**: Width

### Weight and Pitch
- **Weight**: lbs/ft (kg/m)
- **Pitch**: .39 in. (10 mm) per link

### Dimensions

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Bi</th>
<th>Ba</th>
<th>Weight</th>
<th>Pitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-05-0</td>
<td>.20</td>
<td>.34</td>
<td>.027 (0.04)</td>
<td>30.47 (100)</td>
</tr>
<tr>
<td>03-07-0</td>
<td>.28</td>
<td>.42</td>
<td>.034 (0.05)</td>
<td></td>
</tr>
<tr>
<td>03-10-0</td>
<td>.39</td>
<td>.54</td>
<td>.040 (0.06)</td>
<td></td>
</tr>
</tbody>
</table>

### Radii

- **R**: 0.39 (10), 0.47 (12), 0.59 (15), 0.71 (18), 1.10 (28)
- **H**: 1.14 (29), 1.22 (31), 1.34 (34), 1.46 (37), 1.85 (47)
- **D**: 2.17 (55), 2.36 (60), 2.76 (70), 3.15 (80), 4.33 (110)

### Notes
- 0=Standard color black. For other colors see Chapter 1
Polymer, one-piece
- One-piece mounting bracket
- Corrosion resistant
- Available preassembled
- Rapid installation through
  adaptor plate

Part Number Structure

Full set, for both ends:
- 03-05-12Z
  Full set, each part with pin/bore
Single-part order:
- 03-05-12Z
  Mounting bracket with bore
- 03-05-2Z
  Mounting bracket with pin

<table>
<thead>
<tr>
<th>Chain Width</th>
<th>Part No. Full Set</th>
<th>Dimension A (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-05</td>
<td>03-05-12Z</td>
<td>.34 (8.7)</td>
</tr>
<tr>
<td>-07</td>
<td>03-07-12Z</td>
<td>.42 (10.7)</td>
</tr>
<tr>
<td>-10</td>
<td>03-10-12Z</td>
<td>.54 (13.7)</td>
</tr>
</tbody>
</table>

Additional Accessories

03-10-QF = Adapter plate for all sizes
The adapter has broken edges, so that it can be adapted to the respective chain width. It is not absolutely necessary for attaching the mounting brackets. The mounting brackets can also be screwed on without the adapter plate.