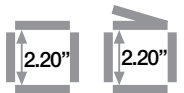


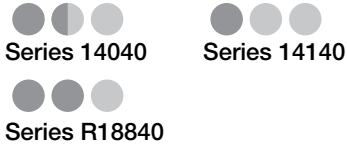
14040
14140
R18840



e-chain system® E4 light Series 14040/14140/R18840



Price Index



Special Features / Options

ESD classification:
Electrically conductive ESD/
ATEX version upon request

High torsional rigidity

Side-mounted - unsupported

Assembly Tips



Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action

Other Installation Methods

Vertical, hanging ≤ 262 ft (80 m)

Vertical, standing ≤ 19.69 ft (6 m)

Side-mounted, un supp. ≤ 6.56 ft (2 m)

Rotary requires further calculation

Usage Guidelines



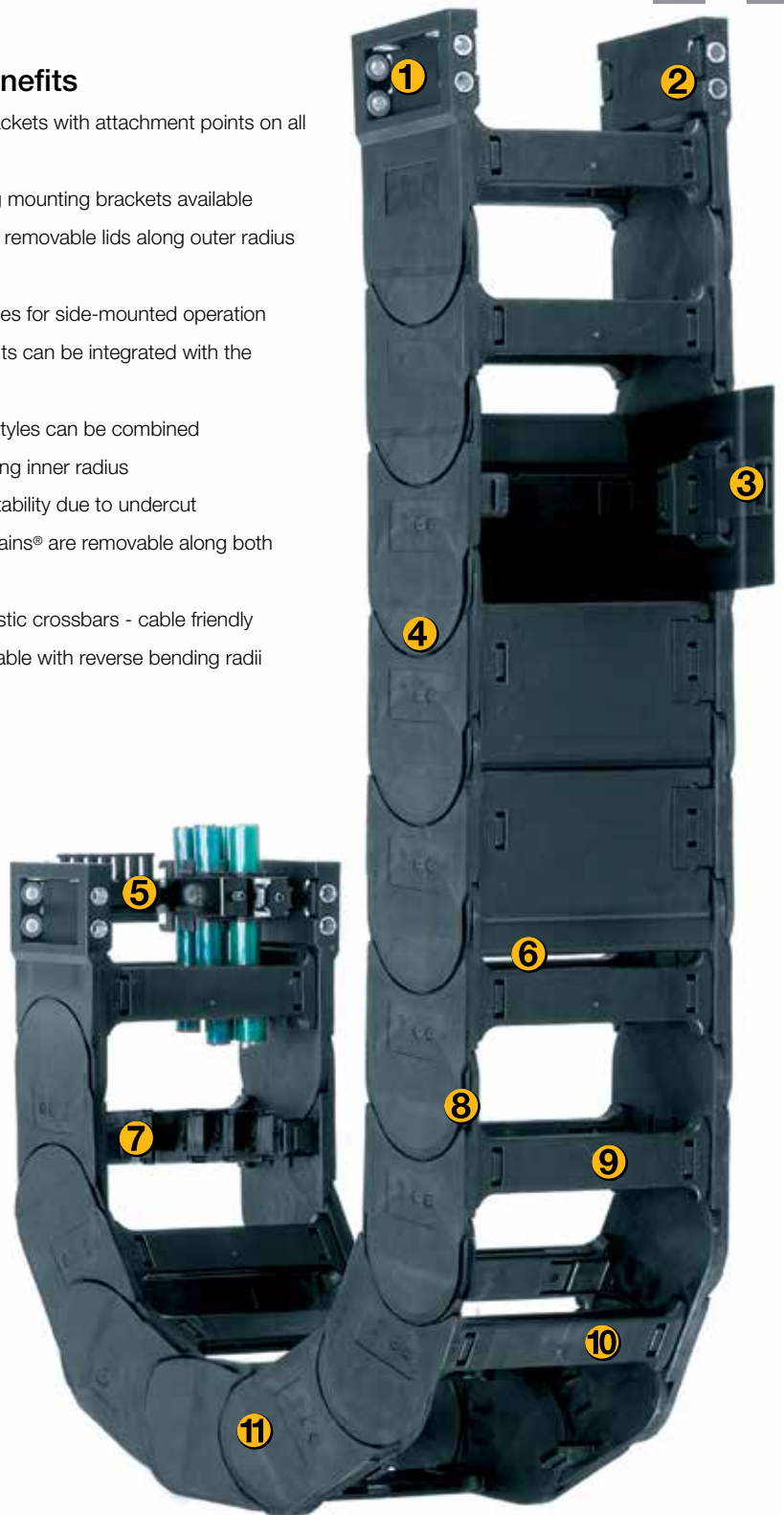
- If a simpler low-cost solution is required
- For maximum inner width with minimal outer width
- If the Series 400 is too large



- If a quieter version is required
➤ Series E6-52
- If side-mounted chain/tube with a long unsupported travel is required
➤ Series E4-56/H4-56/R4-56
- If increased unsupported lengths and longer travels are required
➤ Series E4-56/H4-56/R4-56

Features & Benefits

- 1 KMA mounting brackets with attachment points on all sides
- 2 Locking or pivoting mounting brackets available
- 3 Hinged snap-open removable lids along outer radius of e-tube
- 4 Lateral glide surfaces for side-mounted operation
- 5 Strain relief elements can be integrated with the mounting bracket
- 6 Closed and open styles can be combined
- 7 Removable lids along inner radius
- 8 High side-mount stability due to undercut
- 9 Crossbars on e-chains® are removable along both radii
- 10 Wide, rounded plastic crossbars - cable friendly
- 11 e-chain® also available with reverse bending radii



Order Example: Complete e-chain®

Please indicate chain length or number of links. Example:

16.4 ft (5 m) 14040-30-300-0

e-chain®

With 2 separators 56.1.1 assembled every 2nd link

Interior Separation

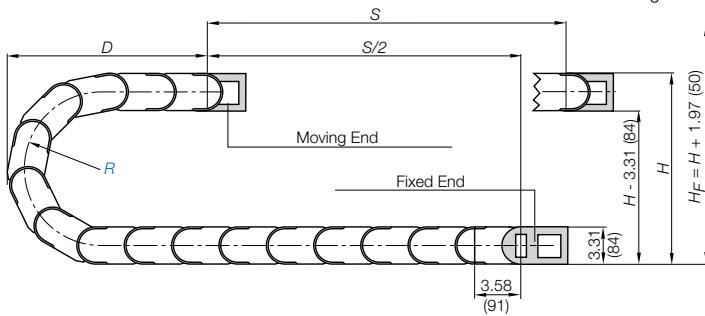
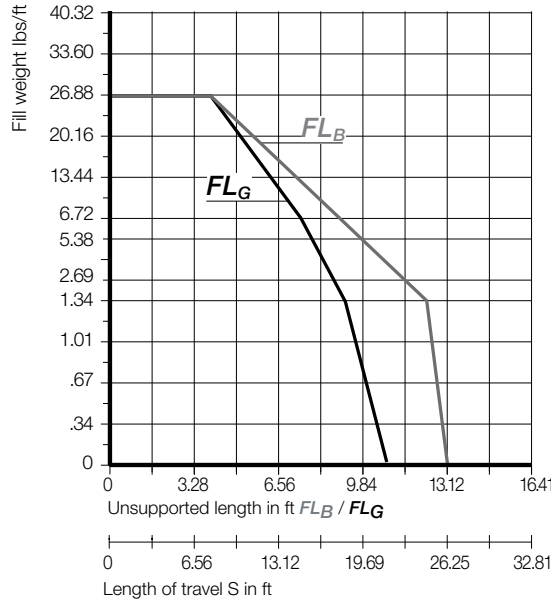
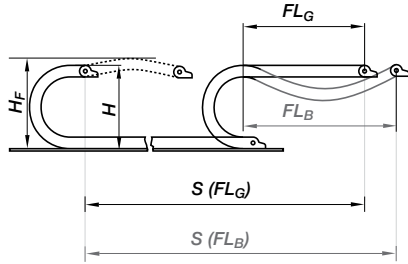
1 Set 141400-30-12P

Mounting Bracket

e-chain system® E4 light Series 14040/14140/R18840 Installation Dimensions

Short travel, unsupported length

- FL_B = unsupported with permitted sag
 - FL_G = unsupported with straight upper run
- Further information ► Design, Chapter 1



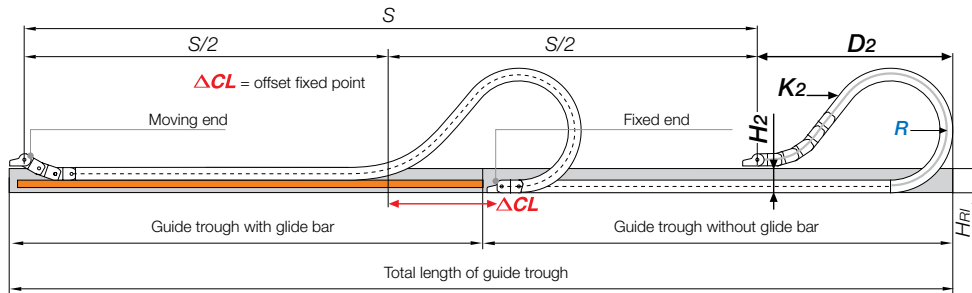
Pitch per link: = 3.58" (91 mm)
Links per ft (m): = 3.35 (11)
For center mount applications:
Chain length = $\frac{S}{2} + K$

The required clearance height: $H_F = H + 1.97$ in. (50 mm) (with 1.34 lbs/ft (2 kg/m) fill weight). Please consult igus® if space is particularly restricted.

| R^{+25} | 5.31 (135) | 5.91 (150) | 6.89 (175) | 7.87 (200) | 9.84 (250) | 11.81 (300) | 15.75 (400) | 19.68 (500) |
|-----------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| H | 14.17 (360) | 15.16 (385) | 17.13 (435) | 19.09 (485) | 23.03 (585) | 26.97 (685) | 34.84 (885) | 42.72 (1085) |
| D | 10.63 (270) | 11.22 (285) | 12.20 (310) | 13.19 (335) | 15.16 (385) | 17.13 (435) | 21.06 (535) | 25.00 (635) |
| K | 25.59 (650) | 29.53 (750) | 32.48 (825) | 35.43 (900) | 41.34 (1050) | 48.23 (1225) | 57.09 (1450) | 69.88 (1775) |

For long travels with lowered mounting height

Long travel lengths from 32.8 ft.(10m) to max. 492 ft. (150m)



| R | 5.31 (135) | 5.91 (150) | 6.89 (175) | 7.87 (200) | 9.84 (250) | 11.81 (300) | 15.75 (400) | 19.68 (500) |
|-------------|-------------|-------------|--------------|--------------|--------------|--------------|---------------|---------------|
| H_2 | 10.47 (266) | 10.47 (266) | 10.47 (266) | 10.47 (266) | 10.47 (266) | 10.47 (266) | 10.47 (266) | 10.47 (266) |
| D_2^{+25} | 15.35 (390) | 17.72 (450) | 20.87 (530) | 27.95 (710) | 36.22 (920) | 44.09 (1120) | 60.24 (1530) | 72.05 (1830) |
| K_2 | 28.66 (728) | 32.24 (819) | 39.41 (1001) | 50.16 (1274) | 64.49 (1638) | 75.23 (1911) | 100.31 (2548) | 125.39 (3185) |
| ΔCL | 4.88 (124) | 6.26 (159) | 8.22 (209) | 14.13 (359) | 20.04 (509) | 25.94 (659) | 37.76 (959) | 45.63 (1159) |

| | |
|--|--|
| Speed / acceleration FL_G | max. 65.6 ft/s (20 m/s) / max. 656 ft/s ² (200 m/s ²) |
| Speed / acceleration FL_B | max. 9.84 ft/s (3 m/s) / max. 19.69 ft/s ² (6 m/s ²) |
| Gliding speed / acceleration (maximum) | max. 32.8 ft/s (10 m/s) / max. 164 ft/s ² (50 m/s ²) |
| Material - permitted temperature | igumid G / -40°F (-40°C) up to +248°F (+120°C) |
| Flammability Class, igumid G | VDE 0304 IIC UL94 HB |



14040
14140
R18840

Short Travels - Unsupported



Unsupported 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
- $K = \pi \cdot R + \text{safety buffer}$
- H_F = Required clearance height
- HRI = Trough inner height
- $H_2 = \text{*Mounting height}$
- $D_2 = \text{*Overlength - long travels, gliding}$
- $K_2 = \text{*Add-on}$
- *If the mounting bracket location is set lower



PDF: igus.com/e-chain-pdfs
Product information: igus.com/e-chains

Long Travels - Gliding



If the unsupported length is exceeded, the e-chain®/ Tube must glide on itself. This requires a guide trough.

Design, Chapter 1



For support of the lower run, see **Chapter 9** of the main catalog for the **Support Tray tool kit**

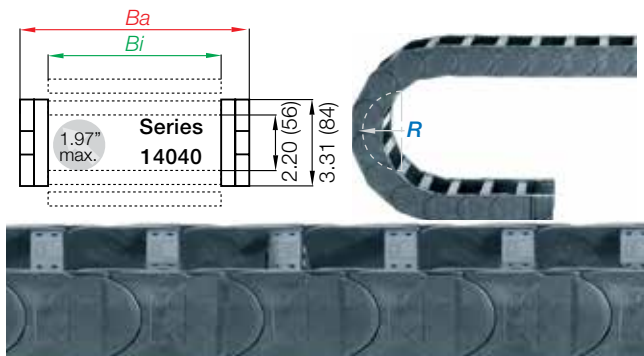
Technical Data



Details of material properties ► **Chapter 1**

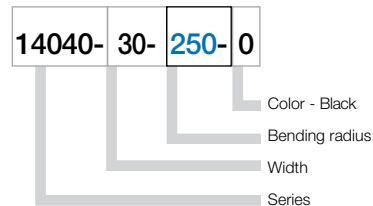


Series 14040 - e-chain® with crossbars every link

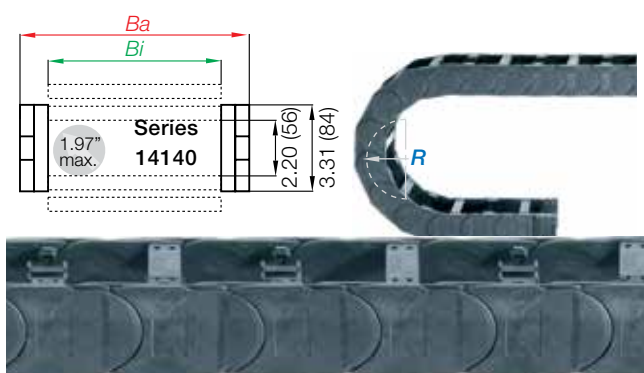


- Crossbars every link
- For use with rigid hydraulic hoses
- For particularly demanding applications
- Can be opened from both sides

Part Number Structure

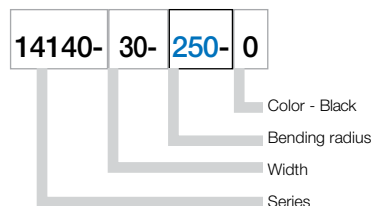


Series 14140 - e-chain® with crossbars every other link

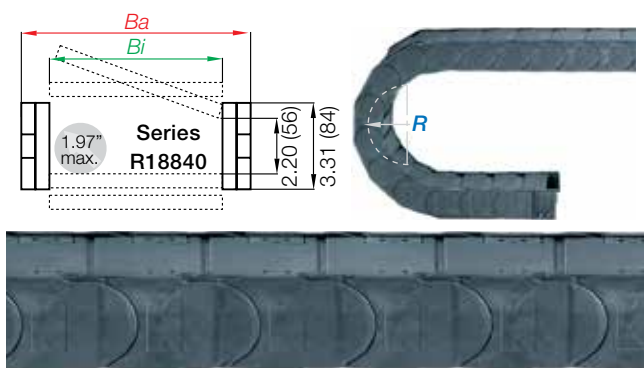


- Crossbars every other link - Standard configuration
- For nearly every situation
- Can be opened from both sides
- Easy assembly
- Stable
- Cost-effective

Part Number Structure

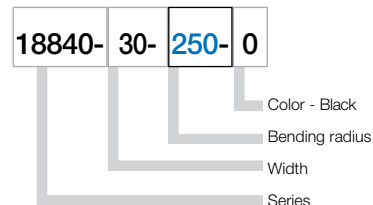


Series R18840 - fully enclosed e-tube

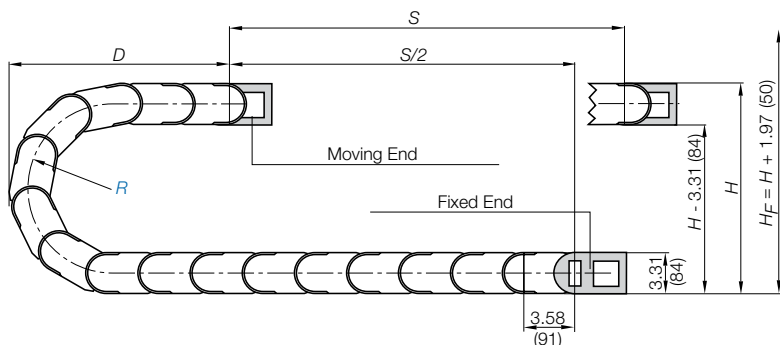
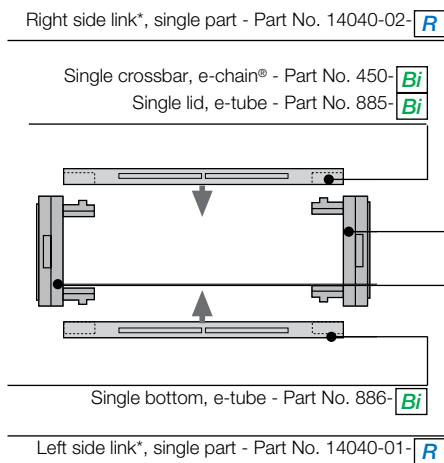


- Fully enclosed
- Excellent cable and hose protection against dirt
- Protection against hot chips
- Lids along inner radius are completely removable
- Lids along the outer radius are single-sided, snap open, hinged on one side as well as completely removable

Part Number Structure



e-chain® as separate parts, links and side plates



*View from the fixed point of the e-chain®/e-tube

e-chain system® E4 light

Series 14040/14140/R18840

Supplement part number with required radius. Example: 14040-30-300-0

Pitch: 3.58 in. (91mm) per link links/ft (m) = 3.35 (11)



14040
14140
R18840

PDF: igus.com/e-chain-pdfs
Product information: igus.com/e-chains

| Part Number. | | | <i>Bi</i> | <i>Ba</i> | 14040 | 14140 | R18840 |
|----------------------|-----------------------|--|-------------|-------------|---------------|---------------|---------------|
| Crossbars Every link | Crossbars Every other | Tube Version | in. (mm) | in. (mm) | lbs/ft (kg/m) | lbs/ft (kg/m) | lbs/ft (kg/m) |
| 14040-05- | 14140-05- | <input type="checkbox"/> -0 | 1.97 (50) | 2.99 (76) | ≈ 1.79 (2.66) | ≈ 1.67 (2.48) | - |
| 14040-06- | 14140-06- | <input type="checkbox"/> -0 | 2.56 (65) | 3.58 (91) | ≈ 1.66 (2.47) | ≈ 1.69 (2.51) | - |
| 14040-07- | 14140-07- | 18840-07- <input type="checkbox"/> -0* | 2.95 (75) | 3.98 (101) | ≈ 1.85 (2.75) | ≈ 1.51 (2.25) | ≈ 2.15 (3.20) |
| 14040-08- | 14140-08- | <input type="checkbox"/> -0 | 3.43 (87) | 4.45 (113) | ≈ 1.91 (2.84) | ≈ 1.61 (2.44) | - |
| 14040-10- | 14140-10- | 18840-10- <input type="checkbox"/> -0 | 3.94 (100) | 4.96 (126) | ≈ 1.97 (2.93) | ≈ 1.75 (2.61) | ≈ 2.35 (3.49) |
| 14040-11- | 14140-11- | <input type="checkbox"/> -0 | 4.41 (112) | 5.47 (139) | ≈ 2.06 (3.06) | ≈ 1.79 (2.67) | - |
| 14040-12- | 14140-12- | 18840-12- <input type="checkbox"/> -0 | 4.92 (125) | 5.94 (151) | ≈ 2.10 (3.12) | ≈ 1.82 (2.71) | ≈ 2.59 (3.85) |
| 14040-13- | 14140-13- | <input type="checkbox"/> -0 | 5.39 (137) | 6.46 (164) | ≈ 2.19 (3.26) | ≈ 1.86 (2.77) | - |
| 14040-15- | 14140-15- | 18840-15- <input type="checkbox"/> -0 | 5.91 (150) | 6.93 (176) | ≈ 2.23 (3.32) | ≈ 1.89 (2.81) | ≈ 2.88 (4.28) |
| 14040-16- | 14140-16- | <input type="checkbox"/> -0 | 6.38 (162) | 7.44 (189) | ≈ 2.30 (3.43) | ≈ 1.92 (2.86) | - |
| 14040-17- | 14140-17- | 18840-17- <input type="checkbox"/> -0 | 6.89 (175) | 7.91 (201) | ≈ 2.38 (3.54) | ≈ 1.96 (2.92) | ≈ 3.05 (4.54) |
| 14040-18- | 14140-18- | <input type="checkbox"/> -0 | 7.36 (187) | 8.43 (214) | ≈ 2.45 (3.65) | ≈ 2.00 (2.97) | - |
| 14040-20- | 14140-20- | 18840-20- <input type="checkbox"/> -0 | 7.87 (200) | 8.90 (226) | ≈ 2.47 (3.67) | ≈ 2.00 (2.98) | ≈ 3.26 (4.85) |
| 14040-21- | 14140-21- | <input type="checkbox"/> -0 | 8.35 (212) | 9.41 (239) | ≈ 2.54 (3.78) | ≈ 2.04 (3.04) | - |
| 14040-22- | 14140-22- | <input type="checkbox"/> -0 | 8.86 (225) | 9.88 (251) | ≈ 2.59 (3.85) | ≈ 2.06 (3.07) | - |
| 14040-23- | 14140-23- | <input type="checkbox"/> -0 | 9.33 (237) | 10.39 (264) | ≈ 2.67 (3.98) | ≈ 2.11 (3.14) | - |
| 14040-25- | 14140-25- | 18840-25- <input type="checkbox"/> -0 | 9.84 (250) | 10.87 (276) | ≈ 2.73 (4.07) | ≈ 2.14 (3.18) | ≈ 3.75 (5.58) |
| 14040-26- | 14140-26- | <input type="checkbox"/> -0 | 10.31 (262) | 11.38 (289) | ≈ 2.80 (4.16) | ≈ 2.16 (3.22) | - |
| 14040-27- | 14140-27- | 18840-27- <input type="checkbox"/> -0 | 10.83 (275) | 11.85 (301) | ≈ 2.87 (4.27) | ≈ 2.20 (3.28) | ≈ 3.93 (5.85) |
| 14040-28- | 14140-28- | <input type="checkbox"/> -0 | 11.30 (287) | 12.36 (314) | ≈ 2.88 (4.29) | ≈ 2.21 (3.29) | - |
| 14040-30- | 14140-30- | 18840-30- <input type="checkbox"/> -0 | 11.81 (300) | 12.83 (326) | ≈ 3.03 (4.51) | ≈ 2.28 (3.40) | ≈ 4.19 (6.24) |
| 14040-31- | 14140-31- | <input type="checkbox"/> -0 | 12.28 (312) | 13.35 (339) | ≈ 3.07 (4.57) | ≈ 2.30 (3.42) | - |
| 14040-32- | 14140-32- | <input type="checkbox"/> -0 | 12.79 (325) | 13.82 (351) | ≈ 3.09 (4.60) | ≈ 2.31 (3.44) | - |
| 14040-33- | 14140-33- | <input type="checkbox"/> -0 | 13.27 (337) | 14.33 (364) | ≈ 3.21 (4.77) | ≈ 2.37 (3.53) | - |
| 14040-35- | 14140-35- | 18840-35- <input type="checkbox"/> -0 | 13.78 (350) | 14.80 (376) | ≈ 3.31 (4.93) | ≈ 2.43 (3.61) | ≈ 4.70 (6.99) |
| 14040-36- | 14140-36- | <input type="checkbox"/> -0 | 14.25 (362) | 15.31 (389) | ≈ 3.32 (4.94) | ≈ 2.43 (3.61) | - |
| 14040-37- | 14140-37- | <input type="checkbox"/> -0 | 14.76 (375) | 15.79 (401) | ≈ 3.33 (4.95) | ≈ 2.43 (3.62) | - |
| 14040-38- | 14140-38- | <input type="checkbox"/> -0 | 15.24 (387) | 16.30 (414) | ≈ 3.39 (5.04) | ≈ 2.46 (3.66) | - |
| 14040-40- | 14140-40- | 18840-40- <input type="checkbox"/> -0 | 15.75 (400) | 16.77 (426) | ≈ 3.52 (5.24) | ≈ 2.53 (3.76) | ≈ 5.34 (7.94) |
| 14040-41- | 14140-41- | <input type="checkbox"/> -0 | 16.22 (412) | 17.28 (439) | ≈ 3.62 (5.39) | ≈ 2.58 (3.84) | - |
| 14040-42- | 14140-42- | <input type="checkbox"/> -0 | 16.73 (425) | 17.76 (451) | ≈ 3.72 (5.54) | ≈ 2.63 (3.92) | - |
| 14040-43- | 14140-43- | <input type="checkbox"/> -0 | 17.20 (437) | 18.27 (464) | ≈ 3.77 (5.61) | ≈ 2.65 (3.95) | - |
| 14040-45- | 14140-45- | <input type="checkbox"/> -0 | 17.72 (450) | 18.74 (476) | ≈ 3.82 (5.68) | ≈ 2.67 (3.98) | - |
| 14040-46- | 14140-46- | 18840-46- <input type="checkbox"/> -0 | 18.19 (462) | 19.25 (489) | ≈ 3.83 (5.70) | ≈ 2.68 (3.99) | ≈ 5.64 (8.40) |
| 14040-47- | 14140-47- | <input type="checkbox"/> -0 | 18.70 (475) | 19.72 (501) | ≈ 3.92 (5.83) | ≈ 2.73 (4.06) | - |
| 14040-48- | 14140-48- | <input type="checkbox"/> -0 | 19.17 (487) | 20.24 (514) | ≈ 3.94 (5.86) | ≈ 2.74 (4.08) | - |
| 14040-50- | 14140-50- | <input type="checkbox"/> -0 | 19.69 (500) | 20.71 (526) | ≈ 4.00 (5.96) | ≈ 2.78 (4.13) | - |
| 14040-51- | 14140-51- | <input type="checkbox"/> -0 | 20.16 (512) | 21.22 (539) | ≈ 4.02 (5.98) | ≈ 2.78 (4.14) | - |
| 14040-52- | 14140-52- | <input type="checkbox"/> -0 | 20.67 (525) | 21.69 (551) | ≈ 4.05 (6.03) | ≈ 2.80 (4.16) | - |
| 14040-53- | 14140-53- | <input type="checkbox"/> -0 | 21.14 (537) | 22.20 (564) | ≈ 4.15 (6.18) | ≈ 2.85 (4.24) | - |
| 14040-55- | 14140-55- | <input type="checkbox"/> -0 | 21.65 (550) | 22.68 (576) | ≈ 4.48 (6.67) | ≈ 3.01 (4.48) | - |
| 14040-60- | 14140-60- | <input type="checkbox"/> -0 | 23.62 (600) | 24.65 (626) | ≈ 4.69 (6.98) | ≈ 3.08 (4.58) | - |

Choose from the radii below for all of the above sizes

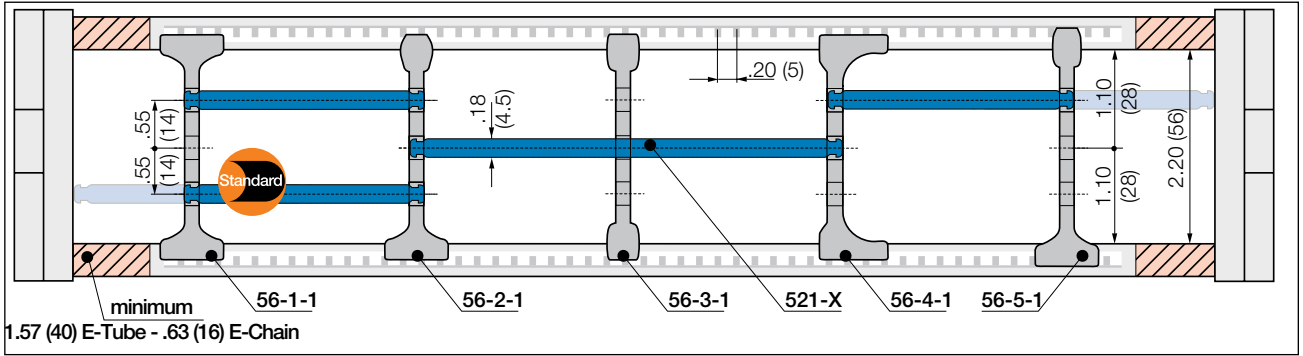
Radius (mm) Example: 14040-30-300-0

| | 135** | 150 | 175 | 200 | 250 | 300 | 400 | 500 |
|------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| <i>R</i> | 5.31 (135) | 5.91 (150) | 6.89 (175) | 7.87 (200) | 9.84 (250) | 11.81 (300) | 15.75 (400) | 19.68 (500) |
| <i>H</i> ₂₅ | 14.17 (360) | 15.16 (385) | 17.13 (435) | 19.09 (485) | 23.03 (585) | 26.97 (685) | 34.84 (885) | 42.72 (1085) |
| <i>D</i> | 10.63 (270) | 11.22 (285) | 12.20 (310) | 13.19 (335) | 15.16 (385) | 17.13 (435) | 21.06 (535) | 25.00 (635) |
| <i>K</i> | 25.59 (650) | 29.53 (750) | 32.48 (825) | 35.43 (900) | 41.34 (1050) | 48.23 (1225) | 57.09 (1450) | 69.88 (1775) |

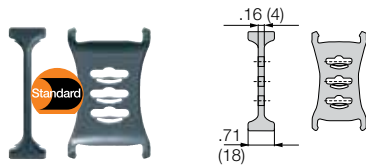
** This radius is not available for the R18840 Series
*Removable lid only, no hinged option

0=Standard color black. For other colors see Chapter 1
For wider chains see page 6.200 For large diameter hoses see page 6.200





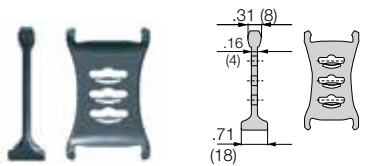
Note Please maintain a lateral spacing of 1.57" (40 mm) for e-tube and .63" (16 mm) for e-chains® between the separators and the side links. In the standard configuration separators are assembled every 2nd e-chain® link



Separator, wide base

| | |
|-------------|-----------------|
| Unassembled | Part No. 56-1 |
| Assembled | Part No. 56-1-1 |

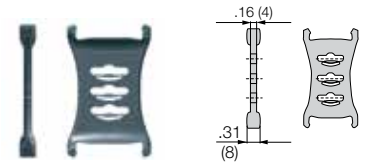
- **Standard separator 56-1 for all applications**
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head

| | |
|-------------|-----------------|
| Unassembled | Part No. 56-2 |
| Assembled | Part No. 56-2-1 |

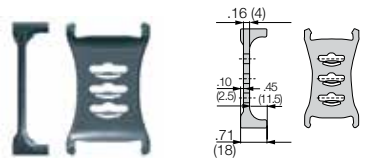
- **Separator 56-2 For even faster installation**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, narrow base

| | |
|-------------|-----------------|
| Unassembled | Part No. 56-3 |
| Assembled | Part No. 56-3-1 |

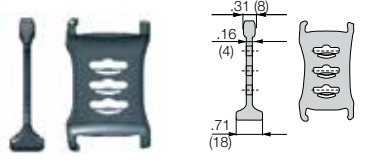
- **Separator 56-3 For many thin cables**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, asymmetrical

| | |
|-------------|-----------------|
| Unassembled | Part No. 56-4 |
| Assembled | Part No. 56-4-1 |

- **Separator 56-4 For side mounted applications**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

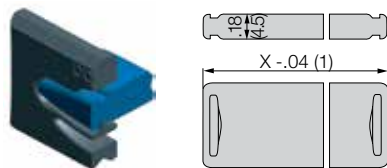


Separator, asymmetrical

| | |
|-------------|-----------------|
| Unassembled | Part No. 56-5 |
| Assembled | Part No. 56-5-1 |

- **Separator 56-5 Locks safely in .30" (7.5 mm) increments**
Notch separator for exact positioning in e-chains®, Recommended for side-mounted applications.

Lockable full-width shelves - for the standard interior separation



Full width shelf, lockable

| | |
|-------------|----------------|
| Unassembled | Part No. 520-X |
| Assembled | Part No. 521-X |

- **Full width shelf, lockable**
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

| Width X in. (mm) | Part No. Unassembled | Part No. Assembled | Width X in. (mm) | Part No. Unassembled | Part No. Assembled | Width X in. (mm) | Part No. Unassembled | Part No. Assembled |
|---------------------|-------------------------|-----------------------|---------------------|-------------------------|-----------------------|---------------------|-------------------------|-----------------------|
| 1.97 (050) | 520-50 | 521-50 | 5.91 (150) | 520-150 | 521-150 | 11.81 (300) | 520-300 | 521-300 |
| 2.56 (065) | 520-65 | 521-65 | 6.89 (175) | 520-175 | 521-175 | 13.78 (350) | 520-350 | 521-350 |
| 2.95 (075) | 520-75 | 521-75 | 7.87 (200) | 520-200 | 521-200 | 14.76 (375) | 520-375 | 521-375 |
| 3.94 (100) | 520-100 | 521-100 | 8.86 (225) | 520-225 | 521-225 | 15.24 (387) | 520-387 | 521-387 |
| 4.92 (125) | 520-125 | 521-125 | 9.84 (250) | 520-250 | 521-250 | 17.72 (450) | 520-450 | 521-450 |

e-chain system® E4 light
 Series 14040/14140/R18840
 Interior Separation - Previous Generation



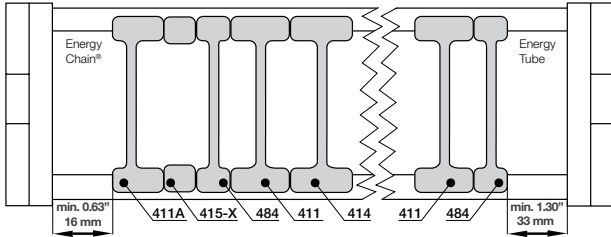
14040
 14140
 R18840



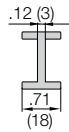
Option 1: Vertical separators and spacers

Vertical separators are used if a vertical subdivision of the e-chain® interior is required. By standard, vertical separators are assembled every other e-chain® link.

NOTE: Observe a lateral spacing of at least 1.30 in. (33mm) for e-tubes and .63 in. (16mm) for e-chain®. There is no minimum spacing needed for side plates



STANDARD
 Vertical separator
 401



Vertical separator

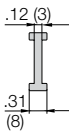
Unassembled **Part No. 401**
 Assembled **Part No. 411**

● **Standard separator 401 for e-chains® and e-tubes**

This separator offers safe stability due to its wide base design, also when used with thick cables or hoses.



Vertical separator
 483



Vertical separator

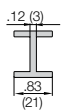
Unassembled **Part No. 483**
 Assembled **Part No. 484**

● **Vertical separator 483 for e-chains® and e-tubes**

This separator offers a narrow base for applications where a large number of small cables need to be individually separated.



Locking separator
 404



Locking separator (chain only)

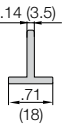
Unassembled **Part No. 404**
 Assembled **Part No. 414**

● **Locking separator 404 for e-chains®**

This separator features increased retention force for applications exposed to very high humidity and extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Take care to ensure proper alignment.



Locking separator
 406



Locking separator (tube only)

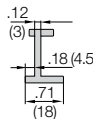
Unassembled **Part No. 406**
 Assembled **Part No. 416**

● **Locking separator 406 for e-tubes**

It features a single sided, secure fit, and can be placed on the lid or the bottom of the e-tube. The single side locking design helps to eliminate difficulties in assembling the opposite cover or crossbar



Asymmetric separator
 401A



Asymmetrical separator (chain only)

Unassembled **Part No. 401A**
 Assembled **Part No. 411A**

● **Asymmetrical separator 401A for e-chains®**

This separator features an (18mm) base. It can be used in combinations between spacers of different widths and vertical separators in side mounted applications.



Spacers
 405-XX



Spacer (chain only)

Unassembled **Part No. 405-XX**
 Assembled **Part No. 415-XX**

XX = width of the spacer

● **NOTE ON SPACERS**

Vertical separators are adjustable, but can be fixed in position by means of a spacer. Spacers are most often necessary for side mounted applications.

The available inner height is reduced by .08" (2mm) **per spacer** (for example if one spacer is placed on either side of the separator, the overall inner height is reduced by .16" (4mm). To avoid this, place the spacers on the **outside** of the opening crossbar (**not for long travels**).

Spacers available in the following sizes:

| Part No. Unassembled | Part No. Assembled | in. | (mm) |
|----------------------|--------------------|-------|------|
| 405 -10 | 415 -10 | .39" | (10) |
| 405 -15 | 415 -15 | .59" | (15) |
| 405 -20 | 415 -20 | .79" | (20) |
| 405 -30 | 415 -30 | 1.18" | (30) |
| 405 -40 | 415 -40 | 1.57" | (40) |

PDF: igus.com/e-chain-pdfs
 Product information: igus.com/e-chains



14040
14140
R18840



e-chain system® E4 light Series 14040/14140/R18840 Interior Separation - Previous Generation

igus®
e-chain system®

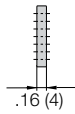
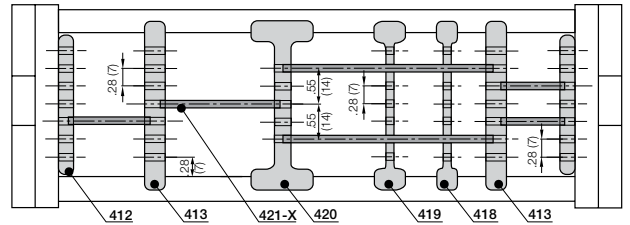
Telephone 1-800-521-2747

Internet: igus.com
email: sales@igus.com
QuickSpec: igus.com/quickspec



Shelves and separators
e-chains® and e-tubes can be subdivided both vertically and horizontally using the various interior separation elements.

► **Design, Chapter 1** for layout recommendations.

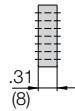


Side plate

| | |
|-------------|---------------------|
| Unassembled | Part No. 402 |
| Assembled | Part No. 412 |

● **Side plates 402**

This component is used to form the basic pattern of a shelf system.

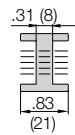


Vertical separator

| | |
|-------------|---------------------|
| Unassembled | Part No. 403 |
| Assembled | Part No. 413 |

● **Vertical separator 403**

This component is used to form the basic pattern of a shelf system.

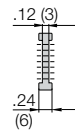
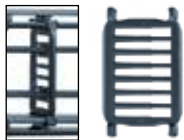


Locking vertical separator

| | |
|-------------|---------------------|
| Unassembled | Part No. 410 |
| Assembled | Part No. 420 |

● **Locking vertical separator 410**

This separator is slotted and able to be combined with shelves. For e-chains® only

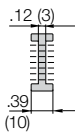


Slotted separators, closed

| | |
|-------------|---------------------|
| Unassembled | Part No. 408 |
| Assembled | Part No. 418 |

● **Slotted separators 408**

These are used for very complex subdivisions. However, they cannot be retrofitted into an existing separation system without removing the shelves first.



Slotted separators, open

| | |
|-------------|---------------------|
| Unassembled | Part No. 409 |
| Assembled | Part No. 419 |

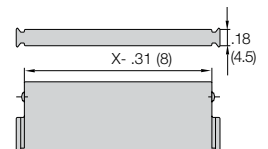
● **Slotted separator 409**

This separator can be retrofitted into an existing interior separation system without removing the shelves, as long as these shelves fit into any of the 3 middle slots

Shelves 420-XX

These components form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights in .28" (7mm) increments

| Width X in. (mm) | Usable Width in. (mm) | Part No. Unassembled | Part No. Assembled | Width X in. (mm) | Usable Width in. (mm) | Part No. Unassembled | Part No. Assembled |
|---------------------|-----------------------------|-------------------------|-----------------------|---------------------|-----------------------------|-------------------------|-----------------------|
| .71 (18) | .39 (10) | 420-18 | 421-18 | 2.95 (75) | 2.64 (67) | 420-75 | 421-75 |
| .91 (23) | .59 (15) | 420-23 | 421-23 | 3.46 (88) | 3.15 (80) | 420-88 | 421-88 |
| .98 (25) | .67 (17) | 420-25 | 421-25 | 3.94 (100) | 3.62 (92) | 420-100 | 421-100 |
| 1.10 (28) | .79 (20) | 420-28 | 421-28 | 4.92 (125) | 4.61(117) | 420-125 | 421-125 |
| 1.30 (33) | .98 (25) | 420-33 | 421-33 | 5.91 (150) | 5.59(142) | 420-150 | 421-150 |
| 1.69 (43) | 1.38 (35) | 420-43 | 421-43 | 6.89 (175) | 6.57(167) | 420-175 | 421-175 |
| 1.97 (50) | 1.65 (42) | 420-50 | 421-50 | 7.36 (187) | 7.05(179) | 420-187 | 421-187 |
| 2.44 (62) | 2.13 (54) | 420-62 | 421-62 | 7.87 (200) | 7.56(192) | 420-200 | 421-200 |





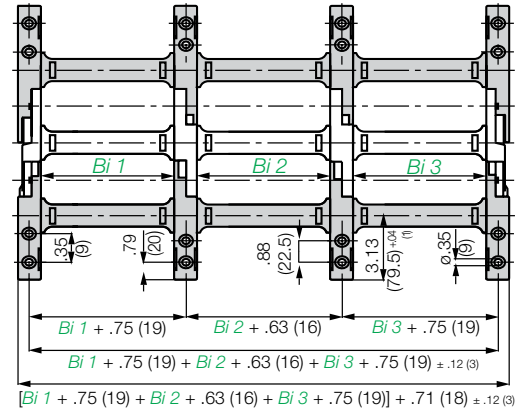
Part number example for e-chain®

14040-10/20/10-200-0
14040-*Bi1/Bi2/Bi3*-R-0

We strongly recommend on-site consultation with an igus® technician for individual advice regarding mounting brackets, guide troughs and other design details.

Extension links - for extremely wide e-chains® up to 9.84 ft (3m)

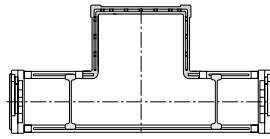
- For applications in which particularly high fill weights necessitate extremely wide e-chains®
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets.



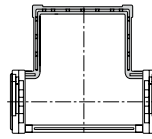
Consult igus® for your extender crossbar applications. We will be happy to assist you with your design layout.

Extender crossbars - For careful guiding of large diameter cables and hoses

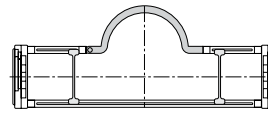
- Intended for cables and hoses with a maximum outer diameter of 9.64 in. (245 mm).
- Can be attached along either the inner or outer radius, inner radius preferred
- Gliding operation with crossbars assembled along the outer radius in conjunction with a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two standard snap-open crossbars.



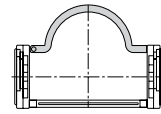
Square extender crossbar combined with standard snap-open crossbars.



Attached directly to the side link.



Round extender crossbar combined with standard snap-open crossbars.



Attached directly to the side link.

| Part No. | Max Ø Hose | Style | Installation Side Link | Combined with Snap-Open Crossbars |
|---------------|------------|--------|------------------------|-----------------------------------|
| 450-15-RHD115 | 4.52 (115) | Round | No | Yes |
| 450-17-RD115 | 4.52 (115) | Round | Yes | No |
| 450-25-D150 | 5.91 (150) | Square | Yes | No |
| 450-30-D200 | 7.09 (180) | Square | Yes | No |
| 450-35-D250 | 7.68 (195) | Square | Yes | No |
| 450-40-D300 | 9.65 (245) | Square | Yes | No |
| 450-20-HD150 | 5.91 (150) | Square | No | Yes |
| 450-25-HD200 | 7.09 (180) | Square | No | Yes |
| 450-30-HD250 | 7.68 (195) | Square | No | Yes |



E4 clip on cable binder

- For side mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as needed

- Compatible with many E4 e-chains®
- Economical
- One clip and one locking band are needed for each chain link



| Part No. | Form |
|-------------|--|
| 450-B12 | Locking clip, comprised of a locking element |
| 450-B12-200 | Locking band, comprised of a locking element and band; 12 x 1.5 x 200 mm |



14040
14140
R18840



e-chain system® E4 light Series 14040/14140/R18840 Mounting Brackets

igus®
e-chain system®

Telephone 1-800-521-2747

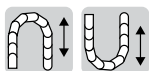
Internet: igus.com
email: sales@igus.com
QuickSpec: igus.com/quickspec

6.201



Option 1: KMA pivoting

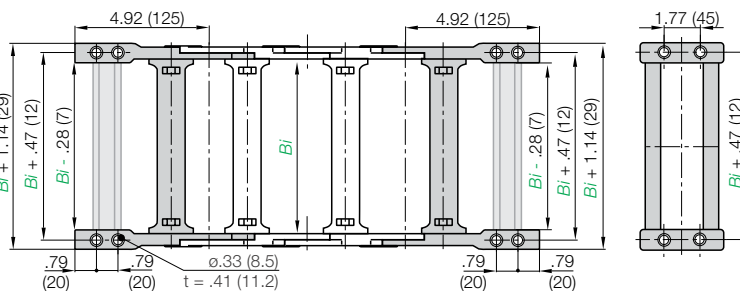
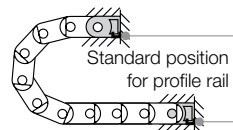
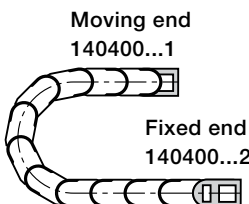
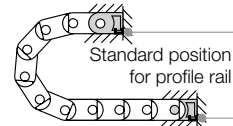
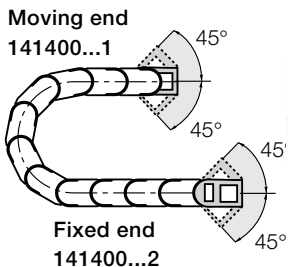
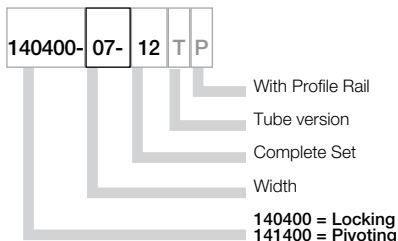
- Profile rail option
- Universal use
- Corrosion resistant
- Short and long travels
- Space-restricted conditions



Option 2: KMA locking

- Profile rail option
- Universal use
- Corrosion resistant
- Extreme accelerations
- Vertical hanging/standing travels

Part Number Structure



Full set, for both ends:

140400-05-12 Full set, each part with pin/bore

Single-part order:

140400-05-1 Mounting bracket with bore
140400-05-2 Mounting bracket with pin

Part number examples are shown for pivoting brackets. For locking brackets change part number to 140400

Part No. Full Set (pivoting)
Series 14040 or 14140:
141400-Width-12

Part No. Full Set (pivoting)
with profile rail
Series 14040 or 14140
141400-Width-12P

Part No. Full Set (pivoting)
Tube Series R18840
141400-Width-12T

Part No. Full Set (pivoting)
with Profile Rail
Tube Series R18840
141400-Width-12TP

| Width | Part No. Full Set | | Tube Option | With Profile Rail | Bi in. (mm) | Width | Part No. Full Set | | Tube Option | With Profile Rail | Bi in. (mm) |
|-------|-------------------|----------|-------------|-------------------|-------------|-------|-------------------|----------|-------------|-------------------|-------------|
| | Locking | Pivoting | | | | | Locking | Pivoting | | | |
| -05 | 140400 | 141400 | -05-12 | P | 1.97 (50) | -31 | 140400 | 141400 | -31-12 | P | 12.28 (312) |
| -06 | 140400 | 141400 | -06-12 | P | 2.56 (65) | -32 | 140400 | 141400 | -32-12 | P | 12.79 (325) |
| -07 | 140400 | 141400 | -07-12 | T | 2.95 (75) | -33 | 140400 | 141400 | -33-12 | P | 13.27 (337) |
| -08 | 140400 | 141400 | -08-12 | P | 3.43 (87) | -35 | 140400 | 141400 | -35-12 | T | 13.78 (350) |
| -10 | 140400 | 141400 | -10-12 | T | 3.94 (100) | -36 | 140400 | 141400 | -36-12 | P | 14.25 (362) |
| -11 | 140400 | 141400 | -11-12 | P | 4.41 (112) | -37 | 140400 | 141400 | -37-12 | P | 14.76 (375) |
| -12 | 140400 | 141400 | -12-12 | T | 4.92 (125) | -38 | 140400 | 141400 | -38-12 | P | 15.24 (387) |
| -13 | 140400 | 141400 | -13-12 | P | 5.39 (137) | -40* | 140400 | 141400 | -40-12 | T | 15.75 (400) |
| -15 | 140400 | 141400 | -15-12 | T | 5.91 (150) | -41 | 140400 | 141400 | -41-12 | P | 16.22 (412) |
| -16 | 140400 | 141400 | -16-12 | P | 6.38 (162) | -42 | 140400 | 141400 | -42-12 | P | 16.73 (425) |
| -17 | 140400 | 141400 | -17-12 | T | 6.89 (175) | -43 | 140400 | 141400 | -43-12 | P | 17.20 (437) |
| -18 | 140400 | 141400 | -18-12 | P | 7.36 (187) | -45 | 140400 | 141400 | -45-12 | P | 17.72 (450) |
| -20 | 140400 | 141400 | -20-12 | T | 7.87 (200) | -46 | 140400 | 141400 | -46-12 | T | 18.19 (462) |
| -21 | 140400 | 141400 | -21-12 | P | 8.35 (212) | -47 | 140400 | 141400 | -47-12 | P | 18.70 (475) |
| -22 | 140400 | 141400 | -22-12 | P | 8.86 (225) | -48 | 140400 | 141400 | -48-12 | P | 19.17 (487) |
| -23 | 140400 | 141400 | -23-12 | P | 9.33 (237) | -50 | 140400 | 141400 | -50-12 | P | 19.69 (500) |
| -25 | 140400 | 141400 | -25-12 | T | 9.84 (250) | -51 | 140400 | 141400 | -51-12 | P | 20.16 (512) |
| -26 | 140400 | 141400 | -26-12 | P | 10.31 (262) | -52 | 140400 | 141400 | -52-12 | P | 20.67 (525) |
| -27 | 140400 | 141400 | -27-12 | T | 10.83 (275) | -53 | 140400 | 141400 | -53-12 | P | 21.14 (537) |
| -28 | 140400 | 141400 | -28-12 | P | 11.30 (287) | -55 | 140400 | 141400 | -55-12 | P | 21.65 (550) |
| -30 | 140400 | 141400 | -30-12 | T | 11.81 (300) | -60 | 140400 | 141400 | -60-12 | P | 23.62 (600) |

e-chain system® E4 light

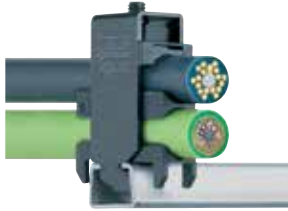
Series 14040/14140/R18840

Strain Relief



14040
14140
R18840

Chainfix clamps for the profile rail



igus® Chainfix strain relief elements are available in either steel or stainless steel. They can be adjusted with a hexagon socket and are available in single, double and triple configurations.

| Part No. Single Clamp | | Part No. Double Clamp | | Part No. Triple Clamp | | Cable ø | |
|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-------------|-----------|
| Steel | Stainless | Steel | Stainless | Steel | Stainless | in. | (mm) |
| CFX12-1 | CFX12-1E | CFX12-2 | CFX12-2E | CFX12-3 | - | .24 - .47 | (6 - 12) |
| CFX14-1 | CFX14-1E | CFX14-2 | CFX14-2E | CFX14-3 | - | .47 - .55 | (12 - 14) |
| CFX16-1 | CFX16-1E | CFX16-2 | CFX16-2E | CFX16-3 | - | .55 - .63 | (14 - 16) |
| CFX18-1 | CFX18-1E | CFX18-2 | CFX18-2E | CFX18-3 | - | .63 - .71 | (16 - 18) |
| CFX20-1 | CFX20-1E | CFX20-2 | CFX20-2E | CFX20-3 | - | .71 - .79 | (18 - 20) |
| CFX22-1 | CFX22-1E | CFX22-2 | CFX22-2E | CFX22-3 | - | .79 - .87 | (20 - 22) |
| CFX26-1 | CFX26-1E | CFX26-2 | CFX26-2E | - | - | .87 - 1.02 | (22 - 26) |
| CFX30-1 | CFX30-1E | CFX30-2 | CFX30-2E | - | - | 1.02 - 1.18 | (26 - 30) |
| CFX34-1 | CFX34-1E | CFX34-2 | CFX34-2E | - | - | 1.18 - 1.34 | (30 - 34) |
| CFX38-1 | CFX38-1E | - | - | - | - | 1.34 - 1.50 | (34 - 38) |
| CFX42-1 | CFX42-1E | - | - | - | - | 1.50 - 1.65 | (38 - 42) |

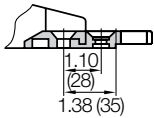
For more information please refer to strain relief section of Chapter 10

Tiewrap Plates

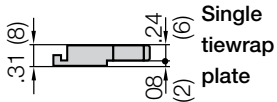
Option 1:

Tiewrap plates as an individual part

Available as an individual component, can be fixed onto a mounting bracket with the use of a profile rail.

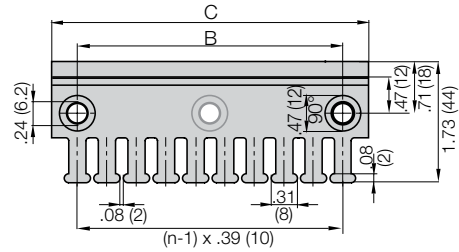


Shown assembled



Single tiewrap plate

| Tiewrap Plate | n Number of Teeth | C Overall Width in. (mm) | B Bore Width in. (mm) | Center Bore |
|---------------|----------------------|--------------------------------|-----------------------------|-------------|
| 3050-ZB | 5 | 1.97 (50) | 1.18 (30) | no |
| 3075-ZB | 7 | 2.95 (75) | 2.16 (55) | no |
| 3100-ZB | 10 | 3.94 (100) | 3.15 (80) | no |
| 3115-ZB | 11 | 4.53 (115) | 3.74 (95) | no |
| 3125-ZB | 12 | 4.92 (125) | 4.13 (105) | no |
| 3150-ZB | 15 | 5.91 (150) | 5.12 (130) | no |
| 3175-ZB | 17 | 6.89 (175) | 6.10 (155) | no |
| 3200-ZB | 20 | 7.87 (200) | 7.09 (180) | yes |
| 3225-ZB | 22 | 8.86 (225) | 8.07 (205) | yes |
| 3250-ZB | 25 | 9.84 (250) | 9.06 (230) | yes |



If used with KMA brackets with profile rail please add "KMA" to the end of the part number.

Example: 3050-ZBKMA

For more information please refer to strain relief section of Chapter 10

Option 2:

Clip-on Tiewrap plates

Available as a clip-on tiewrap plate without the use of bolts They are inserted and removed with a screwdriver used as a lever. Clip-on tiewrap plates are also available as an attachment to the opening crossbars.



| Part No. | Number of Teeth | Width of Strain Relief in. (mm) |
|----------|-----------------|------------------------------------|
| 3050-ZC | 5 | 1.97 (50) |
| 3075-ZC | 7 | 2.95 (75) |

For more information please refer to strain relief section of Chapter 10

Option 3:

Clip-on Tiewrap plates for opening crossbars

Clip-on tiewrap plates are also available as an attachment to opening crossbars. They can be positioned at any point along the e-chain®.



| Part No. | Number of Teeth | Width of Strain Relief in. (mm) |
|----------|-----------------|------------------------------------|
| 4550-ZS | 5 | 1.89 (48) |
| 4575-ZS | 7 | 2.91 (74) |

For more information please refer to strain relief section of Chapter 10

PDF: igus.com/e-chain-pdfs
Product information: igus.com/e-chains



Width of Crossbar
14040-05-200-0

| | B_{Ri} | | Installation Part No. |
|-----|-------------|---|-----------------------|
| -05 | 3.19 (81) | * | |
| -06 | 3.78 (96) | * | |
| -07 | 4.17 (106) | | 94-50-225 |
| -10 | 5.16 (131) | | 94-50-250 |
| -11 | 5.63 (143) | | 94-50-275 |
| -12 | 6.14 (156) | | 94-50-275 |
| -13 | 6.61 (168) | | 94-50-300 |
| -15 | 7.13 (181) | | 94-50-300 |
| -16 | 7.60 (193) | | 94-50-325 |
| -17 | 8.11 (206) | | 94-50-325 |
| -18 | 8.58 (218) | | 94-50-350 |
| -20 | 9.09 (231) | | 94-50-350 |
| -21 | 9.57 (243) | | 94-50-375 |
| -22 | 10.08 (256) | | 94-50-375 |
| -23 | 10.55 (268) | | 94-50-400 |
| -25 | 11.06 (281) | | 94-50-400 |
| -26 | 11.54 (293) | | 94-50-425 |
| -27 | 12.05 (306) | | 94-50-425 |
| -28 | 12.52 (318) | | 94-50-450 |
| -30 | 13.03 (331) | | 94-50-450 |
| -31 | 13.50 (343) | | 94-50-475 |
| -32 | 14.02 (356) | | 94-50-475 |
| -33 | 14.49 (368) | | 94-50-500 |
| -35 | 15.00 (381) | | 94-50-500 |
| -36 | 15.47 (393) | | 94-50-525 |
| -37 | 15.98 (406) | | 94-50-525 |
| -38 | 16.46 (418) | | 94-50-550 |
| -40 | 16.97 (431) | | 94-50-550 |
| -41 | 17.44 (443) | | 94-50-575 |
| -42 | 17.95 (456) | | 94-50-575 |
| -43 | 18.43 (468) | | 94-50-600 |
| -45 | 18.94 (481) | | 94-50-600 |
| -46 | 19.41 (493) | | 94-50-625 |
| -47 | 19.92 (506) | | 94-50-625 |
| -48 | 20.59 (518) | | 94-50-650 |
| -50 | 20.91 (531) | | 94-50-650 |
| -51 | 21.38 (543) | | 94-50-675 |
| -52 | 21.89 (556) | | 94-50-675 |
| -53 | 22.36 (568) | | 94-50-700 |
| -55 | 22.87 (581) | | 94-50-700 |
| -60 | 24.84 (631) | | 94-50-750 |

Guide troughs are used with applications where the upper run of the e-chain® glides on the lower run. If using igus® steel guide troughs, the following components are required:

- Full travel length of guide trough
Part No. 94-30
- 1/2 travel length glide bars
Part No. 93-01
- Installation sets as end connectors
Part No. 94-50-XX

.XX indicates the length of the profile rails on which the guide trough is mounted. The values and part numbers are specified in the table on the left. The standard length of the trough components and glide bars is 6.56 ft (2 m). The required overall length of the guide trough directly correlates to the length of travel.

Example:

Length of travel 164 ft (50 m)
Center mounted

- Required guide troughs**
164 ft (50 m) guide trough
82 ft (25 m) glide bars
= 25 sections of 6.56 ft (2 m) guide trough
Part No. 94-30
= 13 sections of 6.56 ft (2 m) glide bars
Part No. 93-01

Required number of installation sets:

= Number of guide trough components + 1
= 25 + 1 = 26

Part number of the installation sets

94-50-XXX

Example:

94-50-400 for 15.75 (400 mm) long profile rail

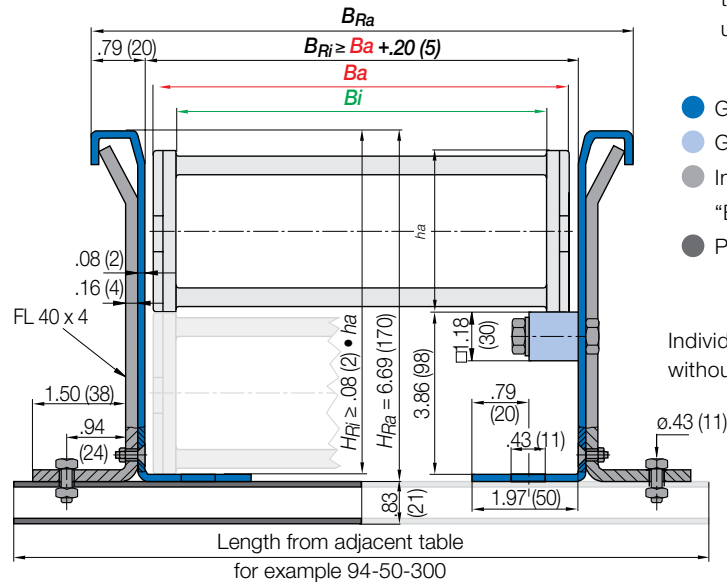


Installation sets as section connectors



Left: Guide trough with glide bars
Right: Guide troughs without glide bars

* Specialized guide trough available upon request



- Guide trough
- Glide bars
- Installation set "Basic"
- Profile rail

Individual attachment without profile rail

Standard length profile rail