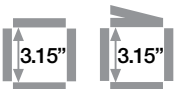


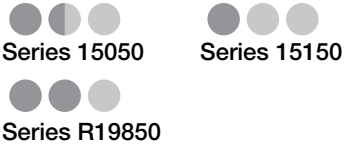
15050
15150
R19850



e-chain system® E4 light Series 15050/15150/R19850



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 ≤ 328 ft (100 m)

Vertical, standing ≤ 19.69 ft (6 m)

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

Rotary requires further calculation

Usage Guidelines



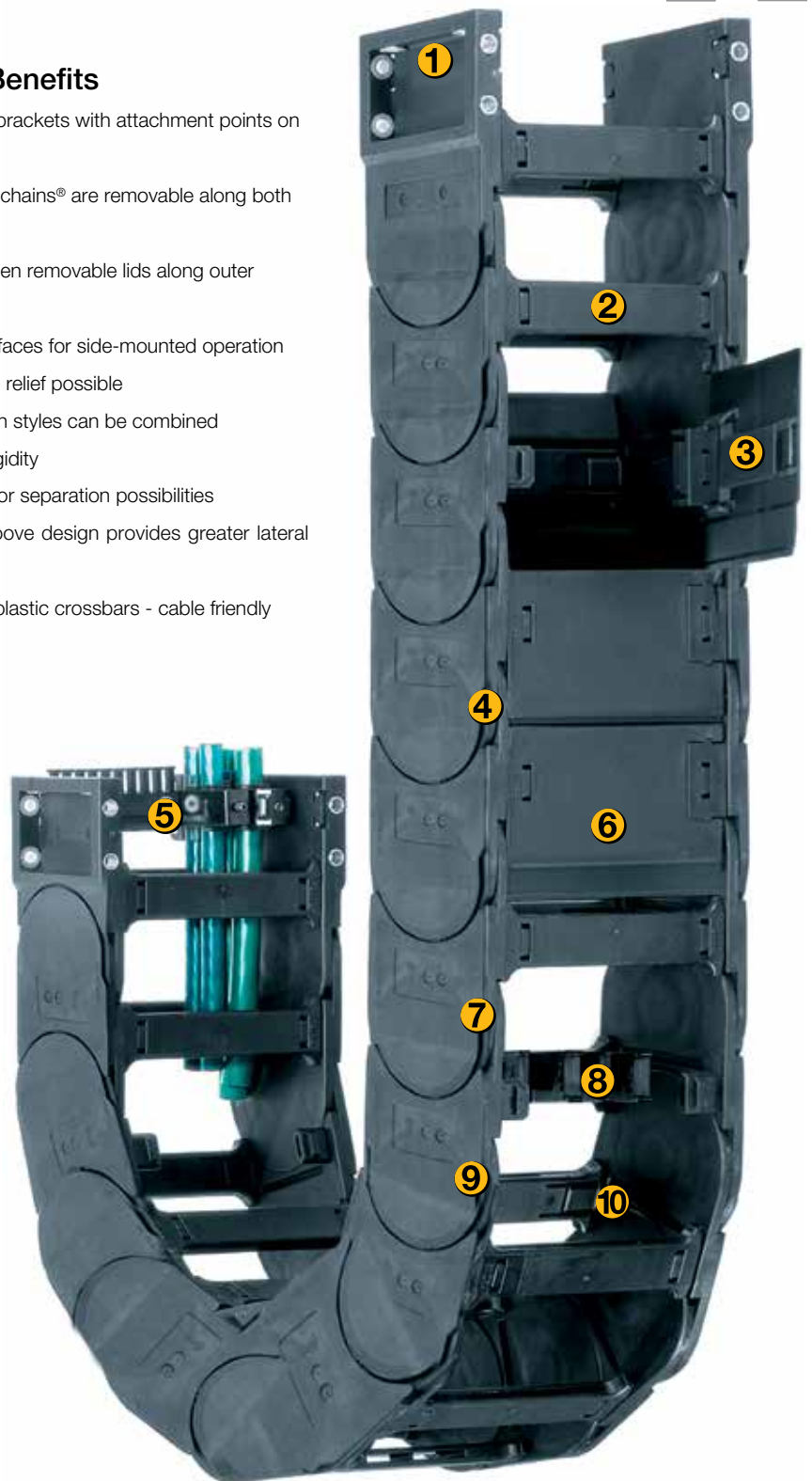
- If a simpler low-cost solution is required
- For maximum inner width with minimal outer width
- If the Series 5050 is too large



- If side-mounted chain/tube with a long unsupported travel is required
➤ Series E4-80/H4-80/R4-80

Features & Benefits

- 1 KMA mounting brackets with attachment points on all sides
- 2 Crossbars on e-chains® are removable along both radii
- 3 Hinged snap-open removable lids along outer radius of e-tube
- 4 Lateral glide surfaces for side-mounted operation
- 5 Integrated strain relief possible
- 6 Closed and open styles can be combined
- 7 High torsional rigidity
- 8 Numerous interior separation possibilities
- 9 Tongue and groove design provides greater lateral stability
- 10 Wide, rounded plastic crossbars - cable friendly



Order Example: Complete e-chain®

Please indicate chain length or number of links. Example:

16.4 ft (5 m) 15050-30-300-0



e-chain®

With 2 separators 80.1.1 assembled every 2nd link



Interior Separation

1 Set 150500-30-12P

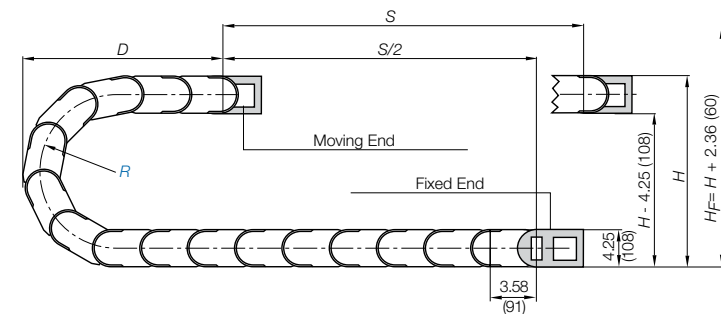
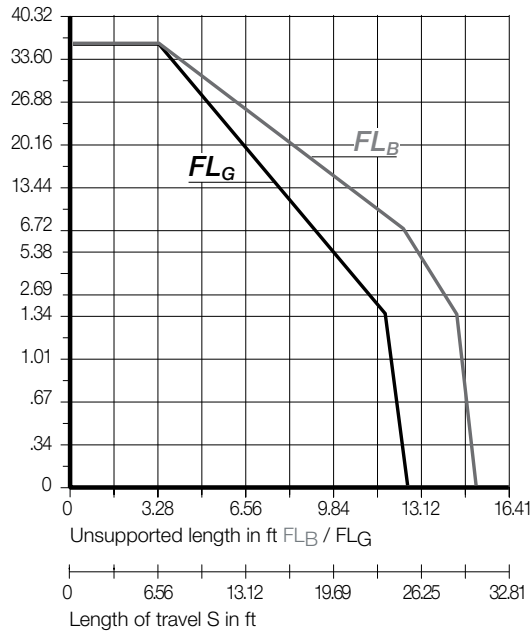
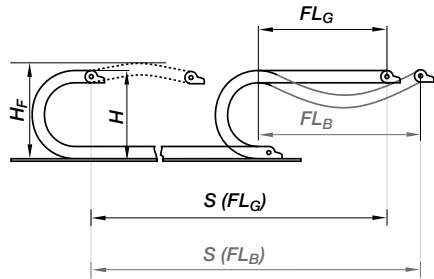


Mounting Bracket

e-chain system® E4 light Series 15050/15150/R19850 Installation Dimensions

Short travel, unsupported length

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



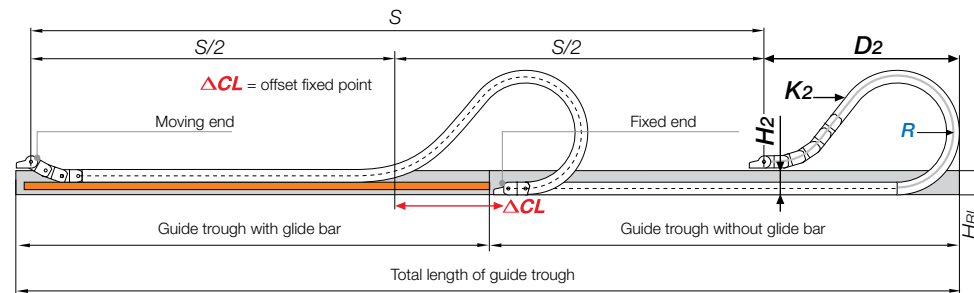
Pitch per link: = 3.58" (91 mm)
Links per ft (m): = 3.35 (11)
For center mount applications:
Chain length = $\frac{S}{2} + K$

The required clearance height: $H_f = H + 2.36$ in. (60 mm) (with 2.02 lbs/ft (3 kg/m) fill weight. Please consult igus® if space is particularly restricted.

R	5.91 (150)	7.87 (200)	9.84 (250)	11.81 (300)	13.78 (350)	15.75 (400)	19.68 (500)	23.62 (600)
H_{2s}	16.06 (408)	20.00 (508)	23.94 (608)	27.87 (708)	31.81 (808)	35.75 (908)	43.62 (1108)	51.50 (1308)
D	13.43 (341)	15.39 (391)	17.36 (441)	19.33 (491)	21.30 (541)	23.27 (591)	27.20 (691)	31.14 (791)
K	25.79 (655)	32.09 (815)	38.19 (970)	44.29 (1125)	50.59 (1285)	56.69 (1440)	69.09 (1755)	81.50 (2070)

For long travels with lowered mounting height

Long travel lengths from 32.8 ft.(10m) to max. 820 ft. (250m)



R	5.91 (150*)	7.87 (200)	9.84 (250)	11.81 (300)	13.78 (350)	15.75 (400)	19.68 (500)	23.62 (600 ¹⁾)
H_2	9.53 (242)	9.53 (242)	9.53 (242)	9.53 (242)	9.53 (242)	9.53 (242)	9.53 (242)	*
D_2^{+25}	21.65 (550)	31.50 (800)	37.40 (950)	47.24 (1200)	61.02 (1550)	66.93 (1700)	85.63 (2175)	*
K_2	35.83 (910)	50.16 (1274)	64.49 (1638)	78.82 (2002)	96.73 (2457)	107.48 (2730)	136.14 (3458)	*
ΔCL	8.23 (209)	16.10 (409)	20.04 (509)	27.91 (709)	39.72 (1009)	43.66 (1109)	58.42 (1484)	*

¹⁾ R 600 not suitable for long travel applications. Please consult igus®

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



15050
15150
R19850

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
 - H_{ri} = Trough inner height
 - H_2 = *Mounting height
 - D_2 = Overlength - long travels, gliding
 - K_2 = *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

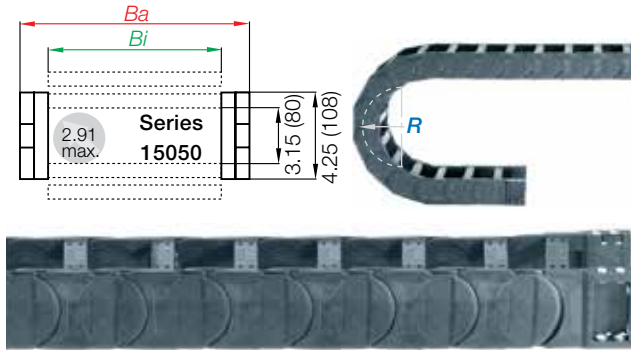
Technical Data



Details of material properties ► **Chapter 1**

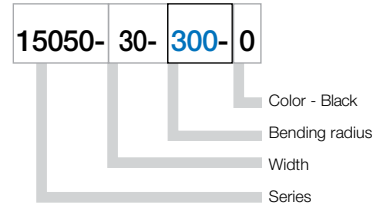


Series 15050 - e-chain® with crossbars every link

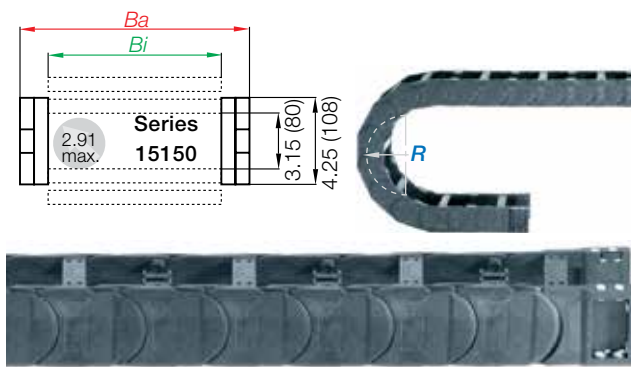


- Crossbars every link
- For use with rigid hydraulic hoses
- For particularly demanding applications
- Can be opened from both sides

Part Number Structure

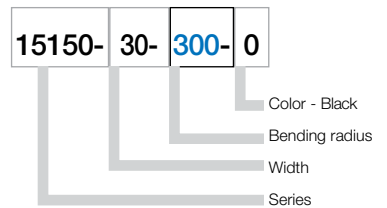


Series 15150 - e-chain® with crossbars every other link

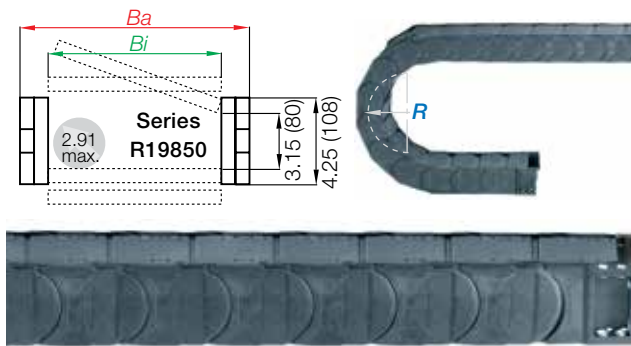


- Crossbars every other link - Standard configuration
- For nearly every situation
- Can be opened from both sides
- Easy assembly
- Stable
- Cost-effective

Part Number Structure

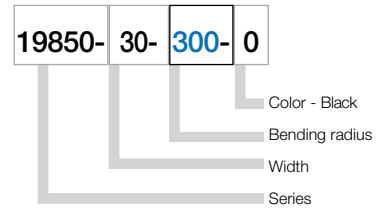


Series R19850 - fully enclosed e-tube

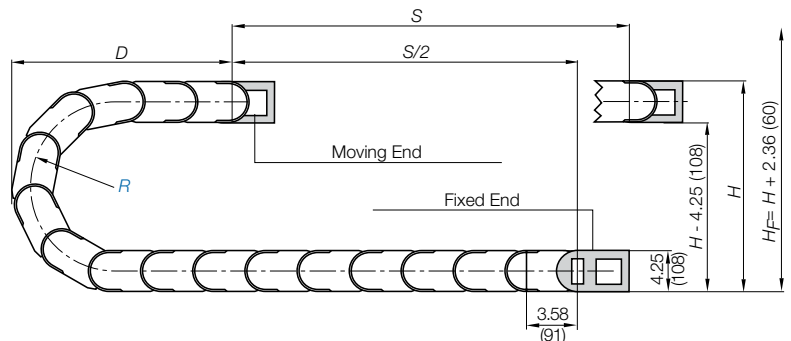
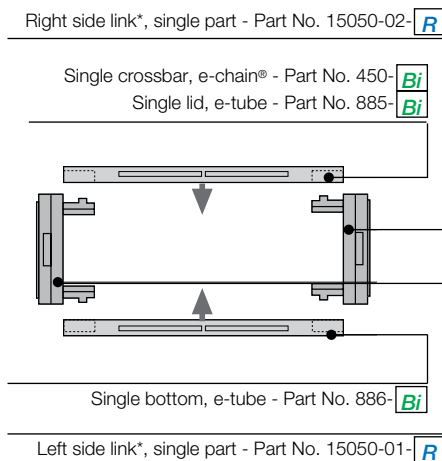


- Fully enclosed
- Excellent cable and hose protection against dirt
- Protection against hot chips
- Lids along inner radius are completely removable
- Lids along the outer radius are single-sided, snap open, hinged on one side as well as completely removable

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 15050/15150/R19850

Supplement part number with required radius. Example: 15050-30-300-0

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



15050
15150
R19850

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

Part Number.			<i>Bi</i>	<i>Ba</i>	15050	15150	R19850
Crossbars Every link	Crossbars Every other	Tube Version	in. (mm)	in. (mm)	lbs/ft (kg/m)	lbs/ft (kg/m)	lbs/ft (kg/m)
15050-05-	15150-05-	<input type="checkbox"/> -0	1.97 (50)	3.15 (80)	≈2.59 (3.85)	≈ 2.58 (3.84)	-
15050-06-	15150-06-	<input type="checkbox"/> -0	2.56 (65)	3.74 (95)	≈2.65 (3.95)	≈ 2.61 (3.88)	-
15050-07-	15150-07-	19850-07- <input type="checkbox"/> -0*	2.95 (75)	4.13 (105)	≈2.69 (4.00)	≈ 2.63 (3.92)	≈ 3.00 (4.46)
15050-08-	15150-08-	<input type="checkbox"/> -0	3.43 (87)	4.61 (117)	≈ 2.72 (4.05)	≈ 2.66 (3.96)	-
15050-10-	15150-10-	19850-10- <input type="checkbox"/> -0	3.94 (100)	5.12 (130)	≈ 2.81 (4.18)	≈ 2.69 (4.00)	≈ 3.18 (4.74)
15050-11-	15150-11-	<input type="checkbox"/> -0	4.41 (112)	5.63 (143)	≈ 2.90 (4.31)	≈ 2.73 (4.07)	-
15050-12-	15150-12-	19850-12- <input type="checkbox"/> -0	4.92 (125)	6.10 (155)	≈ 2.94 (4.38)	≈ 2.76 (4.10)	≈ 3.43 (5.10)
15050-13-	15150-13-	<input type="checkbox"/> -0	5.39 (137)	6.61 (168)	≈ 3.03 (4.51)	≈ 2.80 (4.17)	-
15050-15-	15150-15-	19850-15- <input type="checkbox"/> -0	5.91 (150)	7.09 (180)	≈ 3.08 (4.58)	≈ 2.82 (4.20)	≈ 3.72 (5.53)
15050-16-	15150-16-	<input type="checkbox"/> -0	6.38 (162)	7.60 (193)	≈ 3.15 (4.69)	≈ 2.86 (4.26)	-
15050-17-	15150-17-	19850-17- <input type="checkbox"/> -0	6.89 (175)	8.07 (205)	≈ 3.23 (4.80)	≈ 2.90 (4.31)	≈ 3.95 (5.80)
15050-18-	15150-18-	<input type="checkbox"/> -0	7.36 (187)	8.58 (218)	≈ 3.30 (4.91)	≈ 2.94 (4.37)	-
15050-20-	15150-20-	19850-20- <input type="checkbox"/> -0	7.87 (200)	9.06 (230)	≈ 3.31 (4.93)	≈ 2.94 (4.38)	≈ 4.11 (6.11)
15050-21-	15150-21-	<input type="checkbox"/> -0	8.35 (212)	9.57 (243)	≈ 3.39 (5.04)	≈ 2.98 (4.43)	-
15050-22-	15150-22-	<input type="checkbox"/> -0	8.86 (225)	10.04 (255)	≈ 3.43 (5.10)	≈ 3.00 (4.47)	-
15050-23-	15150-23-	<input type="checkbox"/> -0	9.33 (237)	10.55 (268)	≈ 3.52 (5.24)	≈ 3.04 (4.53)	-
15050-25-	15150-25-	19850-25- <input type="checkbox"/> -0	9.84 (250)	11.02 (280)	≈ 3.57 (5.32)	≈ 3.08 (4.58)	≈ 4.59 (6.83)
15050-26-	15150-26-	<input type="checkbox"/> -0	10.31 (262)	11.54 (293)	≈ 3.64 (5.41)	≈ 3.10 (4.62)	-
15050-27-	15150-27-	19850-27- <input type="checkbox"/> -0	10.83 (275)	12.01 (305)	≈ 3.71 (5.52)	≈ 3.14 (4.68)	≈ 4.87 (7.26)
15050-28-	15150-28-	<input type="checkbox"/> -0	11.30 (287)	12.52 (318)	≈ 3.72 (5.54)	≈ 3.15 (4.69)	-
15050-30-	15150-30-	19850-30- <input type="checkbox"/> -0	11.81 (300)	12.99 (330)	≈ 3.87 (5.76)	≈ 3.23 (4.80)	≈ 5.03 (7.49)
15050-31-	15150-31-	<input type="checkbox"/> -0	12.28 (312)	13.50 (343)	≈ 3.90 (5.80)	≈ 3.24 (4.82)	-
15050-32-	15150-32-	<input type="checkbox"/> -0	12.79 (325)	13.98 (355)	≈ 3.93 (5.85)	≈ 3.25 (4.84)	-
15050-33-	15150-33-	<input type="checkbox"/> -0	13.27 (337)	14.49 (368)	≈ 4.05 (6.03)	≈ 3.31 (4.93)	-
15050-35-	15150-35-	19850-35- <input type="checkbox"/> -0	13.78 (350)	14.96 (380)	≈ 4.15 (6.18)	≈ 3.37 (5.01)	≈ 5.54 (8.24)
15050-36-	15150-36-	<input type="checkbox"/> -0	14.25 (362)	15.47 (393)	≈ 4.16 (6.19)	≈ 3.37 (5.02)	-
15050-37-	15150-37-	<input type="checkbox"/> -0	14.76 (375)	15.94 (405)	≈ 4.17 (6.20)	≈ 3.37 (5.02)	-
15050-38-	15150-38-	<input type="checkbox"/> -0	15.24 (387)	16.46 (418)	≈ 4.23 (6.29)	≈ 3.40 (5.06)	-
15050-40-	15150-40-	19850-40- <input type="checkbox"/> -0	15.75 (400)	16.93 (430)	≈ 4.36 (6.49)	≈ 3.47 (5.16)	≈ 6.18 (9.20)
15050-41-	15150-41-	<input type="checkbox"/> -0	16.22 (412)	17.44 (443)	≈ 4.46 (6.64)	≈ 3.52 (5.24)	-
15050-42-	15150-42-	<input type="checkbox"/> -0	16.73 (425)	17.91 (455)	≈ 4.57 (6.80)	≈ 3.57 (5.31)	-
15050-43-	15150-43-	<input type="checkbox"/> -0	17.20 (437)	18.43 (468)	≈ 4.61 (6.86)	≈ 3.60 (5.35)	-
15050-45-	15150-45-	<input type="checkbox"/> -0	17.72 (450)	18.90 (480)	≈ 4.66 (6.93)	≈ 3.62 (5.38)	-
15050-46-	15150-46-	19850-46- <input type="checkbox"/> -0	18.19 (462)	19.41 (493)	≈ 4.67 (6.95)	≈ 3.62 (5.39)	≈ 6.49 (9.66)
15050-47-	15150-47-	<input type="checkbox"/> -0	18.70 (475)	19.88 (505)	≈ 4.76 (7.08)	≈ 3.67 (5.46)	-
15050-48-	15150-48-	<input type="checkbox"/> -0	19.17 (487)	20.39 (518)	≈ 4.81 (7.16)	≈ 3.69 (5.49)	-
15050-50-	15150-50-	<input type="checkbox"/> -0	19.69 (500)	20.87 (530)	≈ 4.85 (7.22)	≈ 3.71 (5.52)	-
15050-51-	15150-51-	<input type="checkbox"/> -0	20.16 (512)	21.38 (543)	≈ 4.87 (7.24)	≈ 3.72 (5.53)	-
15050-52-	15150-52-	<input type="checkbox"/> -0	20.67 (525)	21.85 (555)	≈ 4.89 (7.28)	≈ 3.74 (5.56)	-
15050-53-	15150-53-	<input type="checkbox"/> -0	21.14 (537)	22.36 (568)	≈ 5.00 (7.44)	≈ 3.78 (5.63)	-
15050-55-	15150-55-	<input type="checkbox"/> -0	21.65 (550)	22.83 (580)	≈ 5.32 (7.92)	≈ 3.94 (5.87)	-
15050-60-	15150-60-	<input type="checkbox"/> -0	23.62 (600)	24.80 (630)	≈ 5.46 (8.12)	≈ 4.01 (5.97)	-

Choose from the radii below for all of the above sizes

Radius (mm) Example: 15050-30-300-0

	150**	200	250	300	350	400	500
<i>R</i>	5.91 (150)	7.87 (200)	9.84 (250)	11.81 (300)	13.78 (350)	15.75 (400)	19.68 (500)
<i>H</i> ₂₅	16.14 (410)	20.08 (510)	24.02 (610)	27.95 (710)	31.89 (810)	35.83 (910)	43.70 (1110)
<i>D</i>	11.81 (300)	13.78 (350)	15.75 (400)	17.72 (450)	19.69 (500)	21.65 (550)	25.59 (650)
<i>K</i>	29.53 (750)	35.43 (900)	41.34 (1050)	48.23 (1225)	54.13 (1375)	57.09 (1450)	65.94 (1675)

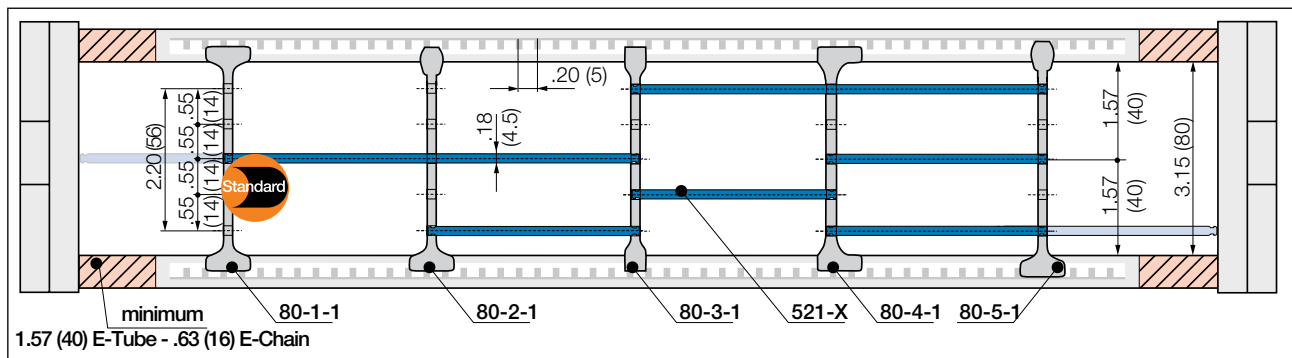
** This radius is not available for the R19850 Series

* Removable lid only, no hinged option

0=Standard color black. For other colors see Chapter 1

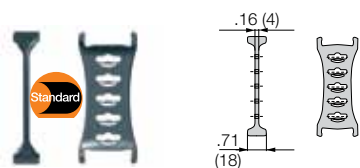
For wider chains see page 6.234 For large diameter hoses see page 6.234





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

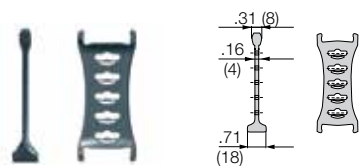
Telephone 1-800-521-2747



Separator, wide base

Unassembled	Part No. 80-1
Assembled	Part No. 80-1-1

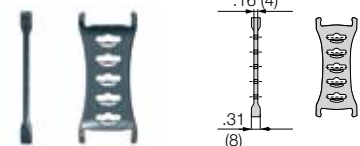
- **Standard separator 80-1 for all applications**
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head

Unassembled	Part No. 80-2
Assembled	Part No. 80-2-1

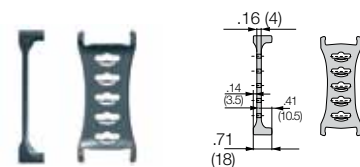
- **Separator 80-2 For even faster installation**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, narrow base

Unassembled	Part No. 80-3
Assembled	Part No. 80-3-1

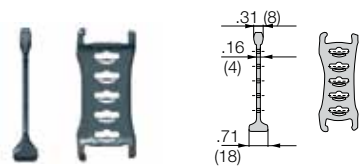
- **Separator 80-3 For many thin cables**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, asymmetrical

Unassembled	Part No. 80-4
Assembled	Part No. 80-4-1

- **Separator 80-4 For side mounted applications**
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

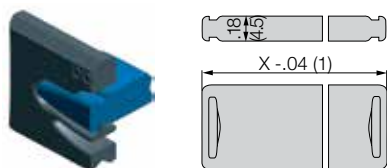


Separator, asymmetrical

Unassembled	Part No. 80-5
Assembled	Part No. 80-5-1

- **Separator 80-5 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 5 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	17.723 (450)	520-450	521-450

e-chain system® E4 light

Series 15050/15150/R19850

Interior Separation - Previous Generation



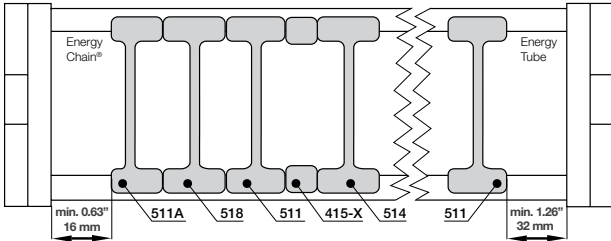
15050
15150
R19850



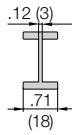
Option 1: Vertical separators and spacers

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
501



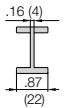
Vertical separator

Unassembled	Part No. 501
Assembled	Part No. 511

- **Standard separator 501 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.



Locking separator
504



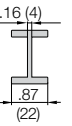
Locking separator (chain only)

Unassembled	Part No. 504
Assembled	Part No. 514

- **Locking separator 504 for e-chains®**
This separator features increased retention force for applications exposed to very high humidity and extreme loads. If locking separators are used, the e-chain® is more difficult to open.



Locking separator
508



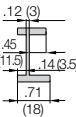
Locking separator (chain only)

Unassembled	Part No. 508
Assembled	Part No. 518

- **Locking separator 508 for e-chains®**
This separator is used for applications that are exposed to extremely high humidity. The clamp at the side serves to uniformly align the separators. In order to avoid destroying the separators when opening the e-chain®, make sure all separators are identically aligned.



Asymmetric separator
501A



Asymmetrical separator (chain only)

Unassembled	Part No. 501A
Assembled	Part No. 511A

- **Asymmetrical separator 501A 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).

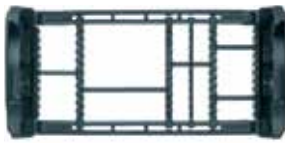
Spacers available in the following sizes:

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

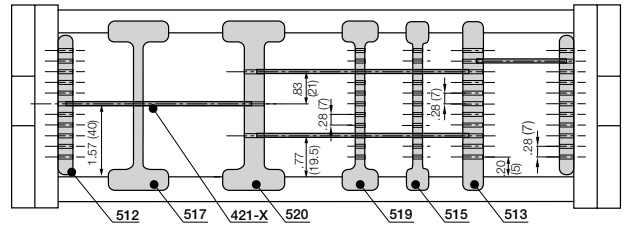




Option 2: Shelves

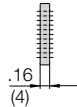
e-chains® and e-tubes can be subdivided both vertically and horizontally using the various interior separation elements.

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



• **Side plates 502**

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



Side plate

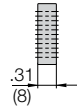
Unassembled	Part No. 502
Assembled	Part No. 512

Side plate 502



• **Vertical separator 503**

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



Vertical separator

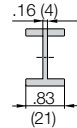
Unassembled	Part No. 503
Assembled	Part No. 513

Vertical separator 503



• **Locking vertical separator 507**

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 vertical separator

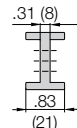
Unassembled	Part No. 507
Assembled	Part No. 517

Locking vertical separator 507



• **Locking vertical separator 510**

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



Locking vertical separator

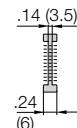
Unassembled	Part No. 510
Assembled	Part No. 520

Locking vertical separator 510



• **Slotted separators 505**

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



Slotted separators, closed

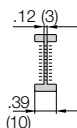
Unassembled	Part No. 505
Assembled	Part No. 515

Closed slotted separator 505



• **Slotted separator 509**

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 7 middle slots



Slotted separators, open

Unassembled	Part No. 509
Assembled	Part No. 519

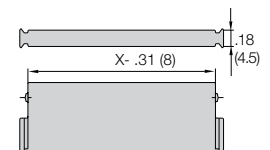
Open slotted separator 509



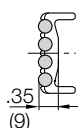
Shelves 420-XX

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



Rollclip - minimizes abrasion of particularly sensitive hoses or cables in an e-chain®. The integrated rollers compensate for relative movement between the chain and the hose or cable. This reduces the abrasion of the hoses or cables



Rollclip

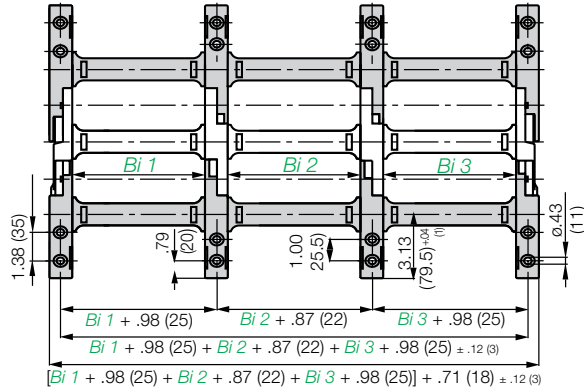
Unassembled	Part No. 489-27
Assembled	Part No. 490-27





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.



Part number example for e-chain®
15050-10/20/10-200-0
15050-*Bi1/Bi2/Bi3*-R-0

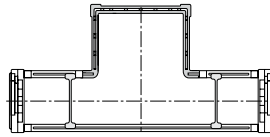
We **strongly recommend** on-site consultation with an igus® technician for individual advice regarding mounting brackets, guide troughs and other design details.



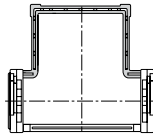
Extender crossbars - For careful guiding of large diameter cables and hoses

- Intended for cables and hoses with a maximum outer diameter of 10.63 in. (270 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.

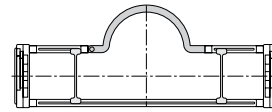
Consult igus® for your extender crossbar applications. We will be happy to assist you with your design layout.



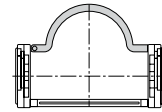
Square extender crossbar combined with standard snap-open crossbars.



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



15050
15150
R19850



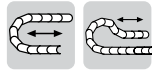
e-chain system® E4 light Series 15050/15150/R19850 Mounting Brackets - KMA

igus®
e-chain system®

Telephone 1-800-521-2747

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

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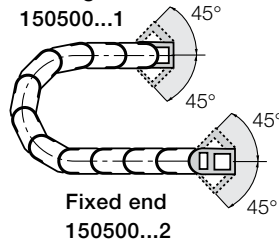


Standard

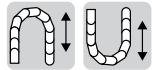
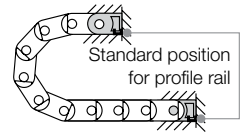
Option 1: KMA pivoting

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

Moving end
150500...1



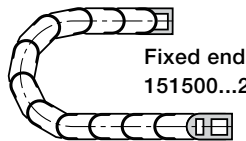
Fixed end
150500...2



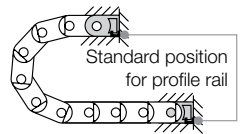
Option 2: KMA locking

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

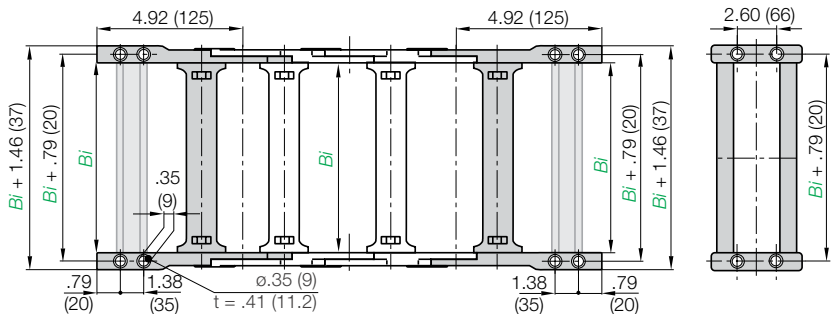
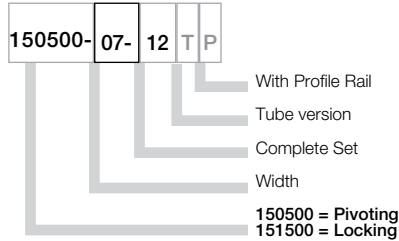
Moving end
151500...1



Fixed end
151500...2



Part Number Structure



Full set, for both ends:

150500-05-12 Full set, each part with pin/bore

Single-part order:

150500-05-1 Mounting bracket with bore

150500-05-2 Mounting bracket with pin

Part number examples are shown for pivoting brackets. For locking brackets change part number to 151500

Part No. Full Set (pivoting)

Series 15050 or 15150:

150500-Width-12

Part No. Full Set (pivoting)

with profile rail

Series 15050 or 15150

150500-Width-12P

Part No. Full Set (pivoting)

Tube Series R19850

150500-Width-12T

Part No. Full Set (pivoting)

with Profile Rail

Tube Series R19850

150500-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)
	Pivoting	Locking					Pivoting	Locking			
-05	150500	151500	-05-12	P	1.97 (50)	-31	150500	151500	-31-12	P	12.28 (312)
-06	150500	151500	-06-12	P	2.56 (65)	-32	150500	151500	-32-12	P	12.79 (325)
-07	150500	151500	-07-12	T	2.95 (75)	-33	150500	151500	-33-12	P	13.27 (337)
-10	150500	151500	-10-12	T	3.94 (100)	-35	150500	151500	-35-12	T	13.78 (350)
-11	150500	151500	-11-12	P	4.41 (112)	-36	150500	151500	-36-12	P	14.25 (362)
-12	150500	151500	-12-12	T	4.92 (125)	-37	150500	151500	-37-12	P	14.76 (375)
-13	150500	151500	-13-12	P	5.39 (137)	-38	150500	151500	-38-12	P	15.24 (387)
-15	150500	151500	-15-12	T	5.91 (150)	-40	150500	151500	-40-12	T	15.75 (400)
-16	150500	151500	-16-12	P	6.38 (162)	-41	150500	151500	-41-12	P	16.22 (412)
-17	150500	151500	-17-12	T	6.89 (175)	-42	150500	151500	-42-12	P	16.73 (425)
-18	150500	151500	-18-12	P	7.36 (187)	-43	150500	151500	-43-12	P	17.20 (437)
-20	150500	151500	-20-12	T	7.87 (200)	-45	150500	151500	-45-12	P	17.72 (450)
-21	150500	151500	-21-12	P	8.35 (212)	-46	150500	151500	-46-12	T	18.19 (462)
-22	150500	151500	-22-12	P	8.86 (225)	-47	150500	151500	-47-12	P	18.70 (475)
-23	150500	151500	-23-12	P	9.33 (237)	-48	150500	151500	-48-12	P	19.17 (487)
-25	150500	151500	-25-12	T	9.84 (250)	-50	150500	151500	-50-12	P	19.69 (500)
-26	150500	151500	-26-12	P	10.31 (262)	-51	150500	151500	-51-12	P	20.16 (512)
-27	150500	151500	-27-12	T	10.83 (275)	-52	150500	151500	-52-12	P	20.67 (525)
-28	150500	151500	-28-12	P	11.30 (287)	-53	150500	151500	-53-12	P	21.14 (537)
-30	150500	151500	-30-12	T	11.81 (300)	-55	150500	151500	-55-12	P	21.65 (550)
						-60	150500	151500	-60-12	P	23.62 (600)

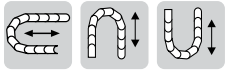
e-chain system® E4 light

Series 15050/15150/R19850

Mounting Brackets - Steel

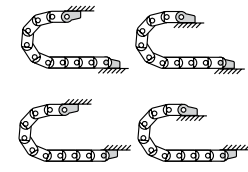
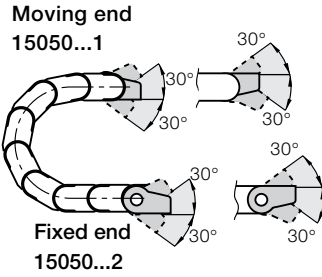


15050
15150
R19850



Option 1: pivoting

- For pivoting connections
- One part for all chain widths
- Electrically conductive



Possible installation configurations -

Part No. Mounting Brackets Full Set

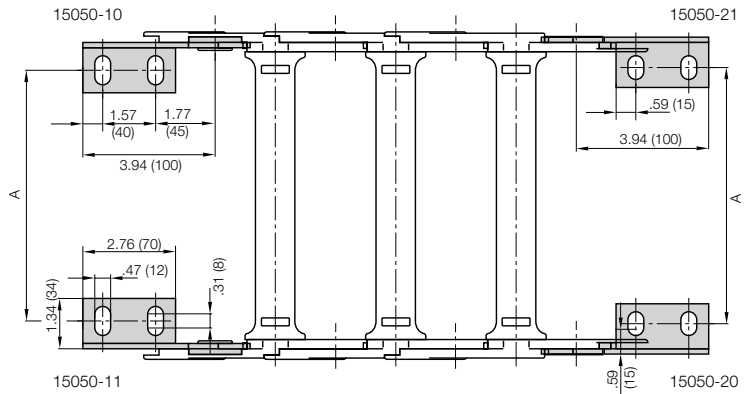
4 parts, 2 with pin, 2 with bore
Series 15050, 15150 or R19850:
15050-12

Part No. Mounting Bracket Moving End

2 parts, 1 left & 1 right with bore
Series 15050, 15150 or R19850:
15050-1

Part No. Mounting Bracket Fixed End

2 parts, 1 left & 1 right with pin
Series 15050, 15150 or R19850:
15050-2



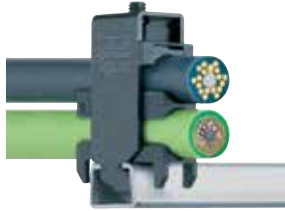
Bracket Mounting Dimensions

Width of Chain <i>Bi</i>	Part Number	Mounting Brackets			Mounting Dimension A in. (mm)	Width of Chain <i>Bi</i>	Part Number	Mounting Brackets			Mounting Dimension A in. (mm)
		Full Set	Moving End Only	Fixed End Only				Full Set	Moving End Only	Fixed End Only	
1.97 (50)	15050	-12	-1	-2	1.02 (26)	12.79 (325)	15050	-12	-1	-2	11.85 (301)
2.56 (65)	15050	-12	-1	-2	1.61 (41)	13.27 (337)	15050	-12	-1	-2	12.32 (313)
2.95 (75)	15050	-12	-1	-2	2.01 (51)	13.78 (350)	15050	-12	-1	-2	12.83 (326)
3.94 (100)	15050	-12	-1	-2	2.99 (76)	14.25 (362)	15050	-12	-1	-2	15.28 (388)
4.41 (112)	15050	-12	-1	-2	3.46 (88)	14.76 (375)	15050	-12	-1	-2	13.82 (351)
4.92 (125)	15050	-12	-1	-2	3.98 (101)	15.24 (387)	15050	-12	-1	-2	14.29 (363)
5.39 (137)	15050	-12	-1	-2	4.45 (113)	15.75 (400)	15050	-12	-1	-2	14.80 (376)
5.91 (150)	15050	-12	-1	-2	4.96 (126)	16.22 (412)	15050	-12	-1	-2	15.28 (388)
6.38 (162)	15050	-12	-1	-2	5.43 (138)	16.73 (425)	15050	-12	-1	-2	15.79 (401)
6.89 (175)	15050	-12	-1	-2	5.94 (151)	17.20 (437)	15050	-12	-1	-2	16.26 (413)
7.36 (187)	15050	-12	-1	-2	6.42 (163)	17.72 (450)	15050	-12	-1	-2	16.77 (426)
7.87 (200)	15050	-12	-1	-2	6.93 (176)	18.19 (462)	15050	-12	-1	-2	17.24 (438)
8.35 (212)	15050	-12	-1	-2	7.40 (188)	18.70 (475)	15050	-12	-1	-2	17.76 (451)
8.86 (225)	15050	-12	-1	-2	7.91 (201)	19.17 (487)	15050	-12	-1	-2	18.23 (463)
9.33 (237)	15050	-12	-1	-2	8.39 (213)	19.69 (500)	15050	-12	-1	-2	18.74 (476)
9.84 (250)	15050	-12	-1	-2	8.90 (226)	20.16 (512)	15050	-12	-1	-2	19.21 (488)
10.31 (262)	15050	-12	-1	-2	9.37 (238)	20.67 (525)	15050	-12	-1	-2	19.72 (501)
10.83 (275)	15050	-12	-1	-2	9.88 (251)	21.14 (537)	15050	-12	-1	-2	20.20 (513)
11.30 (287)	15050	-12	-1	-2	10.35 (263)	21.65 (550)	15050	-12	-1	-2	20.71 (526)
11.81 (300)	15050	-12	-1	-2	10.87 (276)	23.62 (600)	15050	-12	-1	-2	22.68 (576)
12.28 (312)	15050	-12	-1	-2	11.34 (288)						

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



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.

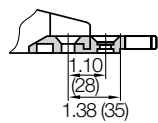
Part No. Single Clamp		Part No. Double Clamp		Part No. Triple Clamp		Cable ø	
Steel	Stainless	Steel	Stainless	Steel	Stainless	in.	(mm)
CFX12-1	CFX12-1E	CFX12-2	CFX12-2E	CFX12-3	-	.24 - .47	(6 - 12)
CFX14-1	CFX14-1E	CFX14-2	CFX14-2E	CFX14-3	-	.47 - .55	(12 - 14)
CFX16-1	CFX16-1E	CFX16-2	CFX16-2E	CFX16-3	-	.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

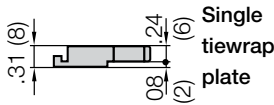
Tiewrap Plates

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.

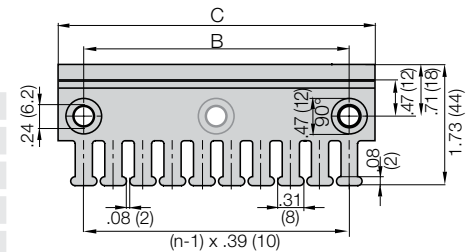


Shown assembled



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

e-chain system® E4 light

Series 15050/15150/R19850

Guide Trough



15050
15150
R19850

Width of Crossbar
15050-05-200-0

	B_{Ri}	
-05	3.35 (85)	*
-07	4.33 (110)	96-50-225
-10	5.31 (135)	96-50-250
-11	5.83 (148)	96-50-275
-12	6.30 (160)	96-50-275
-13	6.81 (173)	96-50-300
-15	7.28 (185)	96-50-300
-16	7.80 (198)	96-50-325
-17	8.27 (210)	96-50-325
-18	8.78 (223)	96-50-350
-20	9.25 (235)	96-50-350
-21	9.76 (248)	96-50-375
-22	10.24 (260)	96-50-375
-23	10.75 (273)	96-50-400
-25	11.22 (285)	96-50-400
-26	11.73 (298)	96-50-425
-27	12.20 (310)	96-50-425
-28	12.72 (323)	96-50-450
-30	13.19 (335)	96-50-450
-31	13.70 (348)	96-50-475
-32	14.17 (360)	96-50-475
-33	14.69 (373)	96-50-500
-35	15.16 (385)	96-50-500
-36	15.67 (398)	96-50-525
-37	16.14 (410)	96-50-525
-38	16.65 (423)	96-50-550
-40	17.13 (435)	96-50-550
-41	17.63 (448)	96-50-575
-42	18.11 (460)	96-50-575
-43	18.62 (473)	96-50-600
-45	19.09 (485)	96-50-600
-46	19.61 (498)	96-50-625
-47	20.08 (510)	96-50-625
-48	20.59 (523)	96-50-650
-50	21.06 (535)	96-50-650
-51	21.57 (548)	96-50-675
-52	22.04 (560)	96-50-675
-53	22.56 (573)	96-50-700
-55	23.03 (585)	96-50-700
-60	25.00 (635)	96-50-750

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. 99-30
- 1/2 travel length glide bars
Part No. 93-01
- Installation sets as end connectors
Part No. 96-50-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 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 bar
= 25 sections of 6.56 ft (2 m) guide trough

Part No. 99-30

= 13 sections of 6.56 ft (2 m) glide bar

Part No. 93-01

Required number of installation set:

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

Part No. of the installation sets **96-50-XXX**

Example:

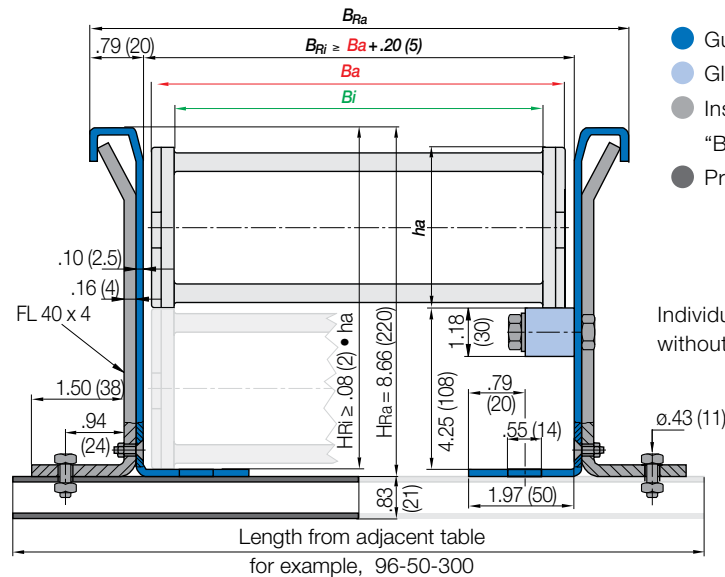
96-50-400 for 15.75 (400 mm) long profile rail



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



Installation sets as section connectors



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

Individual attachment without profile rail

* Specialized guide trough available upon request

Standard length profile rail

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



15050
15150
R19850



e-chain system® E4 light
Series 15050/15150/R19850
Application Example

igus®
e-chain system®

Telephone 1-800-521-2747

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



Spray-painting robot with System E4 e-chain® used in an ATEX version made of igumid ESD. High accelerations of up to 19.69 f/s^2 (6 m/s^2) and high braking rates with a weight of the robot of approximately one ton

