



### Price Index



40 Widths  
7 Bending Radii



3 options for mounting brackets



Wide range of interior separation



Hinged, snap-open, removable lids along outer radius of Energy Tube

KMA mounting brackets with attachment points on all sides

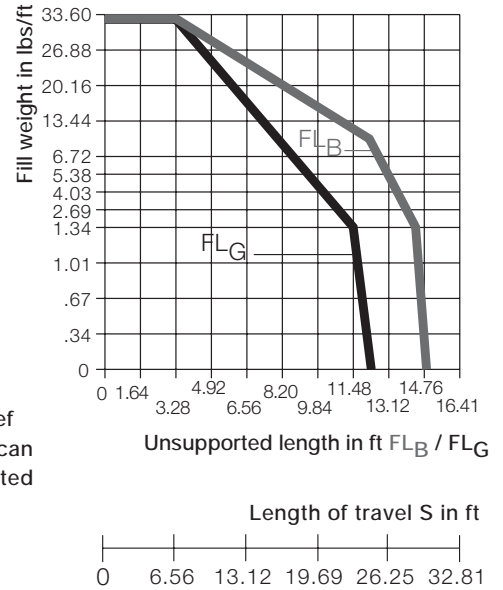
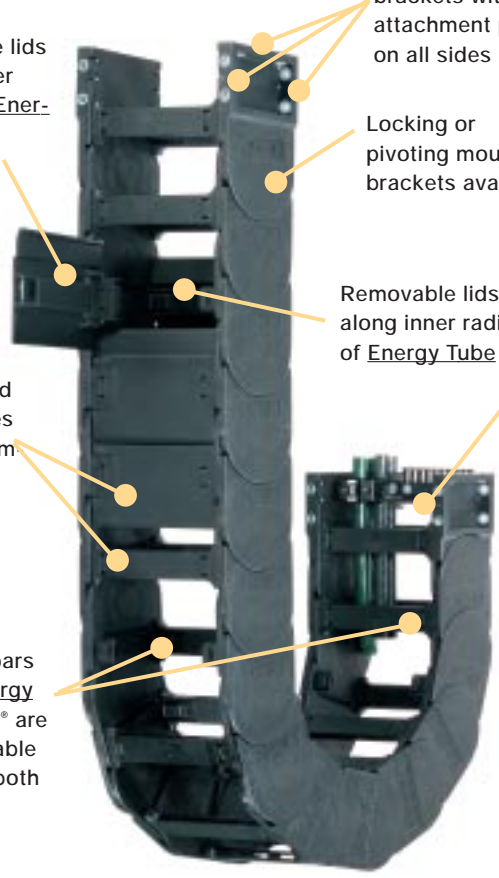
Locking or pivoting mounting brackets available

Removable lids along inner radius of Energy Tube

Closed and open styles can be combined

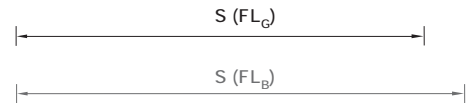
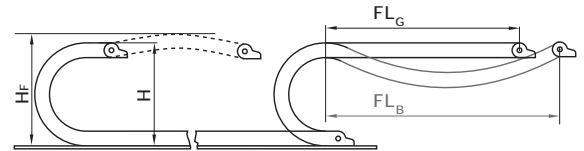
Strain relief elements can be integrated with the mounting bracket

Crossbars on Energy Chains® are removable along both radii



### Unsupported length

- FL<sub>B</sub> = unsupported with permitted sag
- FL<sub>G</sub> = unsupported with straight upper run



### Product range

Inner Widths (Bi) inches (mm):	1.97 - 23.62 (50 - 600)
Bending Radii (R) inches (mm):	5.91 (150), 7.87 (200), 9.84 (250), 11.81 (300), 13.78 (350), 15.75 (400), 19.69 (500)
Pitch:	3.58 (91 mm/link) = 3.35 links/ft (11 links/m) 39.4 (1001 mm)

Unsupported Energy Chains® ► **Design, Chapter 1**, feature positive camber over short travels. This must be accounted for when specifying the clearance height. Please refer to **Installation dimensions** for further details.

If the unsupported length is exceeded, the Energy Chain®/Tube must glide on itself. This requires a guide trough ► **Design, Chapter 1**



**When to use the Series 15050/15150/R19850:**

- If a simpler low-cost solution is required
- If maximized interior space is required
- If Series 5050 is over-specified



**When not to use the Series 15050/15150/R19850:**

- If a side-mounted Chain/Tube with a long unsupported length is required  
► Series 5050/ 5150/ R9850, Chapter 6

- Accessories for  
► Guide Troughs, Chapter 9
- Further information  
► Design, Chapter 1



### Other Installation Methods:

Vertical, hanging	= max 328 ft (100 m)
Vertical, standing, unsupported*	= max 19.69 ft (6 m)
Side-mounted, unsupported	= max 6.56 ft (2 m)
Rotary	= requires further calculation

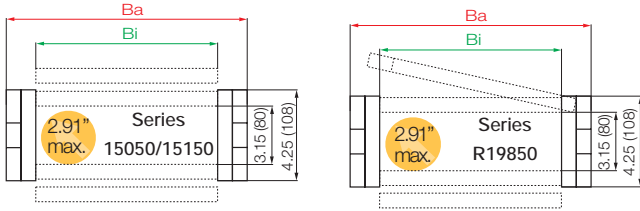
- Long travel Max: 820 ft. (250 m)

\*With support, this distance can be greater. Call igus for details.

# Series 15050/15150/R19850 "E4 Light"



15050  
15150  
R19850



● For crossbar selection please visit [www.igus.com](http://www.igus.com) and use the "E-Chain Helper"

Standard Version  
Part No.

	Bi	Ba <sup>+</sup>
15050/ 15150-05	1.97 (50)	3.15 (80)
15050/ 15150-07*	2.95 (75)	4.13 (105)
15050/ 15150-10	3.94 (100)	5.12 (130)
15050/ 15150-11	4.41 (112)	5.63 (143)
15050/ 15150-12	4.92 (125)	6.10 (155)
15050/ 15150-13	5.39 (137)	6.61 (168)
15050/ 15150-15	5.91 (150)	7.09 (180)
15050/ 15150-16	6.38 (162)	7.60 (193)
15050/ 15150-17	6.89 (175)	8.07 (205)
15050/ 15150-18	7.36 (187)	8.58 (218)
15050/ 15150-20	7.87 (200)	9.06 (230)
15050/ 15150-21	8.35 (212)	9.57 (243)
15050/ 15150-22	8.86 (225)	10.04 (255)
15050/ 15150-23	9.33 (237)	10.55 (268)
15050/ 15150-25	9.84 (250)	11.02 (280)
15050/ 15150-26	10.31 (262)	11.54 (293)
15050/ 15150-27	10.83 (275)	12.01 (305)
15050/ 15150-28	11.30 (287)	12.52 (318)
15050/ 15150-30	11.81 (300)	12.99 (330)
15050/ 15150-31	12.28 (312)	13.50 (343)
15050/ 15150-32	12.80 (325)	13.98 (355)
15050/ 15150-33	13.27 (337)	14.49 (368)
15050/ 15150-35	13.78 (350)	14.96 (380)
15050/ 15150-36	14.25 (362)	15.47 (393)
15050/ 15150-37	14.76 (375)	15.94 (405)
15050/ 15150-38	15.24 (387)	16.46 (418)
15050/ 15150-40	15.75 (400)	16.93 (430)
15050/ 15150-41	16.22 (412)	17.44 (443)
15050/ 15150-42	16.73 (425)	17.91 (455)

Bending Radii  
for ALL Widths  
5.91 (150)\*\*  
7.87 (200)  
9.84 (250)  
11.81 (300)  
13.78 (350)  
15.75 (400)  
19.69 (500)

\* Removable lid  
only, no  
hinged option

\*\* Not available  
for R19850

Supplement part no.  
with required radius,  
for example,  
15050-07-150-0

Standard Version  
Part No.

	Bi	Ba <sup>+</sup>
15050/ 15150-43	17.20 (437)	18.43 (468)
15050/ 15150-45	17.72 (450)	18.90 (480)
15050/ 15150-46	18.19 (462)	19.41 (493)
15050/ 15150-47	18.70 (475)	19.88 (505)
15050/ 15150-48	19.17 (487)	20.39 (518)
15050/ 15150-50	19.69 (500)	20.87 (530)
15050/ 15150-51	20.16 (512)	21.38 (543)
15050/ 15150-52	20.67 (525)	21.85 (555)
15050/ 15150-53	21.14 (537)	22.36 (568)
15050/ 15150-55	21.65 (550)	22.83 (580)
15050/ 15150-60	23.62 (600)	24.80 (630)

Tube Version  
Part No.

	Bi	Ba <sup>+</sup>
R19850-07*	2.95 (75)	4.13 (105)
R19850-10	3.94 (100)	5.12 (130)
R19850-12	4.92 (125)	6.10 (155)
R19850-15	5.91 (150)	7.09 (180)
R19850-20	7.87 (200)	9.06 (230)
R19850-25	9.84 (250)	11.02 (280)
R19850-30	11.81 (300)	12.99 (330)
R19850-35	13.78 (350)	14.96 (380)
R19850-40	15.75 (400)	16.93 (430)
R19850-46	18.19 (462)	19.41 (493)

Extender crossbar for  
large diameter hoses,  
see following pages

Price Index



## Series 15050, Energy Chain (with crossbars every link)

Select Energy Chains® with crossbars every link when using rigid hydraulic hoses or if an application is particularly demanding.



Standard  
Price Index



## Series 15150, Energy Chain (with crossbars every other link)

This design is the **standard** Energy Chain® for this size range. For almost all applications, the Series 151 offers the easiest assembly and best stability for the price.



Price Index



## Series R19850, Energy Tube (fully enclosed)

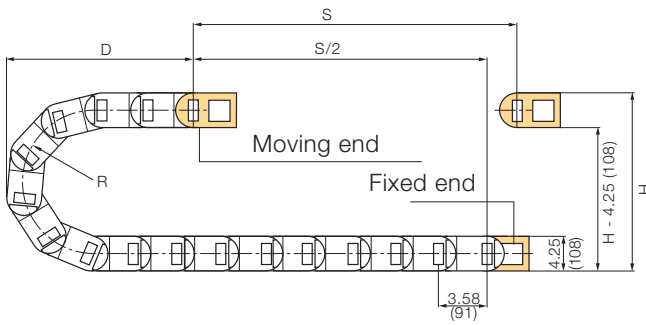
Energy Tubes offer excellent cable and hose protection against dirt, debris and other contaminants, as well as hot chips. This design offers cable and hose accessibility along both radii. Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single-sided, snap-open, with a hinge on the other side to keep them attached to the chain, or completely removable.



PDF: [www.igus.com/echainpdf.asp](http://www.igus.com/echainpdf.asp)  
Specs/CAD/RFO: [www.igus.com/echain.asp](http://www.igus.com/echain.asp)  
RoHS info: [www.igus.com/RoHS.asp](http://www.igus.com/RoHS.asp)



### Installation dimensions



- Pitch: = 3.58 (91 mm) per link
- Links per ft (m): = 3.35 (11)
- Total travel: = S
- Chain length: =  $\frac{S}{2} + K$

R	5.91 (150)	7.87 (200)	9.84 (250)	11.81 (300)
H <sub>25</sub> <sup>0</sup>	16.14 (410)	20.08 (510)	24.02 (610)	27.95 (710)
D	11.81 (300)	13.78 (350)	15.75 (400)	17.72 (450)
K	29.53 (750)	35.43 (900)	41.34 (1050)	48.23 (1225)

R	13.78 (350)	15.75 (400)	19.69 (500)	
H <sub>25</sub> <sup>0</sup>	31.89 (810)	35.83 (910)	43.70 (1110)	
D	19.69 (500)	21.65 (550)	25.59 (650)	
K	54.13 (1375)	57.09 (1450)	65.94 (1675)	

\* The required clearance height is HF = H + 2.36 (60) with .67 lbs/ft (3 kg/m) fill weight. Please consult igus® if space is particularly restricted.

### Extension Link



The extension link has been developed for applications in which particularly high fill weights necessitate extremely wide Energy Chains®. The extension link design allows virtually limitless side-by-side attachment of chains. In addition, the unsupported length of a chain can be increased. Using extension links also allows for additional fill weights.

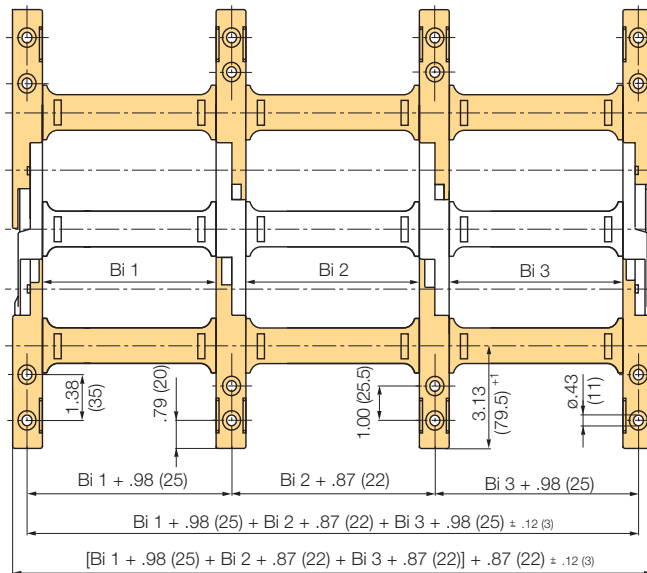


Extension links can be used with Energy Chains®, Energy Tubes or a combination of chains and tubes. They are equally suitable for unsupported and gliding applications in a guide trough.

Energy Chains® with extension links are attached with KMA or steel mounting brackets. We strongly recommend on-site consultation with an igus technician for individual advice regarding mounting brackets, guide troughs and other design details.

All nominal widths from the preceding page available in all combinations.

- Chain widths up to 118 (3000 mm) can be achieved
- Also available as Energy Tube

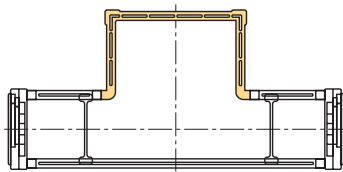


Part number example for  
Energy Chain®  
15050-10/20/10-200-0

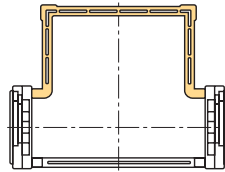
## Extender Crossbars

The extender crossbars were developed specifically for applications in which large diameter hose or cable must be guided carefully. It is intended for hoses or cables with a maximum outer diameter of 11.81 (300 mm.) The extender crossbar can be attached along either the outer or inner radius. In most applications, the inner radius is preferred. However, the chain cannot glide on itself in this case. If gliding operation is required, the crossbars are assembled along outer radius and a special guide trough is required. The extender crossbar can either be attached to the side link directly or can be used in combination with two standard snap-open crossbars.

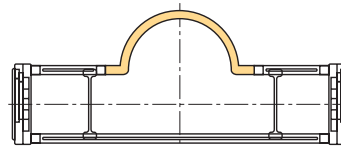
Part No.	Max Ø Hose	Style	Installation Side Link	Combined with Snap-Open Crossbars															
450-15-RHD115	By Request	Round	No	Yes															
450-17-RD115	By Request	Round	Yes	No															
450-25-D150	By Request	Square	Yes	No															
450-30-D200	By Request	Square	Yes	No															
450-35-D250	By Request	Square	Yes	No															
450-40-D300	By Request	Square	Yes	No </tr <tr> <td>450-20-HD150</td> <td>By Request</td> <td>Square</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>450-25-HD200</td> <td>By Request</td> <td>Square</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>450-30-HD250</td> <td>By Request</td> <td>Square</td> <td>No</td> <td>Yes</td> </tr>	450-20-HD150	By Request	Square	No	Yes	450-25-HD200	By Request	Square	No	Yes	450-30-HD250	By Request	Square	No	Yes
450-20-HD150	By Request	Square	No	Yes															
450-25-HD200	By Request	Square	No	Yes															
450-30-HD250	By Request	Square	No	Yes															



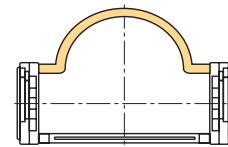
Square extender crossbar combined with standard snap-open crossbars.



Square extender crossbars attached directly to the side link.



Round extender crossbar combined with standard snap-open crossbars.



Round extender crossbar attached directly to the side link.

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

PDF: [www.igus.com/echainpdf.asp](http://www.igus.com/echainpdf.asp)  
 Specs/CAD/RFO: [www.igus.com/echain.asp](http://www.igus.com/echain.asp)  
 RoHS info: [www.igus.com/RoHS.asp](http://www.igus.com/RoHS.asp)



Option 1: separators

Option 1: separators

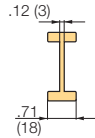
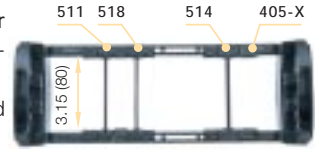
Separators can be placed at any point along the chain's cross-section. The **standard separator (Part No. 501)** offers safe stability due to its broad "foot" design, even when used with large diameter or hoses.

Vertical separators can be used with both Energy Chains® and Energy Tubes for the Series listed above.

A **locking separator (Part No. 504)** with increased retention force is available for chains only. This separator is used with applications subject to extreme loads.

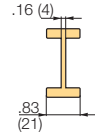
The **asymmetrical locking separator (Part No. 508)** is used with applications involving high relative humidity, such as composting plants. The clamp at the side serves to uniformly align the separators. In order to avoid destroying the separators when opening the Energy Chain®, make sure all separators are identically aligned.

All separators are adjustable, but may be fixed in place with spacers (chains only). Spacers are most often necessary with side-mounted applications.



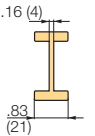
Separator

Unassembled	Part No. 501
Assembled	Part No. 511



Locking Separator (Chain only)

Unassembled	Part No. 504
Assembled	Part No. 514



Locking Separator (Chain Only)

Unassembled	Part No. 508
Assembled	Part No. 518



Note:

The available inner height is decreased by .08 (2 mm) per spacer (for example, if one spacer is placed on either side of the separator, the overall inner height is reduced by .16 (4 mm). To avoid this, place the spacers on the **outside** of the opening crossbar.



Spacer (Chain Only)

Unassembled	Part No. 405-10
Assembled	Part No. 415-10



Spacer (Chain Only)

Unassembled	Part No. 405-15
Assembled	Part No. 415-15



Spacer (Chain Only)

Unassembled	Part No. 405-20
Assembled	Part No. 415-20



Spacer (Chain Only)

Unassembled	Part No. 405-30
Assembled	Part No. 415-30

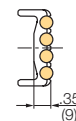


Spacer (Chain Only)

Unassembled	Part No. 405-40
Assembled	Part No. 405-40

● Rollclip

The Rollclip has been developed to minimize abrasion of particularly sensitive hoses or cables in an Energy Chain®. The Rollclip is simply clamped onto the opening crossbar of the chain link. The integrated rollers compensate for relative movement between the chain and the hose or cable. This reduces the abrasion of the hoses or cables. Consult igus® if you have questions regarding the Rollclip.



Rollclip

Unassembled	Part No. 488-27
Assembled	Part No. 489-27



# Series 15050/15150/R19850 "E4 Light"



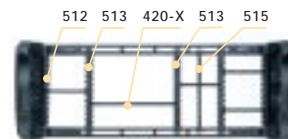
15050  
15150  
R19850

## Option 2: shelves

Energy Chains® and Energy Tubes can be subdivided both vertically and horizontally using the various interior separation elements.

Side plates, separators and shelves form the basic pattern of a shelf system. Shelves of various widths can be arranged at 11 different heights at .28 (7mm) increments.

► Design, Chapter 1 for layout recommendations.



### Side Plate

Unassembled Part No. 502

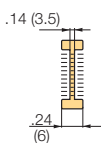
Assembled Part No. 512



### Vertical Separator

Unassembled Part No. 503

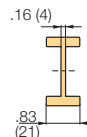
Assembled Part No. 513



### Slotted Separator

Unassembled Part No. 505

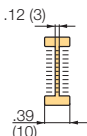
Assembled Part No. 515



### Locking Separators with Slot

Unassembled Part No. 507

Assembled Part No. 517

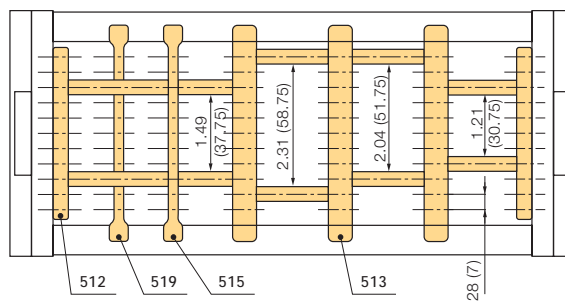
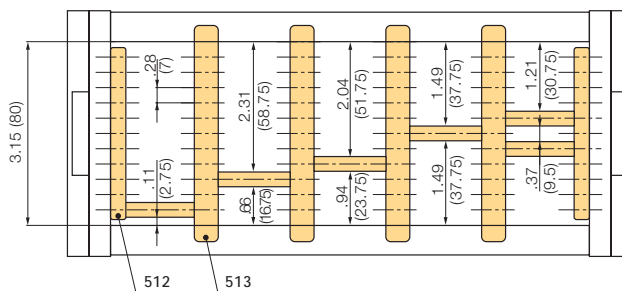


### Slotted Separators, Open

Unassembled Part No. 509

Assembled Part No. 519

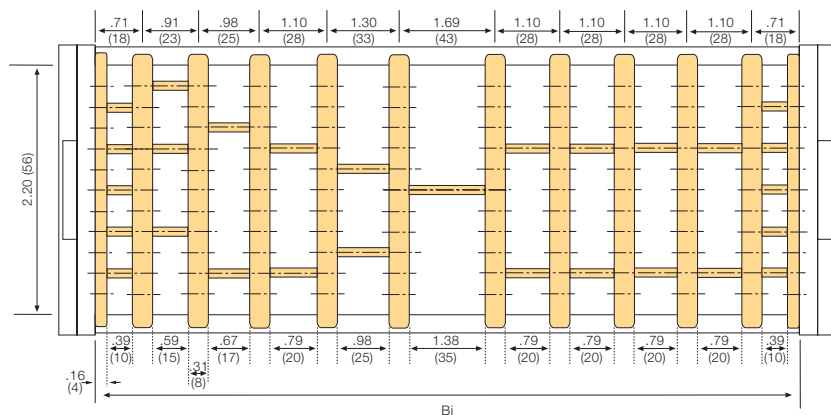
Width X in. (mm)	Usable Width in. (mm)	Part No. Unassembled	Part No. Assembled
.71 (18)	.39 (10)	420-18	421-18
.91 (23)	.59 (15)	420-23	421-23
.98 (25)	.67 (17)	420-25	421-25
1.10 (28)	.79 (20)	420-28	421-28
1.30 (33)	.98 (25)	420-33	421-33
1.69 (43)	1.38 (35)	420-43	421-43
1.97 (50)	1.65 (42)	420-50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



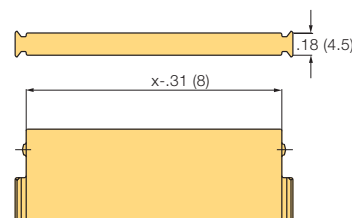
Slotted separators (Part No. 505) are used for complex subdivisions. However, they cannot be retrofitted into an existing interior separation system without removing the shelves first.



The open slotted separator (Part No. 509) can be retrofitted into an existing interior separation system without removing the existing shelves as long as these shelves fit into any of the 7 middle slots.



Click Here for  
Specs &  
CAD Files



PDF: [www.igus.com/echainpdf.asp](http://www.igus.com/echainpdf.asp)  
Specs/CAD/RFO: [www.igus.com/echain.asp](http://www.igus.com/echain.asp)  
RoHS info: [www.igus.com/RoHS.asp](http://www.igus.com/RoHS.asp)



► Page 6.163

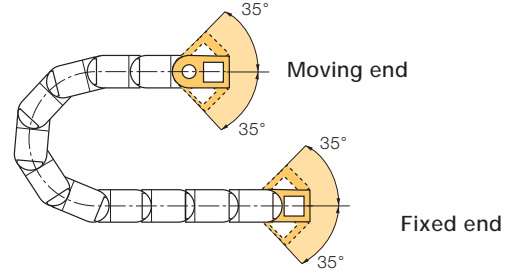


## Mounting Brackets

### Option 1: pivoting

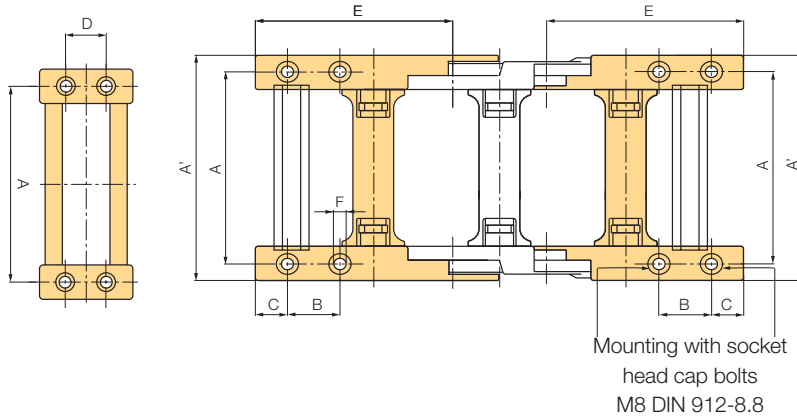
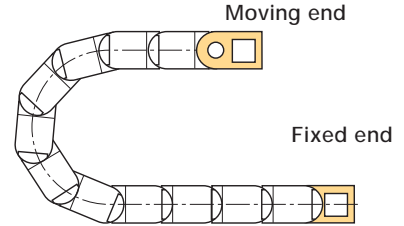
Standard

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

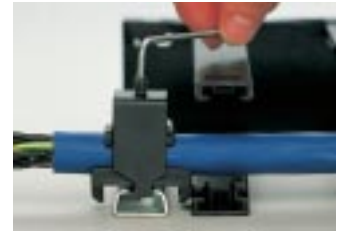


### Option 2: locking

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



An integrated strain relief system,  
using profile rail, is an option  
► Strain Relief, Chapter 10



A	A'	B	C	D	E	F	
Bi +.79 (20)	Bi +1.46 (37)	1.38 (35)	.79 (20)	2.60 (66)	4.92 (125)	.35 (9)	in. (mm)



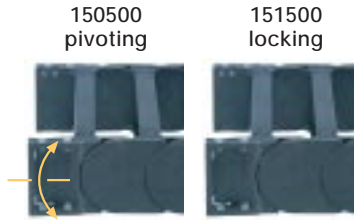
# Series 15050/15150/R19850 "E4 Light"



15050  
15150  
R19850

Part No., full set  
Series 15050/ 15150

15050-\_\_-12 pivoting  
15150-\_\_-12 locking

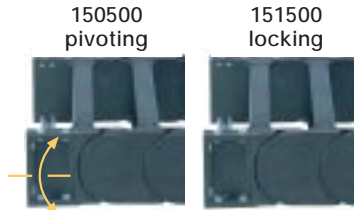


Please insert width of selected Energy Chain®.

For example, 150500-15-12 for Energy Chain® 15050/ 15150-13-\_\_

Part No., full set, with profile rail  
Series 15050/ 15150

15050-\_\_-12P pivoting  
15150-\_\_-12P locking

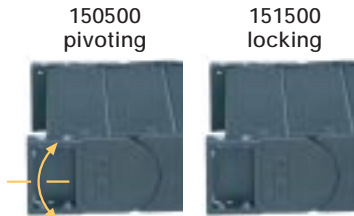


Please insert width of selected Energy Chain®.

For example, 150500-15-12P for Energy Chain® 15050/ 15150-15-\_\_

Part No., full set  
Series R19850

15050-\_\_-12T pivoting  
15150-\_\_-12T locking

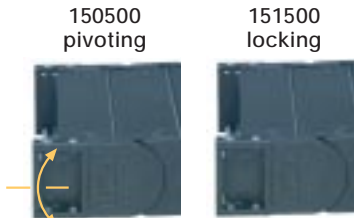


Please insert width of selected Energy Tube For

example, 150500-15-12T for Energy Tube 19850-15-\_\_

Part No. , full set, with profile rail  
Series R198

15050-\_\_-12TP pivoting  
15150-\_\_-12TP locking



Please insert width of selected Energy Tube.

For example, 150500-15-12TP for Energy Tube 19850-15-\_\_

150500-\_\_-12/ 150500-\_\_-12T(P) = Full set, each part with pin/bore  
150500-\_\_-1/ 150500-\_\_-1T(P) = Mounting bracket with bore  
150500-\_\_-2/ 150500-\_\_-2T(P) = Mounting bracket with pin

An integrated strain relief system using a profile rail is an option.

► Strain Relief, Chapter 10

Chain/ Tube Width	Bi
-05	1.97 (50)
-07	2.95 (75)
-10	3.94 (100)
-11	4.41 (112)
-12	4.92 (125)
-13	5.39 (137)
-15	5.91 (150)
-16	6.38 (162)
-17	6.89 (175)
-18	7.36 (187)
-20	7.87 (200)
-21	8.35 (212)
-22	8.86 (225)
-23	9.33 (237)
-25	9.84 (250)
-26	10.31 (262)
-27	10.83 (275)
-28	11.30 (287)
-30	11.81 (300)
-31	12.28 (312)
-32	12.80 (325)
-33	13.27 (337)
-35	13.78 (350)
-36	14.25 (362)
-37	14.76 (375)
-38	15.24 (387)
-40	15.75 (400)
-41	16.22 (412)
-42	16.73 (425)
-43	17.20 (437)
-45	17.72 (450)
-46	18.19 (462)
-47	18.70 (475)
-48	19.17 (487)
-50	19.69 (500)
-51	20.16 (512)
-52	20.67 (525)
-53	21.14 (537)
-55	21.65 (550)
-60	23.62 (600)

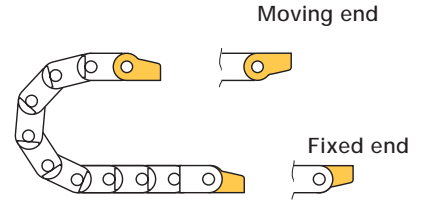


PDF: [www.igus.com/echainpdf.asp](http://www.igus.com/echainpdf.asp)  
Specs/CAD/RFO: [www.igus.com/echain.asp](http://www.igus.com/echain.asp)  
RoHS info: [www.igus.com/RoHS.asp](http://www.igus.com/RoHS.asp)



Option 3: steel

- One part for all chain widths
- Electrically conductive



- 1500-12 = Full set, 4 parts, 2 parts with pin, 2 parts with bore
- 1500-1 = Mounting brackets with bore, 1 part left/right
- 1500-2 = Mounting brackets with pin, 1 part left/right

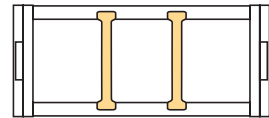
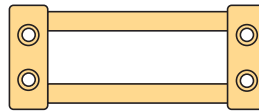
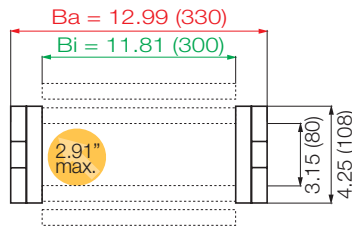
Strain relief package

► Strain Relief, Chapter 10

	A = B	C	D	E	F	G	H	I	K	M
1500-1	Bi - .94 (24)	.47 (12)	2.76 (70)	3.94 (100)	.59 (15)	1.57 (40)	1.77 (45)	1.50 (38)	.24 (6)	.55 (14)
1500-2	Bi - .94 (24)	.47 (12)	2.76 (70)	3.94 (100)	.59 (15)	1.57 (40)	1.77 (45)	1.50 (38)	.39 (10)	.39 (10)



Order example



1. Chain selection:

15050-30-300-0

- Color black
- Radius
- Width
- Chain type

2. Mounting brackets:

150500-30-12P

- With profile rails
- Full set, 1 with pin
- 1 with bore
- Chain width
- Pivoting

3. Interior Separation:

2 separators, assembled every other link (Part No. 511). Alternative interior separation configuration according to design layout possible.

For 6.56 ft (2 m) chain, color black

with pivoting mounting brackets and integrated profile rails:

6.56 ft (2 m) 15050-30-300-0 and 150500-30-12P and 2 Part No. 511, assembled every other link

22 links — 3.35 links/ft (11 links/m)

## Technical Data

Chain/Tube Width	Weight Per Link lbs (kg)			Weight lbs/ft (kg/m)		
	15050	15150	R19850	15050	15150	R19850
-05	.772 (0.350)		-	2.59 (3.85)	2.58 (3.84)	-
-07	.803 (0.364)		.893 (0.405)	2.69 (4.00)	2.63 (3.92)	3.00 (4.46)
-10	.838 (0.380)		.950 (0.431)	2.81 (4.18)	2.69 (4.00)	3.18 (4.74)
-11	.864 (0.392)		-	2.90 (4.31)	2.74 (4.07)	-
-12	.878 (0.398)		1.023 (0.464)	2.94 (4.38)	2.76 (4.10)	3.43 (5.10)
-13	.904 (0.410)		-	3.03 (4.51)	2.80 (4.17)	-
-15	.917 (0.416)		1.109 (0.503)	3.08 (4.58)	2.82 (4.20)	3.72 (5.53)
-16	.939 (0.426)		-	3.15 (4.69)	2.86 (4.26)	-
-17	.961 (0.436)		-	3.23 (4.80)	2.90 (4.31)	-
-18	.983 (0.446)		-	3.30 (4.91)	2.94 (4.37)	-
-20	.988 (0.448)		1.224 (0.555)	3.31 (4.93)	2.94 (4.38)	4.11 (6.11)
-21	1.010 (0.458)		-	3.39 (5.04)	2.98 (4.43)	-
-22	1.023 (0.464)		-	3.43 (5.10)	3.00 (4.47)	-
-23	1.050 (0.476)		-	3.52 (5.24)	3.04 (4.53)	-
-25	1.067 (0.484)		1.369 (0.621)	3.58 (5.32)	3.08 (4.58)	4.59 (6.83)
-26	1.085 (0.492)		-	3.64 (5.41)	3.10 (4.62)	-
-27	1.107 (0.502)		-	3.71 (5.52)	3.15 (4.68)	-
-28	1.111 (0.504)		-	3.72 (5.54)	3.15 (4.69)	-
-30	1.155 (0.524)		1.502 (0.681)	3.87 (5.76)	3.23 (4.80)	5.03 (7.49)
-31	1.155 (0.524)		-	3.87 (5.76)	3.23 (4.80)	-
-32	1.173 (0.532)		-	3.93 (5.85)	3.25 (4.84)	-
-33	1.208 (0.548)		-	4.05 (6.03)	3.31 (4.93)	-
-35	1.239 (0.562)		1.652 (0.749)	4.15 (6.18)	3.37 (5.01)	5.54 (8.24)
-36	1.239 (0.562)		-	4.15 (6.18)	3.37 (5.01)	-
-37	1.244 (0.564)		-	4.17 (6.20)	3.37 (5.02)	-
-38	1.261 (0.572)		-	4.23 (6.29)	3.40 (5.06)	-
-40	1.301 (0.590)		1.843 (0.836)	4.36 (6.49)	3.47 (5.16)	6.18 (9.20)
-41	1.332 (0.604)		-	4.46 (6.64)	3.52 (5.24)	-
-42	1.363 (0.618)		-	4.57 (6.80)	3.57 (5.31)	-
-43	1.376 (0.624)		-	4.61 (6.86)	3.59 (5.35)	-
-45	1.389 (0.630)		-	4.66 (6.93)	3.62 (5.38)	-
-46	1.394 (0.632)		1.936 (0.878)	4.67 (6.95)	3.62 (5.39)	6.49 (9.66)
-47	1.420 (0.644)		-	4.76 (7.08)	3.67 (5.46)	-
-48	1.420 (0.644)		-	4.76 (7.08)	3.67 (5.46)	-
-50	1.446 (0.656)		-	4.85 (7.22)	3.71 (5.52)	-
-51	1.451 (0.658)		-	4.87 (7.24)	3.72 (5.53)	-
-52	1.460 (0.662)		-	4.89 (7.28)	3.74 (5.56)	-
-53	1.491 (0.676)		-	5.00 (7.44)	3.78 (5.63)	-
-55	1.588 (0.720)		-	5.32 (7.92)	3.94 (5.87)	-
-60	1.627 (0.738)		-	5.46 (8.12)	4.01 (5.97)	-

Material	igumid G
Permitted temperature	-40°/266°F (-40/+130°C)
Gliding speed (maximum)	16.4 ft/s (5 m/s)
Unsupported V (maximum)	32.8 ft/s (10 m/s)
Flammability class	VDE 0304 IIC UL94 HB

● Weight data tolerance: +/- 5%

- Details of material properties
- ▶ Design, Chapter 1



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 RoHS info: [www.igus.com/RoHS.asp](http://www.igus.com/RoHS.asp)



▶ Page 6.163



## Guide Troughs

Width of Crossbar  
15050-05-200-0

	$B_{Ri}$		Installation Part No.
-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 Energy 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:

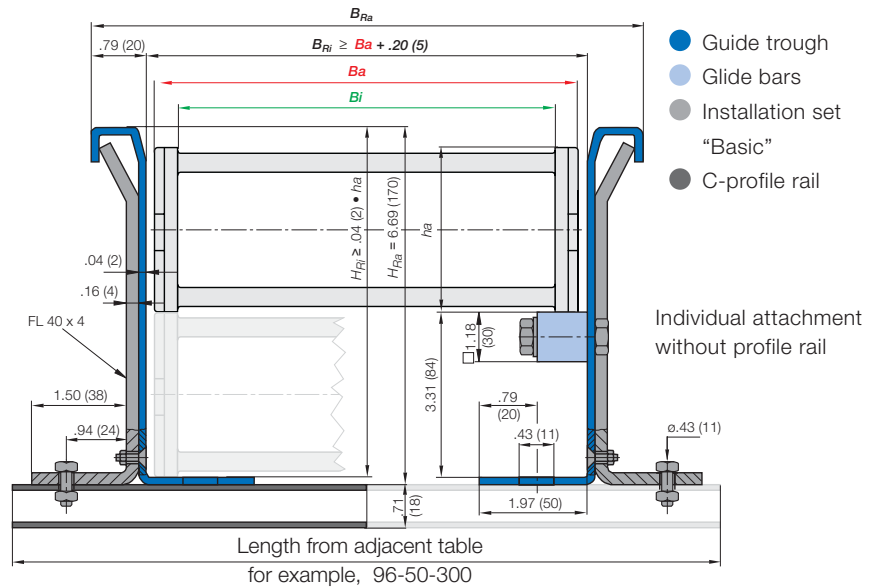
96-50-400 for 15.75 (400 mm) long profile rail



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



Installation sets as section connectors



\* Specialized guide trough available upon request

Standard length profile rail

