

R2680



Energy Chain System® E2 Tubes Series R2680



Price Index

Series 2680

Special Features / Options

IPA Qualification Certificate
Air Cleanliness Class ISO Class 3
(at v = 6.56 ft/s) upon request

ESD classification:
Electrically conductive
ESD/ATEX version upon request

Flammability Class
VDE 0304 IIC UL94 HB

Assembly Tips



Insert screwdriver into the slot, using a lever action apply pressure to the screwdriver to release

Other Installation Methods

Vertical, hanging ≤ 164 ft (50 m)

Vertical, standing ≤ 9.84 ft (3 m)

Side-mounted, un_supp. ≤ 3.28 ft (1 m)

Rotary requires further calculation

Usage Guidelines



- If hinged, snap-open accessibility along the inner radius is required
- If stable chain of moderate size is required
- If integrated strain relief is required at the connection point
- If loads are moderate
- If chip protection is required
- If easy installation is required



- If the application is very simple
%o Series R58 E2 Tubes
- If maximum stability is required
%o Series R770 E4/100
- If cables over 1.26" (32 mm) are involved
%o Series R780 E4/100

Features & Benefits

- 1 Double stop dog for long unsupported length
- 2 Lateral glide surfaces for side-mounted operation
- 3 Integrated strain relief possible
- 4 Fully enclosed Energy Tube snap-open on both sides along the inner radius
- 5 Modular interior separation
- 6 Easy assembly by optimized pin
- 7 Rapid opening from either the left or right



Order Example: Complete Energy Chain®

Please indicate chain length or number of links. Example:

9.84 ft (3 m) 2680-10-100-0



Energy Chain®

With 2 separators 26501 assembled every 2nd link



Interior Separation

1 Set 2610-34 PZB

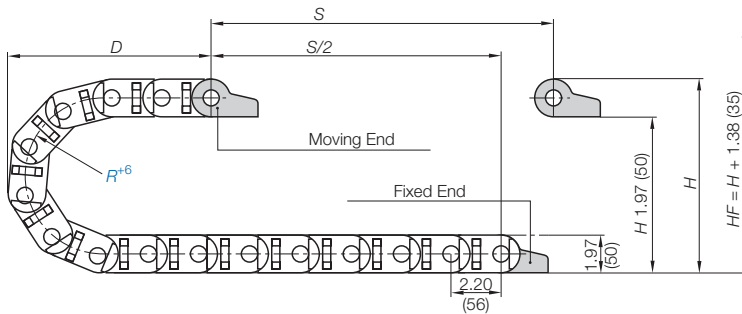
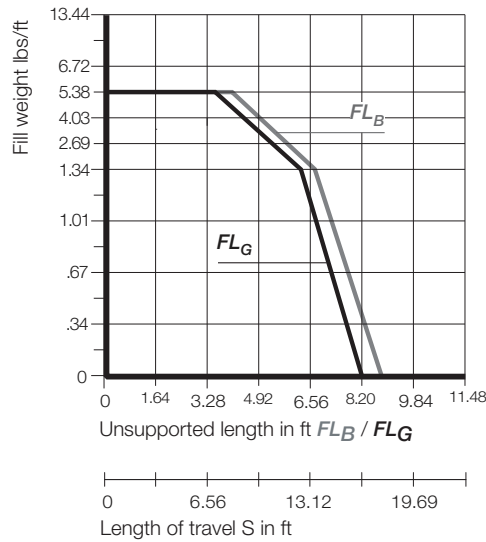
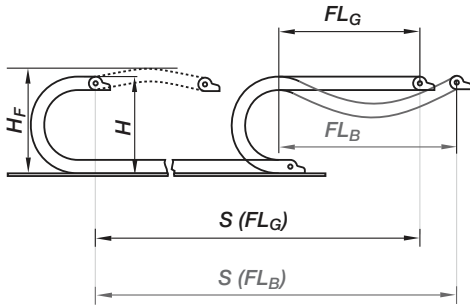


Mounting Bracket

Energy Chain System® E2 Tubes Series R2680 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: = 2.20" (56 mm)
Links per foot (m): = 5.49 (18)
For center mount applications:
Chain length = $S/2 + K$

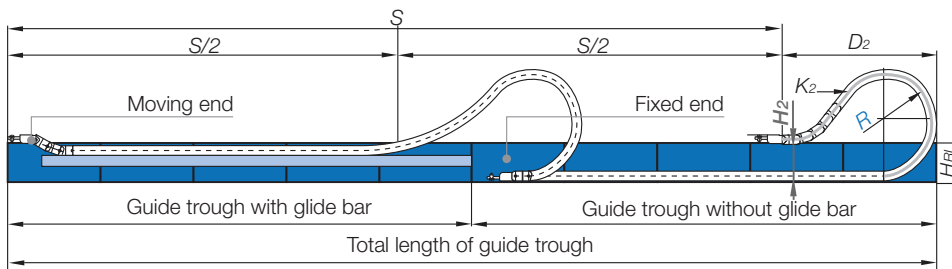
The required clearance height: $H_f = H + 1.38$ in. (35 mm) (with 1.34 lbs/ft (2.0 kg/m) fill weight). Please consult igus® if space is particularly restricted.

R	3.94 (100)	4.92 (125)	5.91 (150)	6.89 (175)	7.87 (200)	9.84 (250)
H	9.84 (250)	11.81 (300)	13.78 (350)	15.75 (400)	17.72 (450)	21.65 (550)
D	6.89 (175)	7.87 (200)	8.86 (225)	9.84 (250)	10.83 (275)	12.80 (325)
K	18.70 (475)	21.65 (550)	25.59 (650)	29.53 (750)	32.48 (825)	36.42 (925)

For long travels with lowered mounting height

Long travel lengths from 32.8 ft. (10 m) to max. 394 ft. (120 m)

For center mount applications:
Chain length: = $S/2 + K_2$



R	3.94 (100)	4.92 (125)	5.91 (150)	6.89 (175)	7.87 (200)	9.84 (250)
H_2	6.54 (166)	6.54 (166)	6.54 (166)	6.54 (166)	6.54 (166)	6.54 (166)
D_2	13.78 (350)	18.70 (475)	19.69 (500)	25.79 (655)	30.31 (770)	37.40 (950)
K_2	24.25 (616)	30.87 (784)	35.28 (896)	44.09 (1120)	50.71 (1288)	63.94 (1624)

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

igus®

R2680

Short Travels - Unsupported



Unsupported Energy 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 Energy Chain® radius in final position
- $K = \pi \cdot R + \text{safety buffer}$
- H_f = Required clearance height
- H_{R1} = 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: www.igus.com/e-chain-pdfs
Specs/CAD/RFQ: www.igus.com/e-chains
RoHS info: www.igus.com/RoHS



Long Travels - Gliding



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

Design, Chapter 1

Technical Data



Details of material properties
% Chapter 1

5.78

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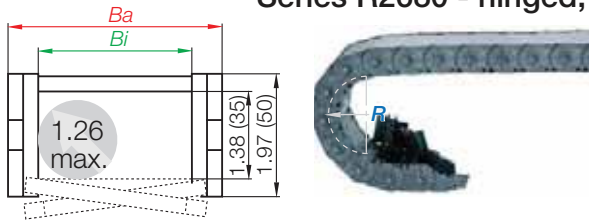


Energy Chain System® E2 Tubes Series R2680

igus® Energy Chain System®

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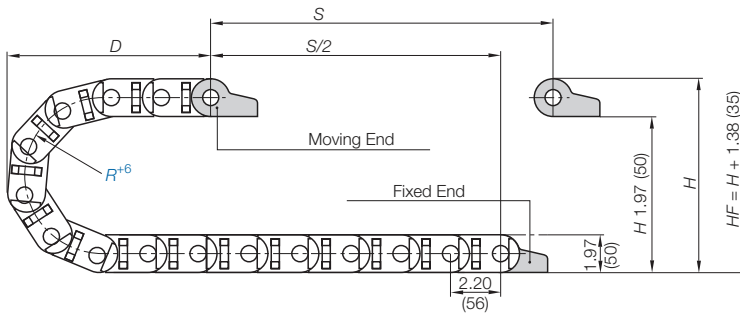
Series R2680 - hinged, snap-open along the inner radius



Part Number Structure



- Color - Black
- Bending radius
- Width
- Series



Supplement part number with required radius. Example: 2680-10-100-0
Pitch: 1.81 in. (46 mm) per link links/ft(m) = 6.71 (22)

Part Number.

Snap-open inner radius	Bi in. (mm)	Ba in. (mm)	Weight lbs/ft (kg/m)
2680-05- [] -0	1.97 (50)	2.60 (66)	≈ 0.89 (1.33)
2680-07- [] -0	2.95 (75)	3.58 (91)	≈ 1.01 (1.51)
2680-10- [] -0	3.94 (100)	4.57 (116)	≈ 1.22 (1.81)
2680-12- [] -0	4.92 (125)	5.55 (141)	≈ 1.34 (1.99)

Choose from the radii below for all of the above sizes

	100	125	150	175	200	250
R	3.94 (100)	4.92 (125)	5.91 (150)	6.89 (175)	7.87 (200)	9.84 (250)
H	9.84 (250)	11.81 (300)	13.78 (350)	15.75 (400)	17.72 (450)	21.65 (550)
D	6.89 (175)	7.87 (200)	8.86 (225)	9.84 (250)	10.83 (275)	12.80 (325)
K	18.70 (475)	21.65 (550)	25.59 (650)	29.53 (750)	32.48 (825)	36.42 (925)

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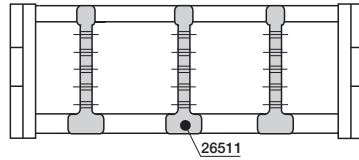
Energy Chain System® E2 Tubes Series R2680 Interior Separation



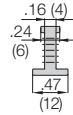
R2680

Option 1: Vertical separators

Vertical separators are used if a vertical subdivision of the Energy Tube interior is required. By standard, vertical separators are assembled every other Energy Tube link.



- **Standard separator 26501 for Energy Tubes**
This separator is used for general subdivision of Energy Tubes.

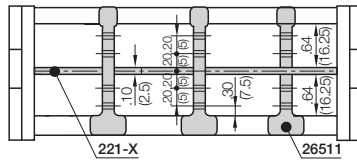


Vertical Separator

Unassembled	Part No. 26501
Assembled	Part No. 26511

Option 2: Full-width shelf

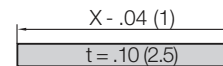
It is ideal for use in applications involving many thin cables with similar or identical diameters. This shelf slides into place and spans the entire width of the chain.



Shelves 220-XX

Shelves can be inserted at 3 different heights in .20" (5mm) increments

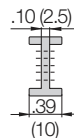
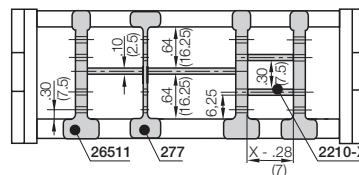
Width X in. (mm)	Part No. Unassembled	Part No. Assembled	Width X in. (mm)	Part No. Unassembled	Part No. Assembled
1.97 (50)	220-50	221-50	3.94 (100)	220-100	221-100
2.56 (65)	220-65	221-65	4.92 (125)	220-125	221-125
2.95 (75)	220-75	221-75	5.91 (150)	220-150	221-150
3.54 (90)	220-90	221-90	6.89 (175)	220-175	221-175



Option 3: shelves

For applications involving many cables with different diameters. This shelf slides into place and spans the entire width of the chain. Use shelf 2200-XX in combination with slotted vertical separator 26510.

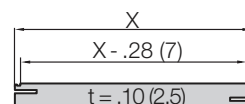
- **Open slotted separator 276 for Energy Tubes**
This separator can be retrofitted into an existing interior separation system without removing the shelves, as long as these shelves fit into the 5 middle slots only.



Slotted Separator, Open

Unassembled	Part No. 276
Assembled	Part No. 277

Width X in. (mm)	Part No. Unassembled	Part No. Assembled	Width X in. (mm)	Part No. Unassembled	Part No. Assembled
.71 (18)	2200-18	2210-18	2.28 (58)	2200-58	2210-58
.91 (23)	2200-23	2210-23	2.68 (68)	2200-68	2210-68
1.10 (28)	2200-28	2210-28	2.87 (73)	2200-73	2210-73
1.30 (33)	2200-33	2210-33	3.46 (88)	2200-88	2210-88
1.50 (38)	2200-38	2210-38	3.90 (99)	2200-99	2210-99
1.69 (43)	2200-43	2210-43	4.88 (124)	2200-124	2210-124
1.89 (48)	2200-48	2210-48			



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 Specs/CAD/RFQ: www.igus.com/e-chains
 RoHS info: www.igus.com/RoHS



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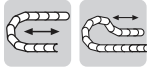


Energy Chain System® E2 Tubes Series R2680 Mounting Bracket - Plastic

igus® Energy Chain System®

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Fax 1-401-438-7270

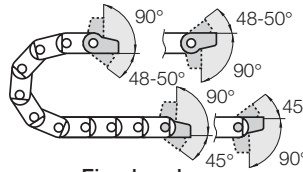
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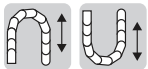
Option 1: pivoting

- For unsupported and gliding applications
- Well suited for tight installation conditions
- Detachable strain relief tiwrap plates
- Can be mounted on the fixed and/or moving end

Moving end
2...3PZB+



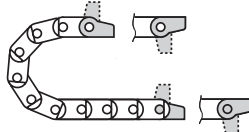
Fixed end
2...4PZB+



Option 2: locking

- For unsupported and gliding applications
- Extreme speed and/or accelerations
- For height restricted applications
- Can be mounted on the fixed and/or moving end

Moving end
2...1PZB+

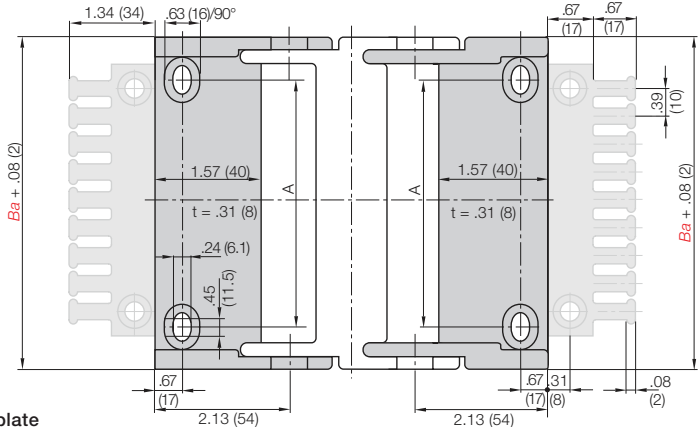
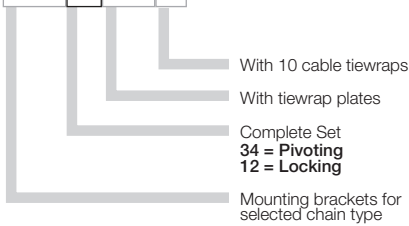


Fixed end
2...2PZB+



Part Number Structure

2605- 34 PZB K1



Full set, for both ends:

2605- 34 PZB Full set, each part with pin/bore + tiwrap plate

Single-part order:

2605- 3 PZB Mounting bracket with bore + tiwrap plate

2605- 4 PZB Mounting bracket with pin + tiwrap plate

Part No. Full Set (pivoting)

With Tiwrap Plates

Series 2680:

2605-34PZB

Part No. Full Set (pivoting)

With Tiwrap Plates + 10 cable ties

Series 2680:

2605-34PZBK1

For Chain Type	Part No. Full Set without Tiwrap Plate	Part No. Full Set with Tiwrap Plate	Part No. Full Set with Tiwrap Plate + 10 cable ties	Dimension A	
				in.	(mm)
2680-05	2605- <input type="checkbox"/> PZ	2605- <input type="checkbox"/> PZB	2605- <input type="checkbox"/> PZBK1	1.18	(30)
2680-07	2607- <input type="checkbox"/> PZ	2607- <input type="checkbox"/> PZB	2607- <input type="checkbox"/> PZBK1	2.17	(55)
2680-10	2610- <input type="checkbox"/> PZ	2610- <input type="checkbox"/> PZB	2610- <input type="checkbox"/> PZBK1	3.15	(80)
2680-12	2612- <input type="checkbox"/> PZ	2612- <input type="checkbox"/> PZB	2612- <input type="checkbox"/> PZBK1	4.13	(105)

34 or 12

For pivoting brackets choose 34

For locking brackets choose 12

Example: 2605- 34 PZB

Energy Chain System® E2 Tubes Series R2680 Mounting Bracket - Steel

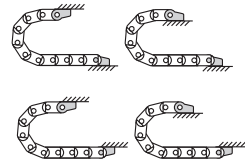
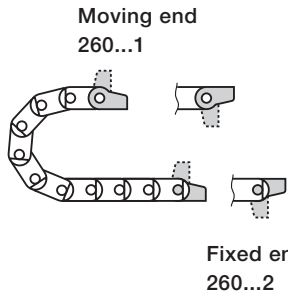


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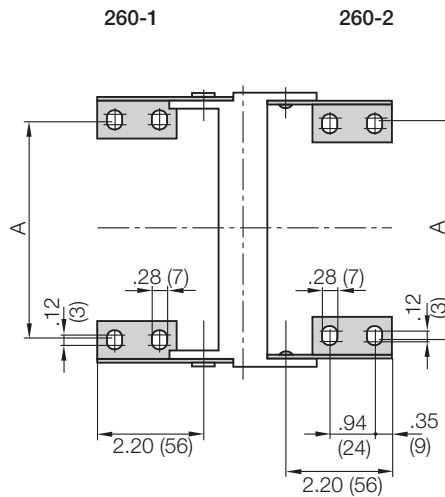
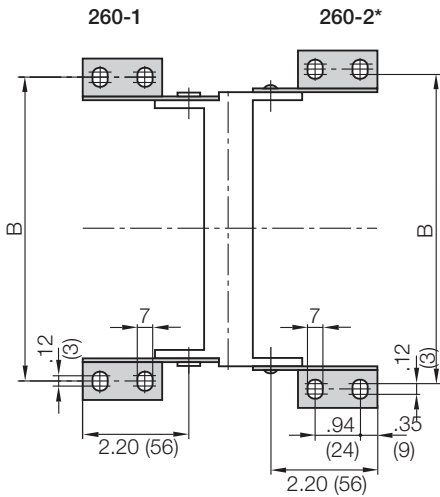


Option 1: Steel

- One part (two-piece) for all chain widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible



Possible installation configurations -



*pivoting with no stop, (360°)

Chain Type	Part No. Full Set	Dimension A		Dimension B	
		in.	(mm)	in.	(mm)
2680-05	260-12	1.46	(37)	3.27	(83)
2680-07	260-12	2.44	(62)	4.25	(108)
2680-10	260-12	3.43	(87)	5.24	(133)
2680-12	260-12	4.41	(112)	6.22	(158)

Part No. Mounting Brackets Full Set

4 parts, 2 with pin, 2 with bore
Series 2680:
260-12

Part No. Mounting Bracket Moving End

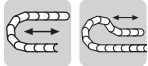
2 parts, 1 left & 1 right
Series 2680:
260-1

Part No. Mounting Bracket Fixed End

2 parts, 1 left & 1 right
Series 2680:
260-2

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Specs/CAD/RFQ: www.igus.com/e-chains
RoHS info: www.igus.com/RoHS

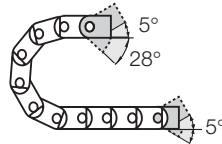




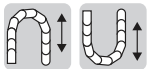
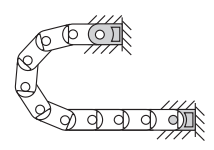
Option 1: pivoting

- For unsupported applications
- Bolted connection outside of chain cross section
- Confined installation conditions
- Attachment points on all sides
- Stackable

Moving end
26800...1



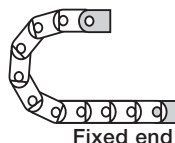
Fixed end
26800...2



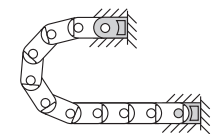
Option 2: locking

- For vertical hanging/standing applications
- Bolted connection outside of chain cross section
- For very high speeds and accelerations
- Attachment points on all sides
- Stackable

Moving end
26810...1



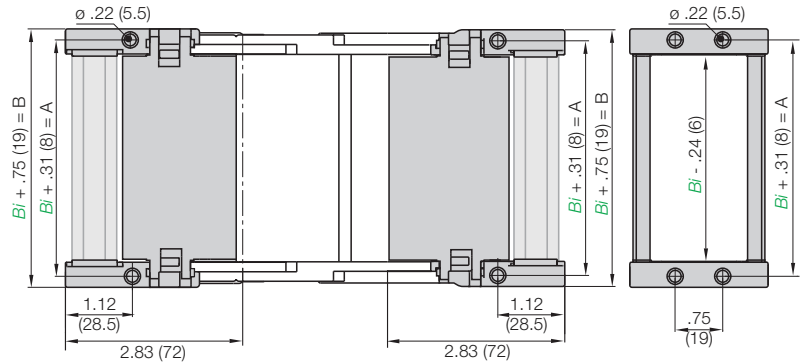
Fixed end
26810...2



Part Number Structure

26800- 10 12 P

- With profile rail
- Complete Set
- Width
- Mounting brackets for selected chain type
26800 = Pivoting
26810 = Locking



Full set, for both ends:

26800-12 P Full set, each part with pin/bore + proile rail

Single-part order:

26800-1 P Mounting bracket with bore + proile rail

26800-2 P Mounting bracket with pin + proile rail

Part No. Full Set (pivoting)

With Profile Rail

Series 2680:

26800-Width-12P

Part No. Full Set (pivoting)

Without Profile Rail

Series 2680:

26800-Width-12

For Chain Type	Part No. Full set with Profile Rail	Part No. Full Set without Profile Rail	Dimension A		Dimension B	
			in.	(mm)	in.	(mm)
2680-05	<input type="text"/> -05-12P	<input type="text"/> -05-12	2.28	(58)	2.72	(69)
2680-07	<input type="text"/> -07-12P	<input type="text"/> -07-12	3.27	(83)	3.70	(94)
2680-10	<input type="text"/> -10-12P	<input type="text"/> -10-12	4.25	(108)	4.69	(119)
2680-12	<input type="text"/> -12-12P	<input type="text"/> -12-12	5.24	(133)	5.67	(144)

26800 or 26810

For pivoting brackets choose 26800

For locking brackets choose 26810

Example: 24800 -10-12P

Energy Chain System® E2 Tubes

Series R2680

Strain Relief



R2680

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	(06 - 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

Chainfix Clip

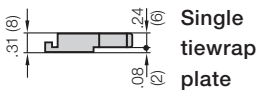
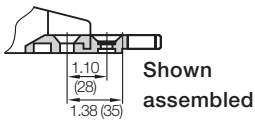


Modular snap-on strain relief device

Chainfix clip is available for cable diameters ranging from .16" (4mm) to .94" (24 mm). It is suitable for assembly on KMA mounting brackets, clip-on strain relief for crossbars as well as profile rails. Quick assembly without the use of tools. **For more information please refer to strain relief section of Chapter 10**

Cable ø	Part No. Clamp	Part No. Bottom
in. (mm)		
.16-.31 (04-08)	CFC-08-M	CFC-08-C
.31-.47 (08-12)	CFC-12-M	CFC-12-C
.47-.63 (12-16)	CFC-16-M	CFC-16-C
.63-.79 (16-20)	CFC-20-M	CFC-20-C
.79-.94 (20-24)	CFC-24-M	CFC-24-C

Tiewrap Plates

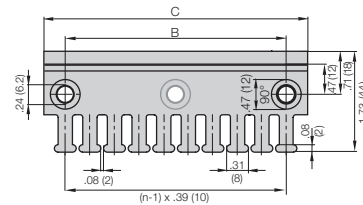


Option 1:

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.

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



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

Strain relief for steel mounting brackets

Clip-on connection is not possible with steel mounting brackets. In this case, the tiewrap plates must be bolted directly into separate bore holes in front of the mounting bracket. Alternatively the tiewrap plates **30XX-Z** and **ZS** can be also used here. **Details chapter 10**

PDF: www.igus.com/e-chain-pdfs
 Specs/CAD/RFQ: www.igus.com/e-chains
 RoHS info: www.igus.com/RoHS



Energy Chain System® E2 Tubes Series R2680 Guide Trough

igus® Energy Chain
System®

Telephone 1-800-521-2747
Fax 1-401-438-7270

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/quickspec>

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 Number 95-30
- 1/2 travel length of glide bars
Part number 92-01
- Installation sets as end connectors
Part Number 95-50-XX

-XX indicates the length of the profile rail 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 bar
= 25 sections of 6.56 ft (2 m) guide trough

Part No. 95-30

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

Part No. 92-01

Required number of installation sets:

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

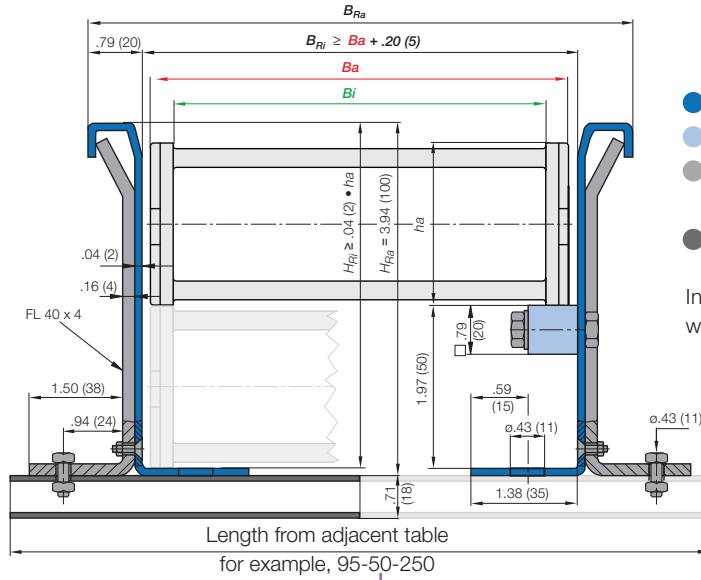
Part number of the installation sets

Example: 95-50-400 for 15.75" (400 mm) long profile rail.



Width of Crossbar
2680-05-200-0

	B_{Ri}	Installation Part No.
-05	2.80 (71)	95-50-200
-07	3.78 (96)	95-50-225
-10	4.76 (121)	95-50-250
-12	5.75 (146)	95-50-250



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

Individual attachment without profile rail

Standard length profile rail

Length from adjacent table
for example, 95-50-250

* Specialized guide trough available upon request

Energy Chain System® E2 Tubes
Series R2680



R2680

PDF: www.igus.com/e-chain-pdfs
Specs/CAD/RFQ: www.igus.com/e-chains
RoHS info: www.igus.com/RoHS

