

Energy Chain Systems® E2/000 “medium”

E2/000 “medium”

● Series 1400/1450/1500

- New snap-open mechanism, opens left or right
- Hinged crossbar can be swiveled more than 180°
- “Half-Tube” Energy Chain option
- Easy opening and closing
- Secure fit of interior separation even when Energy Chain® is open



Product Range

Inner height .83”
Inner widths from .59” to 4.92”



Interior Separation

3 options possible



Mounting Brackets

Pivoting and locking mounting brackets
available with various types of strain relief



Order Example

Ordering and Information
E2/000 “medium” Energy Chains®



Installation

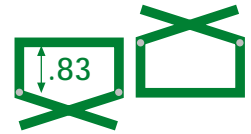
A screwdriver suffices for assembly/dis-
assembly of the chain links



Guide Troughs

All E2/000 “medium” Energy Chains® are
suitable for gliding applications





Price Index



8 Widths
8 Bending Radii



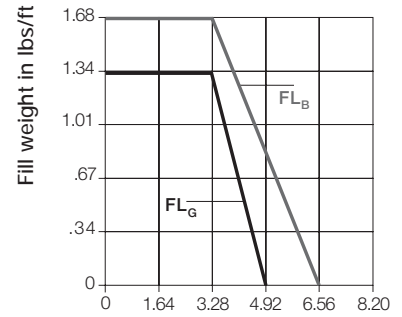
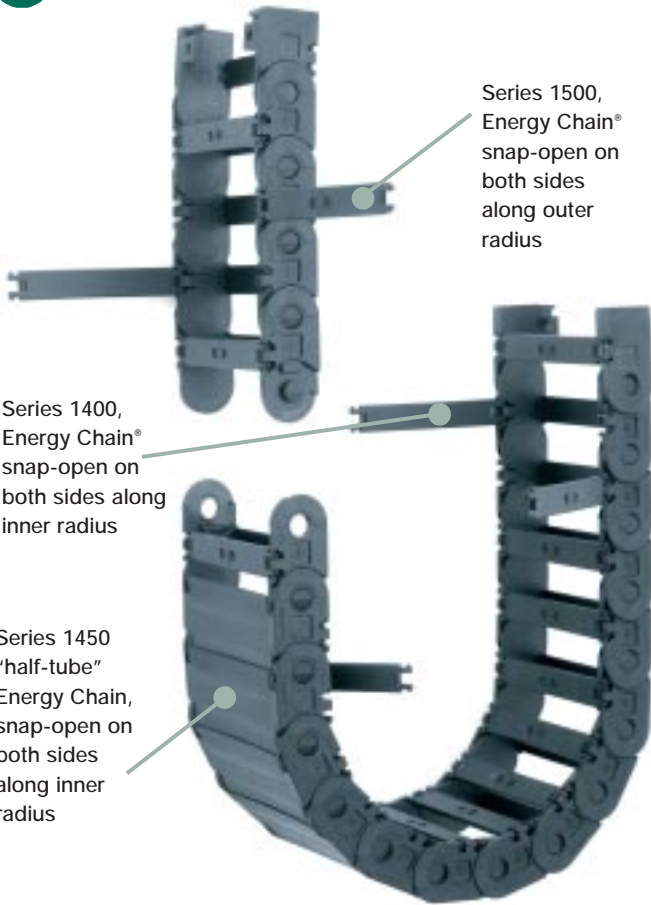
Steel mounting brackets for all chain widths



Mounting bracket available with or without strain relief



Two-piece mounting brackets



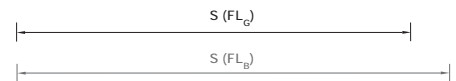
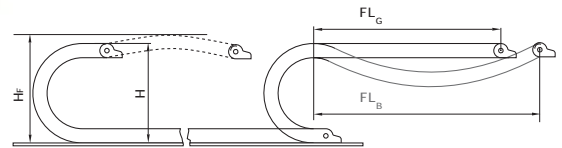
Unsupported length in ft FL_B / FL_G



Length of travel S in ft

Unsupported length

- FL_B = unsupported with permitted sag
- FL_G = unsupported with straight upper run



Product Range:

Inner Widths (Bi) inches (mm):	.59 (15), .98 (25), 1.50 (38), 1.97 (50), 2.68 (68), 3.15 (80), 3.94 (100), 4.92 (125)
Bending Radii (R) inches (mm):	1.38 (035)*, 1.50 (038)*, 1.89 (048)*, 2.95 (075), 3.94 (100), 4.92 (125), 5.71 (145), 7.09 (180)
Pitch:	1.31 (33.3 mm/link) = 9.14 links/ft (30 links/m) 39.4 (1000 mm)

*Not available for Series 1450

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 1400/1450/1500:

- If snap-open accessibility along the inner or outer radius is required
- If integrated strain relief is required at the connection point
- If "half-tube" Energy Chain is required (Series 1450)
- If long service life is required
- If easy installation is required



When not to use the Series 1400/1450/1500:

- If chip protection is required ► E2 Energy Tubes, Series 117, **Chapter 5**
- If the application is very simple ► E-Z Chain®, Series E14, **Chapter 2**

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



Other Installation Methods:

Vertical, hanging	= max 65.6 ft (20 m)
Vertical, standing	= max 6.56 ft (2 m)
Side-mounted, unsupported	= max 2.30 ft (.7 m)
Rotary	= requires further calculation

● Long travel Max: 246 ft (75 m)

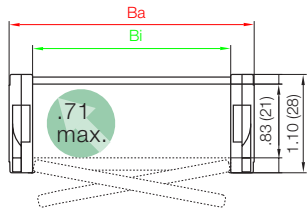
Series 1400/1450/1500 E2/000 "medium"



1400
1450
1500

Series 1400 Energy Chain®

(snap-open along inner radius)



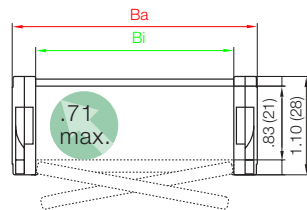
Part No.	Bi	Ba
1400-015	.59 (15)	1.12 (28.5)
1400-025	.98 (25)	1.52 (38.5)
1400-038	1.50 (38)	2.03 (51.5)
1400-050	1.97 (50)	2.50 (63.5)
1400-068	2.68 (68)	3.21 (81.5)
1400-080	3.15 (80)	3.68 (93.5)
1400-100	3.94 (100)	4.47 (113.5)
1400-125	4.92 (125)	5.45 (138.5)

Bending Radii
for ALL Widths
1.38 (035)
1.50 (038)
1.89 (048)
2.95 (075)
3.94 (100)
4.92 (125)
5.71 (145)
7.09 (180)

Supplement part no. with required radius
for example, 1400-025-125-0

Series 1450 "Half-Tube" Energy Chain

(snap-open along inner radius)



Click Here for
Specs &
CAD Files

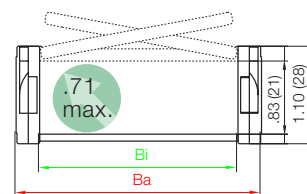
Part No.	Bi	Ba
1450-015	.59 (15)	1.12 (28.5)
1450-025	.98 (25)	1.52 (38.5)
1450-038	1.50 (38)	2.03 (51.5)
1450-050	1.97 (50)	2.50 (63.5)
1450-068	2.68 (68)	3.21 (81.5)
1450-080	3.15 (80)	3.68 (93.5)
1450-100	3.94 (100)	4.47 (113.5)
1450-125	4.92 (125)	5.45 (138.5)

Bending Radii
for ALL Widths
2.95 (075)
3.94 (100)
4.92 (125)
5.71 (145)
7.09 (180)

Supplement part no. with required radius
for example, 1450-015-100-0

Series 1500 Energy Chain®

(snap-open along outer radius)

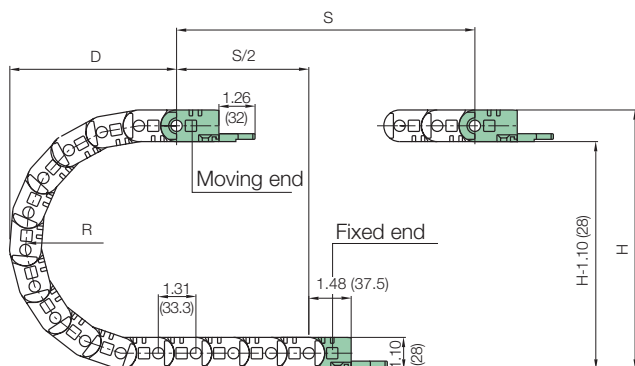


Part No.	Bi	Ba
1500-015	.59 (15)	1.12 (28.5)
1500-025	.98 (25)	1.52 (38.5)
1500-038	1.50 (38)	2.03 (51.5)
1500-050	1.97 (50)	2.50 (63.5)
1500-068	2.68 (68)	3.21 (81.5)
1500-080	3.15 (80)	3.68 (93.5)
1500-100	3.94 (100)	4.47 (113.5)
1500-125	4.92 (125)	5.45 (138.5)

Bending Radii
for ALL Widths
1.38 (035)
1.50 (038)
1.89 (048)
2.95 (075)
3.94 (100)
4.92 (125)
5.71 (145)
7.09 (180)

Supplement part no. with required radius
for example, 1500-050-075-0

Installation Dimensions



R	1.38 (035)*	1.50 (038)*	1.89 (048)*	2.95 (075)
H**	3.86 (98)	4.09 (104)	4.88 (124)	7.01 (178)
D	3.35 (85)	3.46 (88)	3.50 (89)	4.92 (125)
K	5.28 (134)	5.28 (134)	6.57 (167)	9.21 (234)

R	3.94 (100)	4.92 (125)	5.71 (145)	7.09(180)
H**	8.98 (228)	10.94 (278)	12.52 (318)	15.28 (388)
D	5.91 (150)	6.89 (175)	7.68 (195)	9.06 (230)
K	13.11 (333)	15.75 (400)	18.39 (467)	22.32 (567)

*Not available for Series 1450

Pitch: = 1.31 (33.3 mm) per link
Links per ft (m): = 9.14 (30)
Chain length: = $\frac{S}{2} + K$

**The required clearance height is HF = H + .98 (25 mm) with .34 (.5 kg/m) fill weight. Please consult igus® if space is particularly restricted.

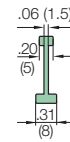
PDF: www.igus.com/echainpdf.asp
Specs/CAD/RFO: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp



Interior Separation

Vertical Separators for Energy Chain® Series 1400/1500

Separators are an option for compartmentalizing the interior of the Energy Chains® (Series 1400/1500). They are used when a division of the chain cross-section is required.

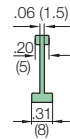
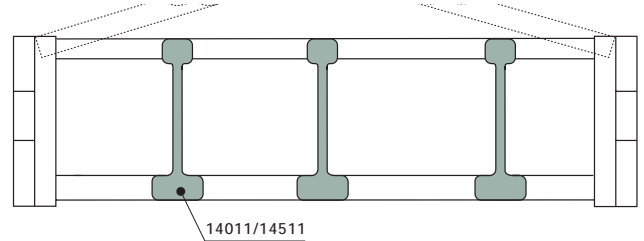


Vertical Separator for Series 1400/1500

Unassembled	Part No. 14001
Assembled	Part No. 14011

Vertical Separators for "Half-Tube" Energy Chain Series 1450

Separators are an option for compartmentalizing the interior of the "Half-Tube" Energy Chain (Series 1450). They are used when a division of the chain cross-section is required.



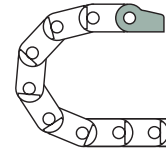
Vertical Separator for Series 1450

Unassembled	Part No. 14501
Assembled	Part No. 14511

Mounting Brackets

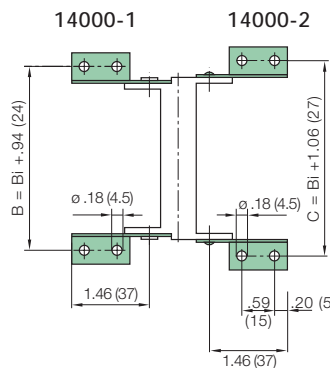
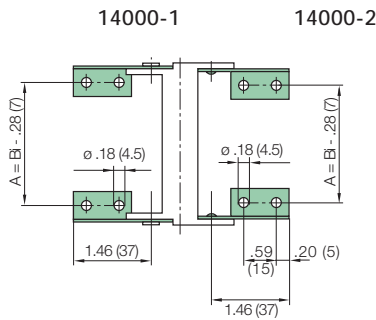
Option 1: Steel

- One part for all chain widths
- Electrically conductive



14000-1 Moving end

14000-2 Fixed end



Screw-on area of the mounting brackets can be on the interior or the exterior.
Inner widths 015 and 025 only on the outside

Chain Type	Part No. Full Set	Dimension A		Dimension B		Dimension C	
		in.	(mm)	in.	(mm)	in.	(mm)
1400/1450/1500-015	14000-12	.31	(8)	1.54	(39)	1.65	(42)
1400/1450/1500-025	14000-12	.71	(18)	1.93	(49)	2.05	(52)
1400/1450/1500-038	14000-12	1.22	(31)	2.44	(62)	2.56	(65)
1400/1450/1500-050	14000-12	1.69	(43)	2.91	(74)	3.03	(77)
1400/1450/1500-068	14000-12	2.40	(61)	3.62	(92)	3.74	(95)
1400/1450/1500-080	14000-12	2.87	(73)	4.09	(104)	4.21	(107)
1400/1450/1500-100	14000-12	3.66	(93)	4.88	(124)	5.00	(127)
1400/1450/1500-125	14000-12	4.65	(118)	5.87	(149)	5.98	(152)

- 14000-12 = Full set, 4 parts, 2 with pin, 2 with bore
- 14000-1 = Mounting bracket with bore, 1 part left/right
- 14000-2 = Mounting bracket with pin, 1 part left/right

Series 1400/1450/1500 E2/000 "medium"

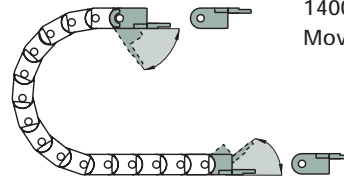


1400
1450
1500

Mounting Brackets

Option 2: Pivoting

- Pivoting
- Corrosion resistant

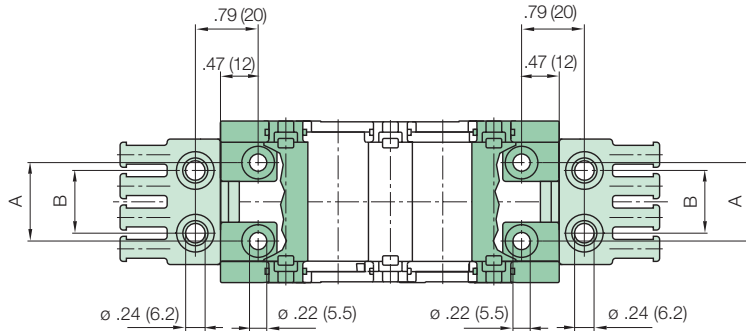


14000-1
Moving end

14000-2
Fixed end

15000-4PZB

15000-3PZB



Chain Type	Part No. Full Set	Dimension A in. (mm)	Dimension B in. (mm)
1400/1450/1500-015	not possible	— —	— —
1400/1450/1500-025	not possible	— —	— —
1400/1450/1500-038	15000-038-34PZB	.98 (25)	.79 (20)
1400/1450/1500-050	15000-050-34PZB	1.46 (37)	1.18 (30)
1400/1450/1500-068	15000-068-34PZB	2.17 (55)	1.57 (40)
1400/1450/1500-080	15000-080-34PZB	2.64 (67)	2.36 (60)
1400/1450/1500-100	15000-100-34PZB	3.43 (87)	3.15 (80)
1400/1450/1500-125	15000-125-34PZB	4.45 (113)	— —

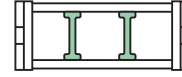
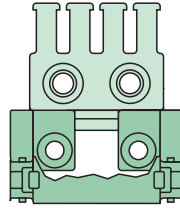
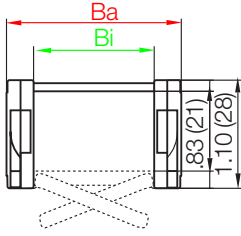
15000-34 = Full set, each part with pin/bore, including tiwrap plates
 15000-3 = Mounting bracket with bore, including tiwrap plates
 15000-4 = Mounting bracket with pin, including tiwrap plates

PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFO: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp



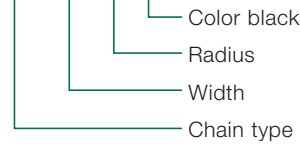
Order example

1400-038



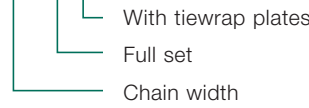
1. Chain selection:

1400-038-100-0



2. Mounting Brackets:

15000-038-34PZB



3. Interior separation:

2 separators unassembled (Part No. 14001), or assembled every other link (Part No. 14011).

For 16.41 ft (5 m) chain, color black, with pivoting mounting brackets
16.41 ft (5 m) 1400-038-100-0 and 15000-038-34PZB



4. Additional information on guide troughs upon request



Technical data

Chain Type	Weight Per Link				Weight			
	Tube		Chain		Tube		Chain	
	(lbs)	(kg)	(lbs)	(kg)	(lbs/ft)	(kg/m)	(lbs/ft)	(kg/m)
1400/1450/1500-015	.030	(0.014)	.022	(0.010)	.28	(0.42)	.20	(0.30)
1400/1450/1500-025	.039	(0.018)	.030	(0.014)	.36	(0.54)	.28	(0.42)
1400/1450/1500-038	.044	(0.020)	.035	(0.016)	.40	(0.60)	.32	(0.48)
1400/1450/1500-050	.049	(0.022)	.039	(0.018)	.44	(0.66)	.36	(0.54)
1400/1450/1500-068	.053	(0.024)	.044	(0.020)	.48	(0.72)	.40	(0.60)
1400/1450/1500-080	.057	(0.026)	.049	(0.022)	.52	(0.78)	.44	(0.66)
1400/1450/1500-100	.062	(0.028)	.053	(0.024)	.56	(0.84)	.48	(0.72)
1400/1450/1500-125	.066	(0.030)	.057	(0.026)	.60	(0.90)	.52	(0.78)

Material	igumid G
Permitted temperature	-40°/+266°F (-40°/+130°C)
Gliding speed max.	16.4 ft/s (5 m/s)
Unsupported V max.	32.8 ft/s (10 m/s)
Flammability class	VDE 0304 IIC UL94 1H

- Details of material properties
- ▶ Design, Chapter 1

Energy Chain Systems® E2 “medium”

E2 “medium”

- Series 200/240/250
- Series 26/27/27i
- Series 340/350*

*Extender chain

- 2 parts per link, maximum
- Easy installation
- Many connection options
- Long service life
- High stability

For Classic E2 Medium Energy Chain®, 20/25, 30/35/36, 255, please contact igus®. Classic sizes will continue to be available and supported.



Product Range

Inner heights from .98” to 1.77”
Inner widths from .98” to 9.84”



Interior Separation

3 options possible



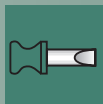
Mounting Brackets

Pivoting and locking mounting brackets
available with various types of strain relief



Order Example

Ordering and Information
E2 “medium” Energy Chains®



Installation

A screwdriver suffices for assembly/dis-
assembly of the chain links



Guide Troughs

All E2 “medium” Energy Chains® are suit-
able for gliding applications





Price Index



7 Widths
9 Bending Radii



3 options for interior separation



5 options for mounting brackets



Various strain relief options



Smooth interior for long cable life

Large pins for long service life

Dirt-repellent exterior

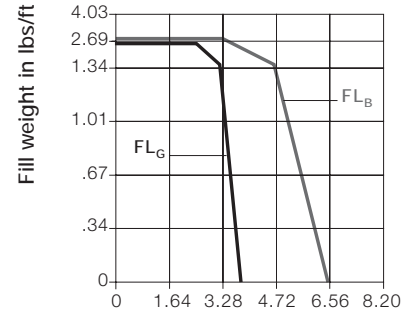
Tapered inertion point - easy assembly

Reinforced stop dog

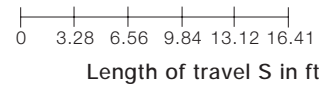
Integrated strain relief possible

Series 240 (snap-open along inner radius) can be combined with Series 250 (snap-open along outer radius)

Snap-open, hinged to left or right, along inner or outer radius, accessible from the top, rather than from the side, of the link

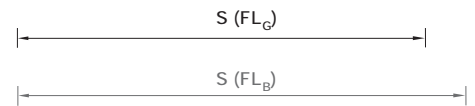
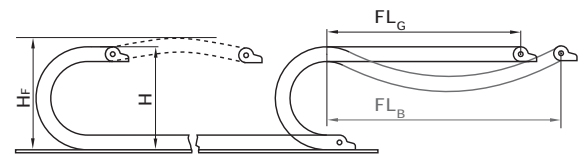


Unsupported length in ft FL_B / FL_G



Unsupported length

- FL_B = unsupported with permitted sag
- FL_G = unsupported with straight upper run



Product Range:

Inner Widths (Bi) inches (mm):	.98 (25), 1.50 (38), 2.24 (57), 3.03 (77), 3.54 (90), 4.06 (103), 4.92 (125)
Bending Radii (R) inches (mm):	2.16 (55), 2.95 (75), 3.94 (100), 4.92 (125), 5.91 (150), 6.89 (175), 7.87 (200), 8.86 (225), 9.84 (250)
Pitch:	1.81 (46 mm)/link = 6.71 links/ft (22 links/m) 39.8 (1012 mm)



When to use the Series 200/240/250:

- If snap-open accessibility along inner or outer radius is required
- If integrated strain relief is required at the mounting point
- If modular interior separation is required
- If long service life is required
- If easy installation is required



When not to use the Series 200/240/250:

- If each link requires snap-open accessibility on both sides simultaneously
 - ▶ System E4, Series 220 etc., Chapter 6
- If maximum stability is required
 - ▶ System E4, Series 220 etc., Chapter 6
- If chip protection is required
 - ▶ Energy Tubes E2, Series R48, Chapter 6
- If the application is very simple
 - ▶ E-Z Chain, Series E 200, Chapter 6

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

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 or incorporation of igus® exclusive AUTO-GLIDE System guide elements, which are available for this chain series ▶ AUTO-GLIDE System, Chapter 9.

Other Installation Methods:

Vertical, hanging	= max 131 (40 m)
Vertical, standing	= max 9.84 (3 m)
Side-mounted, unsupported	= max 3.28 (1 m)
Rotary	= requires further calculation

- Long travel: Max: 328 ft (100 m)

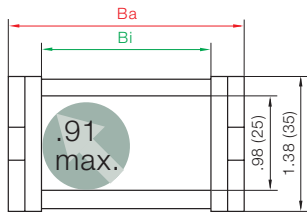
Series 200/240/250 "E2 medium"



200
240
250

Series 200 Energy Chain®

(non snap-open)



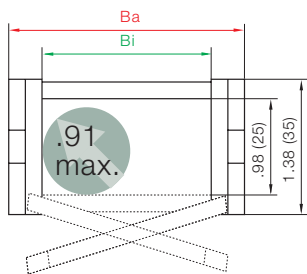
Part No.	Bi	Ba
200-02	.98 (25)	1.61 (41)
200-03	1.50 (38)	2.13 (54)
200-05	2.24 (57)	2.87 (73)
200-07	3.03 (77)	3.66 (93)
200-09	3.54 (90)	4.17 (106)
200-10	4.06 (103)	4.69 (119)
200-12	4.92 (125)	5.55 (141)

Bending Radii
for ALL Widths
2.16 (055)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
8.86 (225)
9.84 (250)

Supplement part no. with required radius
for example, 200-02-100-0

Series 240 Energy Chain®

(snap-open along inner radius)



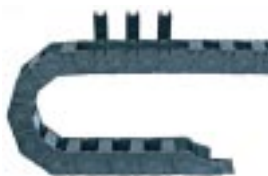
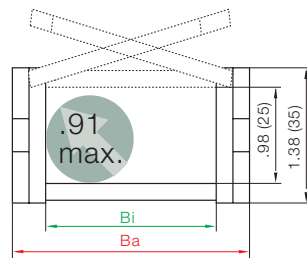
Part No.	Bi	Ba
240-02	.98 (25)	1.61 (41)
240-03	1.50 (38)	2.13 (54)
240-05	2.24 (57)	2.87 (73)
240-07	3.03 (77)	3.66 (93)
240-09	3.54 (90)	4.17 (106)
240-10	4.06 (103)	4.69 (119)
240-12	4.92 (125)	5.55 (141)

Bending Radii
for ALL Widths
2.16 (055)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
8.86 (225)
9.84 (250)

Supplement part no. with required radius
for example, 240-02-100-0

Series 250 Energy Chain®

(snap-open along outer radius)



Part No.	Bi	Ba
250-02	.98 (25)	1.61 (41)
250-03	1.50 (38)	2.13 (54)
250-05	2.24 (57)	2.87 (73)
250-07	3.03 (77)	3.66 (93)
250-09	3.54 (90)	4.17 (106)
250-10	4.06 (103)	4.69 (119)
250-12	4.92 (125)	5.55 (141)

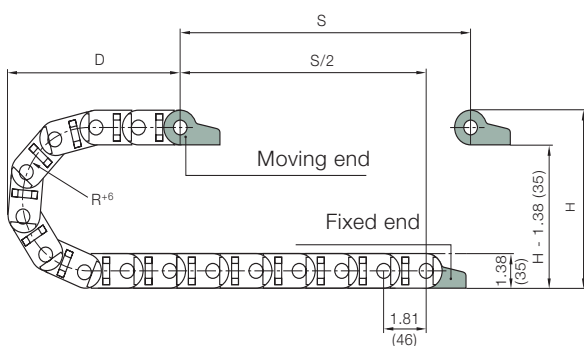
Bending Radii
for ALL Widths
2.16 (055)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
8.86 (225)
9.84 (250)

Supplement part no. with required radius
for example, 250-02-100-0



! Use Series 250 for gliding applications

Installation Dimensions



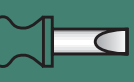
R	2.17 (55)	2.95 (75)	3.94 (100)	4.92 (125)	5.91 (150)
H* ₀	5.71 (145)	7.28 (185)	9.25 (235)	11.22 (285)	13.19 (335)
D	4.92 (125)	5.91 (150)	6.69 (170)	7.68 (195)	8.66 (220)
K	10.87 (276)	13.62 (346)	16.30 (414)	19.53 (496)	22.76 (578)

R	6.89 (175)	7.87 (200)	8.86 (225)	9.84 (250)
H* ₀	15.16 (385)	17.13 (435)	19.09 (485)	21.06 (535)
D	9.65 (245)	10.63 (270)	11.61 (295)	12.60 (320)
K	25.98 (660)	29.21 (742)	32.05 (814)	36.22 (920)

Pitch: = 1.81 (46 mm) per link
 Links per ft (m): = 6.71 (22)
 Chain length: = $\frac{S}{2} + K$

*The required clearance height is HF = H + .98 (25) with 1.01 (1.5 kg/m) fill weight. Please consult igus® if space is particularly restricted.

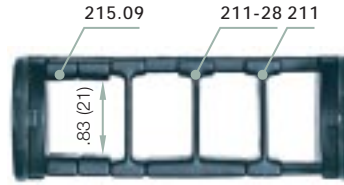
PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFQ: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp



Interior Separation

Option 1: vertical separators

Separators are the only option when compartmentalizing the interior of the non-snap-open chain (Series 200). If a large distance between separators is required, it is possible to use separators with wide feet (not Series 200) or spacers. Both are predominantly used for side-mounted Energy Chains®.



Spacer

Unassembled	Part No. 205-09
Assembled	Part No. 215-09

Vertical Separator

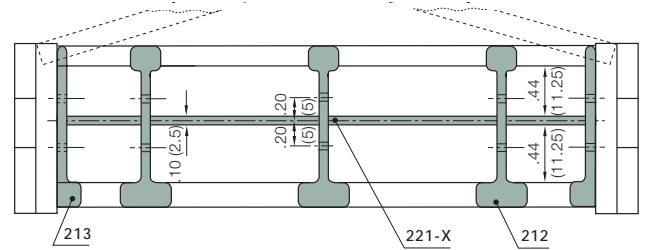
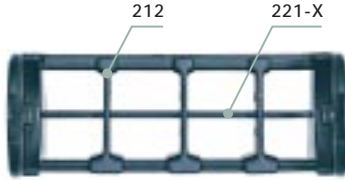
Unassembled	Part No. 201
Assembled	Part No. 211

Vertical Separators

Unassembled	Part No. 201-28
Assembled	Part No. 211-28

Option 2: full-width shelf

This option is available for the snap-open Series 240/250 chains. 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.



Vertical Separators, Slotted

Unassembled	Part No. 202
Assembled	Part No. 212

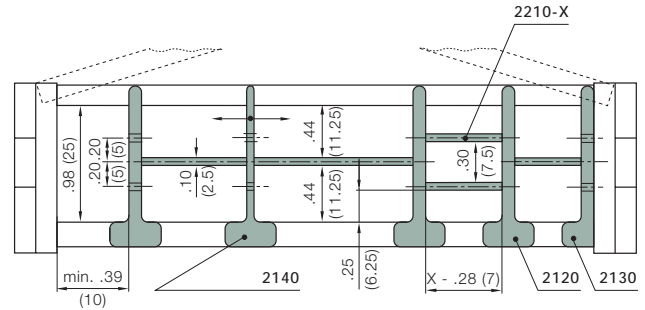
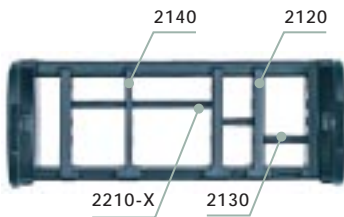
Side Plates

Unassembled	Part No. 203
Assembled	Part No. 213

Width X in. (mm)	Part No. Unassembled	Part No. Assembled
.98 (25)	220-25	221-25
1.50 (38)	220-38	221-38
2.24 (57)	220-57	221-57
3.03 (77)	220-77	221-77
3.54 (90)	220-90	221-90
4.06 (103)	220-103	221-103
4.92 (125)	220-125	221-125

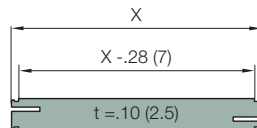
Option 3: shelves

This option is available for the Series 240/250 snap-open chains. It is ideal for use in applications involving many cables with different diameters. This option allows for variable compartment heights and widths across the chain width, but can also be used for level separation across the entire width.



Vertical Separator

Unassembled	Part No. 2040
Assembled	Part No. 2140



Vertical Separator

Unassembled	Part No. 2020
Assembled	Part No. 2120

Side Plates

Unassembled	Part No. 2030
Assembled	Part No. 2130

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

igus® Energy Chain
Systems®

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

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/echain.asp>

Series 200/240/250 E2 "medium"

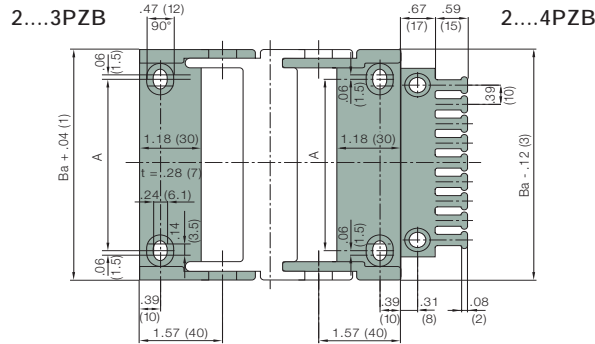
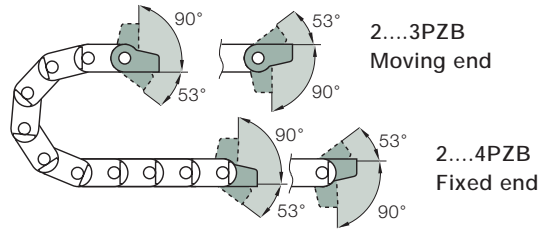


200
240
250

Mounting Brackets

Option 1: pivoting

- Pivoting
- Short and long travel
- Space-restricted conditions
- Corrosion-resistant



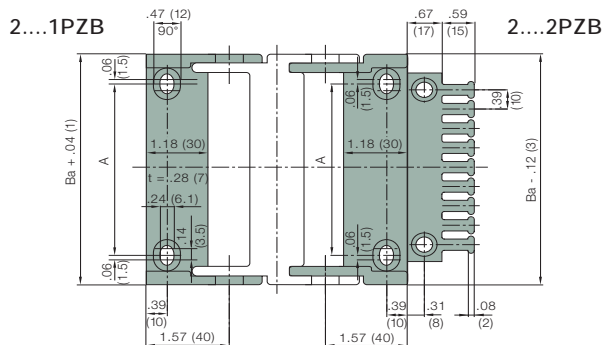
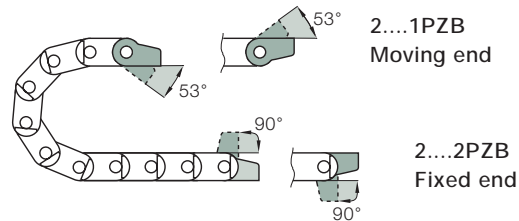
Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
200/240/250-02	2020-34PZB	2020-34PZBK1	2020-34PZ	.47 (12)
200/240/250-03	2030-34PZB	2030-34PZBK1	2030-34PZ	.98 (25)
200/240/250-05	2050-34PZB	2050-34PZBK1	2050-34PZ	1.73 (44)
200/240/250-07	2070-34PZB	2070-34PZBK1	2070-34PZ	2.52 (64)
200/240/250-09	2090-34PZB	2090-34PZBK1	2090-34PZ	3.03 (77)
200/240/250-10	2100-34PZB	2100-34PZBK1	2100-34PZ	3.54 (90)
200/240/250-12	2125-34PZB	2125-34PZBK1	2125-34PZ	4.41 (112)



2...34 PZB = Full set, each part with pin/bore, including tiewrap plates
 2...3 PZB = Mounting bracket with bore, including tiewrap plates
 2...4 PZB = Mounting bracket with pin, including tiewrap plates

Option 2: locking

- Locked connections
- Vertical hanging/standing travels
- Extreme accelerations
- Corrosion-resistant



Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
200/240/250-02	2020-12PZB	2020-12PZBK1	2020-12PZ	.47 (12)
200/240/250-03	2030-12PZB	2030-12PZBK1	2030-12PZ	.98 (25)
200/240/250-05	2050-12PZB	2050-12PZBK1	2050-12PZ	1.73 (44)
200/240/250-07	2070-12PZB	2070-12PZBK1	2070-12PZ	2.52 (64)
200/240/250-09	2090-12PZB	2090-12PZBK1	2090-12PZ	3.03 (77)
200/240/250-10	2100-12PZB	2100-12PZBK1	2100-12PZ	3.54 (90)
200/240/250-12	2125-12PZB	2125-12PZBK1	2125-12PZ	4.41 (112)

2...12 PZB = Full set, each part with pin/bore, including tiewrap plates
 2...1 PZB = Mounting bracket with bore, including tiewrap plates
 2...2 PZB = Mounting bracket with pin, including tiewrap plates

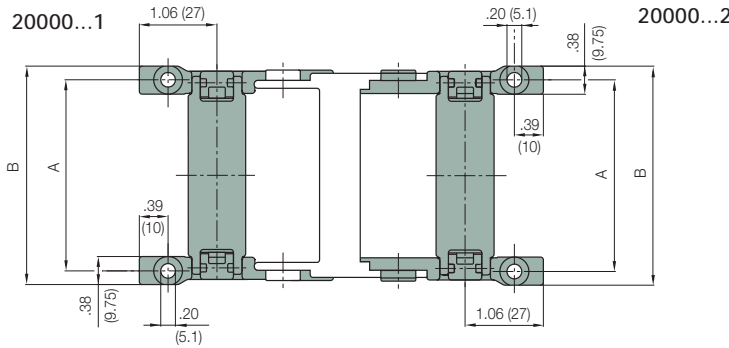
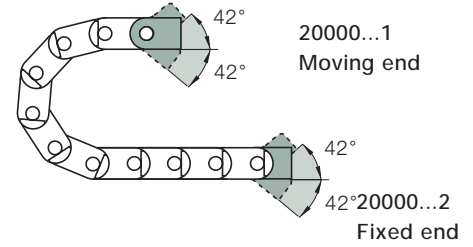
PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFO: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp



Mounting Brackets

Option 3: KMA pivoting

- Pivoting
- Short travels
- Space-restricted conditions
- Corrosion-resistant
- Bolted connection outside of chain cross-section



- Stackable

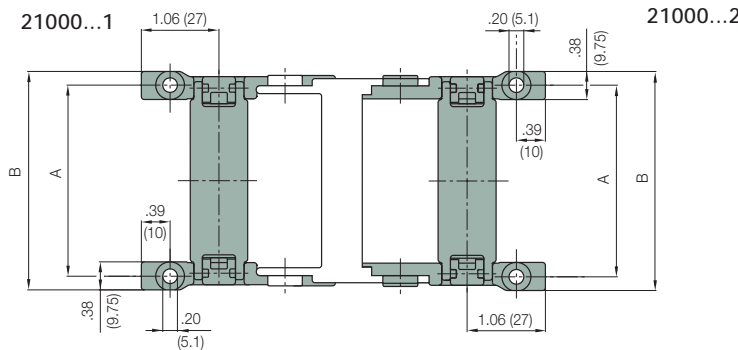
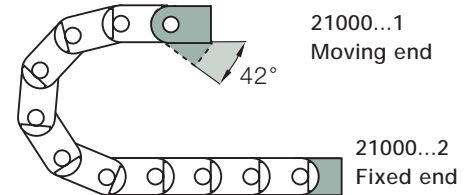


Chain Type	Part No. Full Set	Dimension A		Dimension B	
		in.	(mm)	in.	(mm)
200/240/250-02	20000-02-12	1.36	(34.5)	1.73	(44)
200/240/250-03	20000-03-12	1.87	(47.5)	2.24	(57)
200/240/250-05	20000-05-12	2.62	(66.5)	2.99	(76)
200/240/250-07	20000-07-12	3.41	(86.5)	3.78	(96)
200/240/250-09	20000-09-12	3.92	(99.5)	4.29	(109)
200/240/250-10	20000-10-12	4.43	(112.5)	4.80	(122)
200/240/250-12	20000-12-12	5.30	(134.5)	5.67	(144)

- 21000...12 = Full set, each with pin/bore
- 21000...1 = Mounting bracket with bore
- 21000...2 = Mounting bracket with pin

Option 4: KMA locking

- Locked connections
- Vertical hanging/standing travels
- Extreme accelerations
- Corrosion-resistant
- Bolted connection outside of chain cross-section



- Stackable



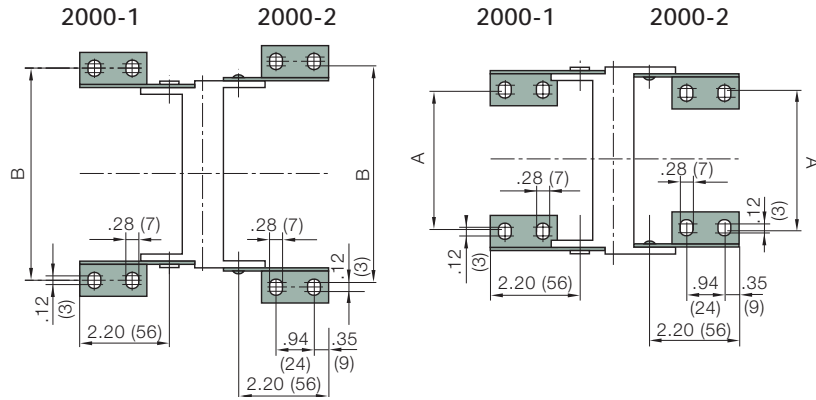
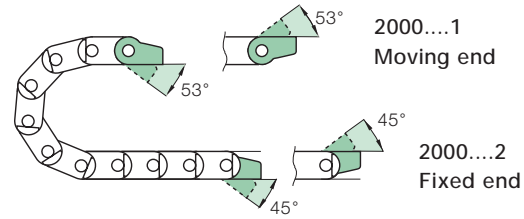
Chain Type	Part No. Full Set	Dimension A		Dimension B	
		in.	(mm)	in.	(mm)
200/240/250-02	21000-02-12	1.36	(34.5)	1.73	(44)
200/240/250-03	21000-03-12	1.87	(47.5)	2.24	(57)
200/240/250-05	21000-05-12	2.62	(66.5)	2.99	(76)
200/240/250-07	21000-07-12	3.41	(86.5)	3.78	(96)
200/240/250-09	21000-09-12	3.92	(99.5)	4.29	(109)
200/240/250-10	21000-10-12	4.43	(112.5)	4.80	(122)
200/240/250-12	21000-12-12	5.30	(134.5)	5.67	(144)

- 21000...12 = Full set, each with pin/bore
- 21000...1 = Mounting bracket with bore
- 21000...2 = Mounting bracket with pin

Mounting Brackets

Option 5: Steel

- One part for all chain widths
- Electrically conductive



Chain Type	Part No. Full Set	Dimension A in. (mm)	Dimension B in. (mm)
200/240/250-02	2000-12	-	2.36 (60)
200/240/250-03	2000-12	.98 (25)	2.87 (73)
200/240/250-05	2000-12	1.73 (44)	3.62 (92)
200/240/250-07	2000-12	2.52 (64)	4.41 (112)
200/240/250-09	2000-12	2.99 (76)	4.88 (124)
200/240/250-10	2000-12	3.54 (90)	5.43 (138)
200/240/250-12	2000-12	4.41 (112)	6.30 (160)

2000-12 = Full set, 4 parts,
2 with pin, 2 with bore
2000-1 = Mounting bracket with bore,
1 part left/right
2000-2 = Mounting bracket with pin,
1 part left/right

PDF: www.igus.com/echainpdf.asp
Specs/CAD/RFO: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp

Strain Relief for Polymer Mounting Brackets (pivoting or locking)

The strain relief tiwrap plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the tiwrap plates are also connected firmly to the machine surface. No separate installation is necessary. Cable tiwraps secure cables using the "teeth" of the tiwrap plate for time-saving, effective strain relief.

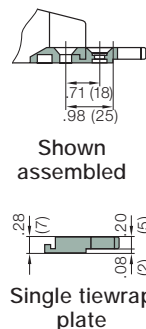
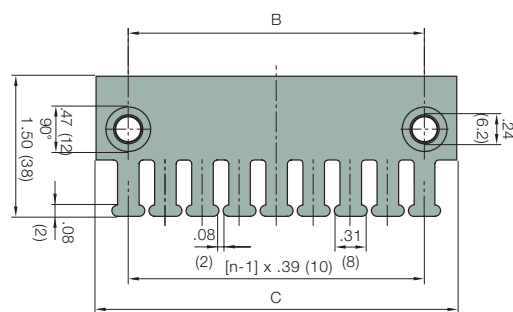


Strain relief for KMA and steel mounting brackets

With these mounting brackets, strain relief tiwrap plates may be bolted into the bores in front of the mounting bracket.



Tiwrap plate as an individual part



Tiwrap Plates	n Number of Teeth	C Overall Width	B Distance Between Bore Holes
2020-ZB	3	1.18 (30)	.59 (15)
2030-ZB	4	1.57 (40)	.79 (20)
2040-ZB	5	1.97 (50)	1.18 (30)
2050-ZB	6	2.36 (60)	1.57 (40)
2070-ZB	8	3.15 (80)	2.36 (60)
2090-ZB	9	3.54 (90)	2.76 (70)
2100-ZB	10	3.94 (100)	3.15 (80)
2120-ZB	12	4.72 (120)	3.94 (100)

Cable tiwraps as individual parts

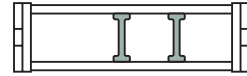
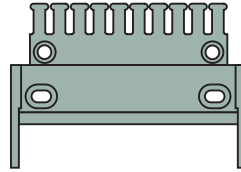
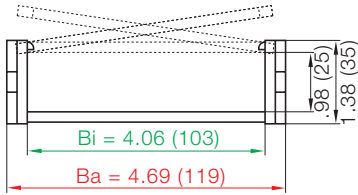
Cable tiwraps	Width x Length in. (mm)	Maximum Ø in. (mm)	Tensile Strength lbs (N)
100 pieces/bag			
CFB-001	.19 x 5.91 (4.8 x 150)	1.42 (36)	50 (222)

- Other strain relief elements
- ▶ Strain Relief, Chapter 10



Order example

250-10



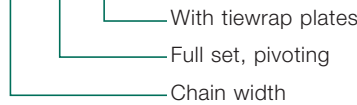
1. Chain selection:

250-10-100-0



2. Mounting brackets:

2100-34-PZB



3. Interior separation:

2 separators, unassembled, (Part No. 201), or assembled every other link (Part No. 211).
Alternative interior separation configuration according to design layout possible.

4. Additional information on guide troughs ► Chapter 9

For 16.4 ft (5 m) chain, color black, with pivoting mounting brackets
16.4 ft (5 m) 250-10-100-0 and 2100-34PZ



Technical data

Chain Type	Weight Per Link		Weight	
	(oz.)	(g)	(lbs/ft)	(kg/m)
200/240/250-02	0.074	(0.034)	0.50	(0.74)
200/240/250-03	0.081	(0.037)	0.54	(0.81)
200/240/250-05	0.090	(0.041)	0.60	(0.90)
200/240/250-07	0.101	(0.046)	0.68	(1.01)
200/240/250-09	0.115	(0.052)	0.73	(1.08)
200/240/250-10	0.128	(0.058)	0.77	(1.15)
200/240/250-12	0.141	(0.064)	0.82	(1.22)

Material	igumid G
Permitted temperature	-40°/+266°F (-40°/+130°C)
Gliding speed max.	16.4 ft/s (5 m/s)
Unsupported V max.	32.8 ft/s (10 m/s)
Flammability class	VDE 0304 IIC UL94 1H

- Details of material properties
- Design, Chapter 1

Guide Troughs



- Other technical data on guide troughs

► Chapter 9

Series 200/240/250 E2 "medium"

Assembly Instructions



1. To open crossbars: press screwdriver into tab on top of link, lever screwdriver until crossbar opens



2. Repeat Step 1 on other side



3. To close crossbars: push down on crossbar with thumb until it snaps into place



4. Joining chain sections: push sections together; angle one side until pin snaps into bore; repeat on other side



5. Separating chain sections: insert screwdriver between two links



6. Twist until pin disengages from bore; pull sections apart



7. Attaching mounting brackets: snap bracket into link (see Step 4 - "Joining chain sections")



8. Snap tiewrap plate into bottom groove of the mounting bracket

Guide Troughs

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 92-30
- 1/2 travel length of glide bars
Part Number 92-01
- Installation sets as end connectors
Part Number 92-50-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. 92-30
= 13 sections of 6.56 ft (2 m) glide bar
Part No. 92-01

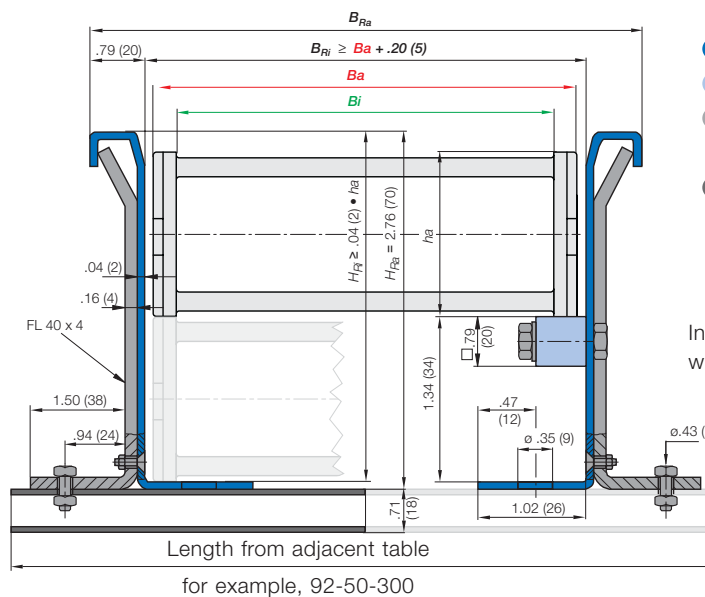
Required number of installation sets:
= Number of guide trough components + 1
= 25 + 1 = 26
Part number of the installation sets

Example: 92-50-400 for 15.75" (400 mm) long profile rail.



Width of Crossbar
250-05-200-0

	B_{Ri}	Installation Part No.
-02	1.81 (46)	92-50-150
-03	2.32 (59)	92-50-175
-05	3.07 (78)	92-50-175
-07	3.86 (98)	92-50-200
-09	4.37 (111)	92-50-250
-10	4.88 (124)	92-50-250
-12	5.75 (146)	92-50-300



- Guide trough
- Glide bars
- Installation set "Basic"
- C-profile rail

Individual attachment without profile rail

* Specialized guide trough available upon request





Price Index



7 Widths
8 Bending Radii



3 options for interior separation



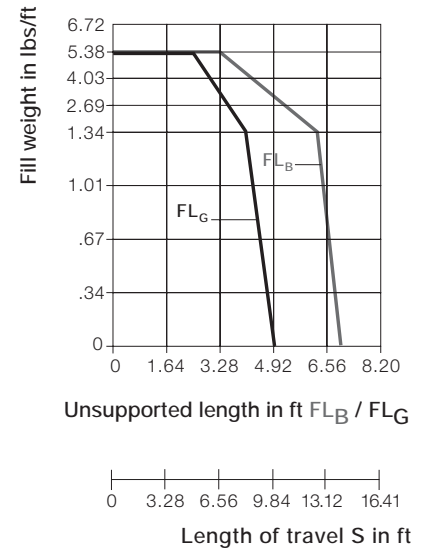
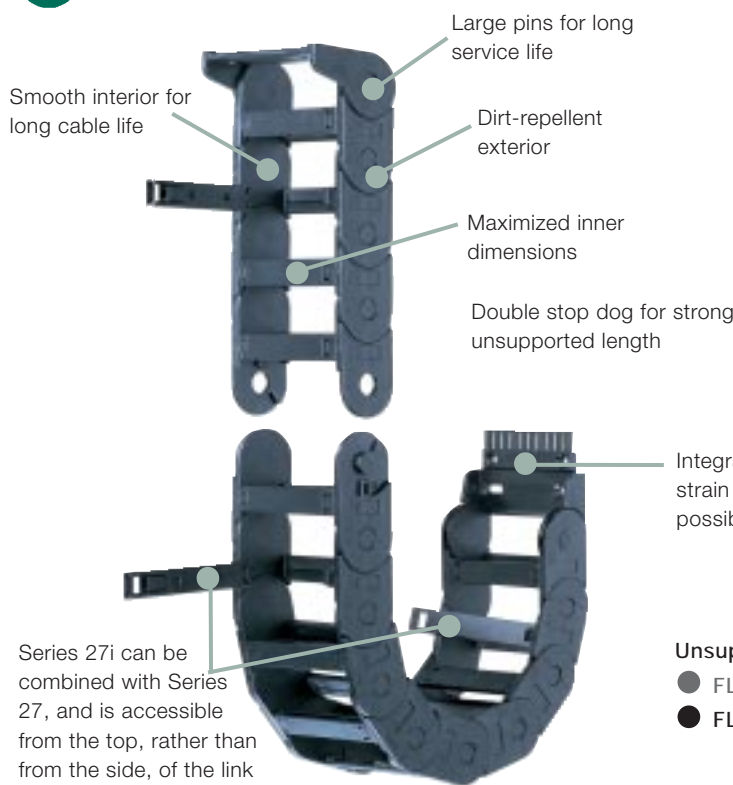
5 options for mounting brackets



Various strain relief options

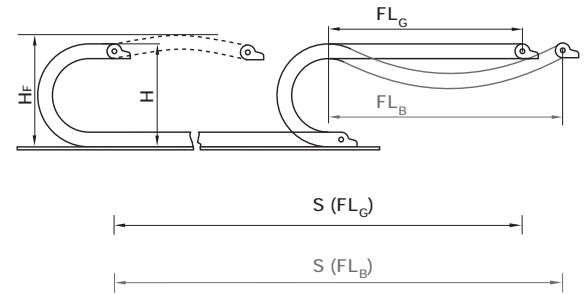


Click Here for Specs & CAD Files



Unsupported length

- FL_B = unsupported with permitted sag
- FL_G = unsupported with straight upper run



Product Range:

Inner Widths (Bi) inches (mm):	1.97 (50), 2.95 (75), 3.94 (100), 4.92 (125), 5.91 (150), 6.89 (175), 7.87 (200)
Bending Radii (R) inches (mm):	2.48 (63), 2.95 (75), 3.94 (100), 4.92 (125), 5.91 (150), 6.89 (175), 7.87 (200), 9.84 (250)
Pitch:	2.20 (56 mm/link) = 5.49 links/ft (18 links/m) 39.4 (1008 mm)



When to use the Series 26/27/27i:

- If snap-open accessibility along inner or outer radius is required
- If stable chain of moderate size is required
- If cables up to Ø1.26" (32 mm) diameter are involved
- If loads are moderate
- If integrated strain relief is required at the connection point
- If easy installation is required



When not to use the Series 26/27/27i:

- If cables over Ø 1.26" (32 mm) diameter are involved
▶ System E2, Series 340, 350, Chapter 4
- If maximum stability is required
▶ System E4, Series 280, Chapter 6
- If chip protection is required
▶ Energy Tube E2, Series R58, Series R157/R158 Chapter 5
- If the application is very simple
▶ "E-Z Chain", Series E26, Chapter 2

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

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** or incorporation of igus® exclusive AUTO-GLIDE System guide elements, which are available for this chain series ▶ **AUTO-GLIDE System, Chapter 9**.

Other Installation Methods:

Vertical, hanging	= max 164 (50 m)
Vertical, standing	= max 9.84 (3 m)
Side-mounted, unsupported	= max 3.28 (1 m)
Rotary	= requires further calculation

- Long travel Max: 393 ft (120 m)

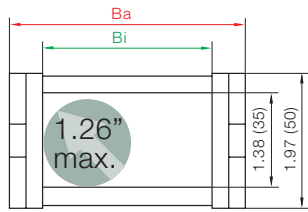
Series 26/27/27i E2 "medium"



26
27
27i

Series 26 Energy Chain®

(non-snap-open)



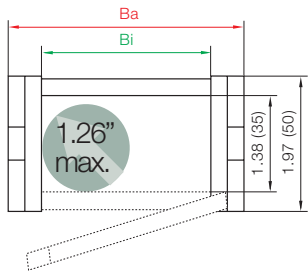
Part No.	Bi	Ba
26-05	1.97 (50)	2.60 (66)
26-07	2.95 (75)	3.58 (91)
26-10	3.94 (100)	4.57 (116)
26-12	4.92 (125)	5.55 (141)
26-15	5.91 (150)	6.54 (166)
26-17	6.89 (175)	7.64 (194)
26-20	7.87 (200)	8.62 (219)

Bending Radii
for ALL Widths
2.48 (063)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
9.84 (250)

Supplement part no. with required radius
for example, 26-10-100-0

Series 27i Energy Chain®

(snap-open along inner radius)



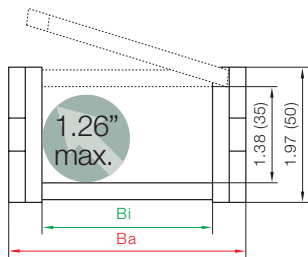
Part No.	Bi	Ba
27i-05	1.97 (50)	2.60 (66)
27i-07	2.95 (75)	3.58 (91)
27i-10	3.94 (100)	4.57 (116)
27i-12	4.92 (125)	5.55 (141)
27i-15	5.91 (150)	6.54 (166)
27i-17	6.89 (175)	7.64 (194)
27i-20	7.87 (200)	8.62 (219)

Bending Radii
for ALL Widths
2.48 (063)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
9.84 (250)

Supplement part no. with required radius
for example, 27i-10-100-0

Series 27 Energy Chain®

(snap-open along outer radius)



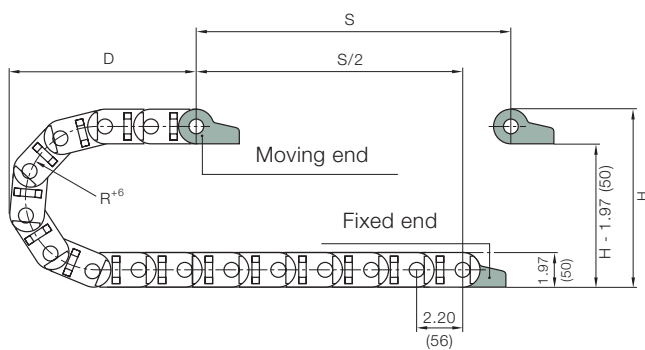
Part No.	Bi	Ba
27-05	1.97 (50)	2.60 (66)
27-07	2.95 (75)	3.58 (91)
27-10	3.94 (100)	4.57 (116)
27-12	4.92 (125)	5.55 (141)
27-15	5.91 (150)	6.54 (166)
27-17	6.89 (175)	7.64 (194)
27-20	7.87 (200)	8.62 (219)

Bending Radii
for ALL Widths
2.48 (063)
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
6.89 (175)
7.87 (200)
9.84 (250)

Supplement part no. with required radius
for example, 27-10-100-0

! Use Series 27 for gliding applications

Installation Dimensions



R	2.48 (063)	2.95 (075)	3.94 (100)	4.92 (125)
H* ⁺⁵ ₀	7.09 (180)	7.87 (200)	9.84 (250)	11.81 (300)
D	5.51 (140)	5.91 (150)	6.89 (175)	7.87 (200)
K	13.19 (335)	14.76 (375)	18.70 (475)	21.65 (550)

R	5.91 (150)	6.89 (175)	7.87 (200)	9.84 (250)
H* ⁺⁵ ₀	13.78 (350)	15.75 (400)	17.72 (450)	21.65 (550)
D	8.86 (225)	9.84 (250)	10.83 (275)	12.80 (325)
K	25.59 (650)	29.53 (750)	32.48 (825)	36.42 (925)

*The required clearance height is HF = H + 1.38 (35 mm) with 1.34 lbs/ft (2 kg/m) fill weight. Please consult igus® if space is particularly restricted.

Pitch: = 2.20 (56 mm) per link
Links per ft (m): = 5.49 (18)
Chain length: = $\frac{S}{2} + K$

**Click Here for
Specs &
CAD Files**

PDF: www.igus.com/echainpdf.asp
Specs/CAD/RFO: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp



SnapChain - Easily Bundle Cables Together

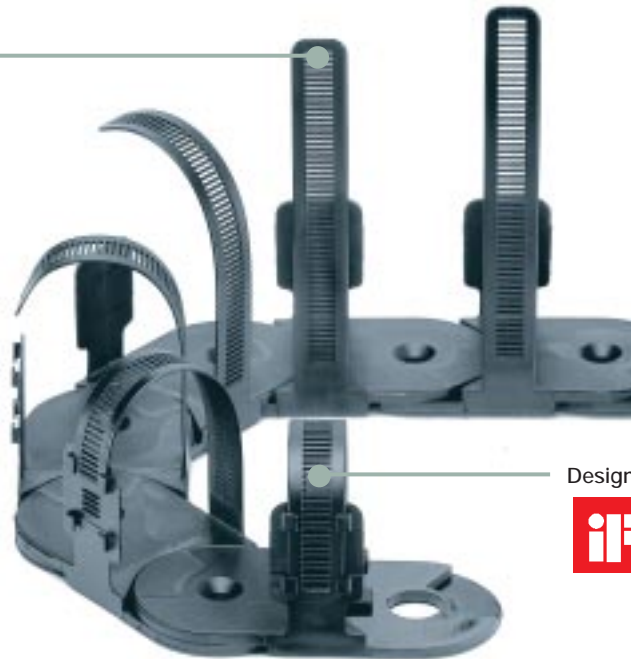
igus® Energy Chain Systems®

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

Internet: <http://www.igus.com>
 email: sales@igus.com
 QuickSpec: <http://www.igus.com/qs/echain.asp>

Adjustable loops

Click Here for Specs & CAD Files



Design Award Winner



Features

- Cable carriers to easily bundle cables together
- Adjustable loops, can be changed at any time
- Suitable for short lengths, ideally 5 to 10 sections
- Favorable alternative for expensive cable clips
- Version TE can be opened from the outside radius
- Version TZ can be opened from the inside radius
- Elegant Design
- Flexible in one or two directions
- Available in two sizes

Applications

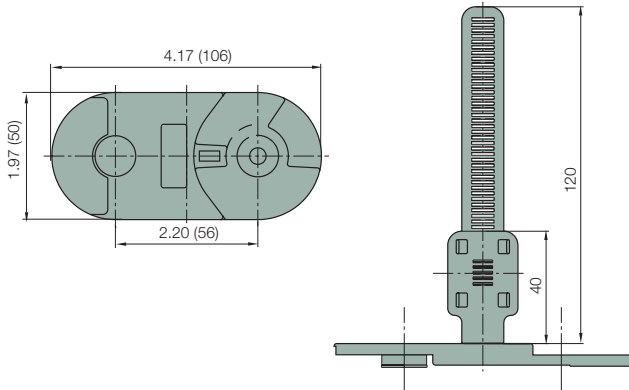
- Control box construction
- Electrical appliances
- Computer cabinets
- Office furniture
- Any place where cables are moving back and forth

Series 26 E2 "medium" SnapChain



SnapChain - TE26 / TZ26

*As an alternative available as RBR (reversed bend radius).
Part No. TE26-120-Radius/Radius

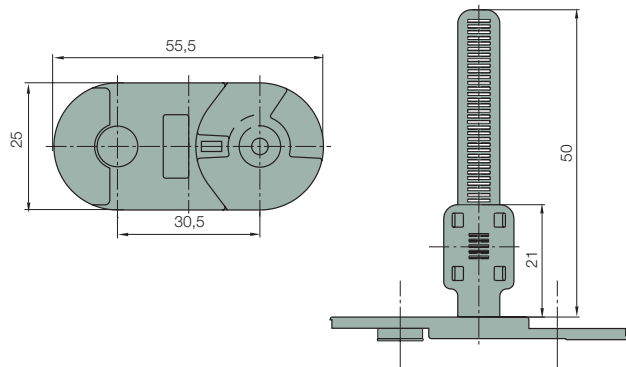


Part No.	Bending Radii for ALL Widths
TE26-120*	2.48 (063)
TZ26-120	2.95 (075)
	3.94 (100)
	4.92 (125)
	5.91 (150)
	7.87 (200)

Supplement part no. with required radius for example, TE26-120-100-0

SnapChain - TE14 / TZ14

*As an alternative available as RBR (reversed bend radius).
Part No. TE14-50-Radius/Radius

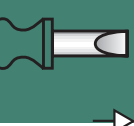
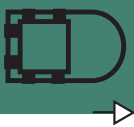


Part No.	Bending Radii for ALL Widths
TE14-50*	1.10 (028)
TZ14-50	1.50 (038)
	1.89 (048)
	2.95 (075)
	3.94 (100)
	4.92 (125)

Supplement part no. with required radius for example, TE14-50-100-0



PDF: www.igus.com/echainpdf.asp
Specs/CAD/RFO: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp



Series 26/27/27i E2 "medium"

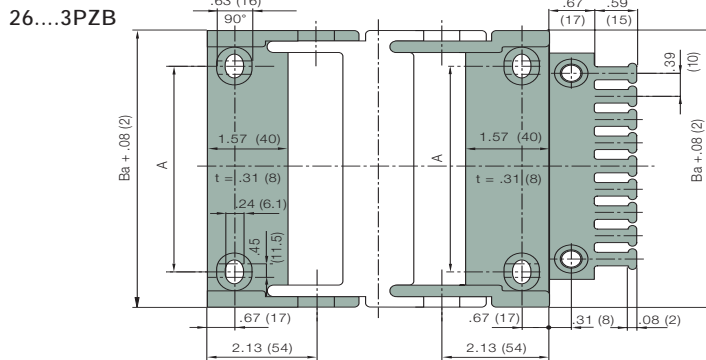
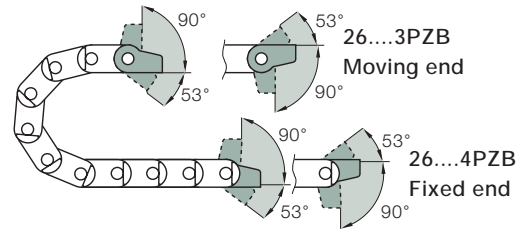


26
27
27i

Mounting Brackets

Option 1: pivoting

- Pivoting
- Short and long travels
- Space-restricted conditions
- Corrosion-resistant



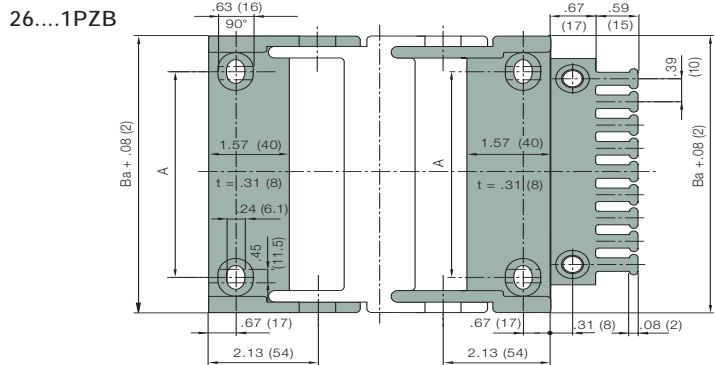
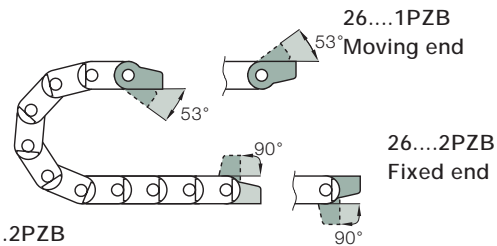
26...4PZB

- 26...34 PZB = Full set, each part with pin/bore, including tiewrap plates
- 26...3 PZB = Mounting bracket with bore, including tiewrap plates
- 26...4 PZB = Mounting bracket with pin, including tiewrap plates

Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
26/27/27i-05	2605-34PZB	2605-34PZBK1	2605-34PZ	1.18 (30)
26/27/27i-07	2607-34PZB	2607-34PZBK1	2607-34PZ	2.17 (55)
26/27/27i-10	2610-34PZB	2610-34PZBK1	2610-34PZ	3.15 (80)
26/27/27i-12	2612-34PZB	2612-34PZBK1	2612-34PZ	4.13 (105)
26/27/27i-15	2615-34PZB	2615-34PZBK1	2615-34PZ	5.12 (130)
26/27/27i-17	2617-34PZB	2617-34PZBK1	2617-34PZ	6.10 (155)
26/27/27i-20	2620-34PZB	2620-34PZBK1	2620-34PZ	7.09 (180)

Option 2: locking

- Locked connections
- Vertical hanging/standing travels
- Extreme accelerations
- Corrosion-resistant



26...2PZB

- 26...12 PZB = Full set, each part with pin/bore, including tiewrap plates
- 26...1 PZB = Mounting bracket with bore, including tiewrap plates
- 26...2 PZB = Mounting bracket with pin, including tiewrap plates

Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
26/27/27i-05	2605-12PZB	2605-12PZBK1	2605-12PZ	1.18 (30)
26/27/27i-07	2607-12PZB	2607-12PZBK1	2607-12PZ	2.17 (55)
26/27/27i-10	2610-12PZB	2610-12PZBK1	2610-12PZ	3.15 (80)
26/27/27i-12	2612-12PZB	2612-12PZBK1	2612-12PZ	4.13 (105)
26/27/27i-15	2615-12PZB	2615-12PZBK1	2615-12PZ	5.12 (130)
26/27/27i-17	2617-12PZB	2617-12PZBK1	2617-12PZ	6.10 (155)
26/27/27i-20	2620-12PZB	2620-12PZBK1	2620-12PZ	7.09 (180)

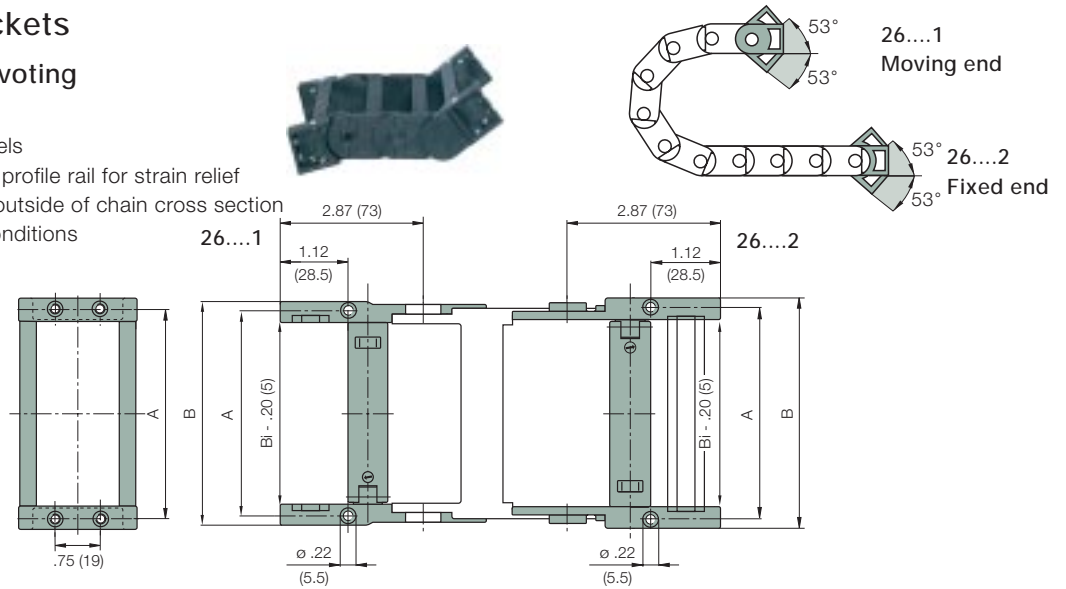
PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFO: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp



Mounting Brackets

Option 3: KMA pivoting

- Pivoting
- Short and long travels
- Optional integrated profile rail for strain relief
- Bolted connection outside of chain cross section
- Space-restricted conditions
- Corrosion-resistant
- Universal use



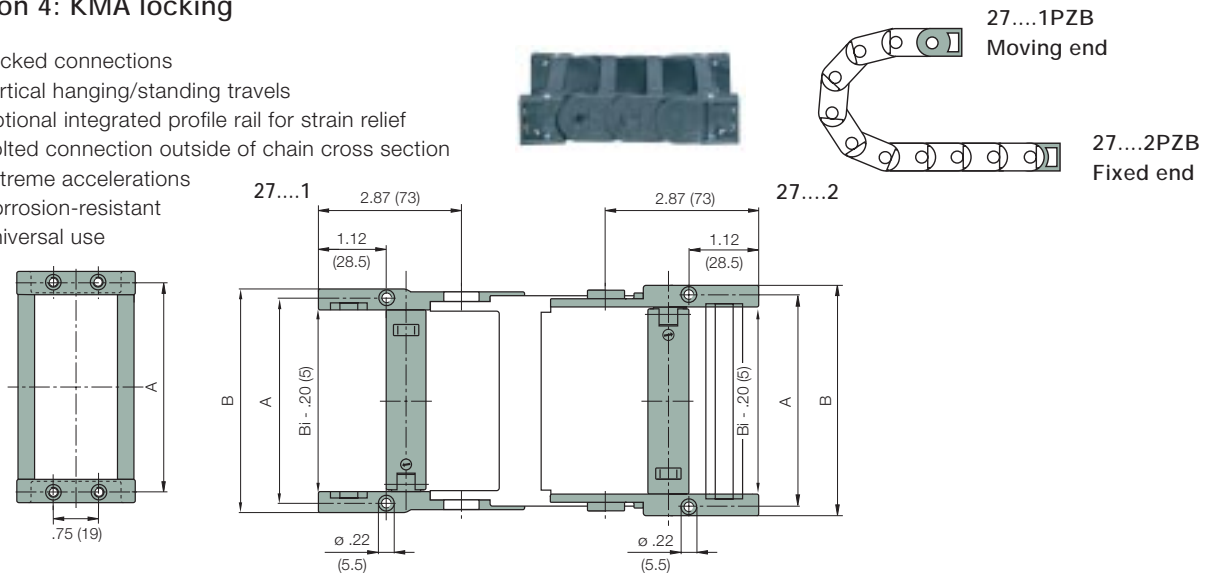
Chain Type	Part No. Full Set with Profile Rail	Part No. Set Mounting Brackets	Dimension A		Dimension B	
			in.	(mm)	in.	(mm)
26/27/27i-05	2600-05-12P	2600-05-12	2.28	(58)	2.72	(69)
26/27/27i-07	2600-07-12P	2600-07-12	3.27	(83)	3.70	(94)
26/27/27i-10	2600-10-12P	2600-10-12	4.25	(108)	4.69	(119)
26/27/27i-12	2600-12-12P	2600-12-12	5.24	(133)	5.67	(144)
26/27/27i-15	2600-15-12P	2600-15-12	6.22	(158)	6.65	(169)
26/27/27i-17	2600-17-12P	2600-17-12	7.20	(183)	7.64	(194)
26/27/27i-20	2600-20-12P	2600-20-12	8.19	(208)	8.62	(219)

26...12 = Full set, each part with pin/bore
26...1 = Mounting bracket with bore
26...2 = Mounting bracket with pin



Option 4: KMA locking

- Locked connections
- Vertical hanging/standing travels
- Optional integrated profile rail for strain relief
- Bolted connection outside of chain cross section
- Extreme accelerations
- Corrosion-resistant
- Universal use



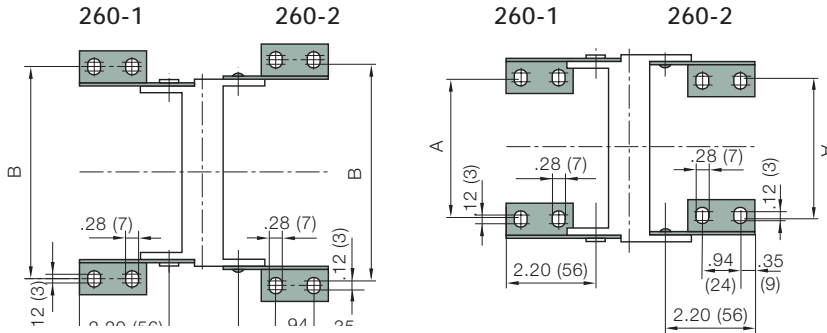
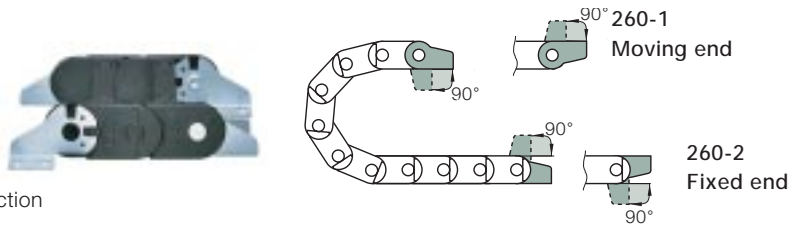
Chain Type	Part No. Full Set with Profile Rail	Part No. Set Mounting Brackets	Dimension A		Dimension B	
			in.	(mm)	in.	(mm)
26/27/27i-05	2700-05-12P	2700-05-12	2.28	(58)	2.72	(69)
26/27/27i-07	2700-07-12P	2700-07-12	3.27	(83)	3.70	(94)
26/27/27i-10	2700-10-12P	2700-10-12	4.25	(108)	4.69	(119)
26/27/27i-12	2700-12-12P	2700-12-12	5.24	(133)	5.67	(144)
26/27/27i-15	2700-15-12P	2700-15-12	6.22	(158)	6.65	(169)
26/27/27i-17	2700-17-12P	2700-17-12	7.20	(183)	7.64	(194)
26/27/27i-20	2700-20-12P	2700-20-12	8.19	(208)	8.62	(219)

26...12 = Full set, each part with pin/bore
26...1 = Mounting bracket with bore
26...2 = Mounting bracket with pin

Mounting Brackets

Option 5: Steel

- One part for all chain widths
- Electrically conductive
- Bolted connection outside of chain cross section



Chain Type	Part No. Full Set	Dimension A		Dimension B	
		in.	(mm)	in.	(mm)
26/27/27i-05	260-12	1.44	(36.5)	3.31	(84)
26/27/27i-07	260-12	2.44	(62)	4.25	(108)
26/27/27i-10	260-12	3.43	(87)	5.24	(133)
26/27/27i-12	260-12	4.41	(112)	6.22	(158)
26/27/27i-15	260-12	5.39	(137)	7.20	(183)
26/27/27i-17	260-12	6.42	(163)	8.23	(209)
26/27/27i-20	260-12	7.40	(188)	9.21	(234)



260-12 = Full set, every second part with pin/bore
 260-1 = Mounting bracket with bore, 1 part left/right
 260-2 = Mounting bracket with pin, 1 part left/right

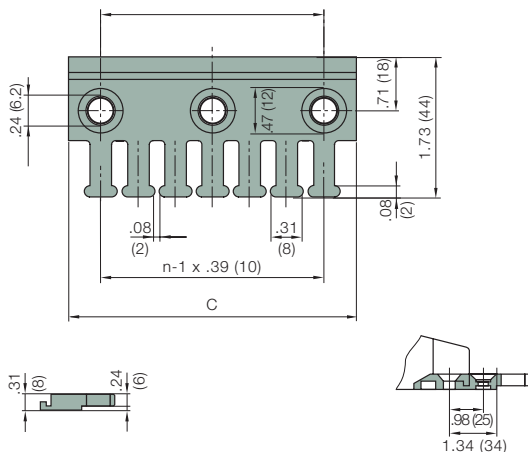
PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFO: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp

Strain Relief for Polymer Mounting Brackets (pivoting or locking)

The strain relief tiwrap plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the tiwrap plates are also connected firmly to the machine surface. No separate installation is necessary. Cable tiwraps secure cables using the "teeth" of the tiwrap plate for time-saving, effective strain relief.



Tiwrap plate as an individual part



Single tiwrap plate

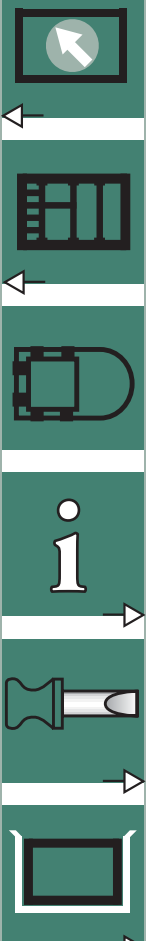
Shown assembled

Tiwrap Plates	n Number of Teeth	C Overall Width	B Distance Between Bore Holes	Center Bore Holes
3050-ZB	5	1.97 (50)	1.18 (30)	no
3075-ZB	7	2.95 (75)	2.17 (55)	no
3100-ZB	10	3.94 (100)	3.15 (80)	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

Cable tiwraps as individual parts

Cable tiwraps 100 pieces/bag	Width x Length		Maximum Ø		Tensile Strength	
	in.	(mm)	in.	(mm)	lbs	(N)
CFB-001	.19 x 5.91	(4.8 x 150)	1.42	(36)	50	(222)

- Other strain relief elements
- ▶ Strain Relief, Chapter 10



“Double” strain relief

If an Energy Chain® is harnessed with a very large number of cables, strain relief may be necessary at two levels. Our 2050-Z strain relief system was developed for this purpose. It can be placed in any position along the Energy Chain®. The 2050-Z strain relief system is simply clamped onto the opening crossbar or onto the fixed crossbar of the chain link, as needed. No additional installation elements are needed. Attachment directly onto the KMA crossbars is possible.



Part No.	Width, Strain Relief	
	in.	(mm)
2050-ZC	1.97	(50)

* Additional widths under preparation

Strain relief for KMA

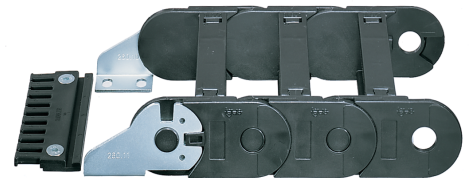
When a profile rail is used, the strain relief element can be attached directly to the KMA brackets without using any bolts. This is accomplished by simply clamping the tiewrap plate onto the profile rail. The profile rail can be placed at the top, bottom or both top and bottom of the KMA bracket to accommodate both tiewrap plates and strain relief clamps simultaneously.



Strain relief for KMA and 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.

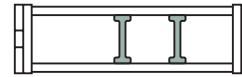
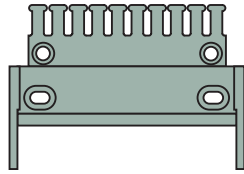
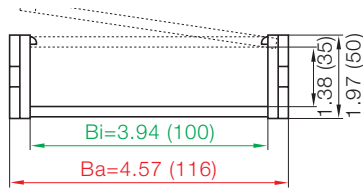
► Chapter 10



Order Example and Technical Data: Series 26/27/27i E2 "medium"

Order example

27-10...



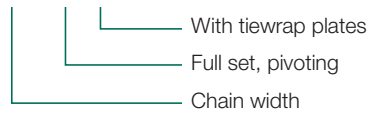
1. Chain selection:

27-10-100-0



2. Mounting brackets:

2610-34-PZB



3. Interior separation:

2 separators unassembled (Part No. 260), or assembled every other link (Part No. 261).

Alternative interior separation configuration according to design layout possible.

For 16.4 ft (5 m) chain, color black, with pivoting mounting brackets
16.4 ft (5 m) 27-10-100-0 and 2610-34PZ



4. Additional information on guide troughs ► Chapter 9

Technical data

Chain Type	Weight Per Link		Weight	
	(oz.)	(g)	(lbs/ft)	(kg/m)
26/27/27i-05	0.143	(0.065)	0.79	(1.17)
26/27/27i-07	0.159	(0.072)	0.87	(1.30)
26/27/27i-10	0.170	(0.077)	0.93	(1.39)
26/27/27i-12	0.181	(0.082)	0.99	(1.48)
26/27/27i-15	0.198	(0.090)	1.09	(1.62)
26/27/27i-17	0.227	(0.103)	1.24	(1.85)
26/27/27i-20	0.240	(0.109)	1.32	(1.96)

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

● Details of material properties

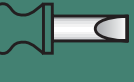
► Design, Chapter 1

Guide Troughs



● Other technical data on guide troughs

► Chapter 9



Assembly Instructions

igus® Energy Chain Systems®

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



1. To open crossbars: press screwdriver into tab on top of link, lever screwdriver until crossbar opens



2. Repeat Step 1 on other side



3. To close crossbars: push down on crossbar with thumb until it snaps into place



4. Joining chain sections: push sections together; angle one side until pin snaps into bore; repeat on other side



5. Separating chain sections: insert screwdriver between two links



6. Twist until pin disengages from bore; pull sections apart



7. Attaching mounting brackets: snap bracket into link (see Step 4 - "Joining chain sections")



8. Snap tie-wrap plate into bottom groove of the mounting bracket

Guide Troughs

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

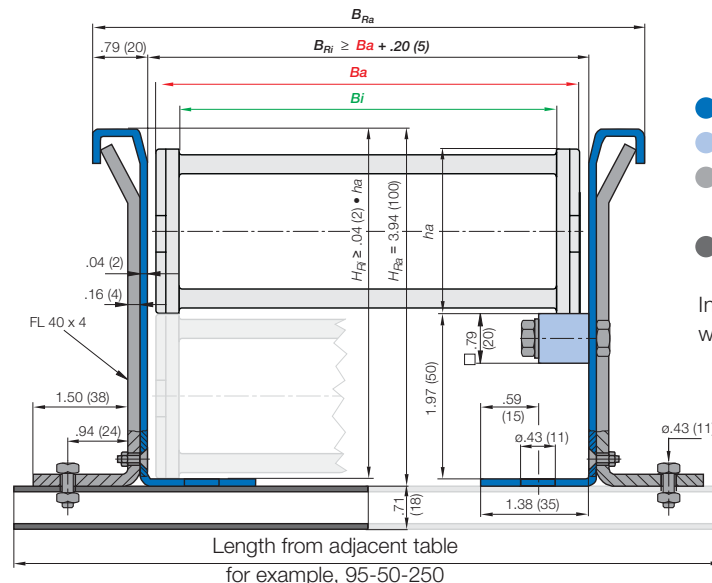
Required number of installation sets:
= Number of guide trough components + 1
= 25 + 1 = 26

Part number of the installation sets
Example: 95-50-400 for 15.75" (400 mm) long profile rail.



Width of Crossbar
27-05-200-0

	B_{Ri}	Installation Part No.
-05	2.80 (71)	95-50-200
-07	3.78 (96)	95-50-200
-10	4.76 (121)	95-50-250
-12	5.75 (146)	95-50-250
-15	6.73 (171)	95-50-300
-17	7.83 (199)	95-50-300
-20	8.82 (224)	95-50-350



- Guide trough
- Glide bars
- Installation set "Basic"
- C-profile rail

Individual attachment without profile rail



* Specialized guide trough available upon request

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/echain.asp>



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/qs/echain.asp>



Price Index



10 Widths
7 Bending Radii



Smooth interior for long cable life

Tapered insertion point for easy assembly

Snap-open, hinged to left or right, along the inner or the outer radius, accessible from the top, rather than from the side, of the link

3 options for interior separation



5 options for mounting brackets



Various strain relief options



Extender crossbar for large diameter hoses



Click Here for Specs & CAD Files



When to use the Series 340/350:

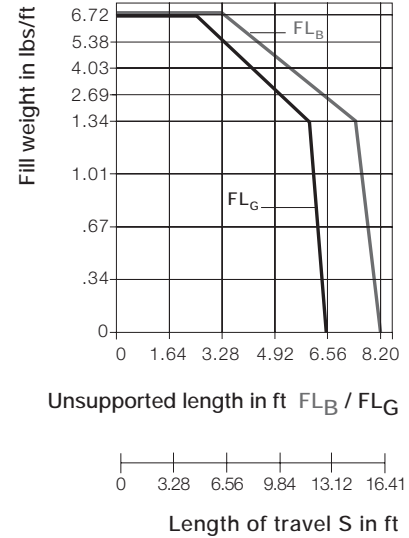
- If snap-open accessibility along inner or outer radius is required
- If integrated strain relief is required at the connection point
- If modular interior separation is required
- If cables up to $\varnothing 1.65"$ (42 mm) diameter are involved
- Travel up to 492 ft (150 m)
- Long service life

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



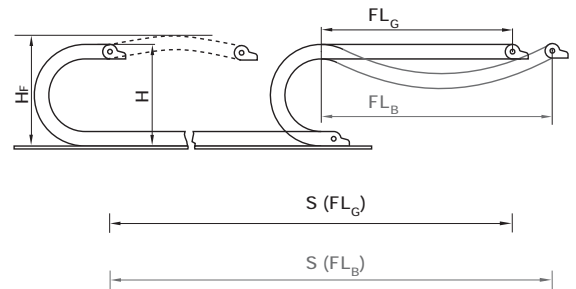
When not to use the Series 340/350:

- If maximum stability is required
 - ▶ System E4, Series 380, Chapter 6
- If each link requires snap-open accessibility on both sides simultaneously
 - ▶ System E4, Series 380, Chapter 6
- If chip protection is required
 - ▶ Energy Tube E2, Series R68, R167/R168, Chapter 5
- If the application is very simple
 - ▶ E-Z Chain, Series E/Z 300, Chapter 2



Unsupported length

- FL_B = unsupported with permitted sag
- FL_G = unsupported with straight upper run



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** or incorporation of igus® exclusive AUTO-GLIDE System guide elements, which are available for this chain series ▶ **AUTO-GLIDE System, Chapter 9**.

Other Installation Methods:

Vertical, hanging	= max 262 ft (80 m)
Vertical, standing	= max 9.84 ft (3 m)
Side-mounted, unsupported	= max 3.28 ft (1 m)
Rotary	= requires further calculation

- Long travel Max: 492 ft (150 m)

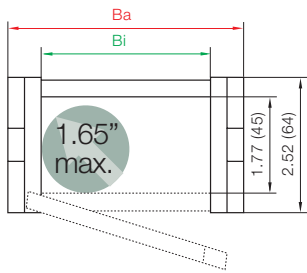
Series 340/350 E2 "medium"



340
350

Series 340 Energy Chain®

(snap-open along inner radius)



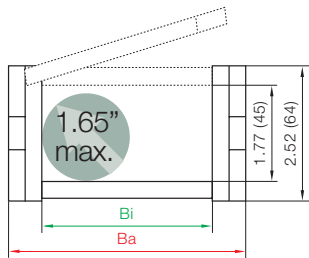
Part No.	Bi	Ba
340-050	1.97 (50)	2.76 (70)
340-075	2.95 (75)	3.74 (95)
340-100	3.94 (100)	4.72 (120)
340-115	4.53 (115)	5.31 (135)
340-125	4.92 (125)	5.71 (145)
340-150	5.91 (150)	6.69 (170)
340-175	6.89 (175)	7.68 (195)
340-200	7.87 (200)	8.66 (220)
340-225	8.86 (225)	9.65 (245)
340-250	9.84 (250)	10.63 (270)

Bending Radii
for ALL Widths
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
7.87 (200)
9.84 (250)
11.81 (300)

Supplement part no. with required radius
for example, 340-050-150-0

Series 350 Energy Chain®

(snap-open along outer radius)



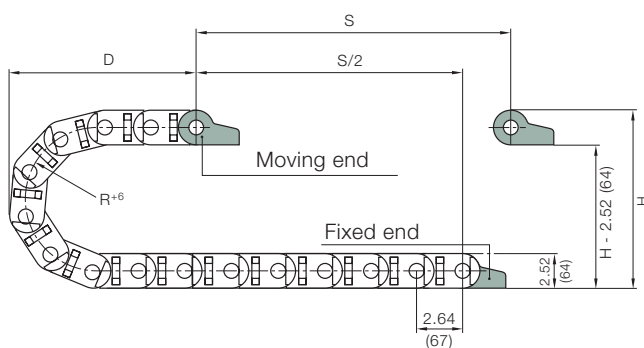
Part No.	Bi	Ba
350-050	1.97 (50)	2.76 (70)
350-075	2.95 (75)	3.74 (95)
350-100	3.94 (100)	4.72 (120)
350-115	4.53 (115)	5.31 (135)
350-125	4.92 (125)	5.71 (145)
350-150	5.91 (150)	6.69 (170)
350-175	6.89 (175)	7.68 (195)
350-200	7.87 (200)	8.66 (220)
350-225	8.86 (225)	9.65 (245)
350-250	9.84 (250)	10.63 (270)

Bending Radii
for ALL Widths
2.95 (075)
3.94 (100)
4.92 (125)
5.91 (150)
7.87 (200)
9.84 (250)
11.81 (300)

Supplement part no. with required radius
for example, 350-050-150-0

! Use Series 350 for gliding applications)

Installation Dimensions



R	2.95 (075)	3.94 (100)	4.92 (125)	5.91 (150)
H*) ⁺⁵ ₀	8.46 (215)	10.43 (265)	12.40 (315)	14.37 (365)
D	5.91 (150)	7.87 (200)	8.86 (225)	9.84 (250)
K	15.75 (400)	19.69 (500)	25.59 (650)	28.54 (725)

R	7.87 (200)	9.84 (250)	11.81 (300)
H*) ⁺⁵ ₀	18.31 (465)	22.24 (565)	26.18 (665)
D	11.81 (300)	13.78 (350)	15.75 (400)
K	34.45 (875)	41.34 (1050)	48.23 (1225)

*The required clearance height is HF = H + 1.57 (40 mm) with 1.68 (2.5 kg/m) fill weight. Please consult igus® if space is particularly restricted.

Pitch: = 2.64 (67 mm) per link
Links per ft (m): = 4.57 (15)
Chain length: = $\frac{S}{2} + K$



PDF: www.igus.com/echainpdf.asp
Specs/CAD/RFO: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp



Extender crossbar

The extender crossbars were developed specifically for applications in which a large diameter hose must be guided carefully. It is intended for hoses with a maximum outer diameter of 4.53 (115 mm). The extender crossbar can be placed along either the outer (Series 350) or inner (Series 340) 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 the outer radius and a special guide trough is required. The extender crossbar can either be attached to the side links directly or can be used in combination with two standard snap-open crossbars.

If the extender crossbars are attached along the outer radius, the side of the chain must be supported so that the crossbars do not come in contact with the running surface. We are happy to assist with the design and assembly of this type of system. This design is also suitable for gliding applications. We are also happy to assist with guide trough requirements.

Extender crossbar: Series 340

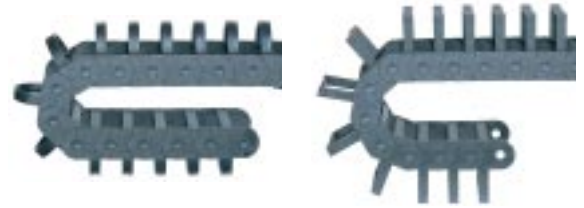


340-150...

340-175...

Series	max. Hose Ø in. (mm)	Bending Radii in. (mm)
340-150	3.54 (90)	5.91 (150), 7.87 (200), 9.84 (250)
340-175	4.53 (115)	7.87 (200), 9.84 (250)

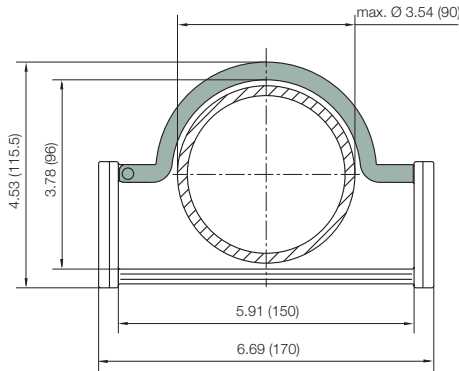
Extender crossbar: Series 350



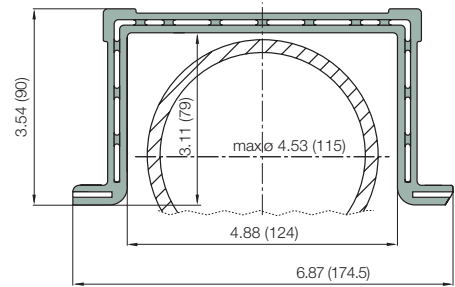
350-150...

350-175...

Series	max. Hose Ø in. (mm)	Bending Radii in. (mm)
350-150	3.54 (90)	2.95 (75), 3.94 (100), 4.92 (125), 5.91 (150), 7.87 (200), 9.84 (250)
350-175	4.53 (115)	2.95 (75), 3.94 (100), 4.92 (125), 5.91 (150), 7.87 (200), 9.84 (250)



Part No. (round extender crossbar)
3500-150-D090



Part No. (square extender crossbar)
3500-175-D115*

*This product also available in round design - order Part No. 3500-175-RD115

Order Example

1. Chain selection:
350-150-D090-175-0

- Color black
- Radius
- Crossbar inside Ø
- Width
- Chain type

2. Mounting brackets:
3150-34-PZB

- With tiwrap plates
- Full set, pivoting
- Chain width

3. Assembly:

As with all Series 340/350 crossbars, the extender crossbars are opened using a screwdriver.

For 16.4 ft (5 m) chain, color black, with pivoting mounting brackets
16.4 ft (5 m) 350-150-D090-175-0 and 3150-34PZ

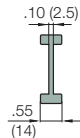
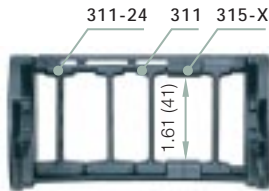
— 75 links — 4.57 links/ft (15 links/m)



Interior Separation

Option 1: vertical separators

Separators are used when vertical compartmentalization of the Energy Chain® is the only type of separation required. Spacers can be used on either side of each separator to maintain the distance between them. Spacers are necessary primarily with side-mounted chains.



Vertical Separator

Unassembled	Part No. 301
Assembled	Part No. 311



Spacer

Unassembled	Part No. 305-08
Assembled	Part No. 315-08

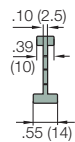
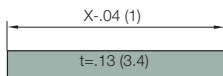
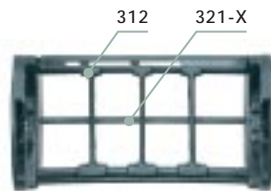


Spacer

Unassembled	Part No. 305-12
Assembled	Part No. 315-12

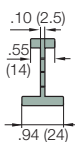
Option 2: full-width shelf

Full-width shelves are used with applications involving numerous thin cables with similar or identical diameters. This shelf slides into place and spans the entire width of the chain.



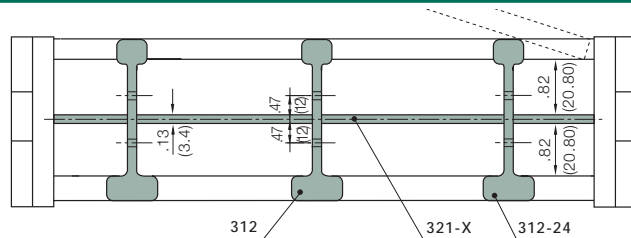
Vertical Separator, Slotted

Unassembled	Part No. 302
Assembled	Part No. 312



Vertical Separator, Slotted

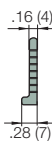
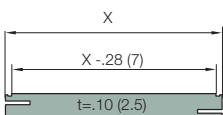
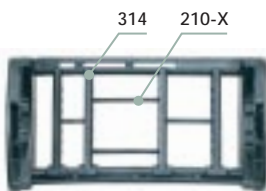
Unassembled	Part No. 302-24
Assembled	Part No. 312-24



Width X in. (mm)	Part No.	
	Unassembled	Assembled
1.97 (50)	320-050	321-050
2.95 (75)	320-075	321-075
3.94 (100)	320-100	321-100
4.53 (115)	320-115	321-115
4.92 (125)	320-125	321-125
5.91 (150)	320-150	321-150
6.89 (175)	320-175	321-175
7.87 (200)	320-200	321-200
8.86 (225)	320-225	321-225
9.84 (250)	320-250	321-250

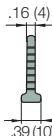
Option 3: shelves

This option is used most often in applications with numerous cables possessing different diameters. It allows for variable compartment heights and widths across the chain width, but can also be used for level separation across the entire inner width. Option 3 shelves can be combined with Option 1 separators and side plates.



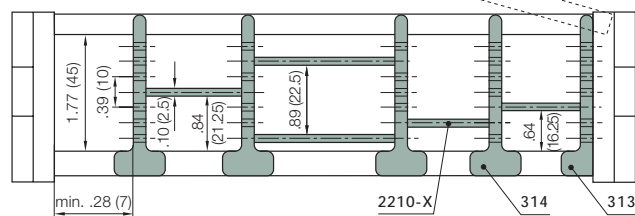
Side Plate

Unassembled	Part No. 303
Assembled	Part No. 313



Vertical Separator, Slotted

Unassembled	Part No. 304
Assembled	Part No. 314



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

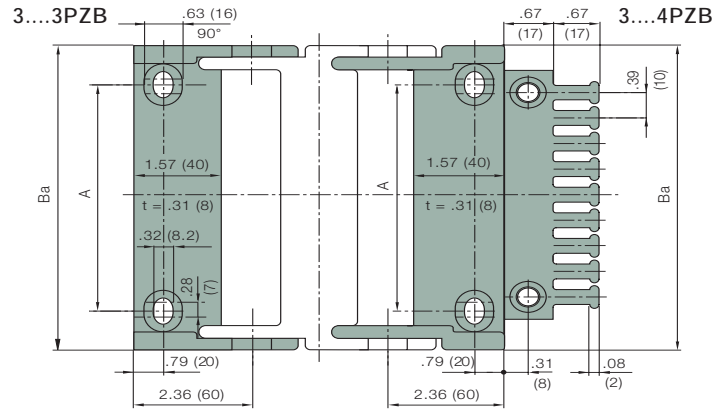
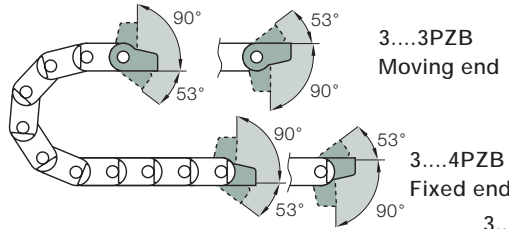
PDF: www.igus.com/echainpdf.asp
 Specs/CAD/RFQ: www.igus.com/echain.asp
 RoHS info: www.igus.com/RoHS.asp



Mounting Brackets

Option 1: pivoting

- Pivoting
- Short and long travels
- Space-restricted conditions
- Corrosion-resistant

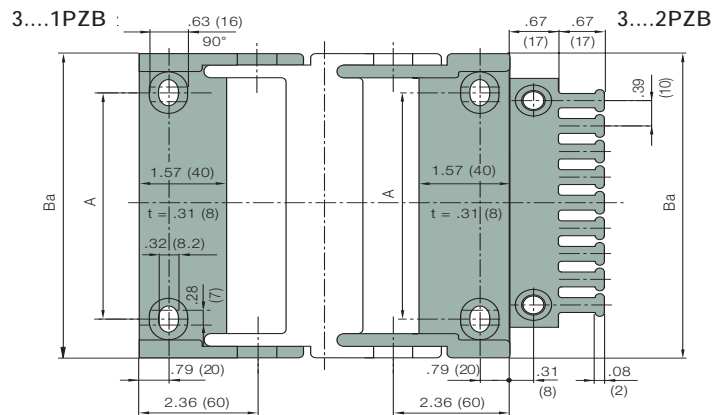
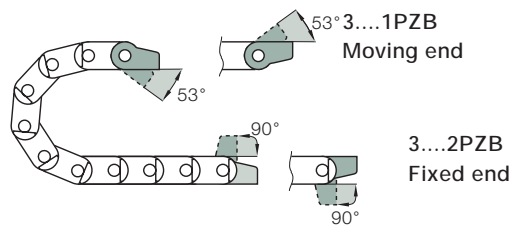


- 3...34 PZB = Full set, each part with pin/bore, including tiewrap plates
- 3...3 PZB = Mounting bracket with bore, including tiewrap plates
- 3...4 PZB = Mounting bracket with pin, including tiewrap plates

Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
340/350-050	3050-34PZB	3050-34PZBK1	3050-34PZ	1.10 (28)
340/350-075	3075-34PZB	3075-34PZBK1	3075-34PZ	2.09 (53)
340/350-100	3100-34PZB	3100-34PZBK1	3100-34PZ	3.07 (78)
340/350-115	3115-34PZB	3115-34PZBK1	3115-34PZ	3.66 (93)
340/350-125	3125-34PZB	3125-34PZBK1	3125-34PZ	4.06 (103)
340/350-150	3150-34PZB	3150-34PZBK1	3150-34PZ	5.04 (128)
340/350-175	3175-34PZB	3175-34PZBK1	3175-34PZ	6.02 (153)
340/350-200	3200-34PZB	3200-34PZBK1	3200-34PZ	7.01 (178)
340/350-225	3225-34PZB	3225-34PZBK1	3225-34PZ	7.99 (203)
340/350-250	3250-34PZB	3250-34PZBK1	3250-34PZ	8.98 (228)

Option 2: locking

- Locked connections
- Vertical hanging/standing travels
- Extreme accelerations
- Corrosion-resistant



- 3...12 PZB = Full set, each part with pin/bore, including tiewrap plates
- 3...1 PZB = Mounting bracket with bore, including tiewrap plates
- 3...2 PZB = Mounting bracket with pin, including tiewrap plates

Chain Type	Part No. Full Set with Tiewrap Plates	Part No. Set with Tiewrap Plates and 10 Cable Tiewraps	Part No. Mounting Bracket Set	Dimension A in. (mm)
340/350-050	3050-12PZB	3050-12PZBK1	3050-12PZ	1.10 (28)
340/350-075	3075-12PZB	3075-12PZBK1	3075-12PZ	2.09 (53)
340/350-100	3100-12PZB	3100-12PZBK1	3100-12PZ	3.07 (78)
340/350-115	3115-12PZB	3115-12PZBK1	3115-12PZ	3.66 (93)
340/350-125	3125-12PZB	3125-12PZBK1	3125-12PZ	4.06 (103)
340/350-150	3150-12PZB	3150-12PZBK1	3150-12PZ	5.04 (128)
340/350-175	3175-12PZB	3175-12PZBK1	3175-12PZ	6.02 (153)
340/350-200	3200-12PZB	3200-12PZBK1	3200-12PZ	7.01 (178)
340/350-225	3225-12PZB	3225-12PZBK1	3225-12PZ	7.99 (203)
340/350-250	3250-12PZB	3250-12PZBK1	3250-12PZ	8.98 (228)

igus® Energy Chain Systems®

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

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/echain.asp>

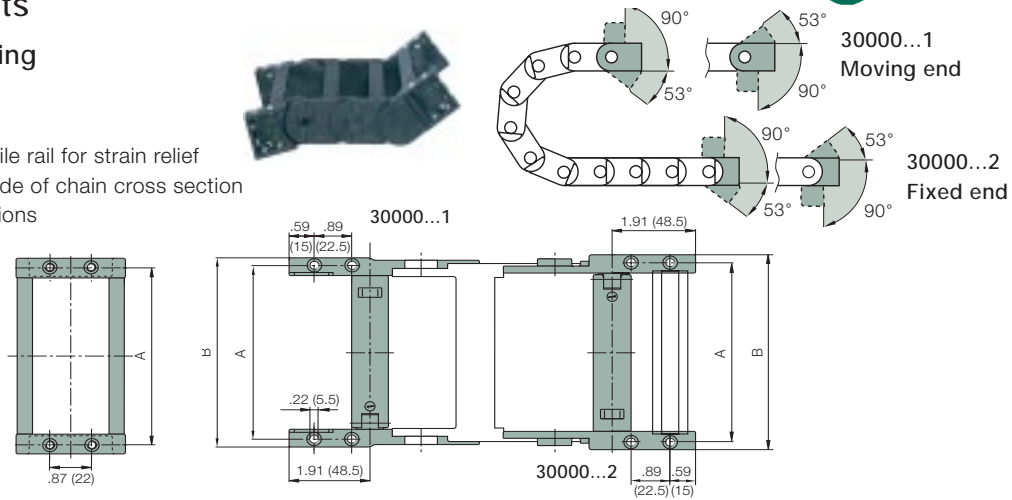
Series 340/350 E2 "medium" Mounting Brackets



340
350

Option 3: KMA pivoting

- Pivoting
- Short and long travels
- Optional integrated profile rail for strain relief
- Bolted connection outside of chain cross section
- Space-restricted conditions
- Corrosion-resistant
- Universal use



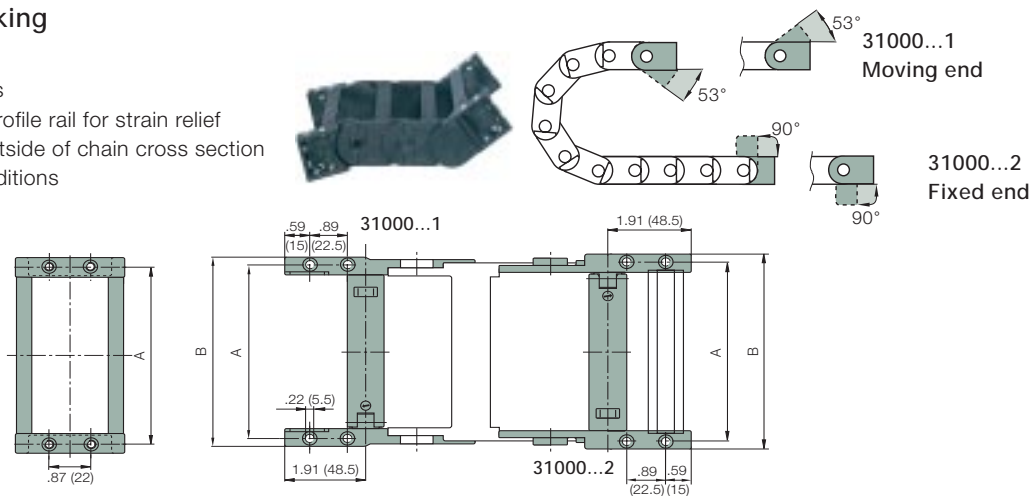
Chain Type	Part No. Full Set with Profile Rail	Part No. Set Mounting Brackets	Dimension A in. (mm)	Dimension B in. (mm)
340/350-050	30000-050-12P	30000-050-12	2.48 (63)	2.91 (74)
340/350-075	30000-075-12P	30000-075-12	3.46 (88)	3.90 (99)
340/350-100	30000-100-12P	30000-100-12	4.45 (113)	4.88 (124)
340/350-115	30000-115-12P	30000-115-12	5.04 (128)	5.47 (139)
340/350-125	30000-125-12P	30000-125-12	5.43 (138)	5.87 (149)
340/350-150	30000-150-12P	30000-150-12	6.42 (163)	6.85 (174)
340/350-175	30000-175-12P	30000-175-12	7.40 (188)	7.83 (199)
340/350-200	30000-200-12P	30000-200-12	8.39 (213)	8.82 (224)
340/350-225	30000-225-12P	30000-225-12	9.37 (238)	9.80 (249)
340/350-250	30000-250-12P	30000-250-12	10.35 (263)	10.79 (274)



30...12 = Full set, each part with pin/bore
 30...1 = Mounting bracket with bore
 30...2 = Mounting bracket with pin

Option 4: KMA locking

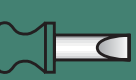
- Locked connections
- Short and long travels
- Optional integrated profile rail for strain relief
- Bolted connection outside of chain cross section
- Space-restricted conditions
- Corrosion-resistant
- Universal use



Chain Type	Part No. Full Set with Profile Rail	Part No. Set Mounting Brackets	Dimension A in. (mm)	Dimension B in. (mm)
340/350-050	31000-050-12P	31000-050-12	2.48 (63)	2.91 (74)
340/350-075	31000-075-12P	31000-075-12	3.46 (88)	3.90 (99)
340/350-100	31000-100-12P	31000-100-12	4.45 (113)	4.88 (124)
340/350-115	31000-115-12P	31000-115-12	5.04 (128)	5.47 (139)
340/350-125	31000-125-12P	31000-125-12	5.43 (138)	5.87 (149)
340/350-150	31000-150-12P	31000-150-12	6.42 (163)	6.85 (174)
340/350-175	31000-175-12P	31000-175-12	7.40 (188)	7.83 (199)
340/350-200	31000-200-12P	31000-200-12	8.39 (213)	8.82 (224)
340/350-225	31000-225-12P	31000-225-12	9.37 (238)	9.80 (249)
340/350-250	31000-250-12P	31000-250-12	10.35 (263)	10.79 (274)

31...12 = Full set, each part with pin/bore
 31...1 = Mounting bracket with bore
 31...2 = Mounting bracket with pin

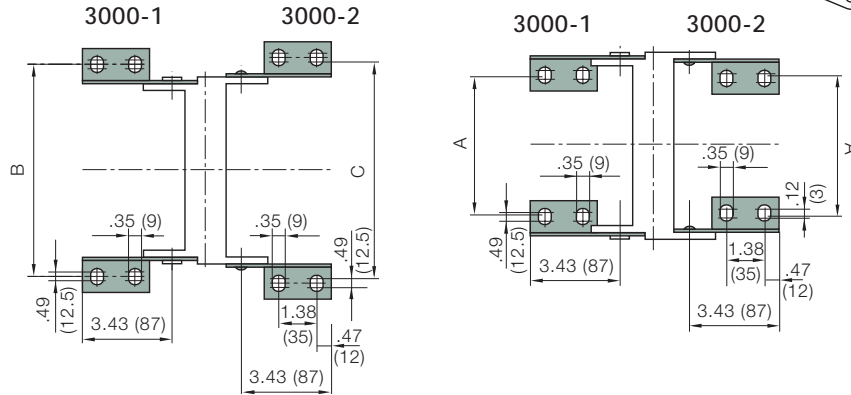
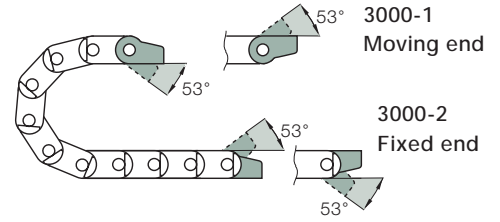
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 Specs/CAD/RFO: www.igus.com/echain.asp
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Mounting Brackets

Option 5: Steel

- One part for all chain widths
- Electrically conductive



[Click Here for Specs & CAD Files](#)

Chain Type	Part No. Full Set	Dimension A in. (mm)	Dimension B in. (mm)	Dimension C in. (mm)
340/350-050	3000-12	-	3.39 (86)	3.82 (97)
340/350-075	3000-12	2.09 (53)	4.37 (111)	4.80 (122)
340/350-100	3000-12	3.07 (78)	5.35 (136)	5.79 (147)
340/350-115	3000-12	3.66 (93)	5.94 (151)	6.38 (162)
340/350-125	3000-12	4.06 (103)	6.34 (161)	6.77 (172)
340/350-150	3000-12	5.04 (128)	7.32 (186)	7.76 (197)
340/350-175	3000-12	6.02 (153)	8.35 (212)	8.82 (224)
340/350-200	3000-12	7.01 (178)	9.29 (236)	9.72 (247)
340/350-225	3000-12	7.99 (203)	10.28 (261)	10.71 (272)
340/350-250	3000-12	8.98 (228)	11.26 (286)	11.69 (297)

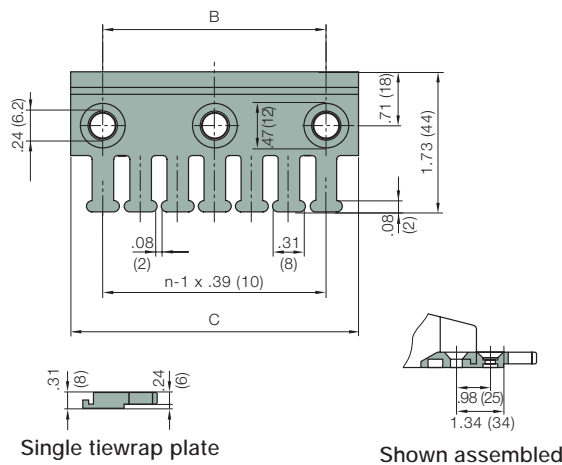
3000-12 = Full set, 4 parts, 2 with pin, 2 with bore
 3000-1 = Mounting bracket with bore, 1 part left/right
 3000-2 = Mounting bracket with pin, 1 part left/right

Strain Relief for Polymer Mounting Brackets (pivoting or locking)

The strain relief tiewrap plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the tiewrap plates are also connected firmly to the machine surface. No separate installation is necessary. Cable tiewraps secure cables using the "teeth" of the tiewrap plate for time-saving, effective strain relief.



Tiewrap plate as an individual part



Tiewrap Plates	n Number of Teeth	C Overall Width	B Distance Between Bore Holes	Center Bore Holes
3050-ZB	5	1.97 (50)	1.18 (30)	no
3075-ZB	7	2.95 (75)	2.17 (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

Cable tiewraps as individual parts

Cable tiewraps	Width x Length in. (mm)	Maximum Ø in. (mm)	Tensile Strength lbs (N)
100 pieces/bag			
CFB-001	.19 x 5.91 (4.8 x 150)	1.42 (36)	50 (222)

- Other strain relief elements
- ▶ Strain Relief, Chapter 10

Series 340/350 E2 "medium"

"Double" strain relief

If an Energy Chain® is harnessed with a very large number of cables, strain relief may be necessary at two levels. Our 30XX-Z and 30XX-ZS strain relief systems were developed for this purpose. They can be placed in any position along the Energy Chain®. As required, the 30XX-ZS strain relief system is simply clamped onto the crossbar of the chain link. The 30XX-Z strain relief system is simply clamped onto the opening crossbar or onto the fixed crossbar of the chain link, as needed. If the strain relief system is to be fastened to the crossbars of the KMA, the 30XX-ZS strain relief system is used for both crossbars.



Part No. for Fixed Port	Part No. for Crossbars or KMA	Width, Strain Relief in. (mm)
3050-Z	3050-ZS	1.97 (50)
3075-Z	3075-ZS	2.95 (75)



Strain relief for KMA

When a profile rail is used, the strain relief element can be attached directly to the KMA brackets without using any bolts. This is accomplished by simply clamping the tiwrap plate onto the profile rail. The profile rail can be placed at the top, bottom or both top and bottom of the KMA bracket to accommodate both tiwrap plates and strain relief clamps simultaneously.



Clip-on tiwrap plates for the profile rail

For easy assembly without bolts, the 3050-ZC and 3075-ZC plates can be clipped directly into the profile rail without a bolt assembly.



Part No.	Width, Strain Relief in. (mm)
3050-ZC	1.97 (50)
3075-ZC	2.95 (75)

Strain relief for KMA and steel mounting brackets

Clip-on connection is not possible with steel mounting brackets. In this case, the tiwrap plates must be bolted directly into the separate bore holes in front of the mounting bracket. Or, the 30XX-Z and 30XX-ZS double strain relief system can be substituted if preferred.

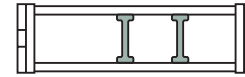
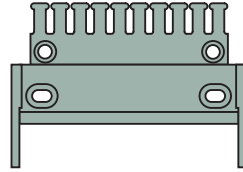
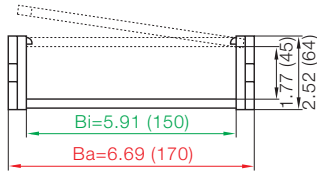
► Chapter 10



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Order example



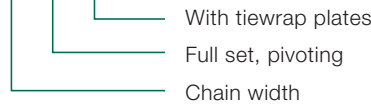
1. Chain selection:

350-150-100-0



2. Mounting Brackets:

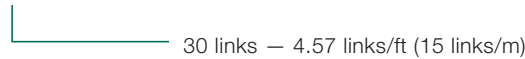
3150-34-PZB



3. Interior separation:

2 separators unassembled (Part No. 301), or assembled every other link (Part No. 311). Alternative interior separation configuration according to design layout possible.

For 6.56 ft (2 m) chain, color black, with pivoting mounting brackets
6.56 ft (2 m) 350-150-100-0 and 3150-34PZ



4. Additional information on guide troughs ► Chapter 9



Technical data

Chain Type	Weight Per Link		Weight	
	(oz.)	(g)	(lbs/ft)	(kg/m)
340/350-050	0.24	(0.107)	1.08	(1.603)
340/350-075	0.26	(0.119)	1.19	(1.778)
340/350-100	0.28	(0.128)	1.29	(1.925)
340/350-115	0.29	(0.132)	1.33	(1.985)
340/350-125	0.30	(0.135)	1.36	(2.025)
340/350-150	0.32	(0.144)	1.45	(2.165)
340/350-175	0.34	(0.152)	1.53	(2.278)
340/350-200	0.36	(0.163)	1.65	(2.448)
340/350-225	0.38	(0.172)	1.74	(2.587)
340/350-250	0.40	(0.182)	1.83	(2.725)

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

● Details of material properties

► Design, Chapter 1

Assembly Instructions



1. To open crossbars: press screwdriver into tab on top of link, lever screwdriver until crossbar opens



2. Repeat Step 1 on other side



3. To close crossbars: push down on crossbar with thumb until it snaps into place



4. Joining chain sections: push sections together; angle one side until pin snaps into bore; repeat on other side



5. Separating chain sections: insert screwdriver between two links



6. Twist until pin disengages from bore; pull sections apart



7. Attaching mounting brackets: snap bracket into link (see Step 4 - "Joining chain sections")



8. Snap tiewrap plate into bottom groove of the mounting bracket

Guide Troughs

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 93-30
- 1/2 travel length of glide bars
Part number 93-01
- Installation sets as end connectors
Part Number 93-50 -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. 93-30

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

Part No. 93-01

Required number of installation sets:
= Number of guide trough components + 1

= 25 + 1 = 26

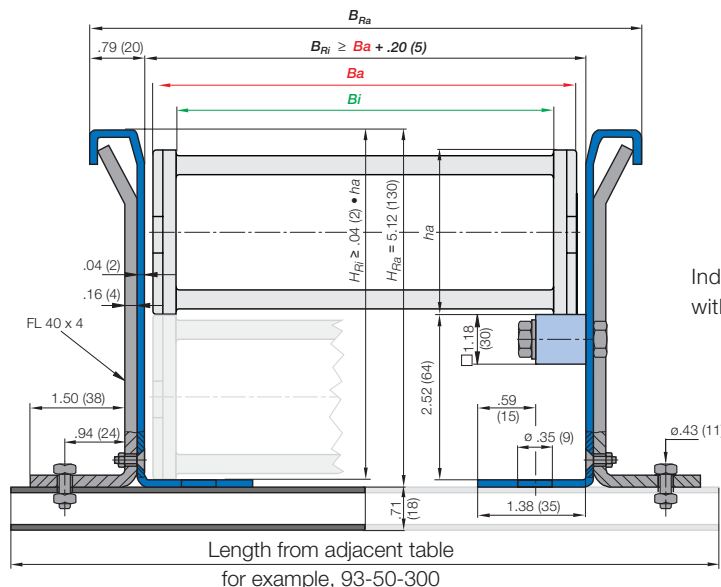
Part number of the installation sets

Example: 93-50-300 for 15.75" (400 mm) long profile rail.



Width of Crossbar
350-075-200-0

	B_{Ri}	Installation Part No.
-050	2.95 (75)	93-50-150
-075	3.94 (100)	93-50-200
-100	4.92 (125)	93-50-250
-115	5.51 (140)	93-50-250
-125	5.91 (150)	93-50-300
-150	6.89 (175)	93-50-300
-175	7.87 (200)	93-50-300
-200	8.86 (225)	93-50-350
-225	9.84 (250)	93-50-350
-250	10.83 (275)	93-50-400

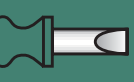


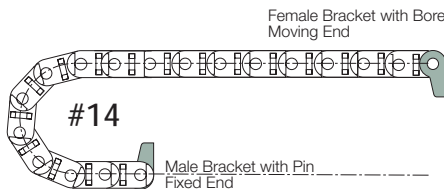
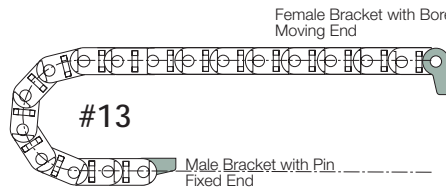
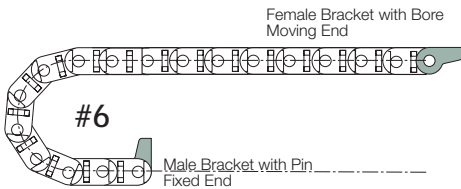
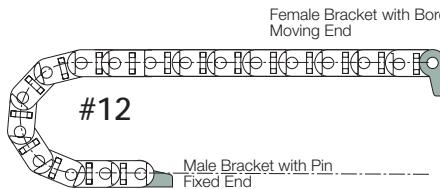
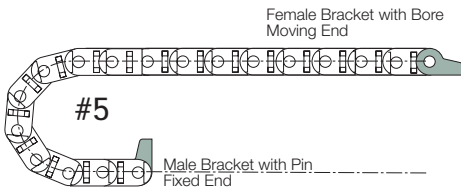
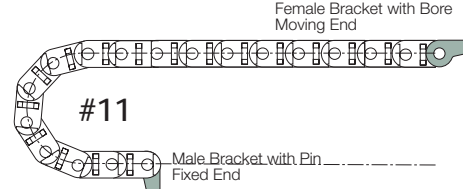
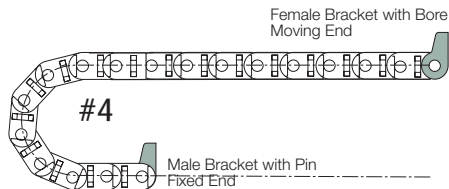
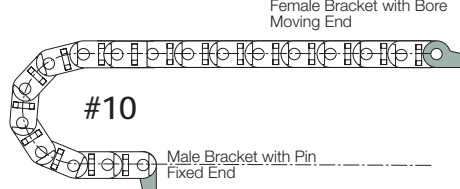
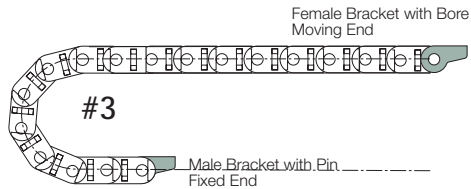
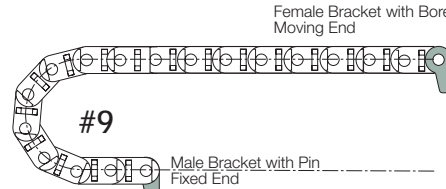
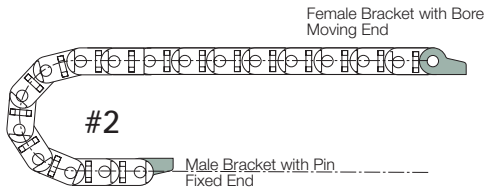
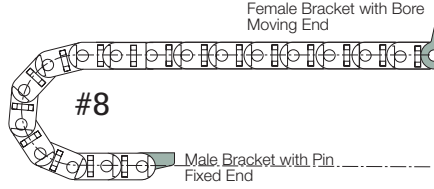
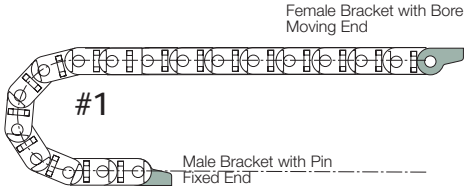
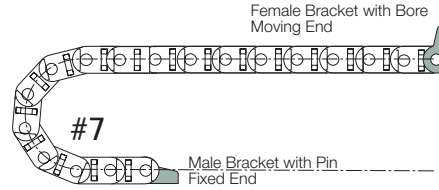
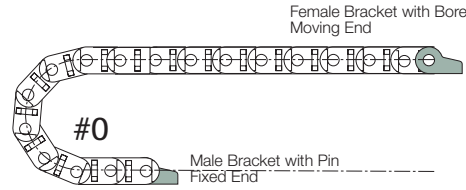
- Guide trough
- Glide bars
- Installation set "Basic"
- C-profile rail

Individual attachment without profile rail

* Specialized guide trough available upon request

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Specs/CAD/RFQ: www.igus.com/echain.asp
RoHS info: www.igus.com/RoHS.asp





● Not all configurations apply to all mounting brackets.

Please refer to bracket specifications pages of each individual series.

[Click Here for Specs & CAD Files](#)



igus® Energy Chain
System®

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