



zipper

Zip fastening e-chains® and e-tubes



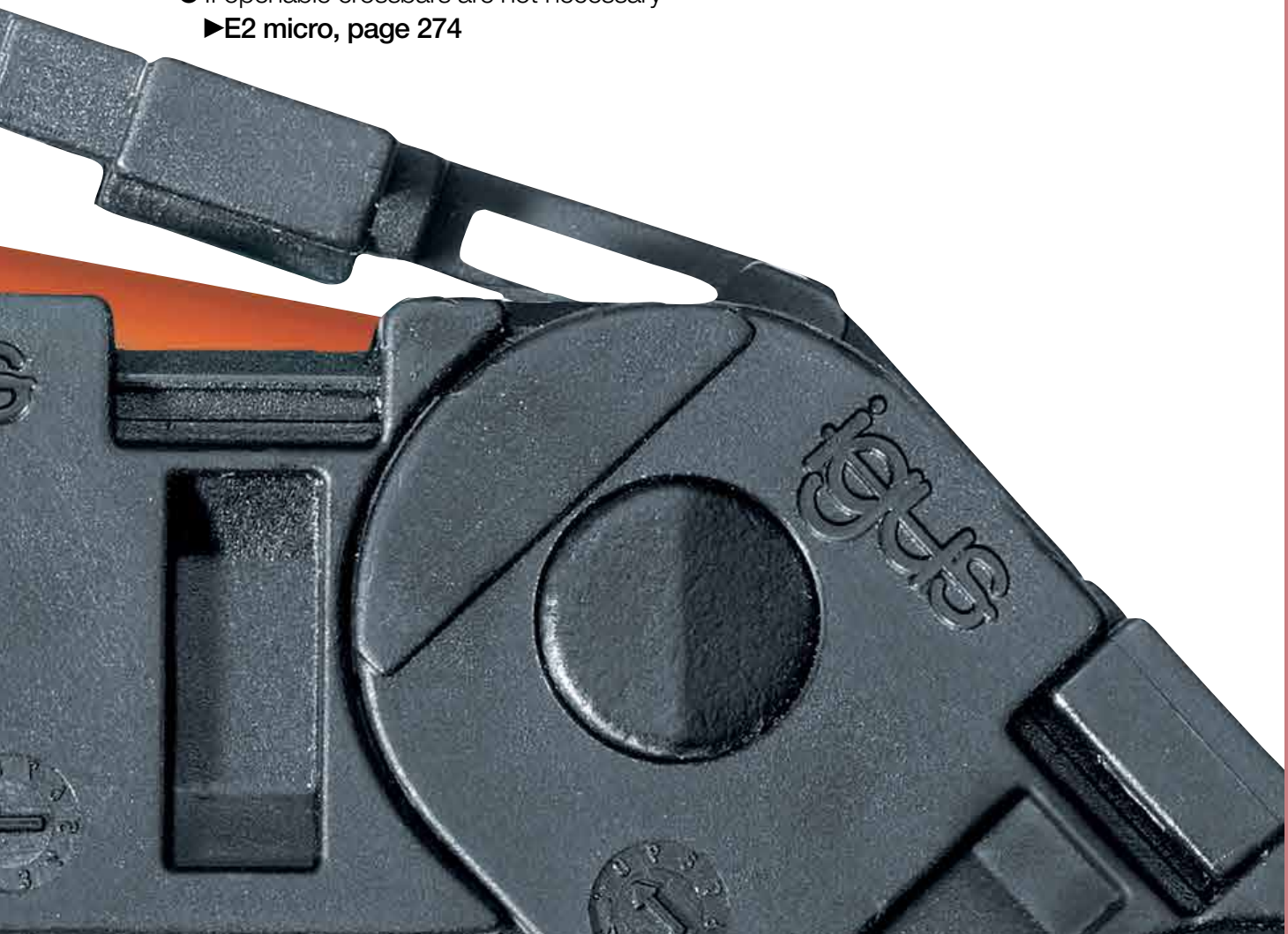
Advantages of the zipper series:

- zipper-like design for quick opening and closing of lids
- zipper e-chains® can be lengthened and shortened at any point
- Small pitch for low noise, smooth running
- Interior separation possible



When to use another e-chain® series:

- When an easy filling without opening and closing of the chain is required
 - ▶ E-Z chain®, page 212
- If an easy-to-open and cost-effective e-chain® is required
 - ▶ E2.1 micro, page 334
- If openable crossbars are not necessary
 - ▶ E2 micro, page 274



Zip fastening e-chains® and e-tubes - zipper

igus® "zipper" e-chains® and e-tubes deliver in terms of practicality and performance. The "zipper" function makes them a very useful product to reduce assembly time. The small pitch, the tough-elastic zipper-band, and the sturdy link work well in high acceleration applications. The "zipper" series is one of the most popular igus® e-chain® series for demanding applications.

- zipper-like design for quick opening and closing of lids
- zipper e-chains® can be lengthened and shortened at any point
- Small pitch for low noise, smooth running
- High accelerations: 328ft/s² 100m/s² and more

Typical industries and applications

- Pick & place robots
- Semi-conductor machines
- Linear motors, actuators
- Measuring equipment
- Machine tools (zipper e-tube)
- General machinery, etc.



58 dB(A) - value determined at the igus® test-lab,
v = 197ft/s (1.0m/s) unsupported, series 09.50.028.0



UL94-V0 classification
upon request



Electrically conductive ESD e-chains® -
several series available from stock



iF product design award

2002 igus® Series R09

1989 igus® Series 15

Universal connection:
mounting bracket with
integrated strain relief

Fast opening:
zip-open along the
outer radius

Smooth running:
small pitch for low-
noise, smooth running

Flexible:
can be lengthened and
shortened at any point

Keep order:
interior separation
possible (series 09,
15/R15, 17/R17)

Dynamic:
high accelerations
are possible

Dynamic:
high accelerations
are possible

zipper | Selection table

Series	Inner height <i>hi</i> in. (mm)	Inner width <i>Bi</i> in. (mm)	Outer width <i>Ba</i> in. (mm)	Outer height <i>ha</i> in. (mm)	Bending radius <i>R</i> in. (mm)
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zipper - e-chains®

crossbars on a strip - zip-open
along the outer radius

047	.35 (9.0)	.39- .63 (10 - 16)	.63- .87 (16.0 - 22.0)	.49 (12.5)	.71- 1.50 (018 - 038)
07	.41 (10.3)	.24- 2.52 (6 - 64)	.49- 2.80 (12.5 - 71.0)	.59 (15.0)	.71- 1.89 (018 - 048**)
09	.59 (15.0)	.39- 1.97 (10 - 50)	.72- 2.29 (18.2 - 58.2)	.76 (19.3)	1.10- 1.89 (028 - 048)
15	.67 (17.0)	.59- 3.94 (15 - 100)	1.02- 4.45 (26.0 - 113.0)	.94 (24.0)	1.50- 7.09 (038 - 180)
17	1.26 (32.0)	.59- 3.94 (15 - 100)	1.02- 4.45 (26.0 - 113.0)	1.54 (39.0)	2.48- 4.92 (063 - 125)

**1.89" (048 mm) Bending radius is only available for the 2.52" (64mm) inner width



zipper - e-tubes - protection against dirt and chips

lids on a strip - zip-open
along the outer radius

R07	.41 (10.3)	.39 - 1.97 (10 - 50)	.65 - 2.24 (16.5 - 57.0)	.59 (15.0)	1.50 - 1.89 (038 - 048)
R09	.59 (15.0)	.39 - 1.97 (10 - 50)	.72 - 2.29 (18.2 - 58.2)	.76 (19.3)	1.89 - 3.94 (048 - 100)
R15	.67 (17.0)	.98 - 3.15 (25 - 80)	1.42 - 3.70 (36.0 - 94.0)	.94 (24.0)	2.48 - 7.09 (063 - 180)
R17	1.26 (32.0)	.59 - 2.48 (15 - 63)	1.02 - 2.91 (26.0 - 74.0)	1.54 (39.0)	2.48 - 4.92 (063 - 125)



Available from stock. Orders ship as early as today.*

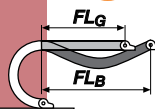
*On average 90% of orders ship the same day..

Technical data



Speed gliding / acceleration gliding

≤ 32.81 ft. (10 m/s) / ≤ 164 ft/s² (50 m/s²)



Speed FL_G / acceleration FL_G

≤ 65.6 ft/s (20 m/s) / ≤ 656 ft/s² (200 m/s²)

Speed FL_B / acceleration FL_B

≤ 9.84 ft. (3 m/s) / ≤ 19.69 ft/s² (6 m/s²)



Material lower part - permitted temperature °F, igumid G

-40°F (-40°C) / +248°F (+120°C)

Material lid - permitted temperature °F, igumid T

-40°F (-40°C) / +158°F (+70°C)



Flammability class, igumid G

VDE 0304 IIC UL94-HB

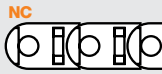
■ FL_G = unsupported with straight upper run ■ FL_B = unsupported with permitted sag *Available in igumid NB. Delivery time upon request.

Installation types, maximum travels

Series	 Unsupported	 Vertical hanging	 Vertical standing	 Side mounted unsupported
047	≤ 2.62 ft. (0.80m)	upon request	upon request	upon request
07 / R07	≤ 3.61 ft. (1.10m)	upon request	upon request	upon request
09 / R09	≤ 6.56 ft. (2.00m)	upon request	upon request	upon request
15 / R15	≤ 7.87 ft. (2.40m)	upon request	upon request	upon request
17 / R17	≤ 6.56 ft. (2.00m)	upon request	upon request	upon request

zipper | Options and order keys

Options with order keys | Examples based on series E200

	<i>Standard</i>	<i>NC version - (No Camber) without pretension</i>	<i>ESD - electrically conductive material</i>
	Part No. Standard 	Part No. NC version 	Part No. igumid ESD 
	15.025. <i>R</i> .0	15.025. <i>R</i> .0. <i>NC</i>	15.025. <i>R</i> .0. <i>ESD</i>
	Ready to ship in 24 - 48hrs.*	Ready to ship in 12 business days*	Ready to ship in 12 business days* 

 ESD version - some series available from stock - further information and the complete product range From page 144

*Average time before the ordered goods are dispatched.

Order example | Order key and color examples | Examples based on series 15

 Order example for complete e-chain® 3.28 ft. (1m),
color black, with mounting brackets and interior separation:

e-chain® 3.28 ft. (1m)	Please indicate e-chain® length or number of links: 3.28ft.(1m) or 22 links	15.025.075.0
+ Mounting brackets	1 set (with tiwrap plates)	1025.34PZ
+ Interior separation	with 2 separators assembled every 2 nd link	2 x 154
Order text:	3.28 ft. (1m) 15.025.075.0 + 1025.34PZ + 2 x 154	

Order key

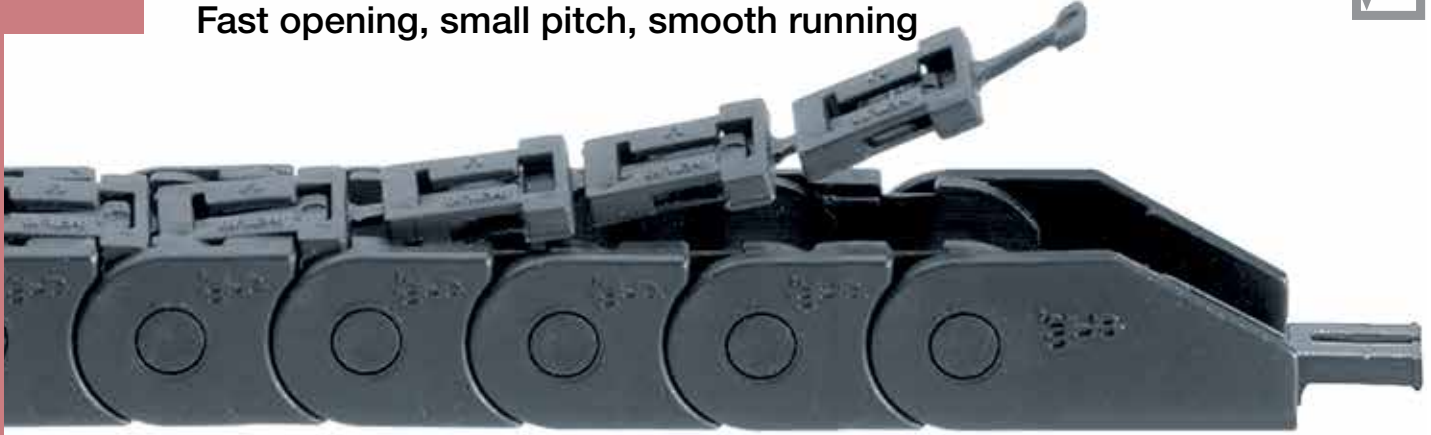
e-chain® zip-open along the outer radius	15.025.075.0
e-tube zip-open along the outer radius	R15.025.075.0
Series / Type	
Width index (depends on <i>B</i>)	
Bend radius <i>R</i>	
Color index (standard black)	

Order index for color options

Color	Order index	Color	Order index
 Black	Standard .0	 Orange	Special color .2
 Silver-gray	Special color .31	 Yellow	Special color .4
 White	Special color .1	 Light gray	Special color .14
 Grey-white	Special color .1S		

Black e-chains® ready to ship in 24 - 48hrs.*

Above special colors upon request.

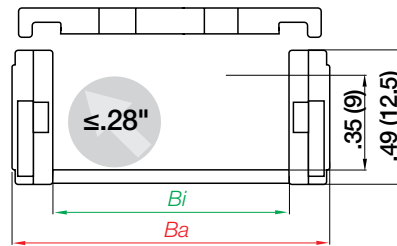
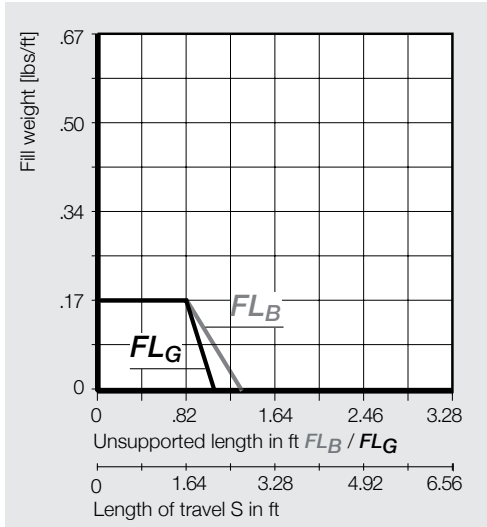


e-chains® | Series 047 | Crossbars on a strip - zip-open along the outer radius

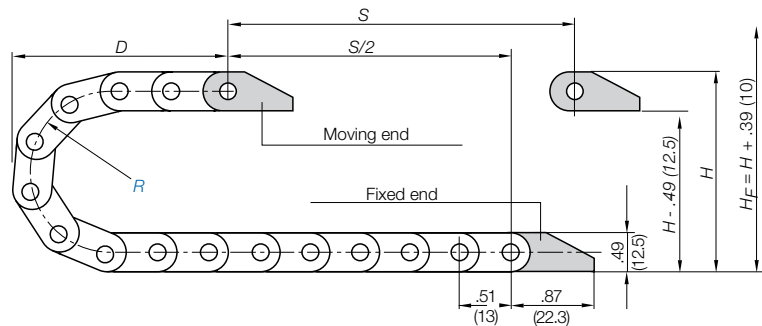
Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-chains®	in. (mm)	in. (mm)	in. (mm)	lbs/ft. (kg/m)
047.10. <i>R</i> .0	.39 (10)	.63 (16)	0.71 (018) 1.10 (028) 1.50 (038)	≈ 0.067 (0.10)
047.16. <i>R</i> .0	.63 (16)	.87 (22)	0.71 (018) 1.10 (028) 1.50 (038)	≈ 0.074 (0.11)

Complete Part No. with required radius (*R*). Example: 047.10.038.0

Installation dimensions



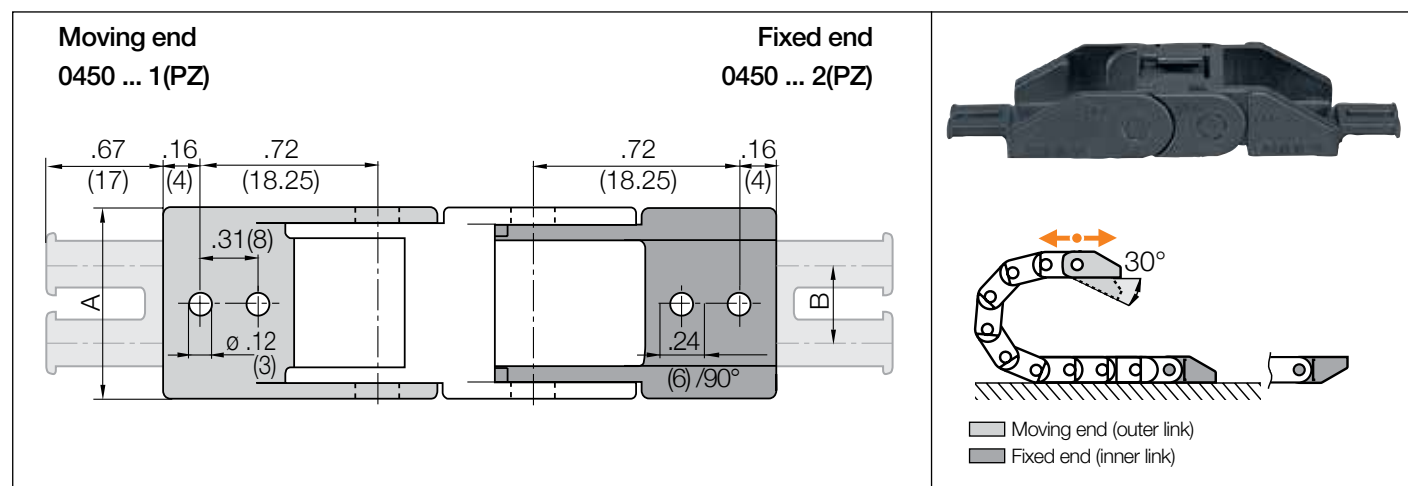
Inner height in. (mm)	.35 (9)
Pitch per link in. (mm)	.51 (13)
Links/ft (m)	23.46 (77)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$



<i>R</i>	.71 (018)	1.10 (028)	1.50 (038)
<i>H</i>	1.91 (48.5)	2.70 (68.5)	3.48 (88.5)
<i>D</i>	1.73 (44)	2.13 (54)	2.52 (64)
<i>K</i>	3.35 (85)	4.53 (115)	5.91 (150)

The required clearance height: $H_F = H + .39 \text{ in. (10 mm)}$ with .13 lbs/ft (0.2 kg/m) fill weight.

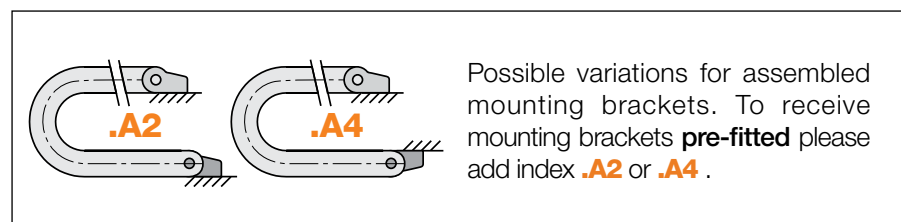
Mounting brackets, polymer one-piece | Locking



Width index	Part No. full set with tie-wrap plates	Part No. full set without tie-wrap plates	A in. (mm)	B in. (mm)	Number of teeth
10. ▶	0450.10.12PZ	0450.10.12	.63 (16)	–	1
16. ▶	0450.16.12PZ	0450.16.12	.87 (22)	.39 (10)	2

Mounting bracket with strain relief tie-wrap plate has reductions of ϕ (3mm) / ϕ (6mm) 90°

Mounting bracket without strain relief tie-wrap plate only has holes of ϕ (3mm)



0450.10.12PZ.**A2**



Order example
.A... to indicate option with brackets pre-fitted
 With integrated strain relief tie-wrap plates
 Full set
 Series

zipper | e-chains® | Series 07 | Product Range

Fast opening, small pitch, smooth running



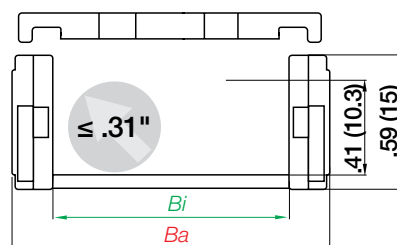
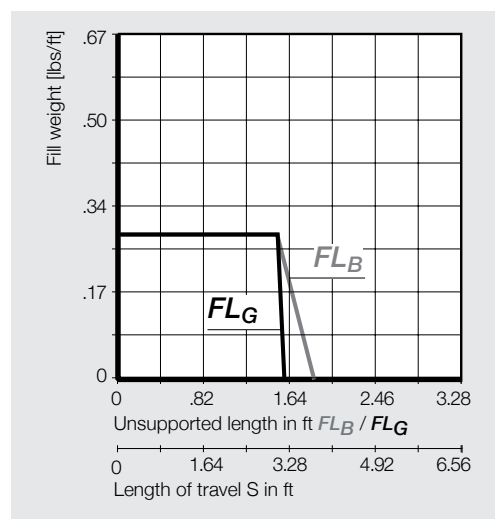
e-chains® | Series 07 | Crossbars on a strip - zip-open along the outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-chains®	in. (mm)	in. (mm)	in. (mm)	lbs/ft. (kg/m)
07.06. <i>R</i> .0	.24 (6)	.49 (12.5)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.087 (0.13)
07.10. <i>R</i> .0▲	.39 (10)	.65 (16.5)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.094 (0.14)
07.16. <i>R</i> .0▲	.63 (16)	.89 (22.5)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.108 (0.16)
07.20. <i>R</i> .0▲	.79 (20)	1.06 (27.0)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.114 (0.17)
07.30. <i>R</i> .0▲	1.18 (30)	1.46 (37.0)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.134 (0.20)
07.40. <i>R</i> .0▲	1.57 (40)	1.85 (47.0)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.155 (0.23)
07.50. <i>R</i> .0▲	1.97 (50)	2.24 (57.0)	0.71 (018) 1.10 (028) 1.50 (038) -	≈ 0.175 (0.26)
07.64. <i>R</i> .0	2.52 (64)	2.80 (71.0)	0.71 (018) 1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.202 (0.30)

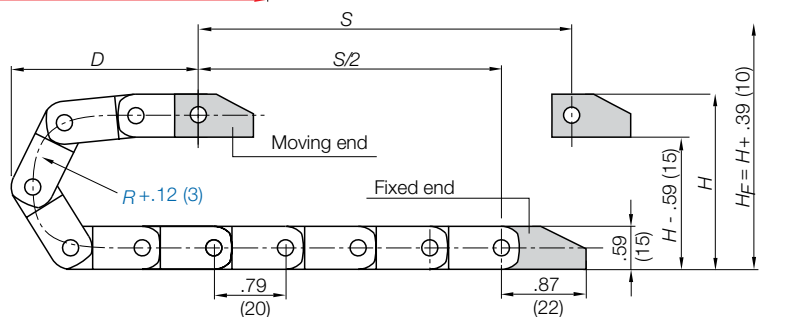
▲ ESD version (Electro Static Discharge) available from stock. More information ► From page 144

Complete Part No. with required radius (*R*). Example: 07.40.038.0

Installation dimensions



Inner height in. (mm)	.41 (10.3)
Pitch per link in. (mm)	.79 (20)
Links/ft (m)	15.19 (50)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$

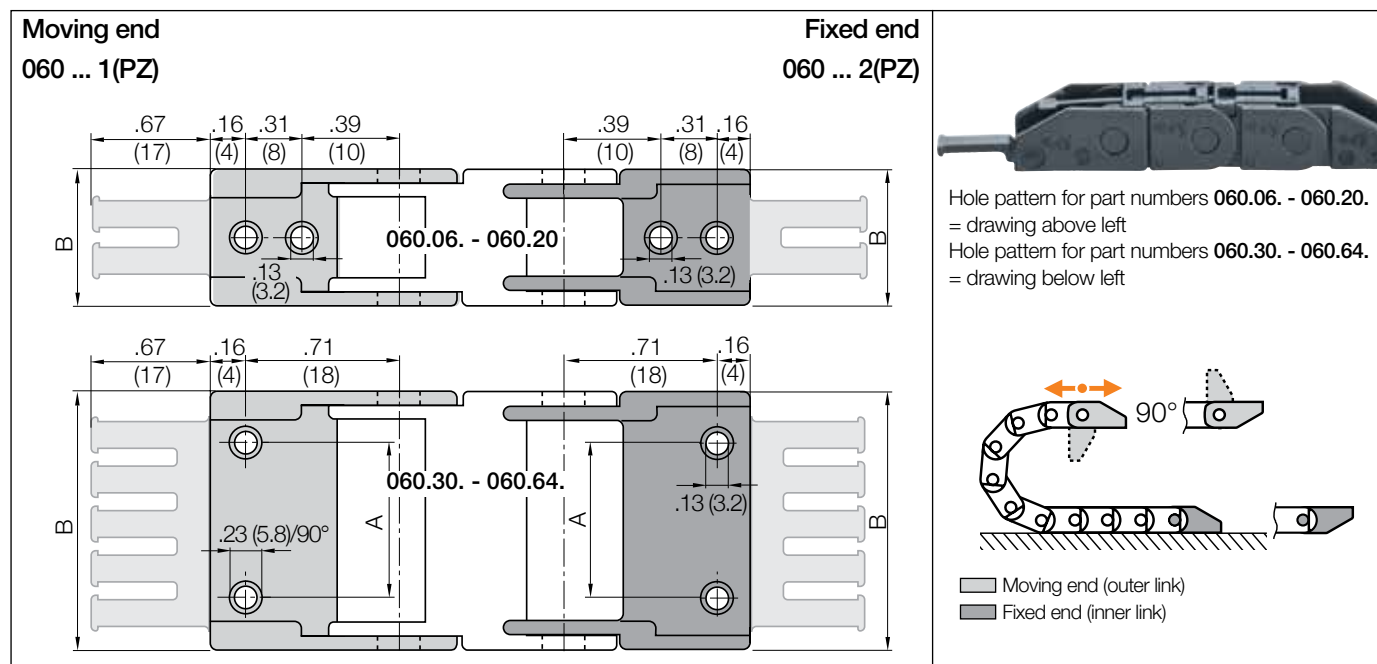


<i>R</i>	.71 (018)	1.10 (028)	1.50 (038)	1.89 (048)*
<i>H</i>	2.01 (51)	2.80 (71)	3.58 (91)	4.37 (111)
<i>D</i>	2.20 (56)	2.60 (66)	2.99 (76)	3.39 (86)
<i>K</i>	3.94 (100)	5.12 (130)	6.30 (160)	7.68 (195)

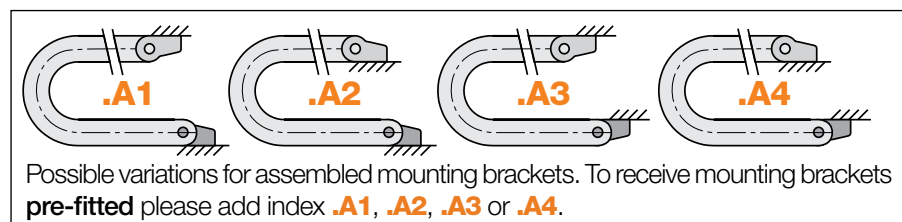
The required clearance height: $H_F = H + .39$ in. (10 mm) with .13 lbs/ft (0.2 kg/m) fill weight.

*Radius 048 only for series 07.64

Mounting brackets, polymer one-piece | Locking



Width index	Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A in. (mm)	B in. (mm)	Number of teeth
06. ▶	060.06.12PZ	060.06.12	—	.49 (12.5)	1
10. ▶	060.10.12PZ	060.10.12	—	.65 (16.5)	1
16. ▶	060.16.12PZ	060.16.12	—	.89 (22.5)	2
20. ▶	060.20.12PZ	060.20.12	—	1.06 (27.0)	2
30. ▶	060.30.12PZ	060.30.12	.87 (22)	1.46 (37.0)	3
40. ▶	060.40.12PZ	060.40.12	1.26 (32)	1.85 (47.0)	4
50. ▶	060.50.12PZ	060.50.12	1.65 (42)	2.24 (57.0)	5
64. ▶	060.64.12PZ	060.64.12	2.20 (56)	2.80 (71.0)	6



060.40.12PZ.A1 Order example



ESD - many sizes from stock

- Standardized product made from igumid ESD
- ESD material tested with over 10 million cycles for highest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information and the complete product range

► From page 144 or at ► www.igus.com/esd



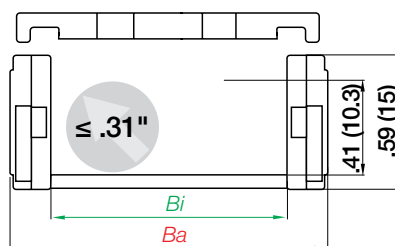
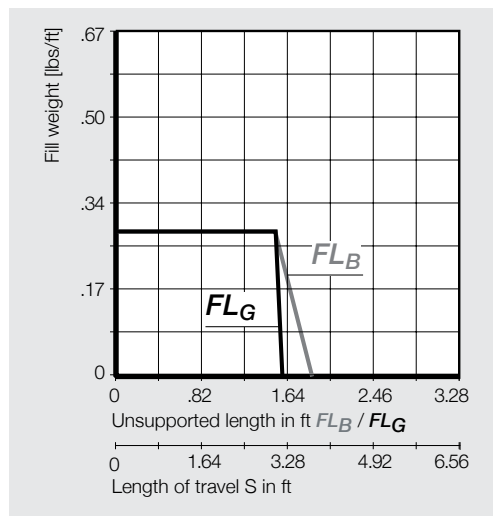


e-tube | Series R07 | Lids on a strip - zip-open along the outer radius

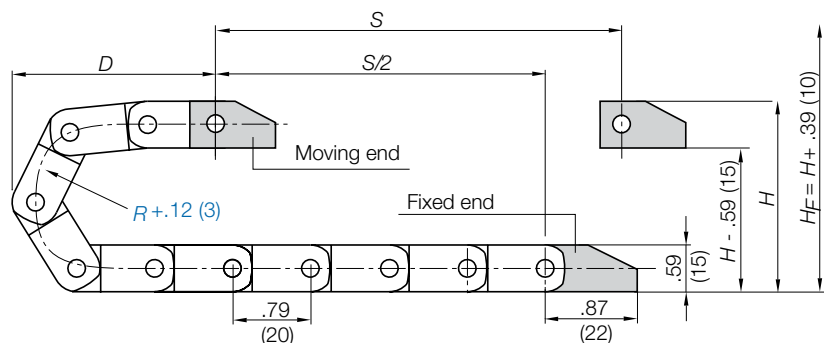
Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-tubes	in. (mm)	in. (mm)	in. (mm)	lbs/ft. (kg/m)
R07.10. <i>R</i> .0	.39 (10)	.65 (16.5)	1.50 (038) 1.89 (048)	≈ 0.108 (0.16)
R07.16. <i>R</i> .0	.63 (16)	.89 (22.5)	1.50 (038) 1.89 (048)	≈ 0.120 (0.18)
R07.20. <i>R</i> .0	.79 (20)	1.06 (27.0)	1.50 (038) 1.89 (048)	≈ 0.128 (0.19)
R07.30. <i>R</i> .0	1.18 (30)	1.46 (37.0)	1.50 (038) 1.89 (048)	≈ 0.148 (0.22)
R07.40. <i>R</i> .0	1.57 (40)	1.85 (47.0)	1.50 (038) 1.89 (048)	≈ 0.168 (0.25)
R07.50. <i>R</i> .0	1.97 (50)	2.24 (57.0)	1.50 (038) 1.89 (048)	≈ 0.188 (0.28)

Complete Part No. with required radius (*R*). Example: R07.40.038.0

Installation dimensions



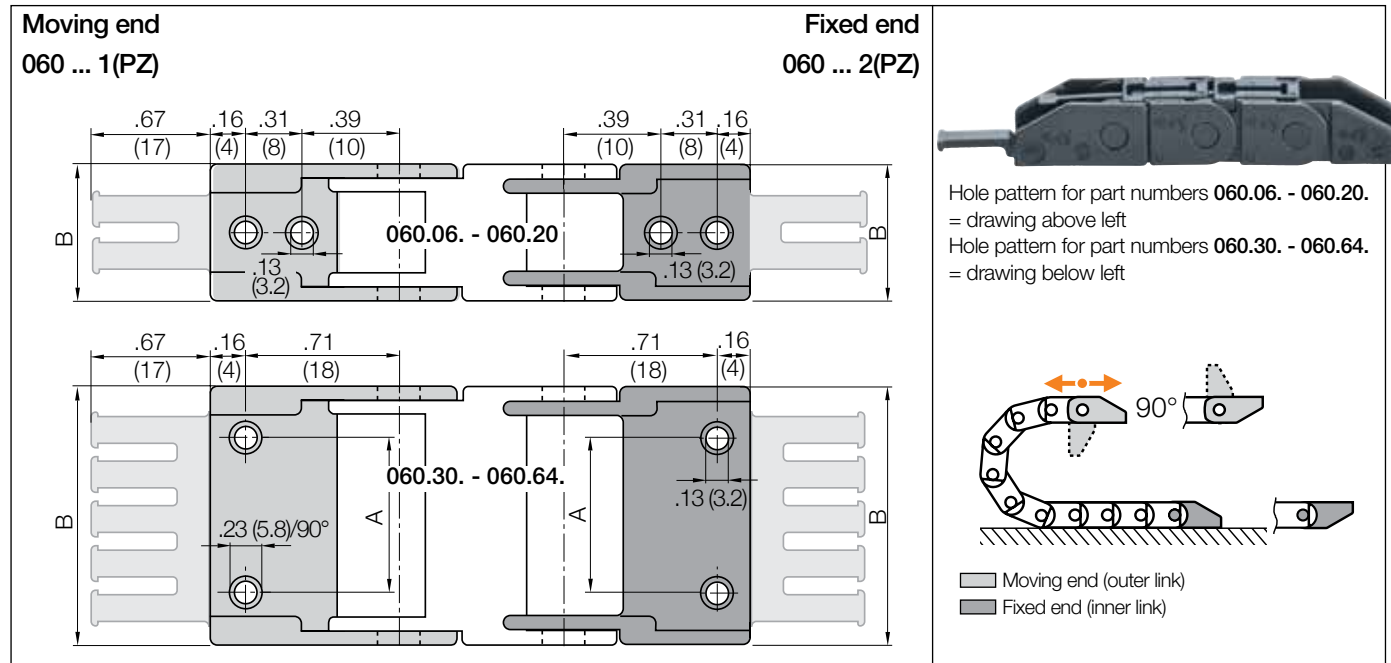
Inner height in. (mm)	.41 (10.3)
Pitch per link in. (mm)	.79 (20)
Links/ft (m)	15.19 (50)
corresponds to (mm)	1,000
e-chain* length	$L_K = \frac{S}{2} + K$



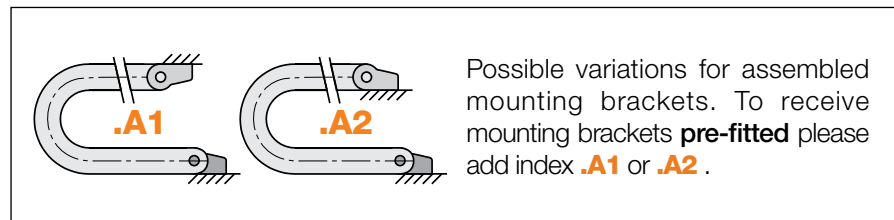
<i>R</i>	1.50 (038)	1.89 (048)*
<i>H</i>	3.58 (91)	4.37 (111)
<i>D</i>	2.99 (76)	3.39 (86)
<i>K</i>	6.30 (160)	7.68 (195)

The required clearance height: $H_F = H + .39 \text{ in. (10 mm)}$ with .13 lbs/ft (0.2 kg/m) fill weight.

Mounting brackets, polymer one-piece | Locking

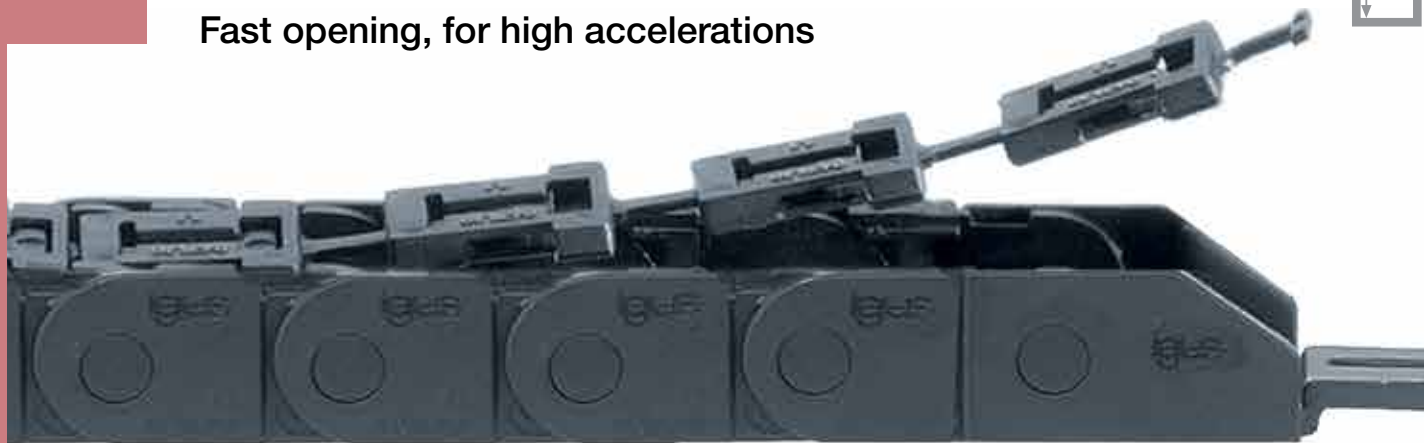


Width index	Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A in. (mm)	B in. (mm)	Number of teeth
10. ▶	060.10.12PZ	060.10.12	—	.65 (16.5)	1
16. ▶	060.16.12PZ	060.16.12	—	.89 (22.5)	2
20. ▶	060.20.12PZ	060.20.12	—	1.06 (27.0)	2
30. ▶	060.30.12PZ	060.30.12	.87 (22)	1.46 (37.0)	3
40. ▶	060.40.12PZ	060.40.12	1.26 (32)	1.85 (47.0)	4
50. ▶	060.50.12PZ	060.50.12	1.65 (42)	2.24 (57.0)	5



060.40.12PZ.A1





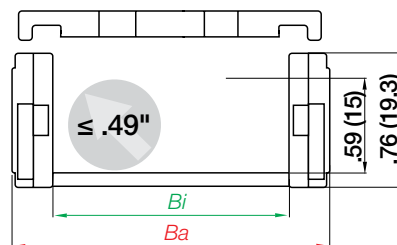
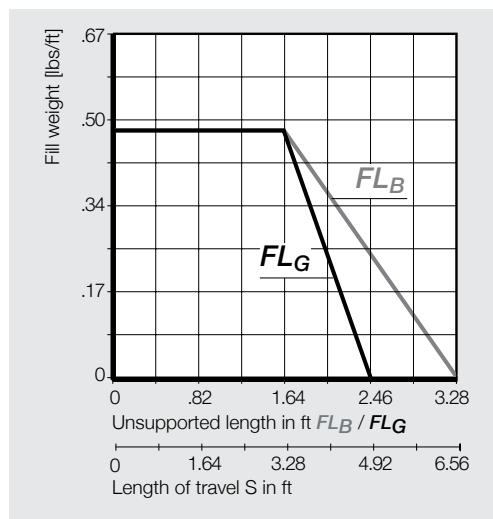
e-chains® | Series 09 | Crossbars on a strip - zip-open along the outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-chains®	in. (mm)	in. (mm)	in. (mm)	lbs/ft. (kg/m)
09.10. <i>R.0</i> ▲	.39 (10)	.72 (18.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.141 (0.21)
09.16. <i>R.0</i> ▲	.63 (16)	.95 (24.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.161 (0.24)
09.20. <i>R.0</i> ▲	.79 (20)	1.11 (28.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.168 (0.25)
09.30. <i>R.0</i> ▲	1.18 (30)	1.50 (38.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.188 (0.28)
09.40. <i>R.0</i> ▲	1.57 (40)	1.90 (48.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.208 (0.31)
09.50. <i>R.0</i> ▲	1.97 (50)	2.29 (58.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.228 (0.34)
09.64. <i>R.0</i>	2.52 (64)	2.84 (72.2)	1.10 (028) 1.50 (038) 1.89 (048)	≈ 0.262 (0.39)

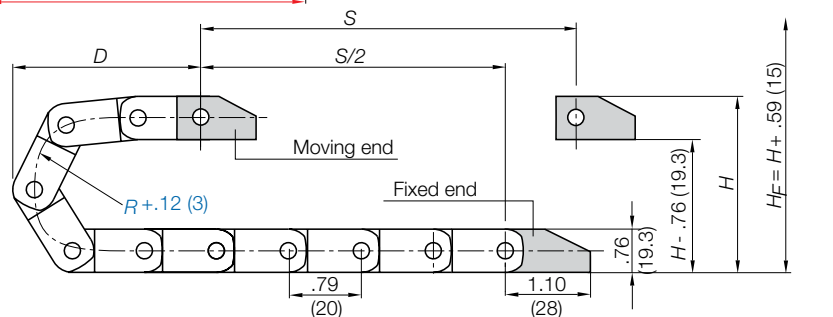
▲ ESD version (Electro Static Discharge) available from stock. More information ► From page 144

Complete Part No. with required radius (*R*). Example: 09.40.048.0

Installation dimensions



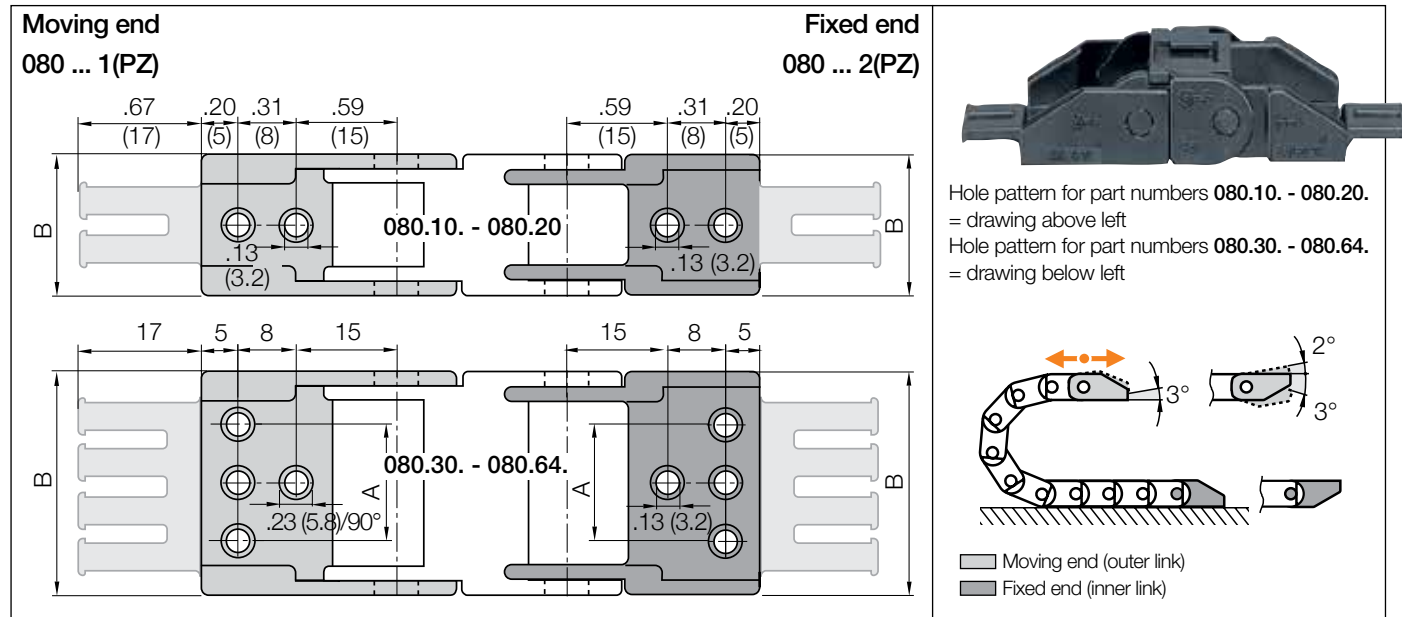
Inner height in. (mm)	.59 (15)
Pitch per link in. (mm)	.79 (20)
Links/ft (m)	15.19 (50)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$



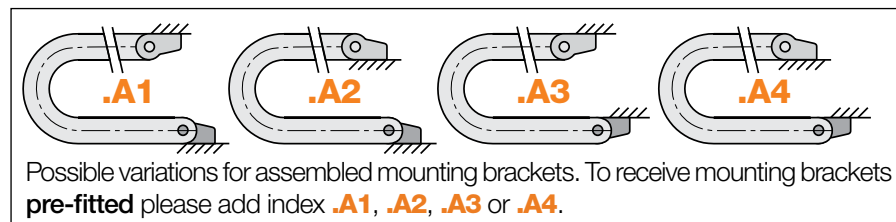
<i>R</i>	1.10 (028)	1.50 (038)	1.89 (048)
<i>H</i>	2.95 (75)	3.74 (95)	4.53 (115)
<i>D</i>	2.68 (68)	3.07 (78)	3.46 (88)
<i>K</i>	5.12 (130)	6.30 (160)	7.68 (195)

The required clearance height: $H_F = H + .59$ in. (15 mm) (with .20 lbs/ft (0.3 kg/m) fill weight).

Mounting brackets, polymer one-piece | Locking



Width index	Standard	Part No. full set with tie-wrap plates	Part No. full set without tie-wrap plates	A in. (mm)	B in. (mm)	Number of teeth
10.	▶	080.10.12PZ	080.10.12	—	.72 (18.2)	1
16.	▶	080.16.12PZ	080.16.12	—	.95 (24.2)	2
20.	▶	080.20.12PZ	080.20.12	—	1.11 (28.2)	2
30.	▶	080.30.12PZ	080.30.12	.87 (22)	1.50 (38.2)	3
40.	▶	080.40.12PZ	080.40.12	1.26 (32)	1.90 (48.2)	4
50.	▶	080.50.12PZ	080.50.12	1.65 (42)	2.29 (58.2)	5
64.	▶	080.64.12PZ	080.64.12	2.20 (56)	2.84 (72.2)	6



080.40.12PZ.A1 Order example

.A... to indicate option with brackets pre-fitted
With integrated strain relief tie-wrap plates
Full set
Series

ESD - many sizes from stock

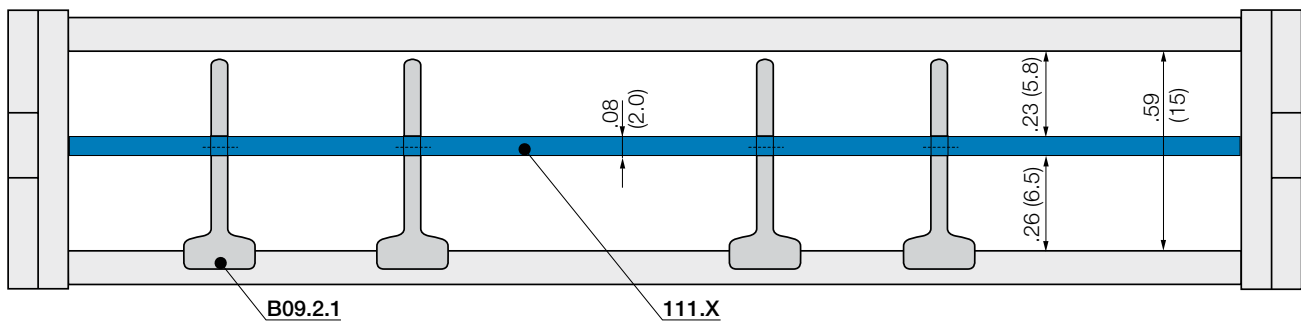
- Standardized product made from igumid ESD
- ESD material tested with over 10 million cycles for highest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information and the complete product range

► From page 144 or at ► www.igus.com/esd

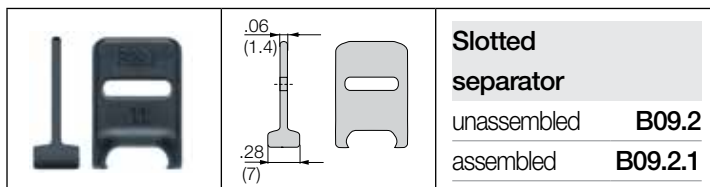


Interior separations



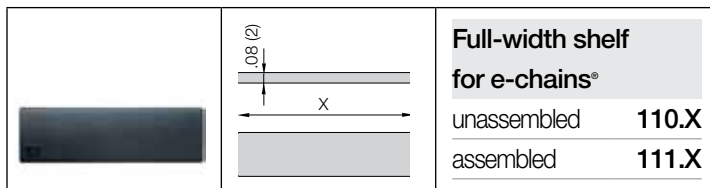
No lateral gap to side links necessary.

As standard separators are fitted every 2nd e-chain® link!



Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.



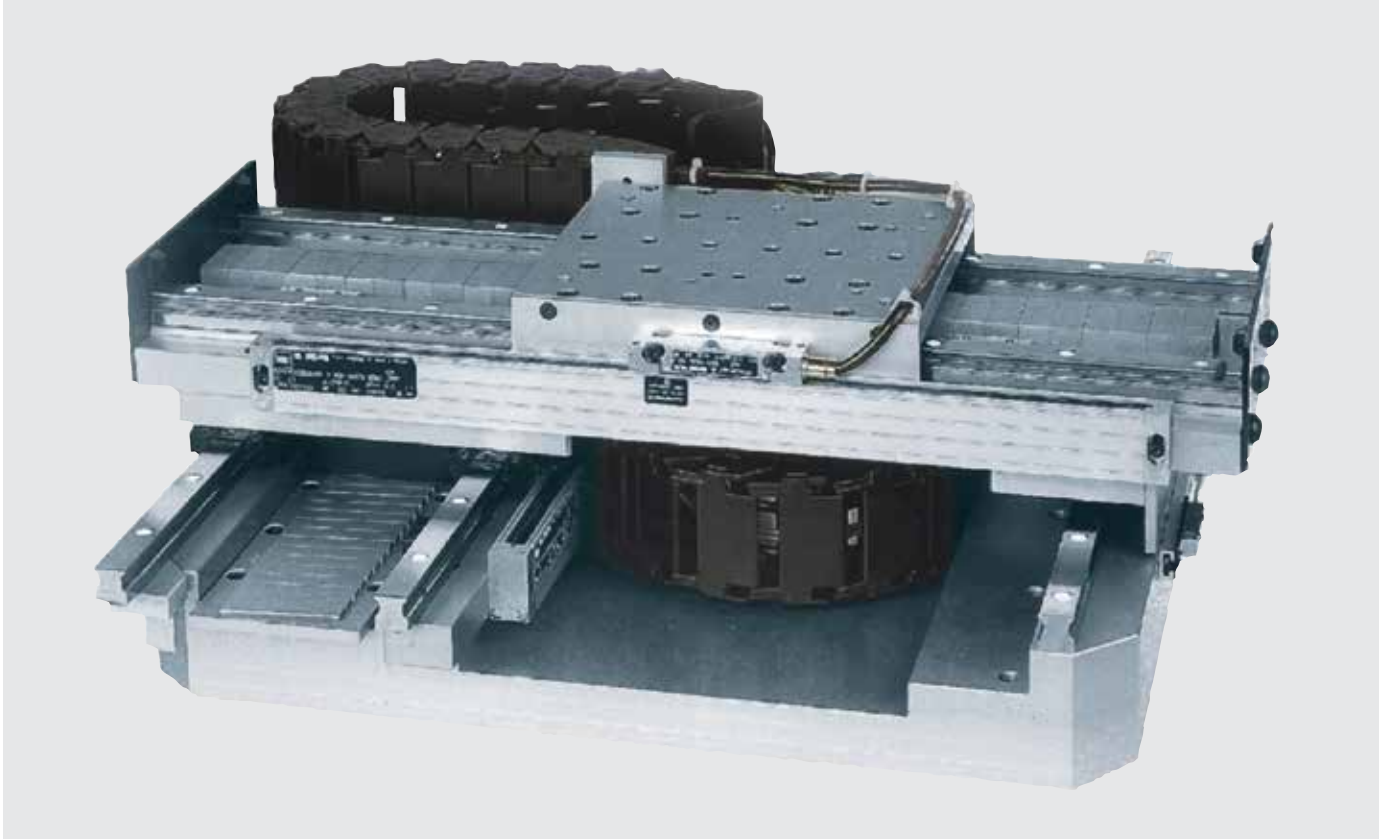
Full-width shelf

This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves

Width = X in. (mm)

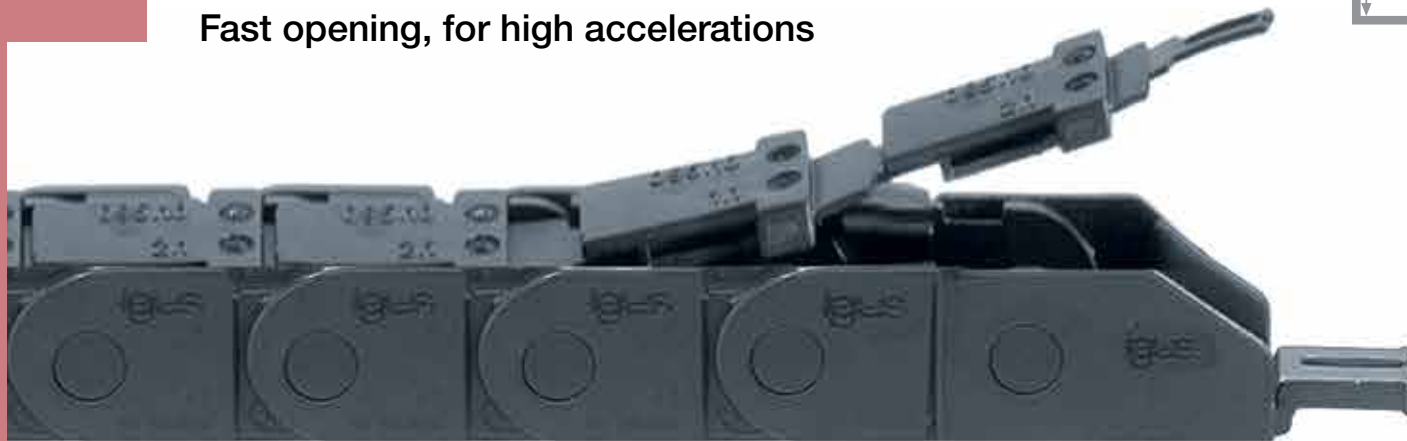
X in. (mm)		unassembled	assembled	X in. (mm)		unassembled	assembled
.63	(016)	110.16	111.16	1.57	(040)	110.40	111.40
.98	(020)	110.20	111.20	1.97	(050)	110.50	111.50
1.18	(030)	110.30	111.30				



igus® zipper e-chain® on an X/Y unit. Acceleration: 328 ft/s² (100m/s²)

zipper | e-tubes | Series R09 | Product Range

Fast opening, for high accelerations

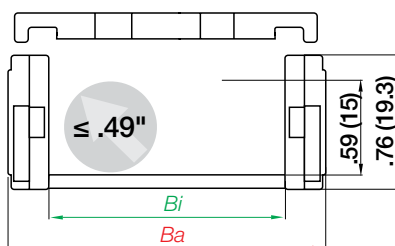
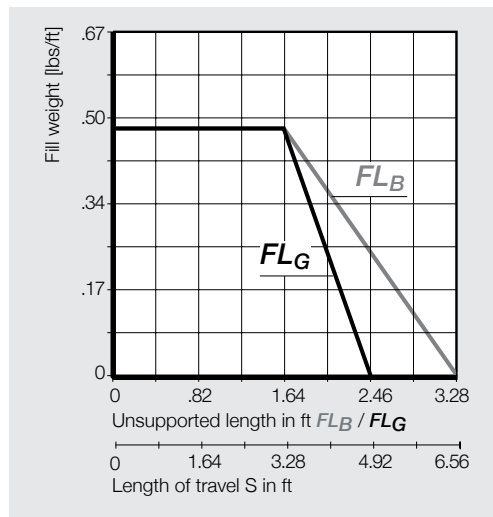


e-tube | Series R09 | Lids on a strip - zip-open along the outer radius

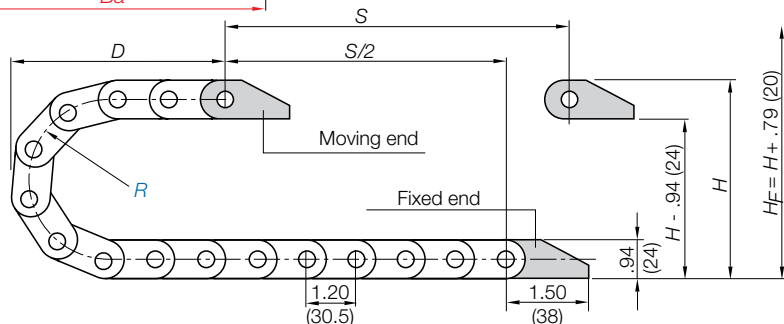
Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-tubes	in. (mm)	in. (mm)	in. (mm)	lbs/ft. (kg/m)
R09.10. <i>R</i> .0	.39 (10)	.72 (18.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.155 (0.23)
R09.16. <i>R</i> .0	.63 (16)	.95 (24.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.175 (0.26)
R09.20. <i>R</i> .0	.79 (20)	1.11 (28.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.181 (0.27)
R09.30. <i>R</i> .0	1.18 (30)	1.50 (38.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.202 (0.30)
R09.40. <i>R</i> .0	1.57 (40)	1.90 (48.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.222 (0.33)
R09.50. <i>R</i> .0	1.97 (50)	2.29 (58.2)	1.89 (048) 2.95 (075) 3.94 (100)	≈ 0.242 (0.36)

Complete Part No. with required radius (*R*). Example: R09.40.048.0

Installation dimensions



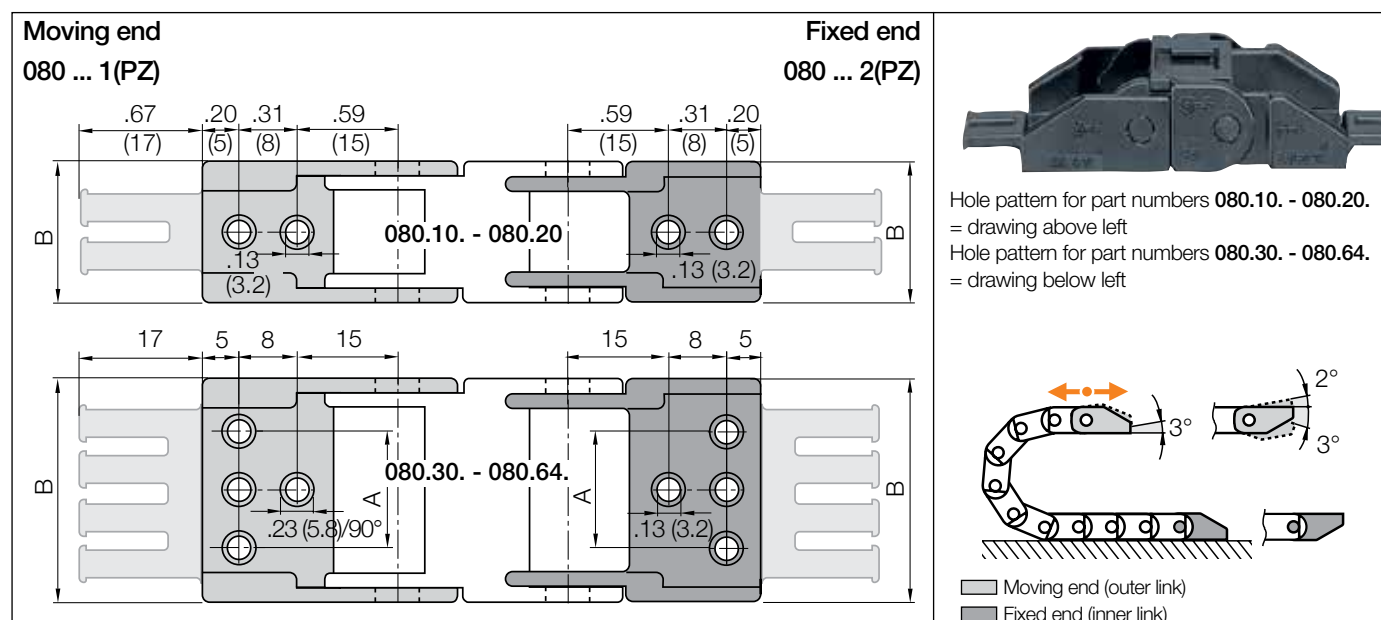
Inner height in. (mm)	.59 (15)
Pitch per link in. (mm)	.79 (20)
Links/ft (m)	15.19 (50)
corresponds to (mm)	1,000
e-chain* length	$L_K = \frac{S}{2} + K$



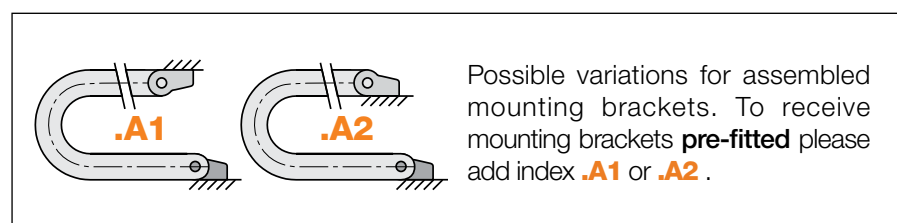
<i>R</i>	1.89 (048)	2.95 (075)	3.94 (100)
<i>H</i>	4.53 (115)	6.65 (169)	8.62 (219)
<i>D</i>	3.46 (88)	4.53 (115)	5.51 (140)
<i>K</i>	7.68 (195)	11.02 (280)	13.98 (355)

The required clearance height: $H_F = H + .59$ in. (15 mm) (with .20 lbs/ft (0.3 kg/m) fill weight).

Mounting brackets, polymer one-piece | Locking



Width index	Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A in. (mm)	B in. (mm)	Number of teeth
10. ▶	080.10.12PZ	080.10.12	—	.72 (18.2)	1
16. ▶	080.16.12PZ	080.16.12	—	.95 (24.2)	2
20. ▶	080.20.12PZ	080.20.12	—	1.11 (28.2)	2
30. ▶	080.30.12PZ	080.30.12	.87 (22)	1.50 (38.2)	3
40. ▶	080.40.12PZ	080.40.12	1.26 (32)	1.90 (48.2)	4
50. ▶	080.50.12PZ	080.50.12	1.65 (42)	2.29 (58.2)	5

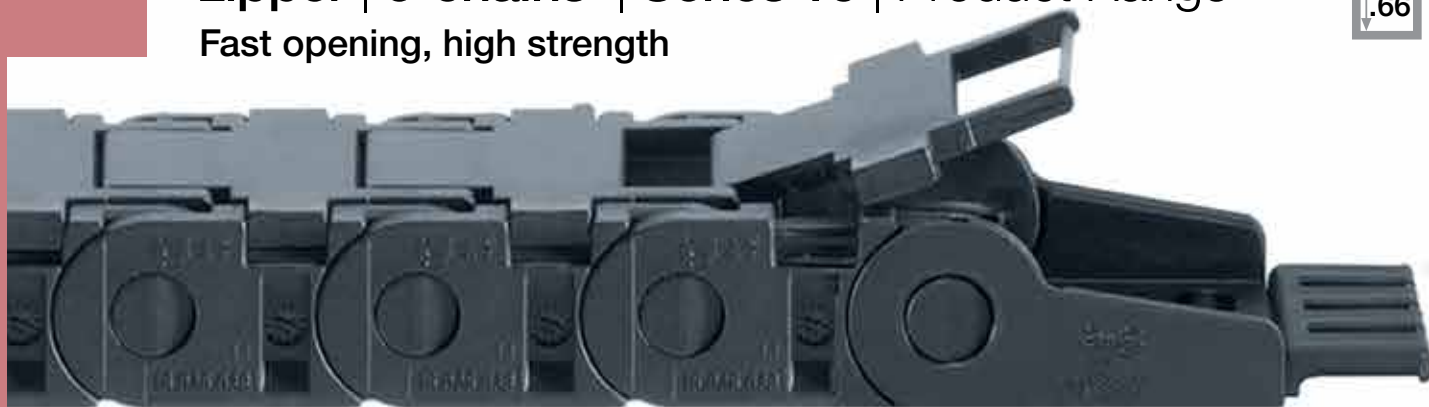


080.40.12PZ.A1 Order example



zipper | e-chains® | Series 15 | Product Range

Fast opening, high strength



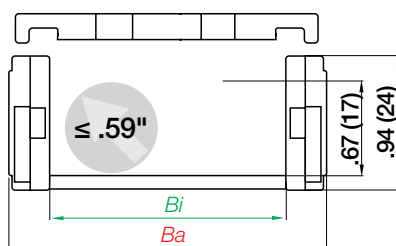
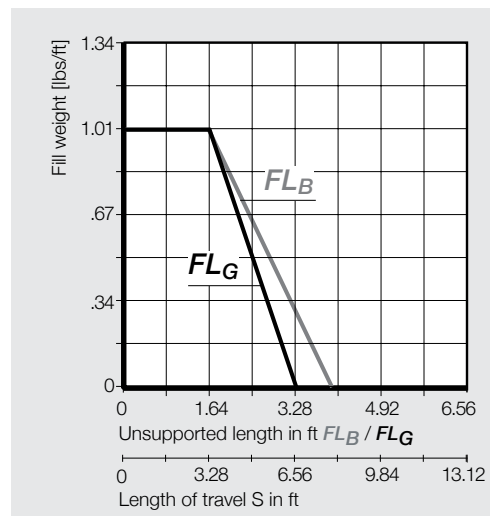
e-chains® | Series 15 | Crossbars on a strip - zip-open along the outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-chains®	in. (mm)	in. (mm)	in. (mm)	lbs/ft (kg/m)
15.015. <i>R</i> .0	.59 (15)	1.02 (26)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.235 (0.35)
15.025. <i>R</i> .0	.98 (25)	1.42 (36)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.269 (0.40)
15.038. <i>R</i> .0	1.50 (38)	1.93 (49)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.309 (0.46)
15.050. <i>R</i> .0	1.97 (50)	2.40 (61)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.349 (0.52)
15.5. <i>R</i> .0	2.48 (63)	2.99 (76)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.423 (0.63)
15.6. <i>R</i> .0	3.15 (80)	3.70 (94)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.470 (0.70)
15.7. <i>R</i> .0	3.94 (100)	4.45 (113)	1.50 (038) 1.89 (048) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.511 (0.76)

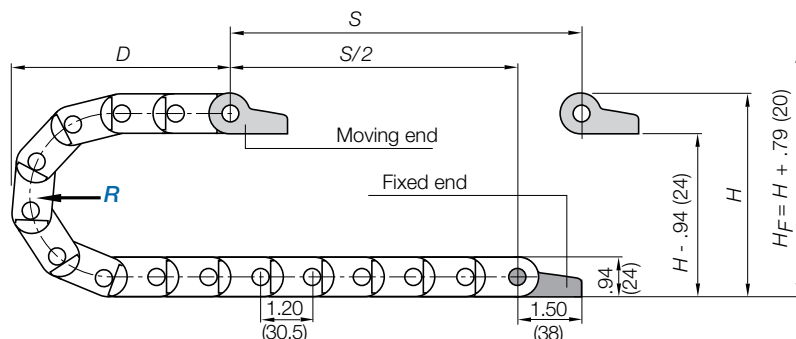
Before using this series on long travels please consult igus®.

Complete Part No. with required radius (*R*). Example: 15.025.038.0

Installation dimensions

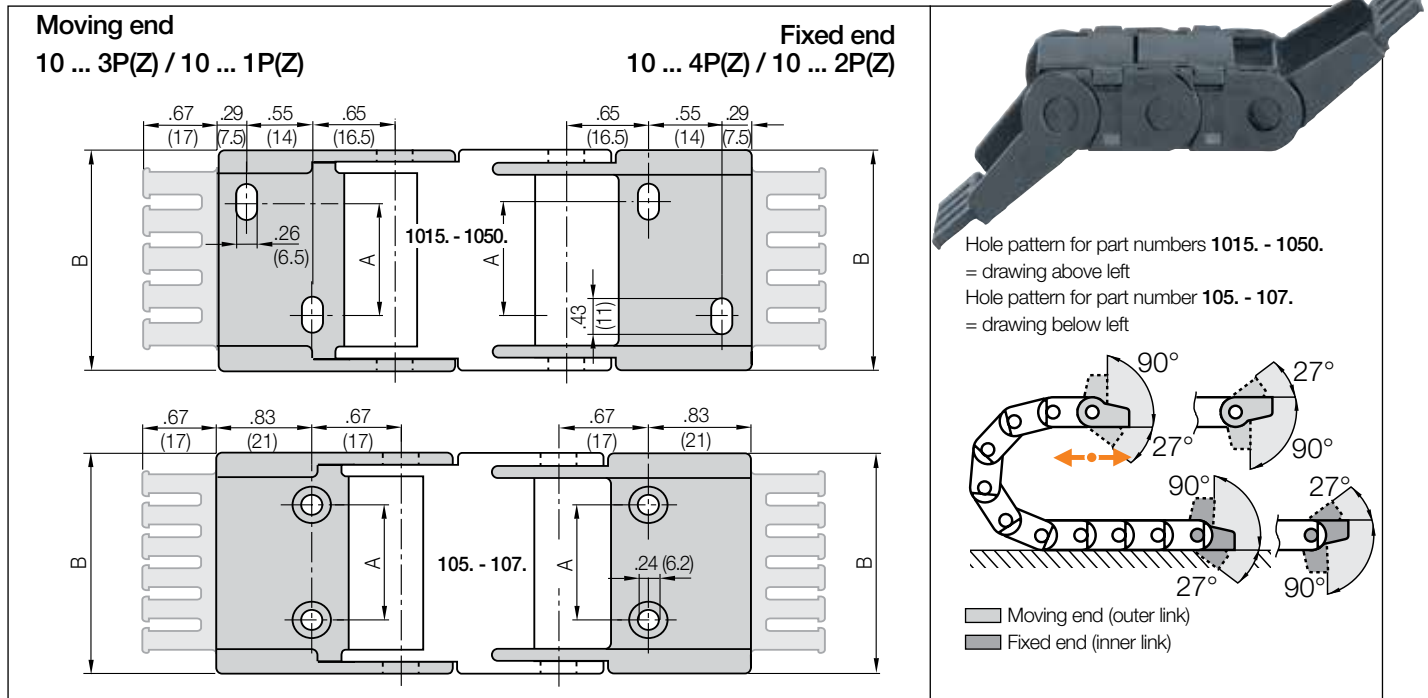


Inner height in. (mm)	.67 (17)
Pitch per link in. (mm)	1.20 (30.5)
Links/ft (m)	10.00 (33)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$

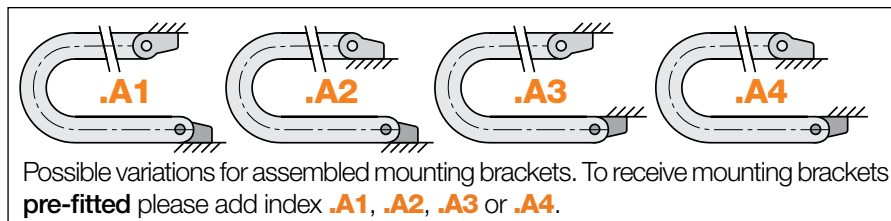


<i>R</i>	1.50 (038)	1.89 (048)	2.95 (075)	3.94 (100)	4.33 (110)	4.92 (125)	5.71 (145)	7.09 (180)
<i>H</i>	3.90 (99)	4.69 (119)	6.81 (173)	8.78 (223)	9.57 (243)	10.75 (273)	12.32 (313)	15.08 (383)
<i>D</i>	3.74 (95)	4.13 (105)	5.20 (132)	6.18 (157)	6.57 (167)	7.17 (182)	7.95 (202)	9.33 (237)
<i>K</i>	7.28 (185)	8.46 (215)	11.81 (300)	14.96 (380)	16.14 (410)	17.91 (455)	20.47 (520)	24.80 (630)

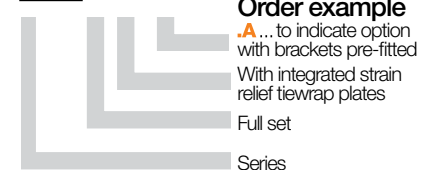
The required clearance height: $H_r = H + .79$ in. (20 mm) (with .67 lbs/ft (1.0 kg/m) fill weight).



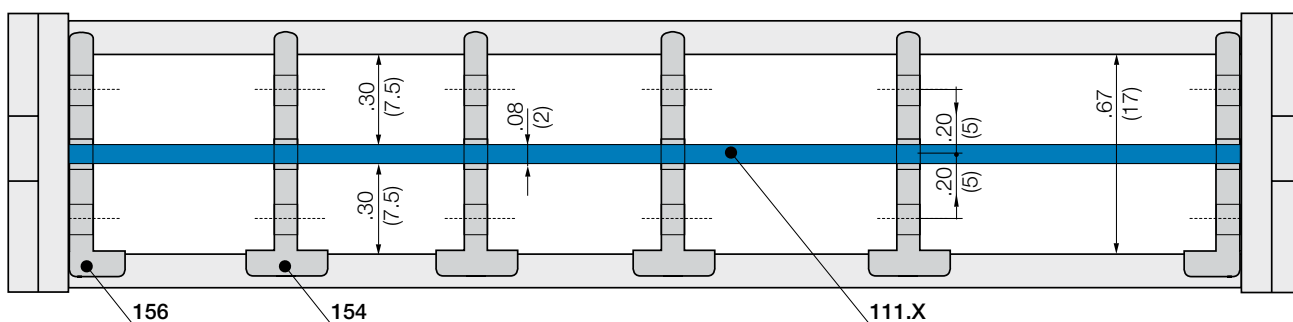
Width index		Part No. full set pivoting		Part No. full set locking		A in. (mm)	B in. (mm)	Number of teeth
		with tiewrap plates	without tiewrap plates	with tiewrap plates	without tiewrap plates			
015. ▶		1015.34PZ	1015.34P	1015.12PZ	1015.12P	—	1.00 (25.5)	2
025. ▶		1025.34PZ	1025.34P	1025.12PZ	1025.12P	.39 (10)	1.40 (35.5)	3
038. ▶		1038.34PZ	1038.34P	1038.12PZ	1038.12P	.91 (23)	1.91 (48.5)	4
050. ▶		1050.34PZ	1050.34P	1050.12PZ	1050.12P	1.38 (35)	2.38 (60.5)	5
5. ▶		105.34PZ	105.34P	105.12PZ	105.12P	1.89 (48)	2.95 (75.0)	6
6. ▶		106.34PZ	106.34P	106.12PZ	106.12P	2.56 (65)	3.62 (92.0)	8
7. ▶		107.34PZ	107.34P	107.12PZ	107.12P	3.35 (85)	4.41 (112.0)	10



1025.34PZ.A1



Interior separation



No lateral gap to side links necessary.

As standard separators are fitted every 2nd e-chain® link!

		Slotted separator	
		unassembled	153
		assembled	154

Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.

		Slotted side plate	
		unassembled	155
		assembled	156

Slotted side plate

Allows modular shelving right up to the side links. No clearance required!

		Full-width shelf for e-chains®	
		unassembled	110.X
		assembled	111.X

Full-width shelf

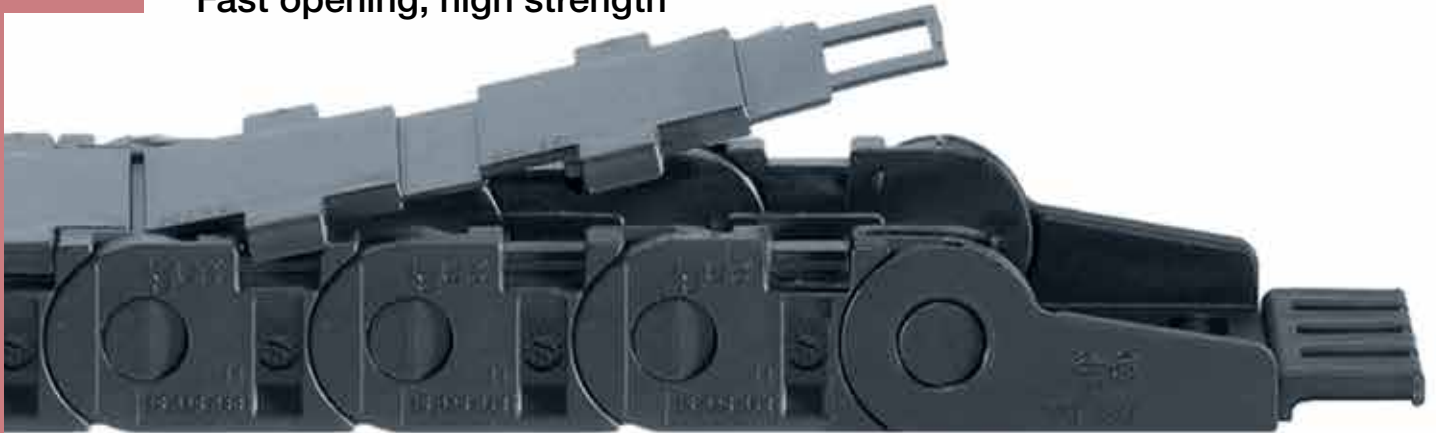
This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves
 Width = X in. (mm)

X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled
.59 (015)	110.15	111.15	1.97 (050)	110.50	111.50	3.94 (100)	110.100	111.100
.98 (025)	110.25	111.25	2.48 (063)	110.63	111.63			
1.50 (038)	110.38	111.38	3.15 (080)	110.80	111.80			



igus® zipper e-chain® series 15 in a special purpose machine for quick cable installation



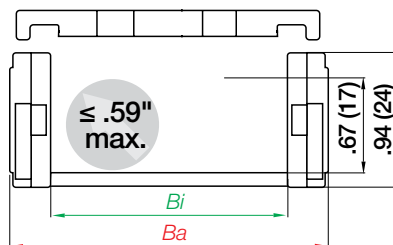
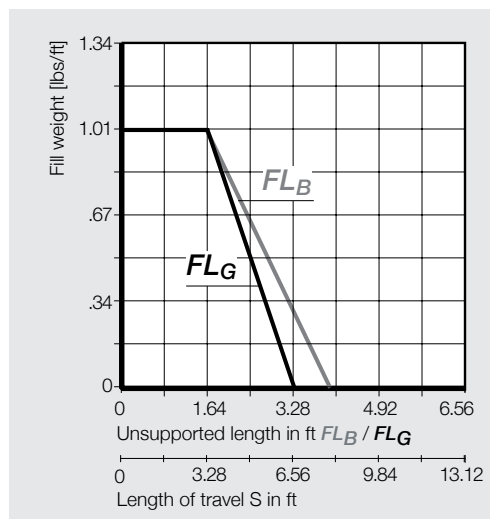
e-tube | Series R15 | Lids on a strip - zip-open along the outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-tubes	in. (mm)	in. (mm)	in. (mm)	lbs/ft (kg/m)
R15.025. <i>R</i> .0	.98 (25)	1.42 (36)	2.48 (063) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.302 (0.45)
R15.038. <i>R</i> .0	1.50 (38)	1.93 (49)	2.48 (063) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.342 (0.51)
R15.063. <i>R</i> .0	1.97 (50)	2.40 (61)	2.48 (063) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.457 (0.68)
R15.080. <i>R</i> .0	2.48 (63)	2.99 (76)	2.48 (063) 2.95 (075) 3.94 (100) 4.33 (110) 4.92 (125) 5.71 (145) 7.09 (180)	≈ 0.504 (0.75)

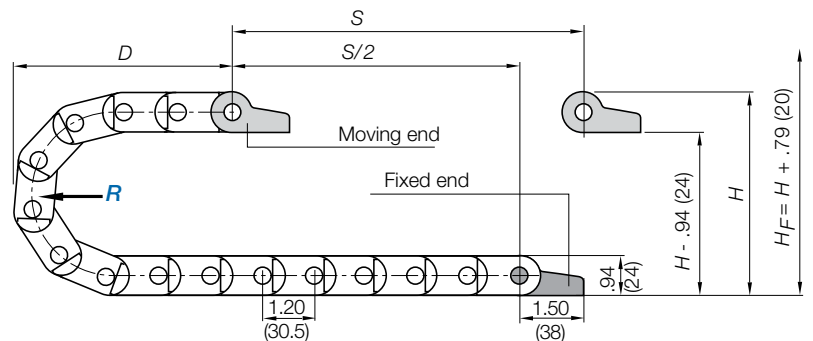
Before using this series on long travels please consult igus®.

Complete Part No. with required radius (*R*). Example: R15.025.063.0

Installation dimensions

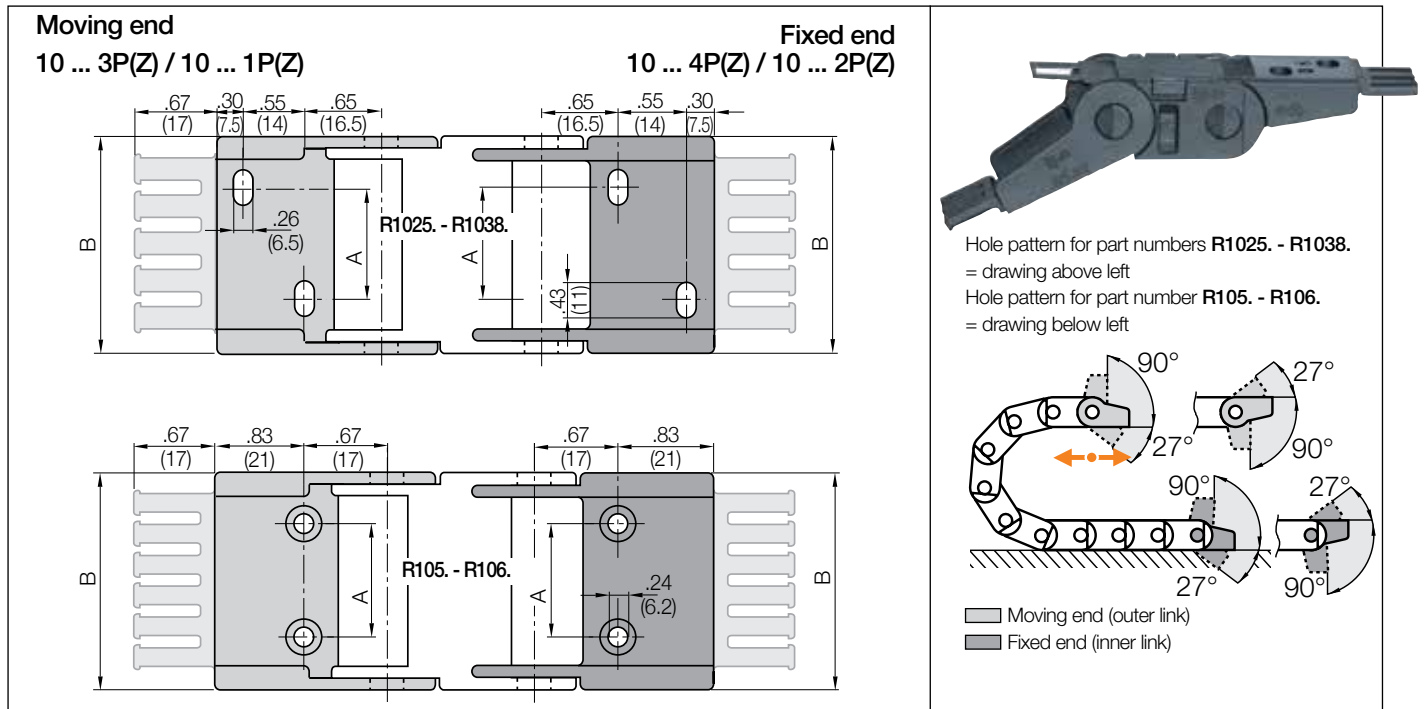


Inner height in. (mm)	.67 (17)
Pitch per link in. (mm)	1.20 (30.5)
Links/ft (m)	10.00 (33)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$

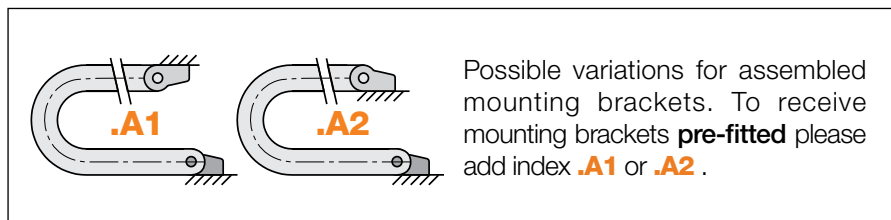


<i>R</i>	2.48 (063)	2.95 (075)	3.94 (100)	4.33 (110)	4.92 (125)	5.71 (145)	7.09 (180)
<i>H</i>	5.86 (149)	6.81 (173)	8.78 (223)	9.57 (243)	10.75 (273)	12.32 (313)	15.08 (383)
<i>D</i>	4.72 (120)	5.20 (132)	6.18 (157)	6.57 (167)	7.17 (182)	7.95 (202)	9.33 (237)
<i>K</i>	10.24 (260)	11.81 (300)	14.96 (380)	16.14 (410)	17.91 (455)	20.47 (520)	24.80 (630)

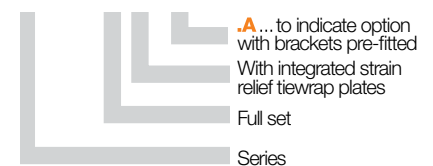
The required clearance height: $H_F = H + .79$ in. (20 mm) (with .67 lbs/ft (1.0 kg/m) fill weight).



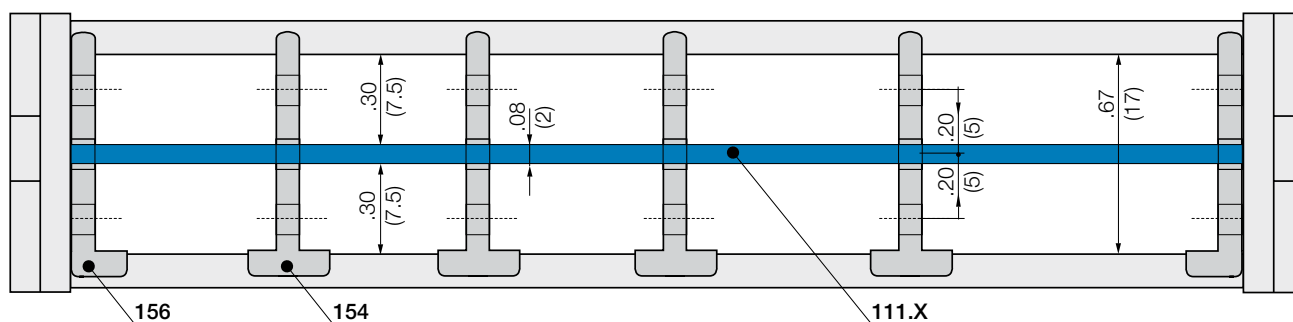
Width index		Part No. full set pivoting		Part No. full set locking		A	B	Number of teeth
		with tiewrap plates	without tiewrap plates	with tiewrap plates	without tiewrap plates	in. (mm)	in. (mm)	
025. ▶		1025.34PZ	1025.34P	1025.12PZ	1025.12P	.39 (10)	1.40 (35.5)	3
038. ▶		1038.34PZ	1038.34P	1038.12PZ	1038.12P	.91 (23)	1.91 (48.5)	4
063. ▶		105.34PZ	105.34P	105.12PZ	105.12P	1.89 (48)	2.95 (75.0)	6
080. ▶		106.34PZ	106.34P	106.12PZ	106.12P	2.56 (65)	3.62 (92.0)	8



R1025.34PZ.A1 Order example

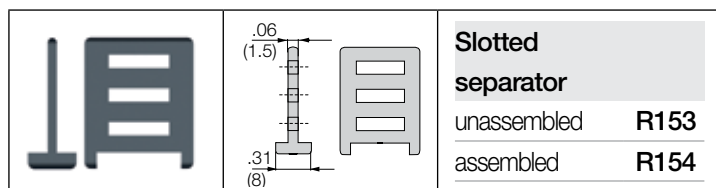


Interior separation



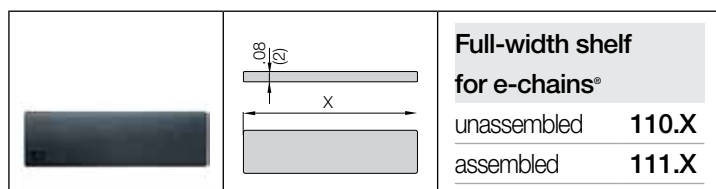
No lateral gap to side links necessary.

As standard separators are fitted every 2nd e-chain® link!



Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.



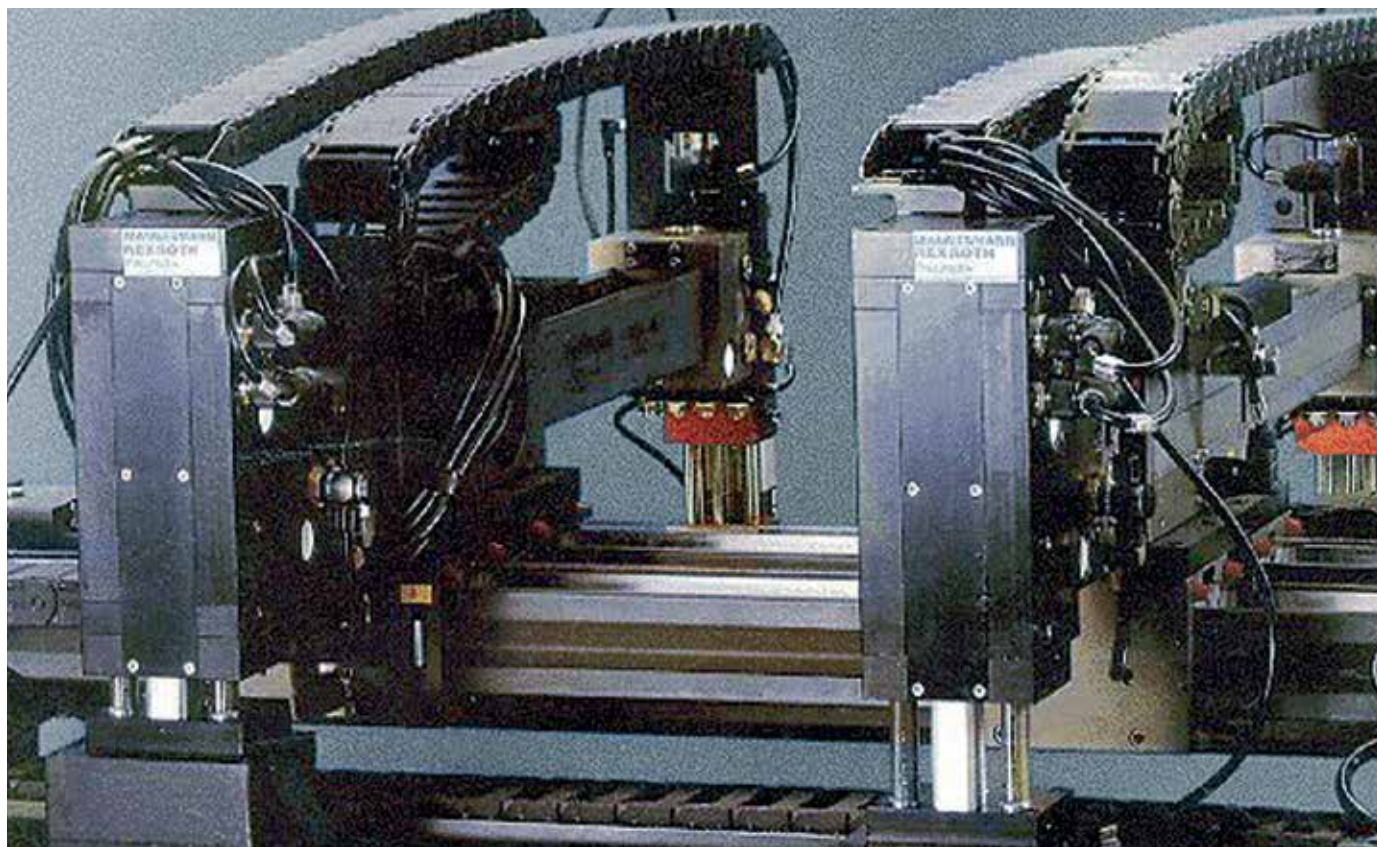
Full-width shelf

This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves

Width = X in. (mm)

X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled
.98 (025)	110.25	111.25	2.48 (063)	110.63	111.63
1.50 (038)	110.38	111.38	3.15 (080)	110.80	111.80



Series 15 on a pick and place machine. Acceleration: 328 ft/s² (100 m/s²) , smooth running

zipper | e-chains® | Series 17 | Product Range

Fast opening, large inner height

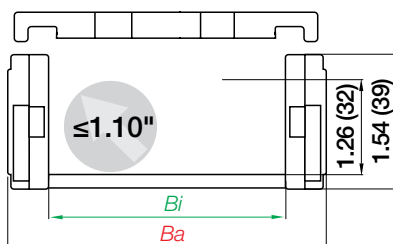
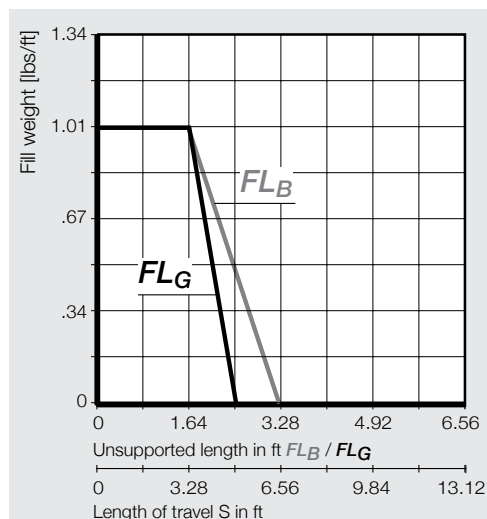


e-chains® | Series 17 | Crossbars on a strip - zip-open along the outer radius

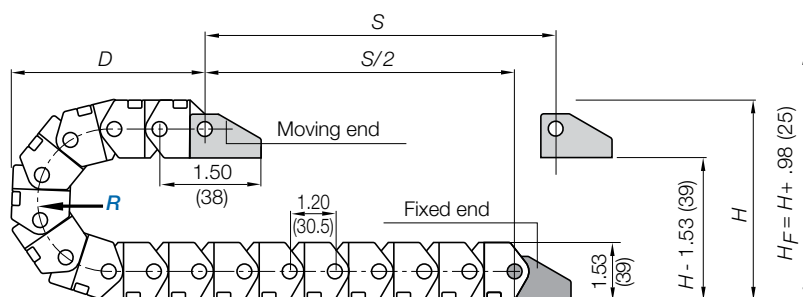
Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-chains®	in. (mm)	in. (mm)	in. (mm)	lbs/ft (kg/m)
17.1. <i>R</i> .0	.59 (15)	1.00 (25.5)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.349 (0.52)
17.2. <i>R</i> .0	.98 (25)	1.40 (35.5)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.396 (0.59)
17.3. <i>R</i> .0	1.50 (38)	1.91 (48.5)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.437 (0.65)
17.4. <i>R</i> .0	1.97 (50)	2.38 (60.5)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.470 (0.70)
17.5. <i>R</i> .0	2.48 (63)	2.99 (76)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.558 (0.83)
17.6. <i>R</i> .0	3.15 (80)	3.66 (93)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.618 (0.92)
17.7. <i>R</i> .0	3.94 (100)	4.45 (113)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.712 (1.06)

Complete Part No. with required radius (*R*). Example: 17.2.075.0

Installation dimensions

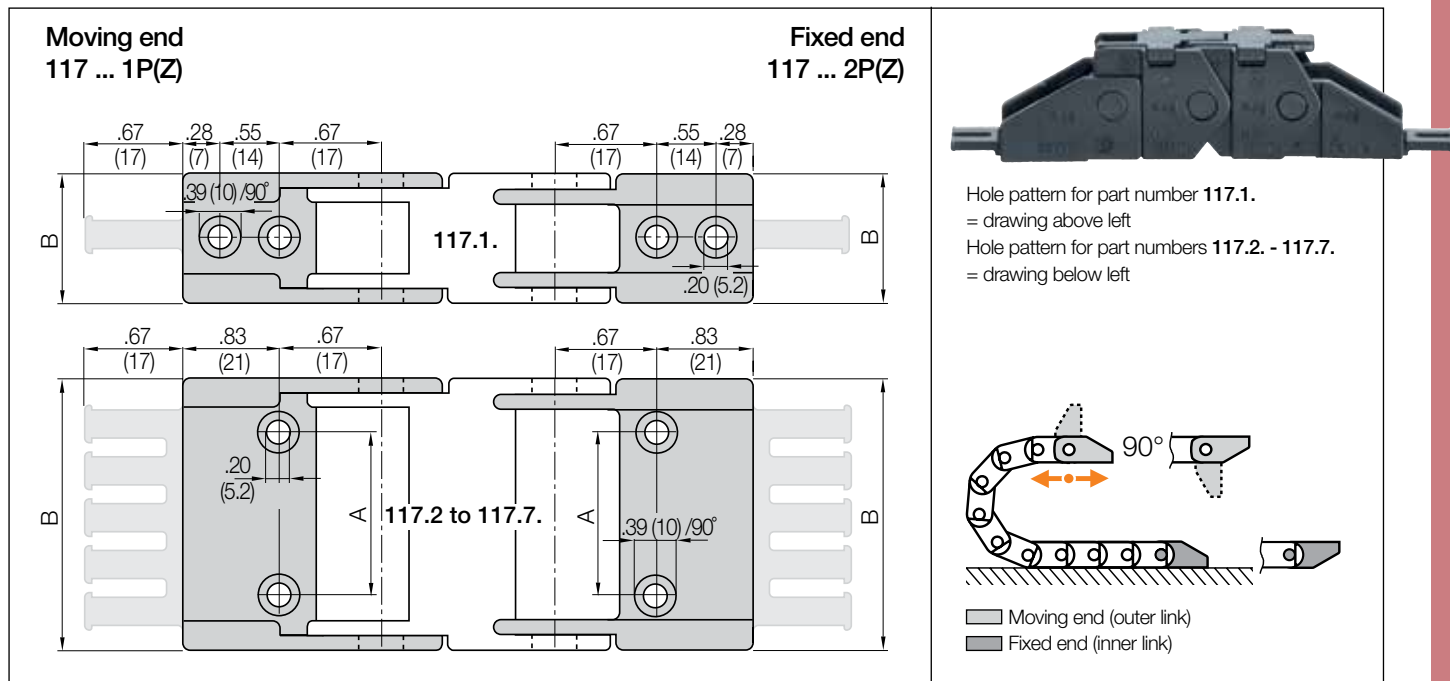


Inner height in. (mm)	1.26 (32)
Pitch per link in. (mm)	1.20 (30.5)
Links/ft (m)	10.00 (33)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$

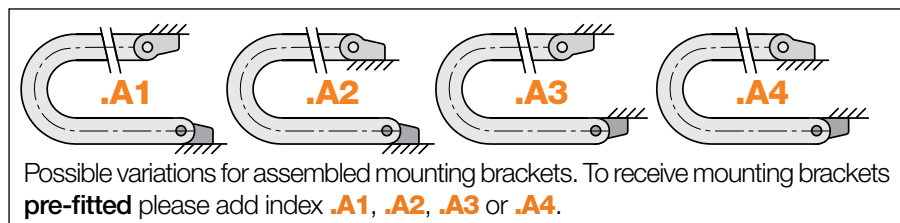


<i>R</i>	2.48 (063)	2.95 (075)	3.94 (100)	4.92 (125)
<i>H</i>	6.50 (165)	7.44 (189)	9.41 (239)	11.38 (289)
<i>D</i>	5.04 (128)	5.51 (140)	6.50 (165)	7.48 (190)
<i>K</i>	10.24 (260)	11.81 (300)	14.96 (380)	17.91 (455)

The required clearance height: $H_r = H + .98$ in. (25 mm) (with 1.01 lbs/ft (1.5 kg/m) fill weight).

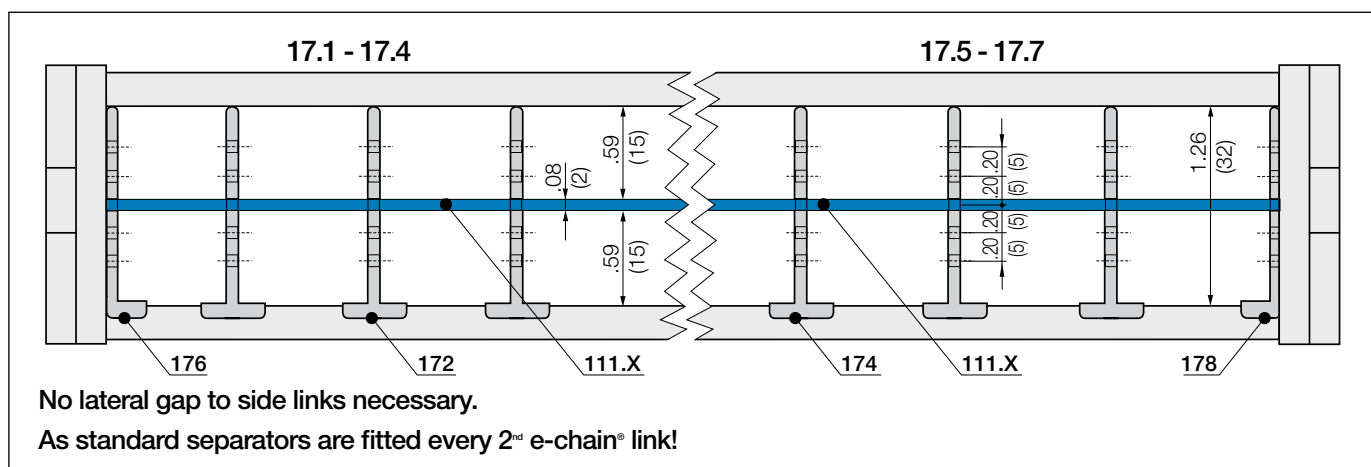


		Part No. full set with tie-wrap plates	Part No. full set without tie-wrap plates	A in. (mm)	B in. (mm)	Number of teeth
1.	▶	117.1.12PZ	117.1.12P	—	1.00 (25.5)	1
2.	▶	117.2.12PZ	117.2.12P	.47 (12)	1.40 (35.5)	3
3.	▶	117.3.12PZ	117.3.12P	.98 (25)	1.91 (48.5)	4
4.	▶	117.4.12PZ	117.4.12P	1.46 (37)	2.38 (60.5)	5
5.	▶	117.5.12PZ	117.5.12P	1.89 (48)	2.99 (76.0)	6
6.	▶	117.6.12PZ	117.6.12P	2.56 (65)	3.66 (93.0)	8
7.	▶	117.7.12PZ	117.7.12P	3.35 (85)	4.45 (113.0)	10



117.2.12PZ.A1 **Order example**

.A... to indicate option with brackets pre-fitted
With integrated strain relief tie-wrap plates
Full set
Series



		Slotted separator	
		unassembled	171
		assembled	172

For width index 17.1 up to 17.4

Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.

		Slotted side plate	
		unassembled	175
		assembled	176

Slotted side plate

Allows modular shelving right up to the side links. No clearance required!

		Slotted separator	
		unassembled	173
		assembled	174

For width index 17.5 up to 17.7

Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.

		Slotted side plate	
		unassembled	177
		assembled	178

Slotted side plate

Allows modular shelving right up to the side links. No clearance required!

		Full-width shelf for e-chains®	
		unassembled	110.X
		assembled	111.X

For all widths

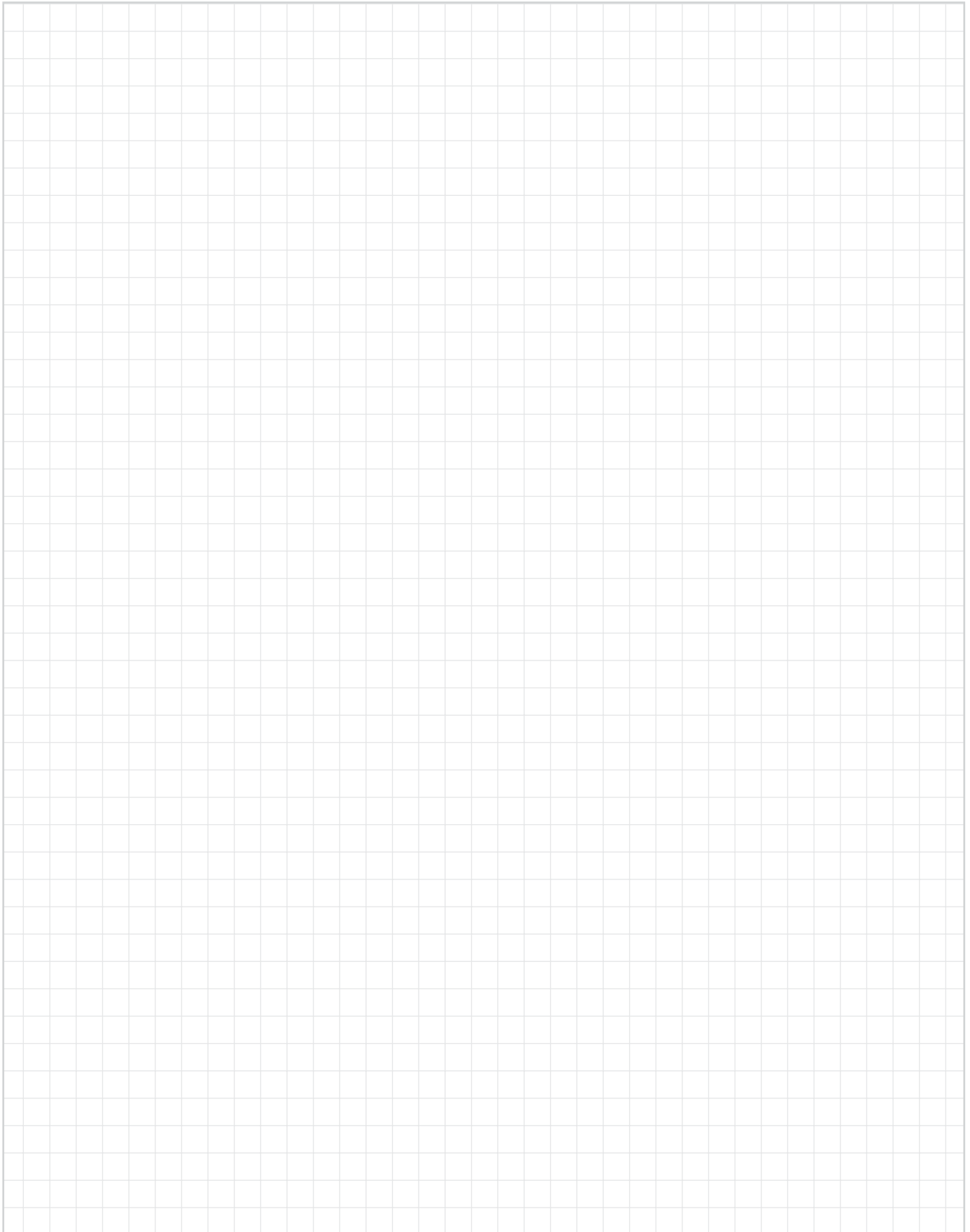
Full-width shelf

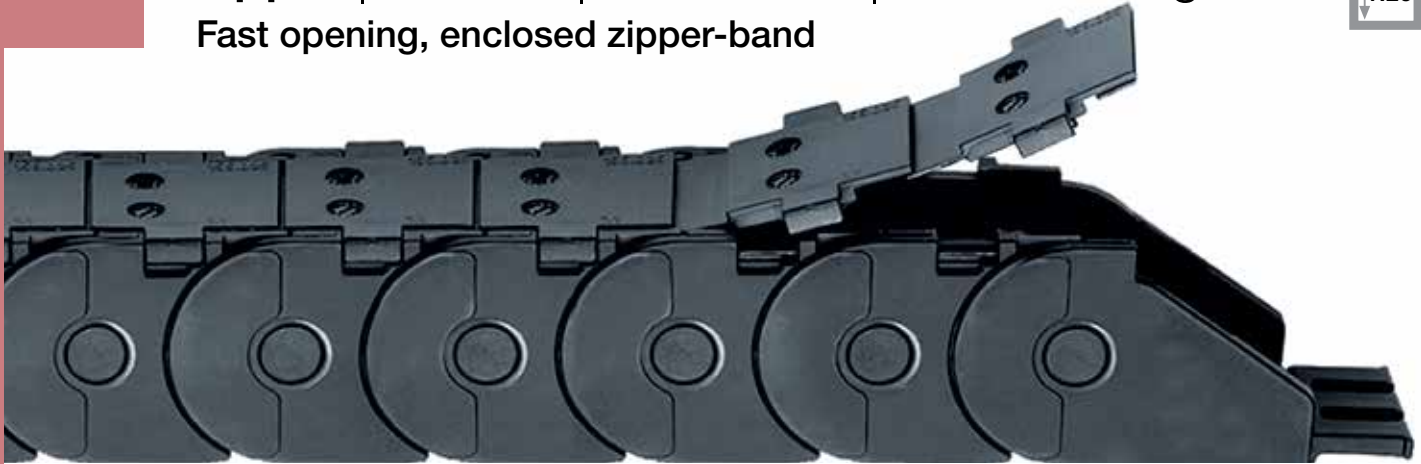
This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves

Width = X in. (mm)

X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled
.59 (015)	110.15	111.15	1.97 (050)	110.50	111.50	3.94 (100)	110.100	111.100
.98 (025)	110.25	111.25	2.48 (063)	110.63	111.63			
1.50 (038)	110.38	111.38	3.15 (080)	110.80	111.80			



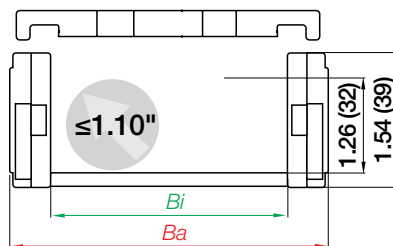
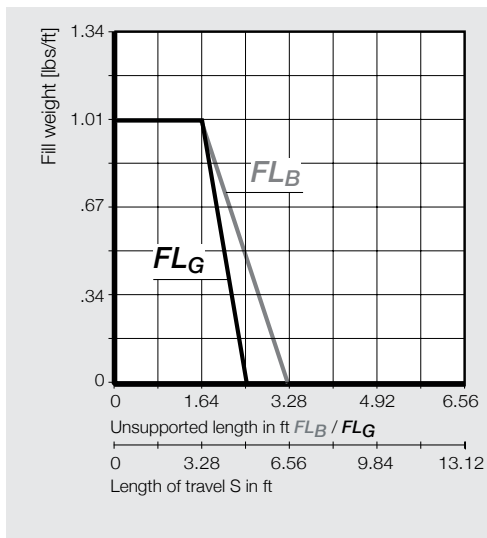


e-tube | Series R17 | Lids on a strip - zip-open along the outer radius

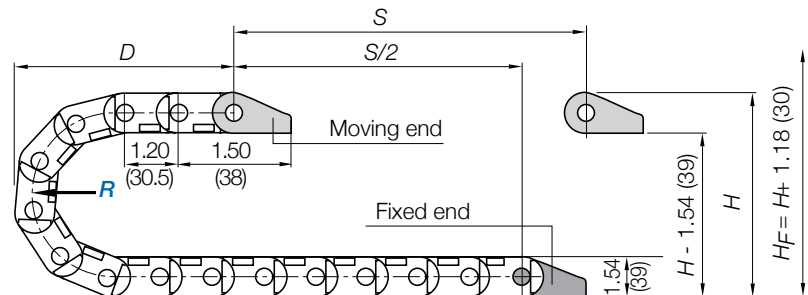
Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	Weight
e-tubes	in. (mm)	in. (mm)	in. (mm)	lbs/ft (kg/m)
R17.015. <i>R.0</i>	.59 (15)	1.02 (26)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.383 (0.57)
R17.025. <i>R.0</i>	.98 (25)	1.42 (36)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.430 (0.64)
R17.063. <i>R.0</i>	2.48 (63)	2.91 (74)	2.48 (063) 2.95 (075) 3.94 (100) 4.92 (125)	≈ 0.591 (0.88)

Complete Part No. with required radius (*R*). Example: 17.2.075.0

Installation dimensions

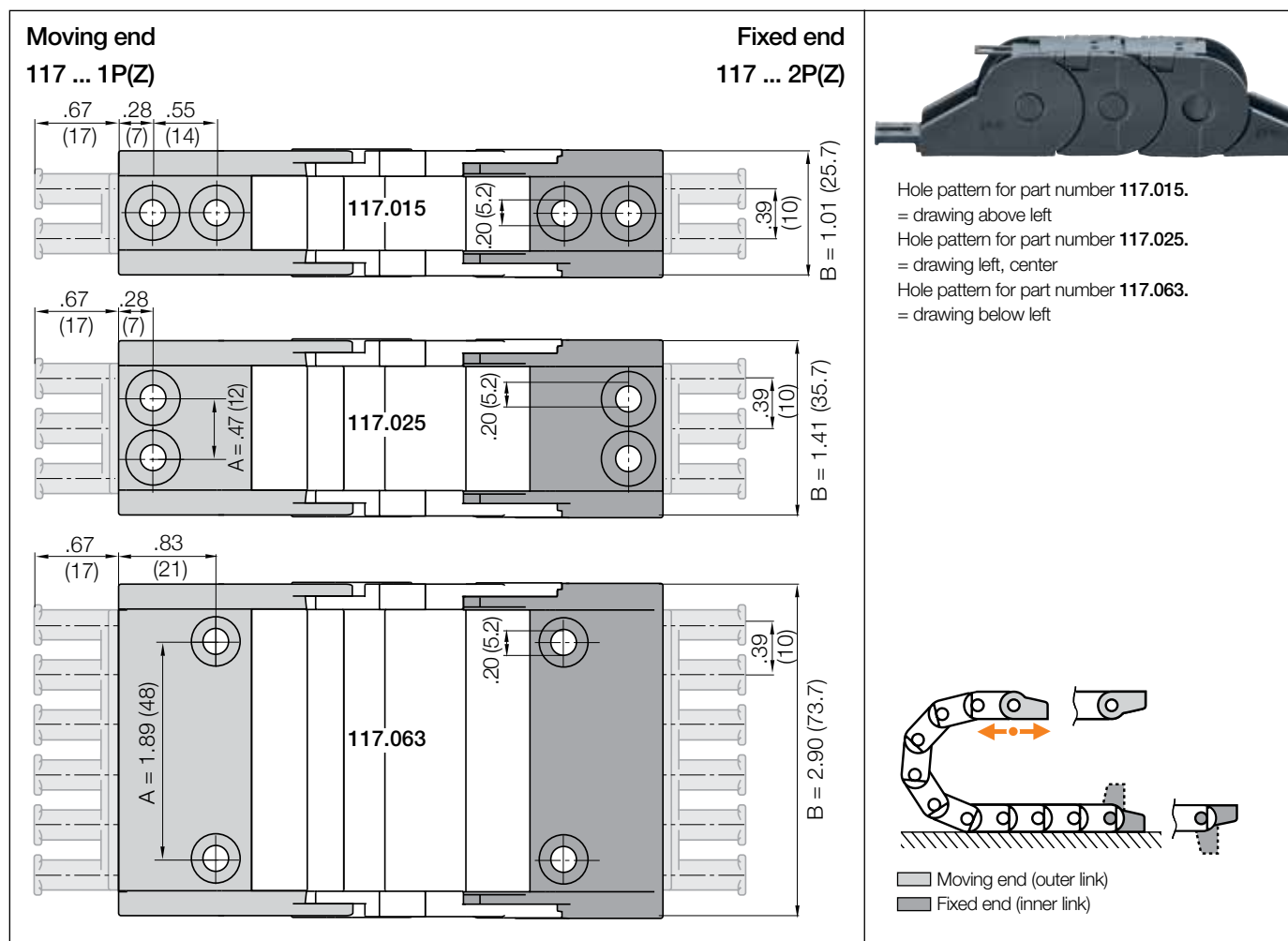


Inner height in. (mm)	1.26 (32)
Pitch per link in. (mm)	1.20 (30.5)
Links/ft (m)	10.00 (33)
corresponds to (mm)	1,000
e-chain® length	$L_K = \frac{S}{2} + K$



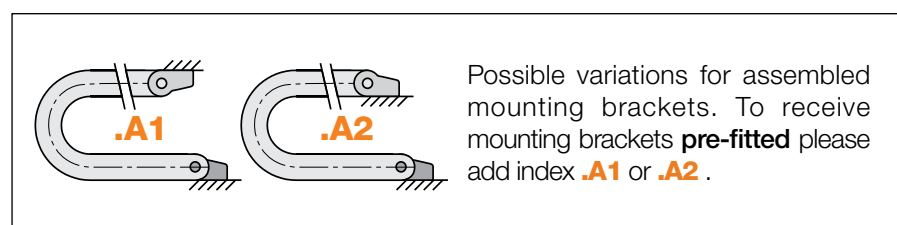
<i>R</i>	2.48 (063)	2.95 (075)	3.94 (100)	4.92 (125)
<i>H</i>	6.50 (165)	7.44 (189)	9.41 (239)	11.38 (289)
<i>D</i>	5.04 (128)	5.51 (140)	6.50 (165)	7.48 (190)
<i>K</i>	10.24 (260)	11.81 (300)	14.96 (380)	17.91 (455)

The required clearance height: $H_f = H + .98 \text{ in. (25 mm)}$ (with 1.01 lbs/ft (1.5 kg/m) fill weight).



		Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A in. (mm)	B in. (mm)	
015.	▶	117.015.12PZ	117.015.12P	—	1.01 (25.7)	2
025.	▶	117.025.12PZ	117.025.12P	.47 (12)	1.41 (35.7)	3
063.	▶	117.063.12PZ*	117.063.12P*	1.89 (48)	2.91 (73.7)	6

*Pivoting requires rework



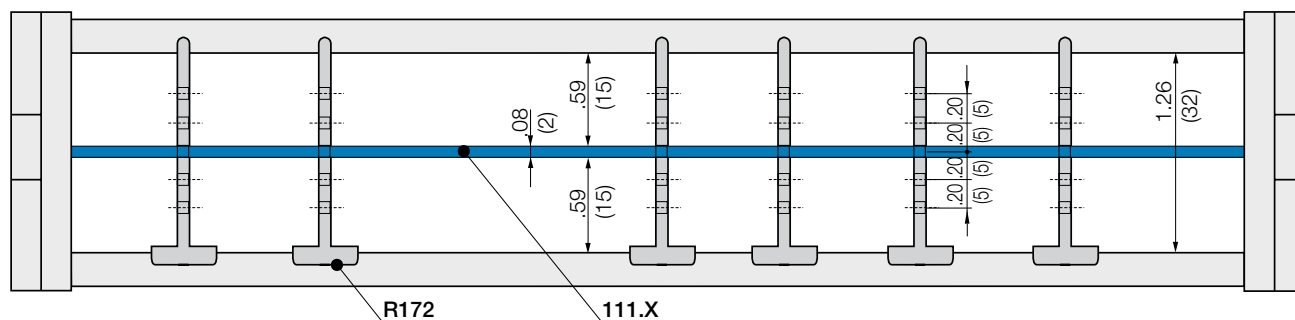
117.015.12PZ.A1 Order example

.A... to indicate option with brackets pre-fitted

With integrated strain relief tiewrap plates

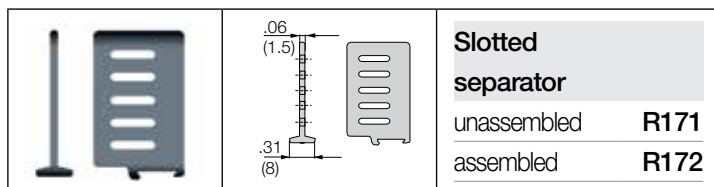
Full set

Series



No lateral gap to side links necessary.

As standard separators are fitted every 2nd e-chain® link!

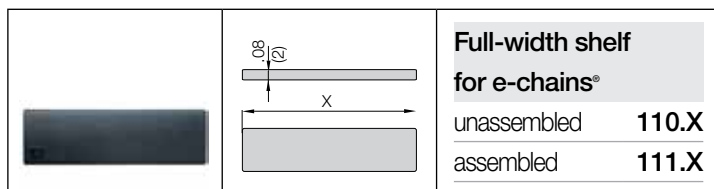


Slotted separator

unassembled	R171
assembled	R172

Slotted separator

Vertical subdivision in e-chains®. The slot allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-chains®

unassembled	110.X
assembled	111.X

Full-width shelf

This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves

Width = X in. (mm)

X in. (mm)	unassembled	assembled	X in. (mm)	unassembled	assembled
.59 (015)	110.15	111.15	2.48 (063)	110.63	111.63
.98 (025)	110.25	111.25			

