

# T3 Light, highly flexible and low-vibration



## Advantages of the T3 system:

- Very low weight e-chain®
- For high speeds and accelerations
- Virtually no polygon effect
- Small bend radii and installation space
- Fast, easy filling and assembly
- **Low noise 33dB(A)<sup>1)</sup>** - extremely low noise and low vibration due small pitch
- **Cleanroom ISO Class 2<sup>2)</sup>** - virtually no wear or abrasion

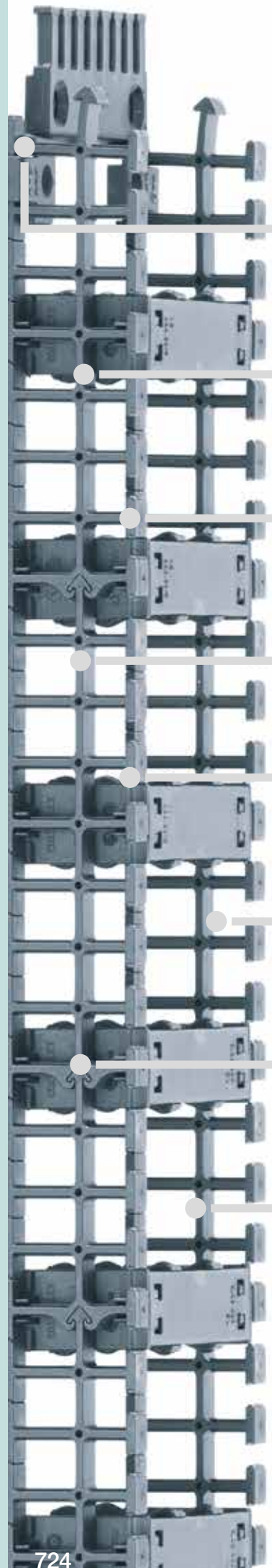
1) Extremely low-noise - tested at the igus® lab 2) Cleanroom - Series T3.29.050.038.0



## When to use another igus® e-chain® series:

- When an e-chain® for more fill weight is required
  - ▶ E6.1, page 750
- When larger interior heights are required
  - ▶ E6.1, page 750
- When Cleanroom ISO Class 1 is required
  - ▶ E6.1, page 750
- When an enclosed e-chain® for smooth running is required
  - ▶ R6, page 788





Universal:  
mounting angles and  
strain relief option

Low noise 33dB(A)<sup>1)</sup>:  
small pitch for low noise,  
smooth running

Modular design:  
t-band in one  
segment of 8 links

Modular:  
easy to lengthen and  
shorten at any point

Easy to use:  
clip-on interior  
separation clips

Cleanroom ISO Class 2<sup>2)</sup>:  
virtually no wear or abrasion

Dynamic:  
for high speeds and  
accelerations

Efficient:  
lightweight

## Smooth running "T-band", quiet, cost-effective - T3 system

The T3 system combines low noise operation, simple assembly and economy. The side bands, which snap together, replace a conventional pin/bore connection and prevent relative movements between the joints giving extremely low wear. This means virtually no wear or abrasion (cleanroom). The geometrical shape of the t-band, means that hardly any polygon effect is generated in operation. The t-band therefore rolls in a very smooth arc, giving extremely low vibration and noise. In order to reduce the manufacturing and installation costs, the t-band is made in a segment of 8 links (similar to the igus® E3 system). Due to its low mass, the igus® t-band, is suitable for applications with low fill weights and short strokes, combined with high speeds and accelerations.

- 1) Extremely low-noise - tested at the igus® lab
- 2) Cleanroom - Series T3.29.050.038.0

### Typical industries and applications

- Printer and plotter ● Cleanroom applications ● Production and processing of semiconductors
- Optics ● Pick and place machines ● Measuring technology



IPA Qualification Certificate<sup>2)</sup> - Report IG 1303-640-1:  
ISO Class 2, according to DIN EN ISO 14644-1 for system T3,  
series T3.29.050.038.0 at v = 0.5m/s, 1 m/s, 2m/s

igus® tests at 1 m measuring distance:  
= 33 dB(A)<sup>1)</sup> for T3.29.050.038.0 at  
v = 1 m/s and 26.5 dB(A) basic sound level

Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Outer height <i>ha</i> [mm]	Bend radius <i>R</i> [mm]	Unsupported length ≤ [m]	Page
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System T3 -  
t-shaped band e-chains®  
crossbars removable along  
the inner and outer radius

T3.29.	29	30 - 140	55 - 165	35	038	≈ 1.45	728
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Available from stock. Ready to ship in 24 - 48hrs.\*

\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.



T3 system on the Z-axis of a positioning system. It has very low noise and vibration

Technical data

 Speed $FL_G$ / acceleration $FL_G$	$\leq 20$ [m/s] / $\leq 200$ [m/s <sup>2</sup> ]
 Speed $FL_B$ / acceleration $FL_B$	$\leq 3$ [m/s] / $\leq 6$ [m/s <sup>2</sup> ]
 Material - permitted temperature °C	upon request
 Flammability class	VDE 0304 IIC UL94-HB

■  $FL_G$  = unsupported with straight upper run ■  $FL_B$  = unsupported with permitted sag

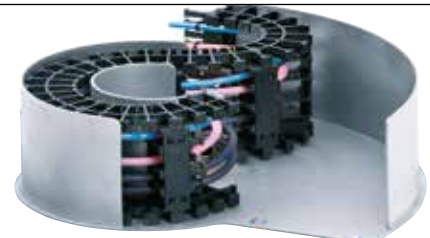
T3 e-chains® and modules for circular movement

- T3 e-chains® with Reverse Bend Radii: **RBR**
  - Several Reverse Bend Radii: 55, 75, 100, 150
  - Wide range of interior separation layouts ● Quiet operation ● Low wear.
- Please consult igus® for delivery time  
More information ► [www.igus.eu/circularmovement](http://www.igus.eu/circularmovement)









T3 RBR module for Reverse Bend Radii

- Consists of 4 elements: T3 **RBR** e-chain®, guiding system, chainflex® cables, iglidur® PRT slewing ring bearing ● Compact guide trough ● Inner or outer radius rotation ● For high speeds ● Quiet ● Several mounting options.
- Please consult igus® for delivery time.  
More information ► [www.igus.eu/circularmovement](http://www.igus.eu/circularmovement)




Options with order keys | Examples based on series T3.29

 <b>Standard</b>	<i>NC version - (No Camber) without pretension</i>	<i>Reverse Bend Radius (RBR) for circular movements</i>
Part No. <b>Standard</b>	Part No. <b>NC version</b>	Part No. <b>RBR</b>
		
 <b>T3.29.050.R.0</b>	<b>T3.29.050.R.0.NC</b>	<b>T3.29.050.R1/R2.0</b>
 <b>Ready to ship* in 24 - 48hrs.</b>	<b>Delivery time* 2-5 business days</b>	<b>Delivery time* 5-10 business days</b>

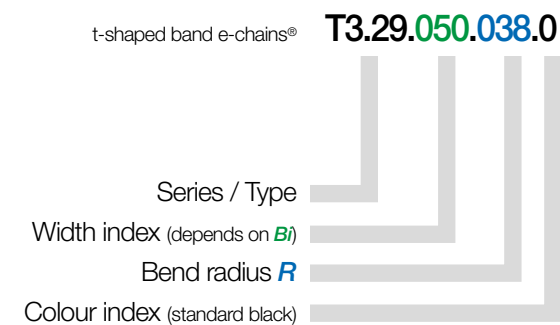
\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

Order example | Order key and colour examples | Examples based on series T3.29








-  **Order example for complete e-chain® (1.0m), colour black, with mounting brackets and interior separation:**

<b>e-chain® (1.0m)</b>	Please indicate e-chain® length or number of links: 1.0m or 67 links	<b>T3.29.050.038.0</b>
<b>+ Mounting brackets</b>	1 set (with tiwrap plates)	<b>T3.29.050.12PZ</b>
<b>Interior separation</b>	with 2 separators assembled every 2 <sup>nd</sup> link	<b>2 x .29.11</b>
<b>Order text:</b>	<b>1 m T3.29.050.038.0 + T3.050.12 + 2 x 29.1.1</b>	

 **Order key**



**Order index for colour options**

Colour	Order index	Colour	Order index
 <b>Black</b>	Standard	 <b>Orange</b>	Special colour
 <b>Silver-grey</b>	Special colour	 <b>Yellow</b>	Special colour
 <b>White</b>	Special colour	 <b>Light grey</b>	Special colour
 <b>Grey-white</b>	Special colour		<b>.14</b>

**Black e-chains® available from stock.**  
Above special colours upon request.



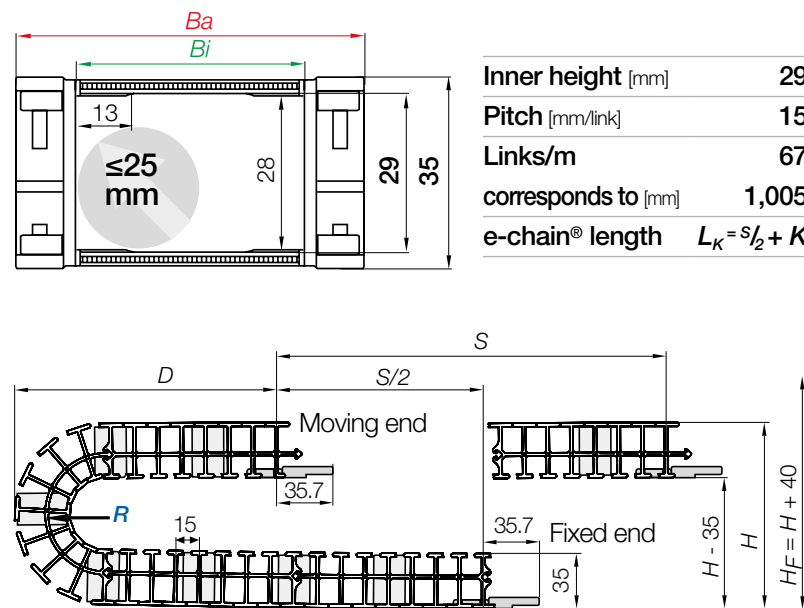
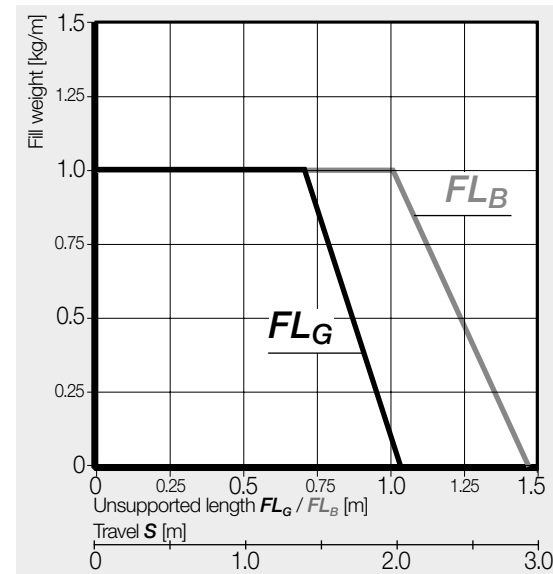


**e-chains® | Series T3.29 | Crossbars removable along the inner and outer radius**

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	T3.29
e-chains®	[mm]	[mm]	[mm]	[kg/m]
T3.29.030.R.0	30	55	038	≈ 0.40
T3.29.040.R.0	40	65	038	≈ 0.42
T3.29.050.R.0	50	75	038	≈ 0.44
T3.29.060.R.0	60	85	038	≈ 0.46
T3.29.070.R.0	70	95	038	≈ 0.48
T3.29.080.R.0	80	105	038	≈ 0.50
T3.29.090.R.0	90	115	038	≈ 0.51
T3.29.100.R.0	100	125	038	≈ 0.53
T3.29.110.R.0	110	135	038	≈ 0.55
T3.29.120.R.0	120	145	038	≈ 0.57
T3.29.140.R.0	140	165	038	≈ 0.59

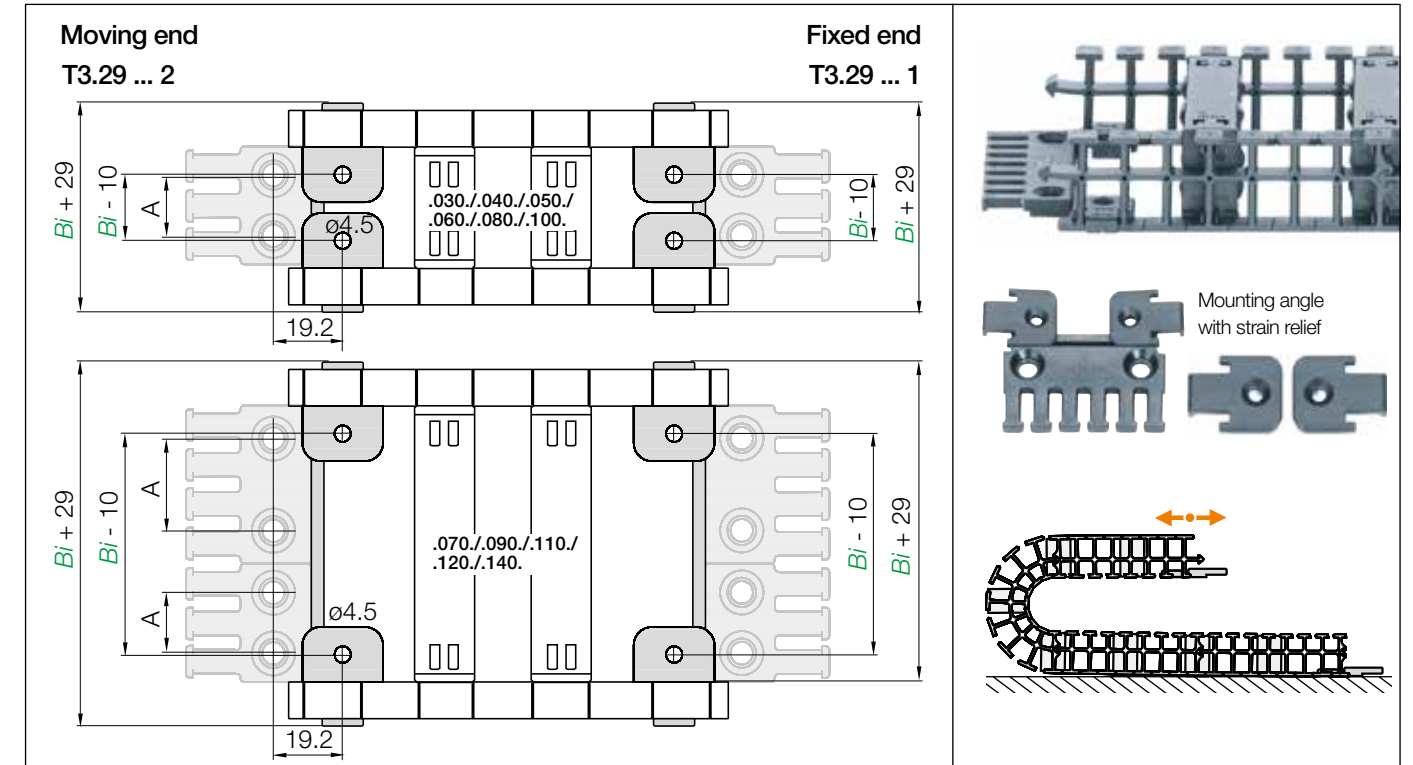
Complete Part No. with required radius (*R*). Example: T3.29.100.038.0

**Installation dimensions**



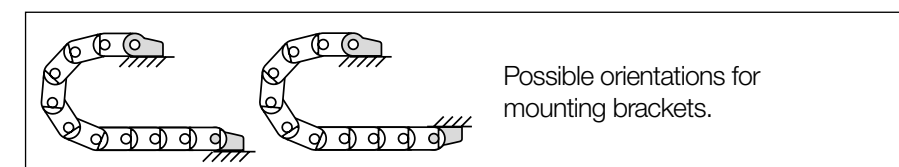
<i>R</i> ≥	038
<i>H</i> ≥	216
<i>D</i>	111
<i>K</i>	210

The required clearance height:  $H_F = H + 40\text{mm}$  (with 1.0kg/m fill weight)



Width index	Part No. full set with tiewrap plates	Part No. full set without tiewrap plates	A [mm]	<i>Bi</i> [mm]	Number of teeth
030. ►	T3.29.030.12PZ	T3.29.030.12	15	30	3
040. ►	T3.29.040.12PZ	T3.29.040.12	20	40	4
050. ►	T3.29.050.12PZ	T3.29.050.12	30	50	5
060. ►	T3.29.060.12PZ	T3.29.060.12	40	60	6
070. ►	T3.29.070.12PZ	T3.29.070.12	15 + 20*	70	7
080. ►	T3.29.080.12PZ	T3.29.080.12	60	80	8
090. ►	T3.29.090.12PZ	T3.29.090.12	20 + 30*	90	9
100. ►	T3.29.100.12PZ	T3.29.100.12	80	100	10
110. ►	T3.29.110.12PZ	T3.29.110.12	30 + 40*	110	11
120. ►	T3.29.120.12PZ	T3.29.120.12	40 + 40*	120	12
140. ►	T3.29.140.12PZ	T3.29.140.12	60 + 40*	140	14

\*Strain relief consisting of 2 tiewrap plates

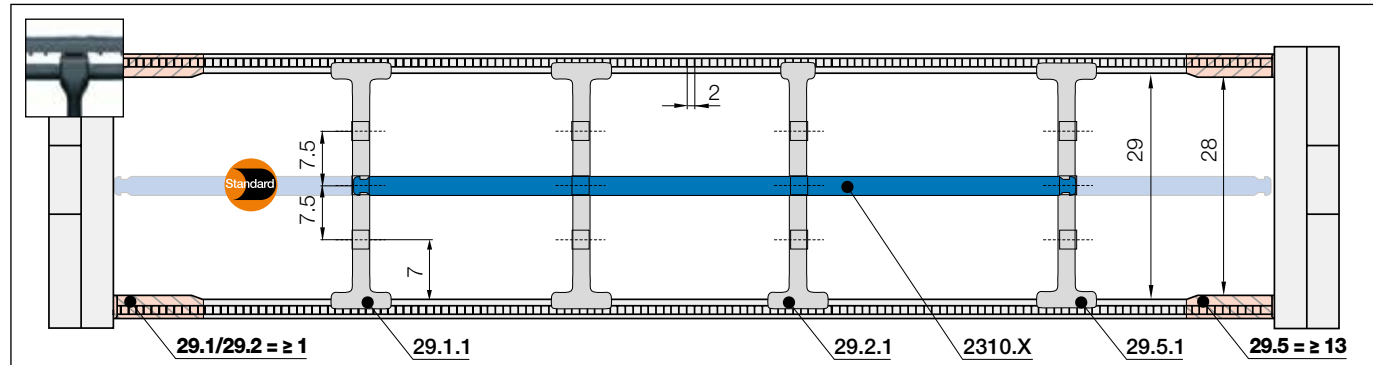


**T3.29.100.12** Order example

- Full set
- Width index
- Series

**Strain relief** e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300





**Note:** Please be aware of the minimum lateral gap to the side links! 29.1/29.2 = 1mm | 29.5 = 13mm  
As standard separators are fitted every 4th e-chain® link!

**Standard separator, wide base**

unassembled	29.1
assembled	29.1.1

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.

**Separator, narrow top**

unassembled	29.2
assembled	29.2.1

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**Notch separator for notched crossbar**

unassembled	29.5
assembled	29.5.1

**Locks securely in preset increments**  
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

**Shelf, lockable**

unassembled	2300.X
assembled	2310.X

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]	
	unassembled	assembled	unassembled	assembled	unassembled	assembled
	015	2300.015	060	2300.060	087	2300.087
	025	2300.025	062	2300.062	090	2300.090
	030	2300.030	065	2300.065	100	2300.100
	038	2300.038	070	2300.070	103	2300.103
	040	2300.040	075	2300.075	110	2300.110
	050	2300.050	077	2300.077	120	2300.120
	057	2300.057	080	2300.080	125	2300.125

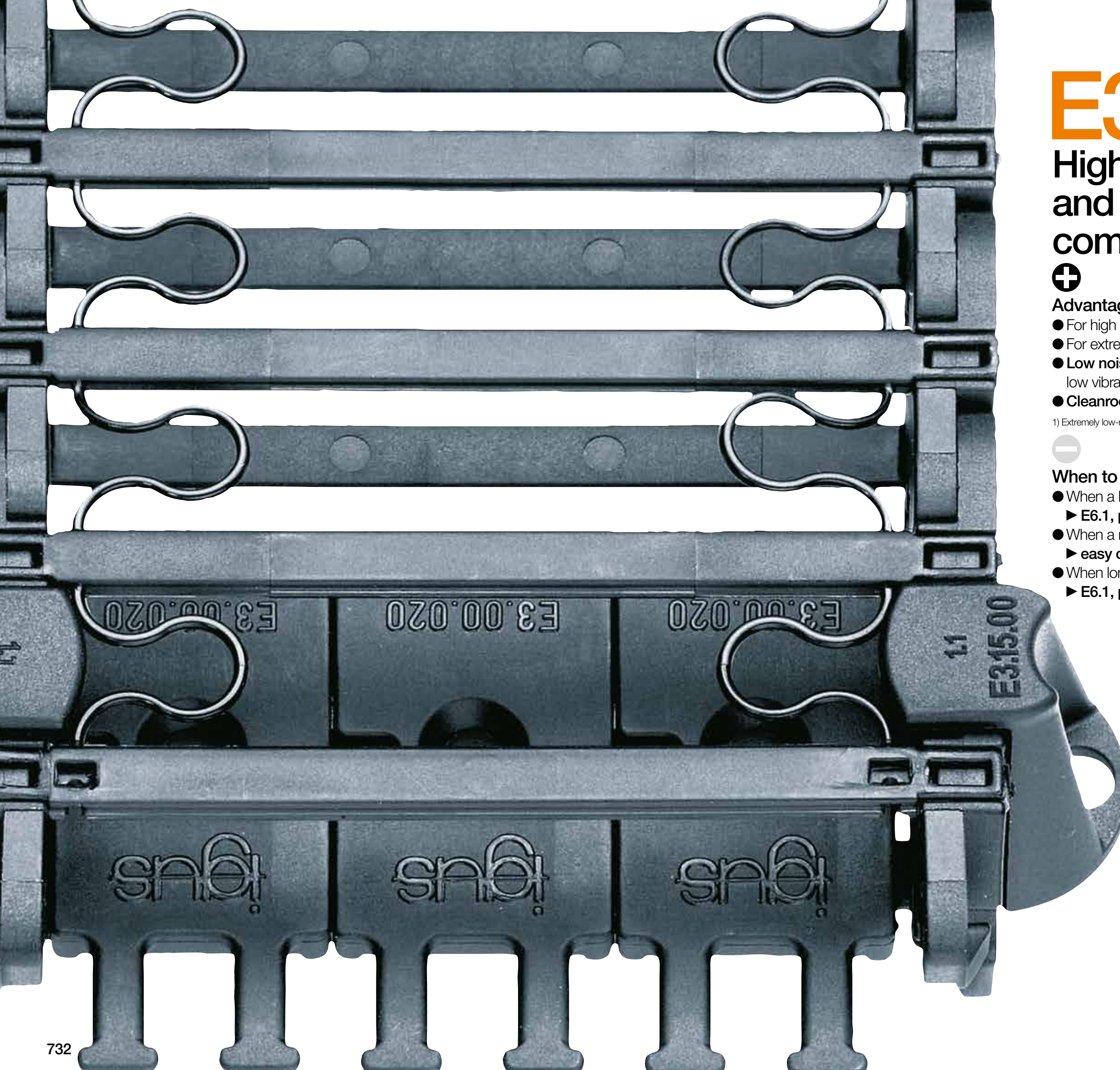
**Separator with integrated strain relief teeth**

- Can be integrated into the mounting bracket or placed at any point in the e-chain®
  - Combines strain relief and interior separation, for restricted space conditions
  - Strain relief separator is easy to assemble without any screws
- Part No. E6.29.02.Z. More information ► From page 1326



Perfect match. Cleanroom-suitable igus® chainflex® cables are safely guided in a T3 e-chain®. 1,125 chainflex® cables are certified according to IPA ISO Class 1 or Class 2 and are available from stock.





# E3

## High dynamics and cleanroom compatible



### Advantages of the E3 system:

- For high speeds and accelerations
- For extremely fast opening and closing
- **Low noise 38dB(A)**<sup>1)</sup> - low noise and low vibration due small pitch
- **Cleanroom ISO Class 1**<sup>2)</sup> - virtually no wear or abrasion

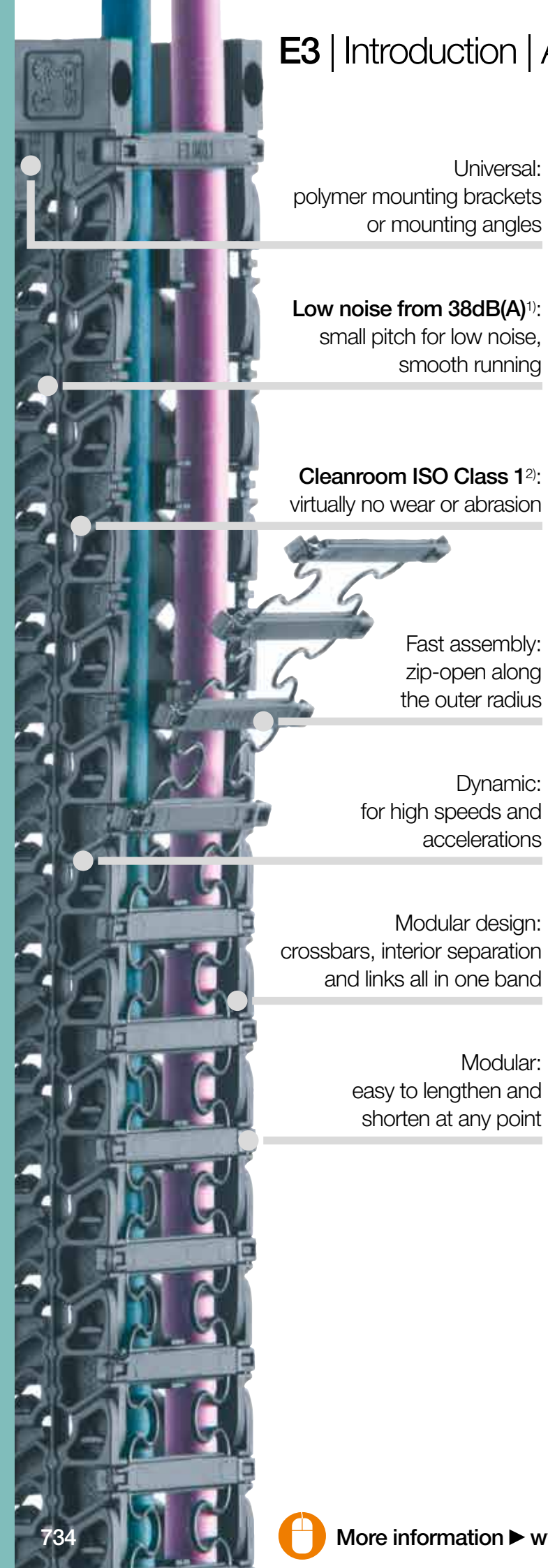
1) Extremely low-noise - tested at the igus® lab 2) Cleanroom - Series E3.15.040.075.0



### When to use another e-chain® series:

- When a larger e-chain® with cleanroom Class 1 is required  
▶ **E6.1**, page 750
- When a more cost-effective, openable solution is required  
▶ **easy chain®**, page 198
- When longer unsupported lengths are required  
▶ **E6.1**, page 750





Universal:  
polymer mounting brackets  
or mounting angles

Low noise from 38dB(A)<sup>1)</sup>:  
small pitch for low noise,  
smooth running

Cleanroom ISO Class 1<sup>2)</sup>:  
virtually no wear or abrasion

Fast assembly:  
zip-open along  
the outer radius

Dynamic:  
for high speeds and  
accelerations

Modular design:  
crossbars, interior separation  
and links all in one band

Modular:  
easy to lengthen and  
shorten at any point

## High dynamics and cleanroom compatible - System E3

E3 combines small pitch, smooth running, low noise, stability, easy assembly and low cost. The spring connector element replaces the pin and bore and avoids relative movement between the joints. This means virtually no wear or abrasion (cleanroom). To reduce production and assembly costs, the spring connector is on a segment of ten e-chain® links.

- 1) Extremely low-noise - tested at the igus® lab  
2) Cleanroom - Series E3.15.040.075.0

### Typical industries and applications

- Semi-conductor manufacturing and handling
- Pick and place robots
- Optics
- Material handling technology
- Measuring technology
- Printers and plotters
- Cleanroom environments
- General mechanical engineering



IPA Qualification Certificate<sup>2)</sup> - Report IG 0704-400:  
ISO Class 1, according to DIN EN ISO 14644-1 for system  
E3, series E3.15.040.075.0 at v = 0.5m/s, 1m/s, 2m/s

38 dB(A)<sup>1)</sup> - level determined at the igus® test-lab acc.  
to DIN 45635, with consideration of background  
noises, E3.22.060.044.0 at v = 1.8 m/s



Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Outer height <i>ha</i> [mm]	Bend radius <i>R</i> [mm]	Unsupported length ≤ [m]	Page
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System E3 -  
3-piece e-chains®  
crossbars on a strip -  
zip-open along the outer radius

E3.10	10	20 - 60	32 - 72	15	15 - 48	≈ 0.70	738
E3.15	15	20 - 60	32 - 72	20	32 - 75	≈ 0.90	742
E3.22	22	20 - 60	32 - 72	27	44 - 75	≈ 1.20	746

Available from stock. Ready to ship in 24 - 48hrs.\*

\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.



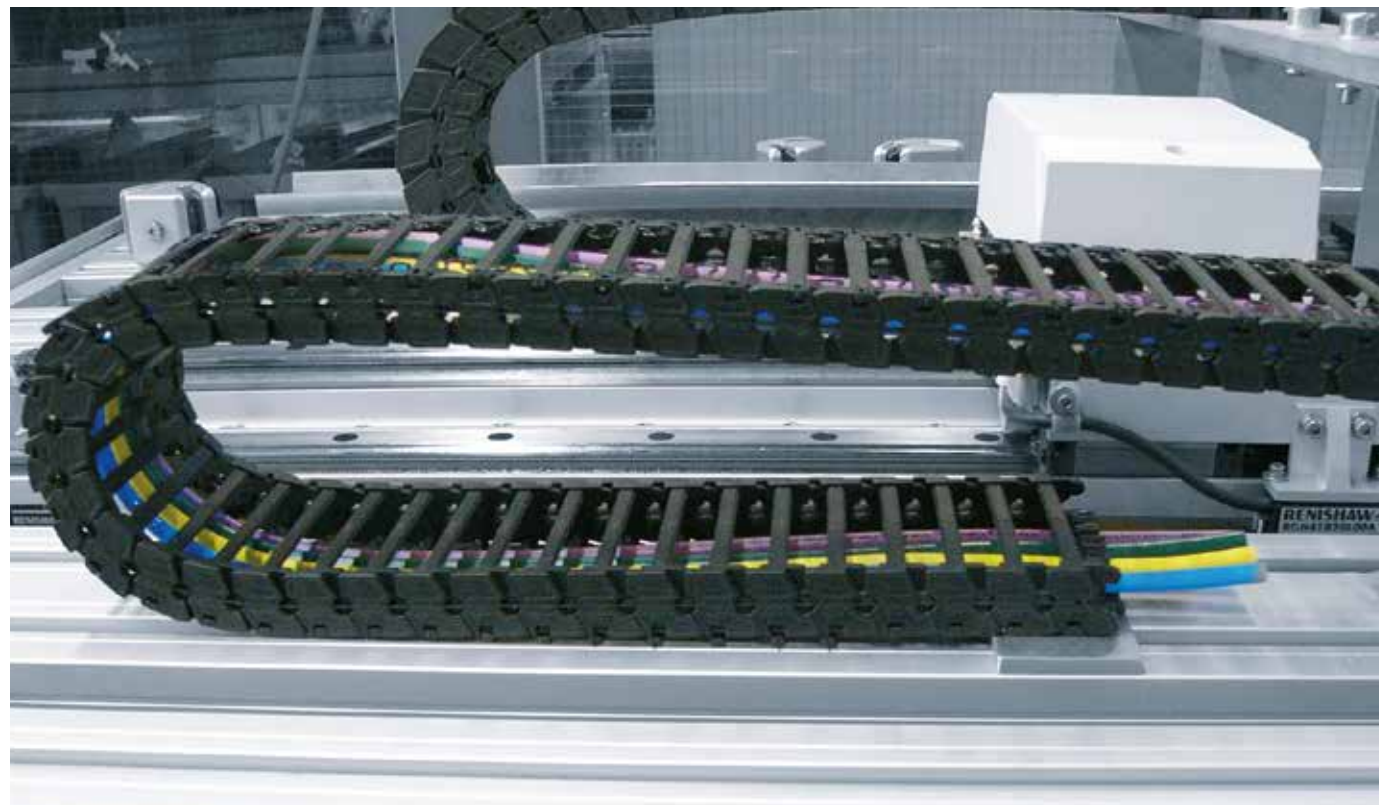
Long-term tests in our acoustics laboratory at a speed of 1.8m/s and an acceleration of 3m/s<sup>2</sup> showed reductions of 19-20dB(A) compared to conventional e-chains®



Technical data

	Speed $FL_G$ / acceleration $FL_G$	$\leq 20$ [m/s] / $\leq 200$ [m/s <sup>2</sup> ]
	Speed $FL_B$ / acceleration $FL_B$	$\leq 3$ [m/s] / $\leq 6$ [m/s <sup>2</sup> ]
	Material - permitted temperature °C	upon request
	Flammability class	VDE 0304 IIC UL94-HB

■  $FL_G$  = unsupported with straight upper run ■  $FL_B$  = unsupported with permitted sag



1,125 chainflexR cables are certified according to IPA ISO Class 1 or Class 2 and are available from stock

Options with order keys | Examples based on series E3.10

	Standard	NC version - (No Camber) without pretension
	Part No. Standard	Part No. NC version
	E3.10.060.R.0	E3.10.060.R.0.NC
	Ready to ship* in 24 - 48hrs.	Delivery time* 2-5 business days

\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

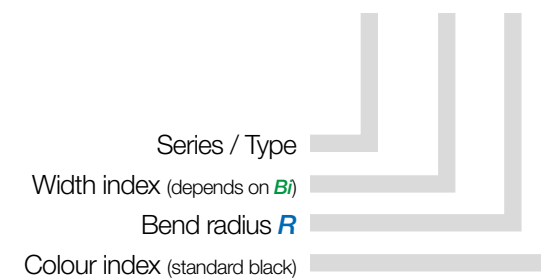
Order example | Order key and colour examples | Examples based on series E3.10

Order example for complete e-chain® (1.0m), colour black, with mounting brackets and interior separation:

e-chain® (1.0m)	Please indicate e-chain® length or number of links: 1.0m or 60 links	E3.10.060.015.0
+ Mounting angle	1 set (with tiwrap plates)	E3.100.060.12
Interior separation	with 2 separators assembled every 2 <sup>nd</sup> link	2 x E3.10.11
Order text:	1 m E3.10.060.015.0 + E3.100.060.12 + 2 x E3.10.11	

Order key

e-chain® zip-open along the outer radius **E3.10.060.015.0**



Order index for colour options

Colour	Order index	Colour	Order index
Black	Standard .0	Orange	Special colour .2
Silver-grey	Special colour .31	Yellow	Special colour .4
White	Special colour .1	Light grey	Special colour .14
Grey-white	Special colour .1S		

Black e-chains® available from stock.  
Above special colours upon request.



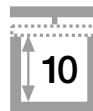


Image with plastic mounting bracket

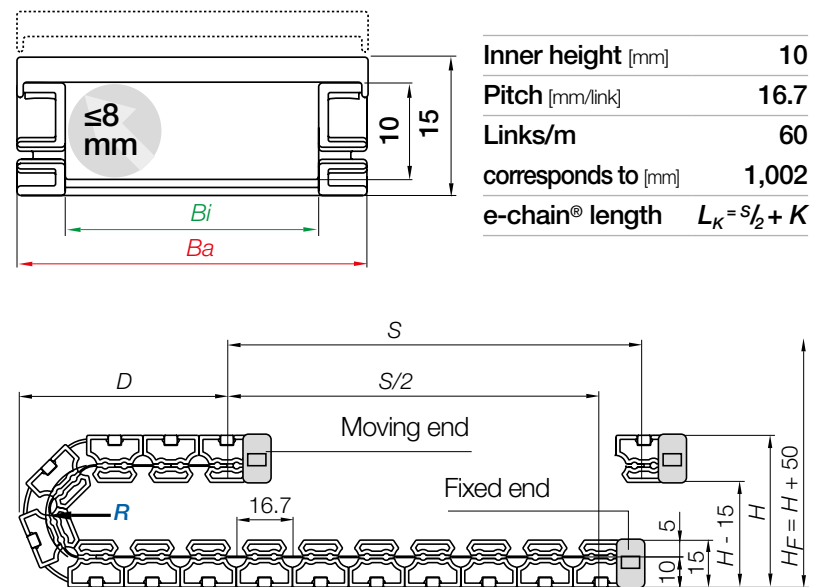
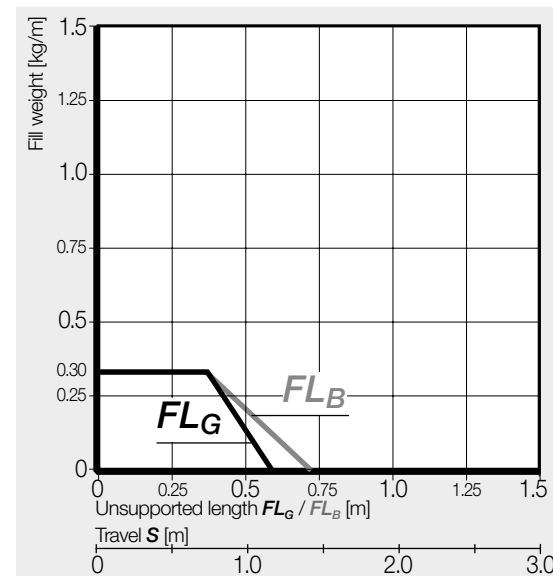
e-chains® | Series E3.10 | Crossbars on a strip - zip-open along the outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	<i>R</i> Available bend radii	E3.10
e-chains®	[mm]	[mm]	[mm]	[kg/m]
E3.10.020 .R.0	20	32	015   028   038*   048*	≈ 0.12
E3.10.040 .R.0	40	52	015   028*   038   048	≈ 0.15
E3.10.060 .R.0	60	72	015   028*   038   048*	≈ 0.20

\*Radius available upon request. Please consult igus® for delivery time.

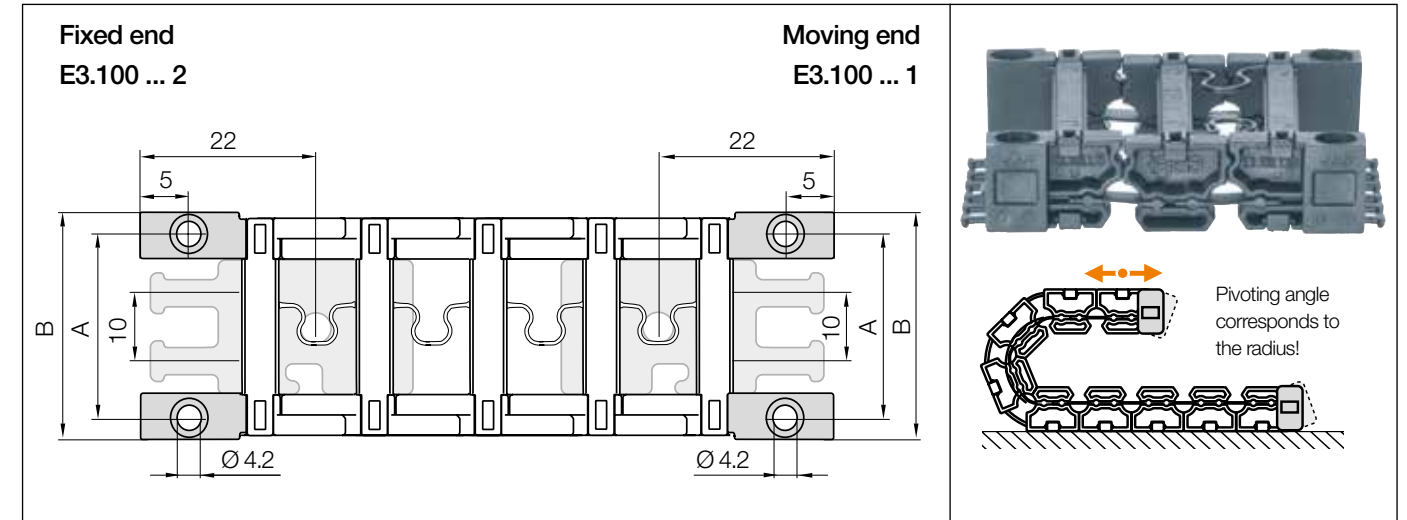
Complete Part No. with required radius (*R*). Example: E3.10.060.015.0

Installation dimensions

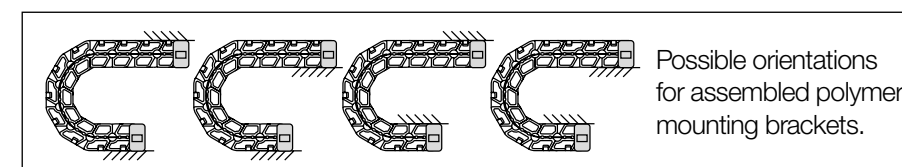
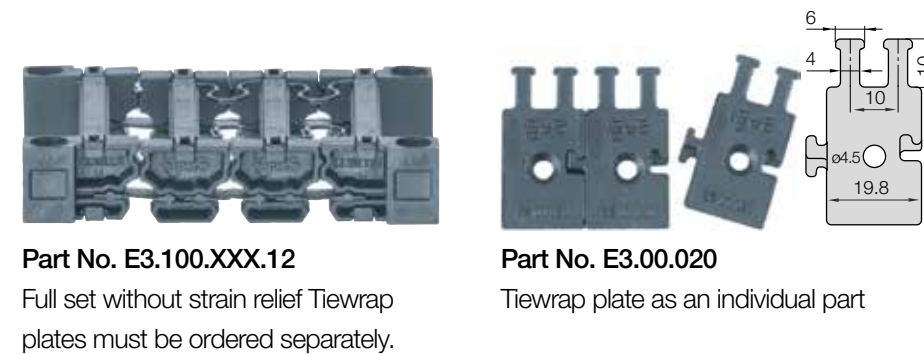


<i>R</i>	015	028	038	048
<i>H</i>	60	86	106	126
<i>D</i>	50	63	73	83
<i>K</i>	85	125	155	185

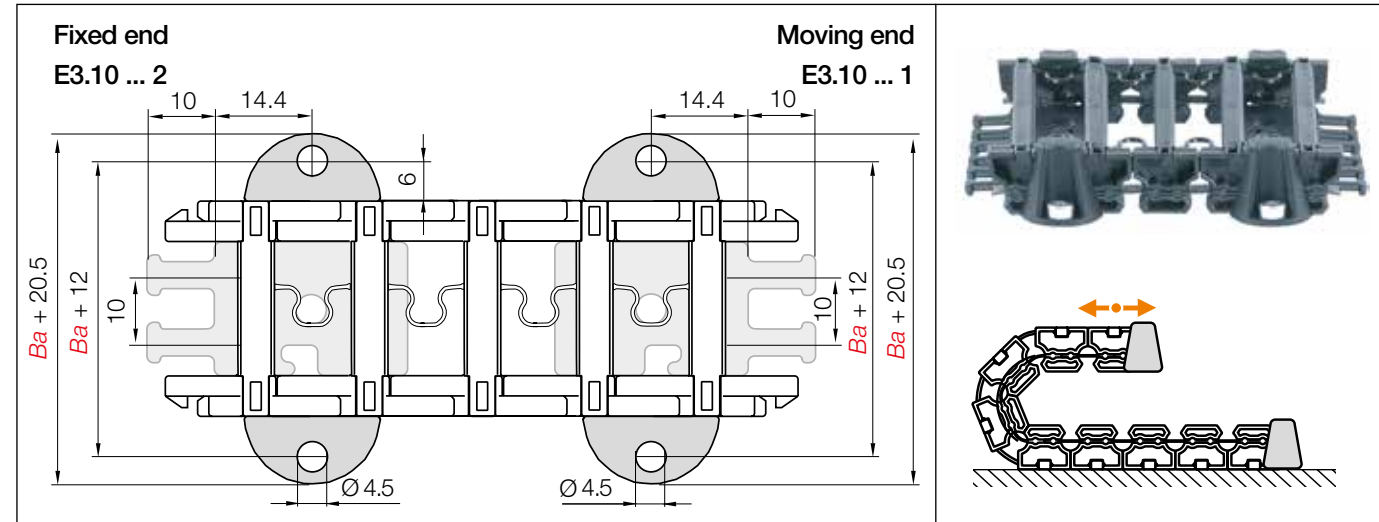
The required clearance height:  $H_F = H + 50\text{mm}$  (with 0.1kg/m fill weight)



Width index	Part No. full set without tiewrap plates	A [mm]	B [mm]	Part No. strain relief at both ends
020.	E3.100.020.12	28	36	E3.020.12
040.	E3.100.040.12	48	56	E3.020.12
060.	E3.100.060.12	68	76	E3.020.12

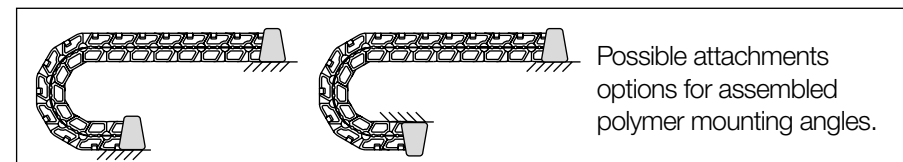


**E3.100.060.12** Order example  
 Full set  
 Width index  
 Series



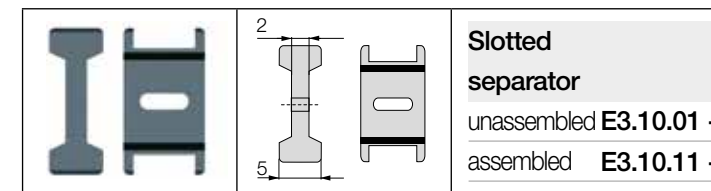
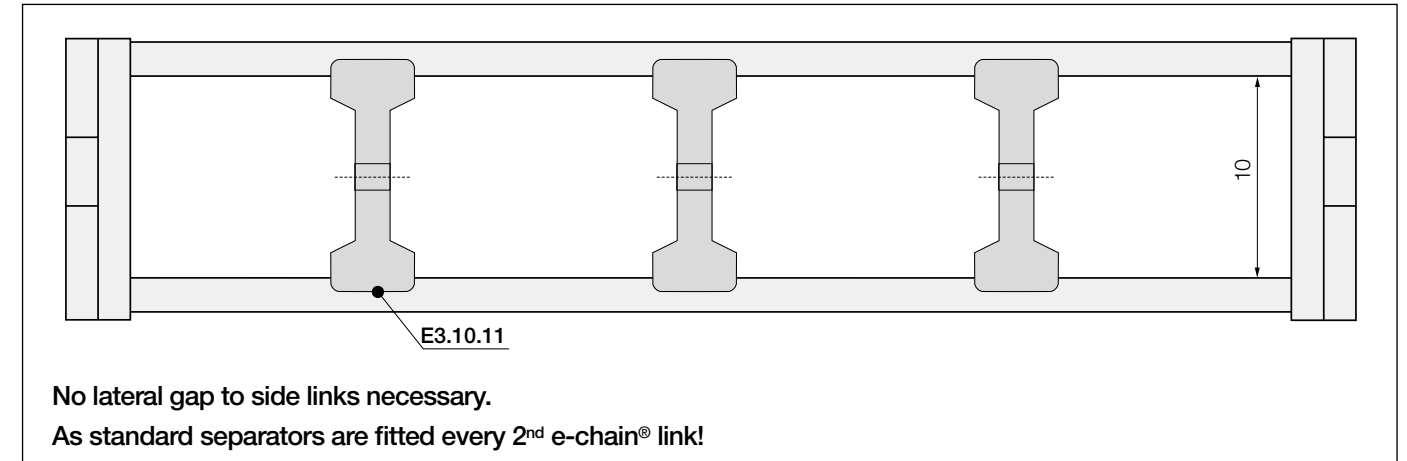
Width index	Part No. full set strain relief at both ends + 4 mounting angles*	Part No. mounting angle* (single part)	Part No. strain relief at both ends	Ba [mm]
020.	▶ E3.10.020.12	E3.10.00	E3.020.12	32
040.	▶ E3.10.040.12	E3.10.00	E3.040.12	52
060.	▶ E3.10.060.12	E3.10.00	E3.060.12	72

\* **Note:** If the mounting brackets are used, two links each end must be added to the calculated e-chain® length, because the first two links are fixed by the mounting brackets.



**E3.10.060.12** Order example

- Full set
- Width index
- Series



**Slotted separator**  
Separators can be arranged at any position in the chain cross section to divide the interior of the e-chain®.



E3 e-chains® in optional white colour; ideal for cleanroom and medical applications, available upon request



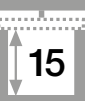


Image with plastic mounting bracket

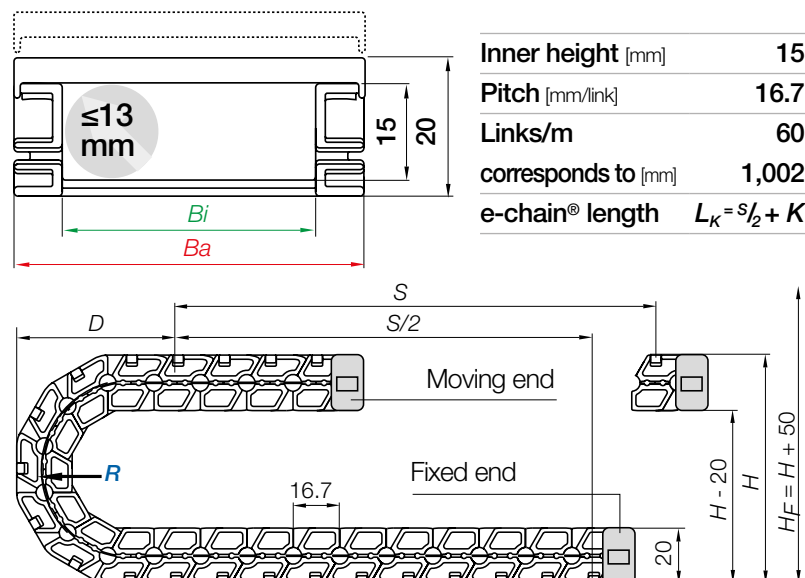
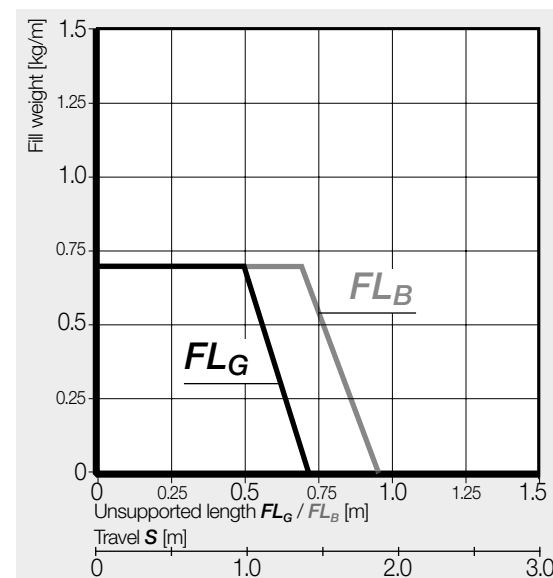
e-chains® | Series E3.15 | Crossbars on a strip - zip-open along the outer radius

Part No.	Bi	Ba	R Available bend radii				E3.15
e-chains®	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/m]
E3.15.020 .R.0	20	32	032	-	048*	-	≈ 0.22
E3.15.040 .R.0	40	52	032	038	048	075	≈ 0.25
E3.15.060 .R.0	60	72	032	038	048	075	≈ 0.32

\*Radius available upon request. Please consult igus® for delivery time.

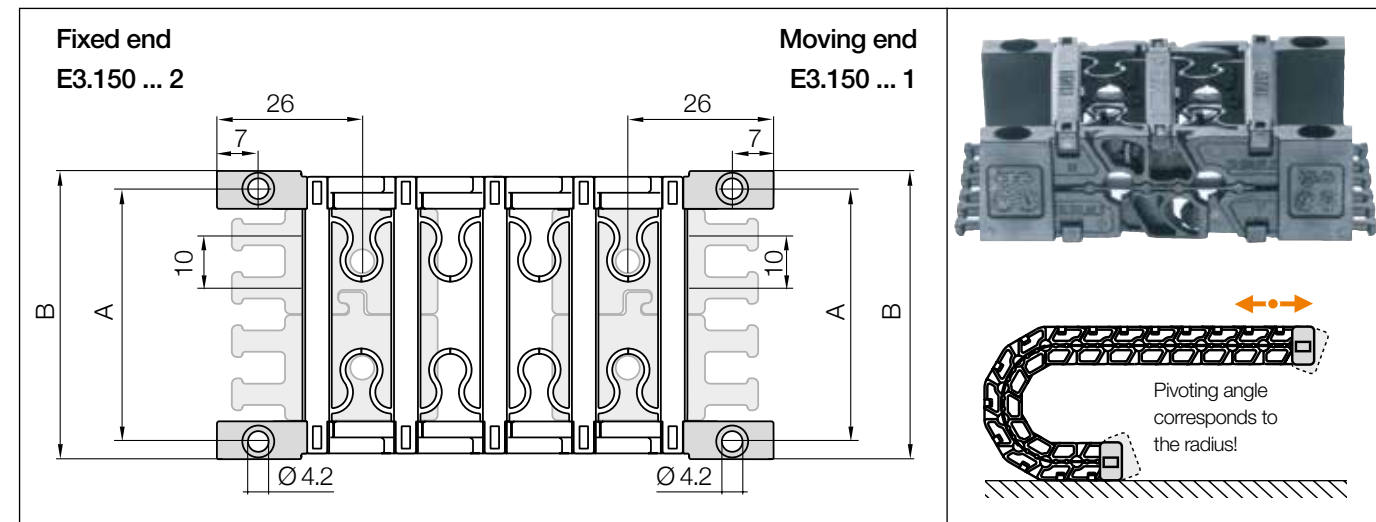
Complete Part No. with required radius (R). Example: E3.15.060.032.0

Installation dimensions



R	032	038	048	075
H	99	111	131	185
D	67	73	83	110
K	135	155	185	270

The required clearance height:  $H_F = H + 50\text{mm}$  (with 0.2kg/m fill weight)

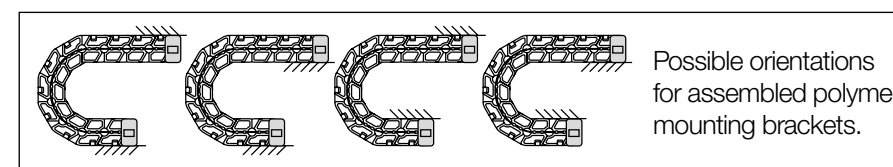


Width index	Part No. full set without tiewrap plates	A [mm]	B [mm]	Part No. strain relief at both ends
020.	E3.150.020.12	28	36	E3.020.12
040.	E3.150.040.12	48	56	E3.020.12
060.	E3.150.060.12	68	76	E3.020.12



Part No. E3.150.XXX.12  
Full set without strain relief Tiewrap plates must be ordered separately.

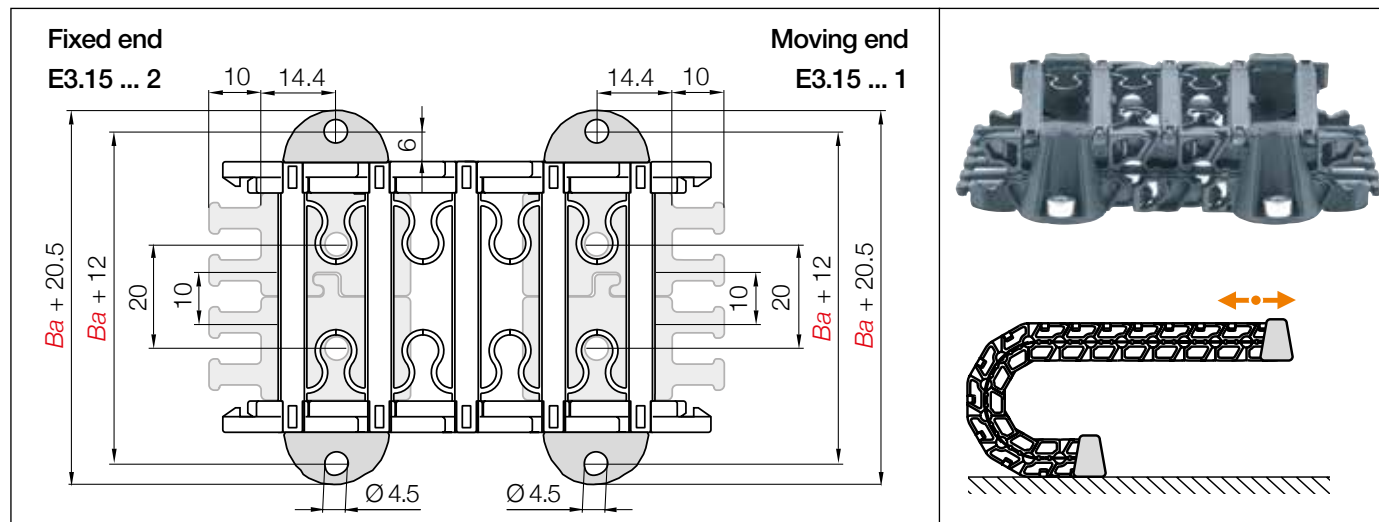
Part No. E3.00.020  
Tiewrap plate as an individual part



Possible orientations for assembled polymer mounting brackets.

E3.150.060.12 Order example

- Full set
- Width index
- Series

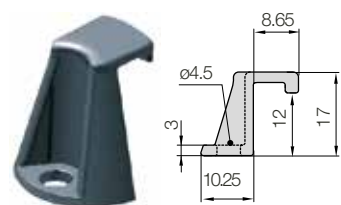


Width index	Part No. full set strain relief at both ends + 4 mounting angles*	Part No. mounting angle* (single part)	Part No. strain relief at both ends	Ba [mm]
020.	▶ E3.15.020.12	E3.15.00	E3.020.12	32
040.	▶ E3.15.040.12	E3.15.00	E3.040.12	52
060.	▶ E3.15.060.12	E3.15.00	E3.060.12	72

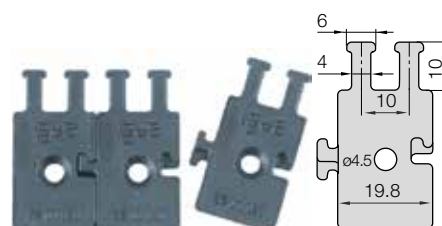
\* **Note:** If the mounting brackets are used, two links each end must be added to the calculated e-chain® length, because the first two links are fixed by the mounting brackets.



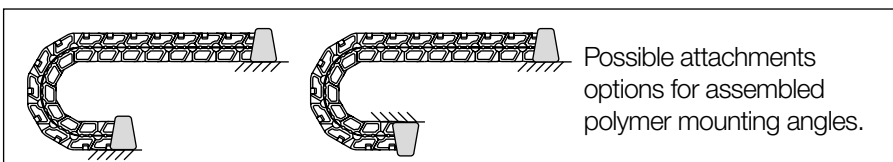
**Part No. E3.15.XXX.12**  
Full set with strain relief at both ends  
2 tie-wrap plates + 4 mounting angles



**Part No. E3.15.00**  
Mounting angle as an individual part



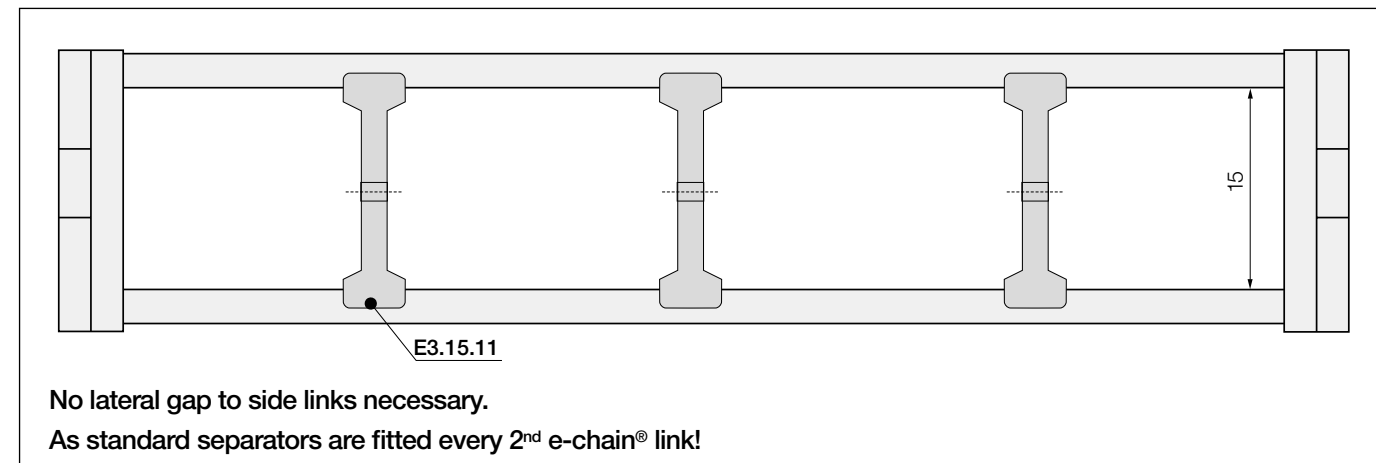
**Part No. E3.00.020**  
Tie-wrap plate as an individual part



Possible attachments options for assembled polymer mounting angles.

**E3.15.060.12**      **Order example**

- Full set
- Width index
- Series



No lateral gap to side links necessary.  
As standard separators are fitted every 2<sup>nd</sup> e-chain® link!

**Slotted separator**  
unassembled **E3.15.01** -  
assembled **E3.15.11** -

**Slotted separator**  
Separators can be arranged at any position in the chain cross section to divide the interior of the e-chain®.

**Slotted separator on a strip**  
unassembled **E3.15.01.10**  
assembled **E3.15.11.10**

**Slotted separator on a strip**  
Five vertical separators altogether on one strip over ten e-chain® links are mounted on the openable crossbars. In this way separate chambers are formed, protecting the cables. Dimensions same as E3.15.01.



igus® E3 system, ideal for very small installation spaces as well as very low-noise operation



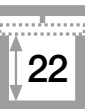


Image with plastic mounting bracket

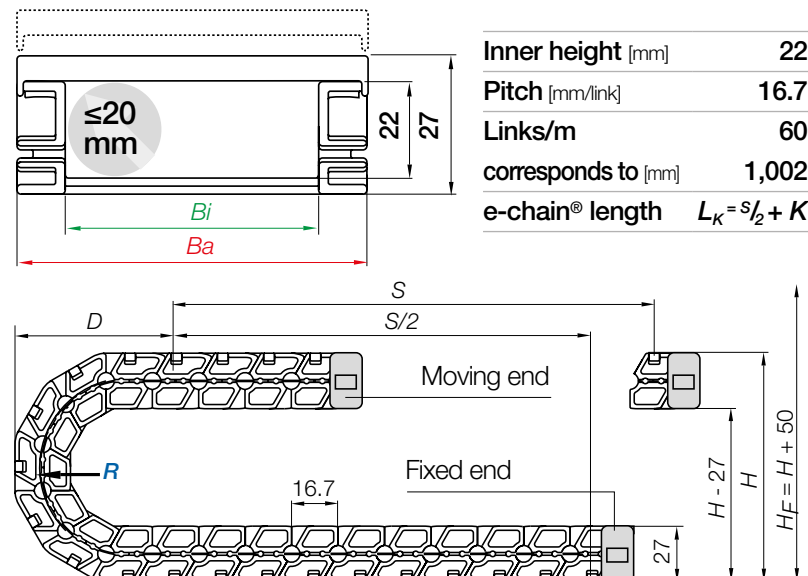
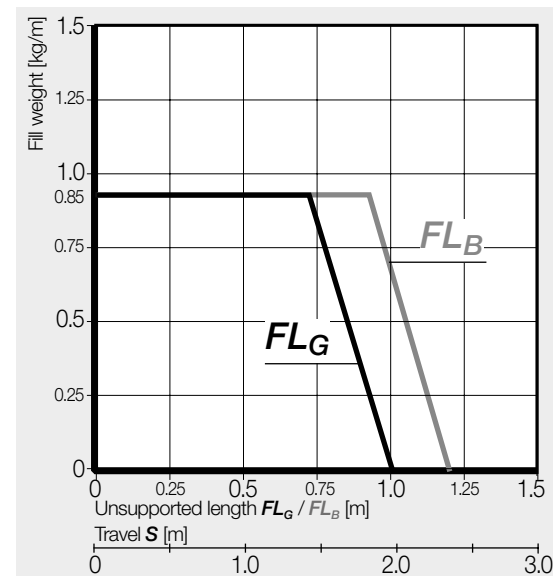
e-chains® | Series E3.22 | Crossbars on a strip - zip-open along the outer radius

Part No.	Bi [mm]	Ba [mm]	R Available bend radii [mm]	E3.22 [kg/m]
e-chains®				
E3.22.020 .R.0	20	32	044   050   075	≈ 0.30
E3.22.040 .R.0	40	52	044   050   075	≈ 0.32
E3.22.060 .R.0	60	72	044   -   075	≈ 0.41

\*Radius available upon request. Please consult igus® for delivery time.

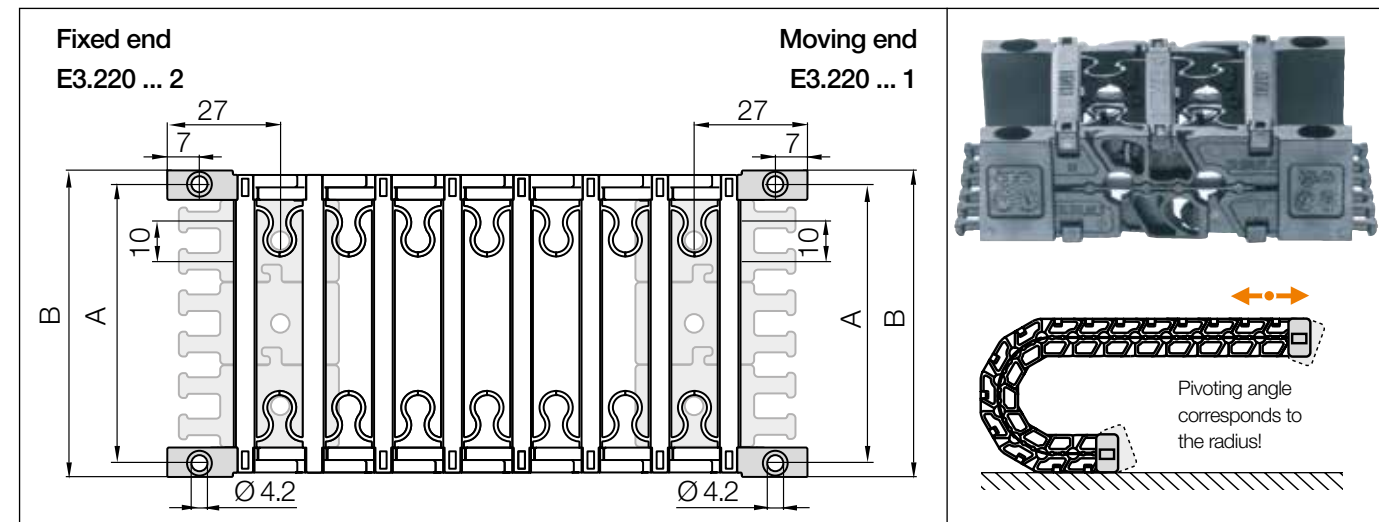
Complete Part No. with required radius (R). Example: E3.22.060.044.0

Installation dimensions



R	044	050	075
H	134	146	196
D	82	88	113
K	175	195	270

The required clearance height:  $H_F = H + 50\text{mm}$  (with 0.3kg/m fill weight)

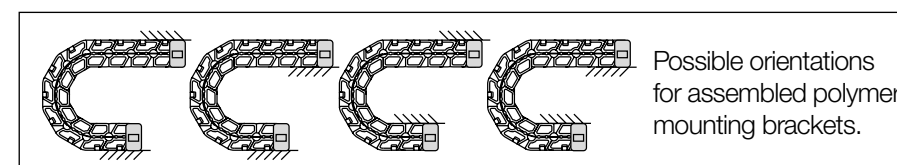


Width index	Part No. full set without tiewrap plates	A [mm]	B [mm]	Part No. strain relief at both ends
020.	E3.220.020.12	28	36	E3.020.12
040.	E3.220.040.12	48	56	E3.020.12
060.	E3.220.060.12	68	76	E3.020.12



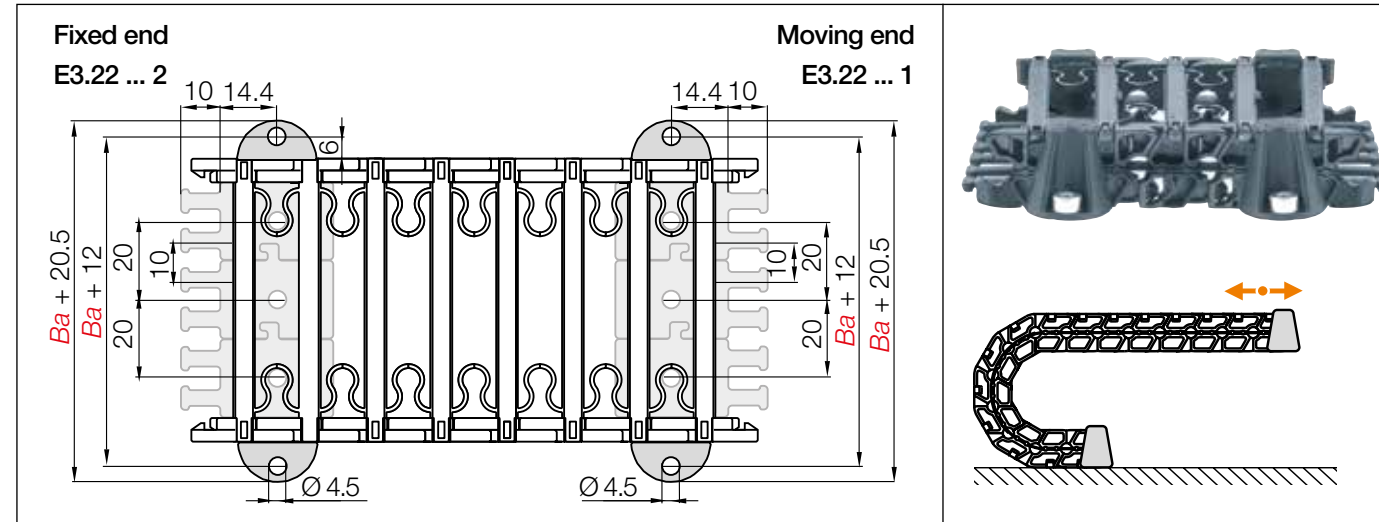
Part No. E3.220.XXX.12  
Full set without strain relief Tiewrap plates must be ordered separately.

Part No. E3.00.020  
Tiewrap plate as an individual part



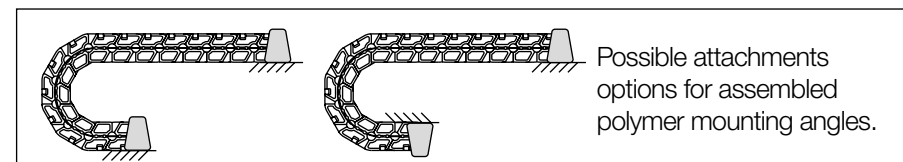
E3.220.060.12 Order example

█	Full set
█	Width index
█	Series

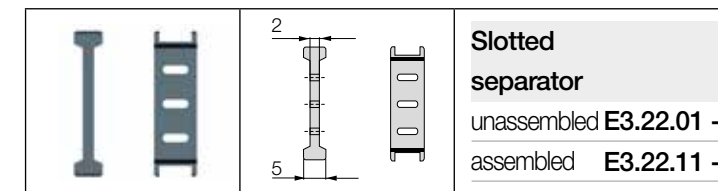
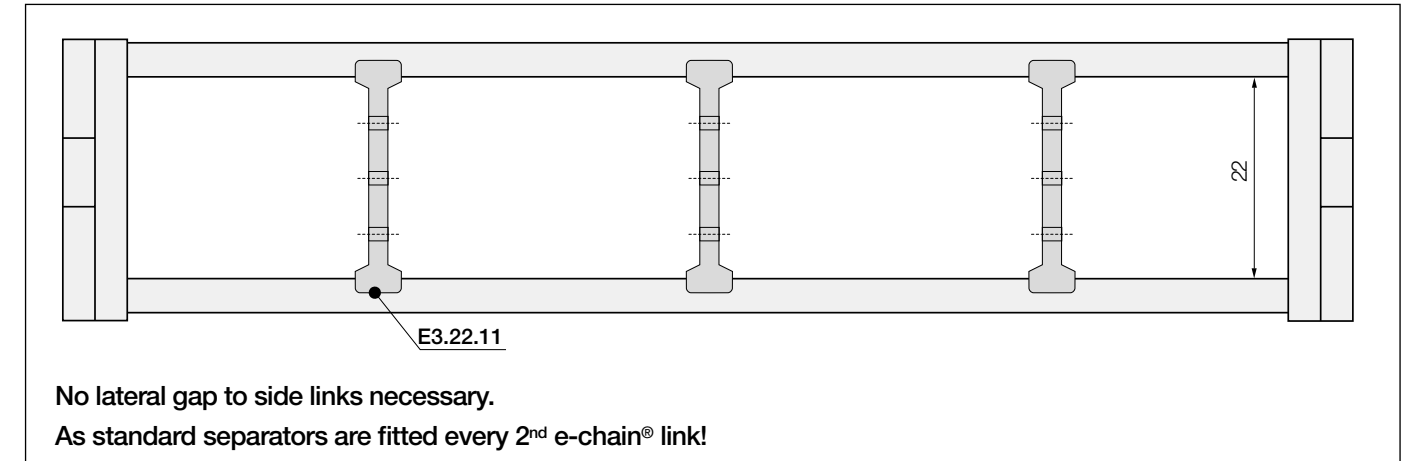


Width index	Part No. full set strain relief at both ends + 4 mounting angles*	Part No. mounting angle* (single part)	Part No. strain relief at both ends	Ba [mm]
020.	▶ E3.22.020.12	E3.22.00	E3.020.12	32
040.	▶ E3.22.040.12	E3.22.00	E3.040.12	52
060.	▶ E3.22.060.12	E3.22.00	E3.060.12	72

\* **Note:** If the mounting brackets are used, two links each end must be added to the calculated e-chain® length, because the first two links are fixed by the mounting brackets.



**E3.22.060.12** Order example  
 Full set  
 Width index  
 Series



**Slotted separator**  
 Separators can be arranged at any position in the chain cross section to divide the interior of the e-chain®.



igus® series E3.15 side mounted as a low-abrasion guide for cables in a scanner system





# E6.1

## Dynamic, quiet, light and cleanroom suitable



### Advantages of the E6.1 system:

- Extremely quiet, low-vibration e-chain®
- For very high speeds and accelerations
- Ideal ratio of internal and external dimensions with thinner outer links and optimised crossbar geometry
- High push-pull forces
- Small bend radii
- **Low-noise 32dB(A)<sup>1)</sup>** - extremely low noise and vibration
- **Cleanroom ISO Class 1<sup>2)</sup>** - virtually no wear or abrasion

1) Extremely low-noise - tested at the igus® lab Series E61.29.070.055.0

2) Cleanroom - Series E61.29.50.075.0 and Series E61.29.50.075.0.CR



### When to use another e-chain® series:

- For side-mounted applications
  - ▶ **E2/000, page 360**
- When a Reverse Bend Radius **RBR** is required
  - ▶ **E2/000, page 360**
- For longer unsupported lengths
  - ▶ **E2/000, page 360**
- For long travels
  - ▶ **E2/000, page 360**
- When an enclosed e-chain® for smooth running is required
  - ▶ **R6, page 788**



Attachment from any side:  
with KMA mounting  
brackets

Fast assembly:  
crossbars removable  
along the inner and  
outer radius

**Low noise from  
32dB(A)<sup>1)</sup>**:  
small pitch for low  
noise, smooth running

Dynamic:  
for high speeds and  
accelerations

Long service life:  
low vibration,  
high strength

**Cleanroom ISO Class  
1<sup>2)</sup>**:  
virtually no wear  
or abrasion

Modular design:  
easy to lengthen  
and shorten



**Series E61.29  
special feature:**  
crossbar openable  
along inner and outer  
radius, from both sides

## Dynamic, quiet, light and cleanroom suitable - E6.1

The E6.1 series is a development of the E6 series. It incorporates all the advantages of the E6 such as strength, cleanroom-compatibility and low weight in addition to even quieter operation at higher maximum speeds. In addition, its accessibility to the interior and the assembly and handling have been improved.

- Low-noise - from a noise level of 32dB(A)<sup>1)</sup>
- Weight savings approx. 30% compared to the System E6
- Highly dynamic
- Extremely low vibration
- Cleanroom-compatible due to principle of low-abrasion for connectors, without pin/bore connection
- Virtually no polygon effect, smooth rolling operation
- Smooth interior design for a long lifetime for cables and hoses
- Crossbars removable along the inner and outer radius
- Option without camber (NC) simply by turning the inner link

1) Extremely low-noise - tested at the igus® lab Series E61.29.070.055.0

2) Cleanroom - Series E61.29.50.075.0 and Series E61.29.50.075.0.CR

### Typical industries and applications

- Semiconductor industry
- Studio equipment and camera tracking systems
- Printer/plotter industry
- In applications with extremely high accelerations
- When noise minimisation and a low level of abrasion are important



32dB(A)<sup>1)</sup> - level determined at the igus® test-lab, v = 1.0m/s unsupported, series E61.29.070.055.0

Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Outer height <i>ha</i> [mm]	Bend radius <i>R</i> [mm]	Unsupported length ≤ [m]	Page
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**E6.1 e-chains®**  
openable along inner and  
outer radius, from both sides

E61.29	29	30 - 140	44 - 14	35	055 - 150	≈ 1.75	758
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**E6.1 e-chains®**  
crossbars removable along  
the inner and outer radius

EF61.29	29	30 - 140	44 - 154	35	055 - 150	≈ 1.75	758
E61.35	35	30 - 140	46 - 156	42	055 - 150	≈ 1.90	764
E61.40	40	40 - 300	56 - 316	54	063 - 200	≈ 2.50	768
E61.52	52	40 - 300	64 - 324	65	075 - 150	≈ 3.00	774
E61.62	62	50 - 400	82 - 432	84	115	≈ 4.00	778
E61.80	80	50 - 600	78 - 628	108	150	≈ 5.25	782



**Available from stock. Ready to ship in 24 - 48hrs.\***

\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

### Cost-effective - Series EF61.29

- Series EF61.29 - 29mm inner height
- Available at an even lower price without the pivoting function of the crossbars
- Crossbars removable from both sides
- Otherwise, technically the same as the E61.29 series.

More information ► [www.igus.eu/EF61.29](http://www.igus.eu/EF61.29)



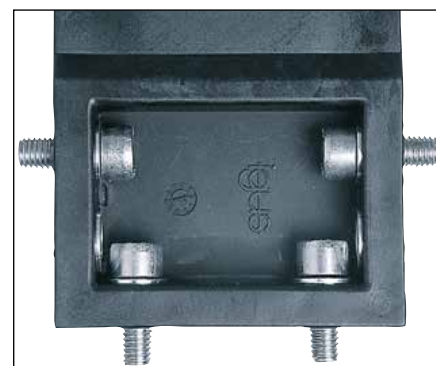




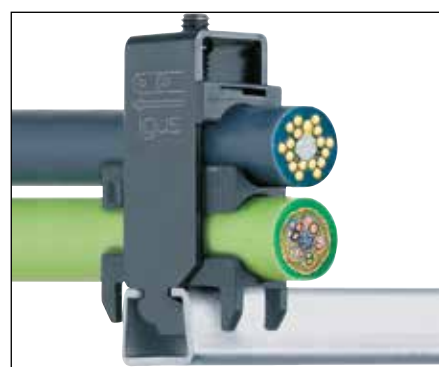
Lean separators enable extremely fast cable filling in several layers



Openable mechanism, Series E61.29 is openable on left or right



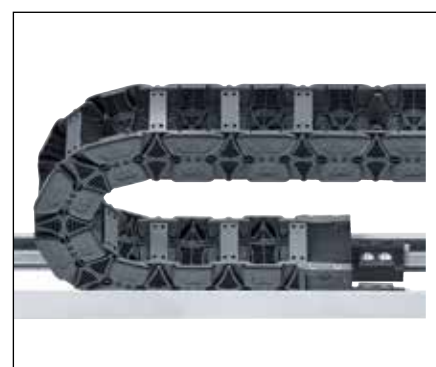
KMA mounting brackets with attachment options from any side



Strain relief e.g. clamps, tie-wrap plates, nuggets, etc. ▶ **From page 1300**



Pivoting KMA mounting brackets - pivot angle corresponds to the bend radius



Aluminium and steel support tray for support of the lower run ▶ **From page 1264**

## E6.1 for cleanrooms

### Cleanroom qualification of E6.1 e-chains®

By using a special material, the already low abrasion of the e-chain® can be reduced even further. In many applications where cumbersome special solutions are required, a simple standard e-chain® can be used instead. IPA tests confirm that standard iglus® e-chains® meet cleanroom requirements. "Tested and certified as very good!" e-chains® for cleanroom applications demand very high wear resistance of moving parts in order to meet the normal requirements for such a sensitive environment.

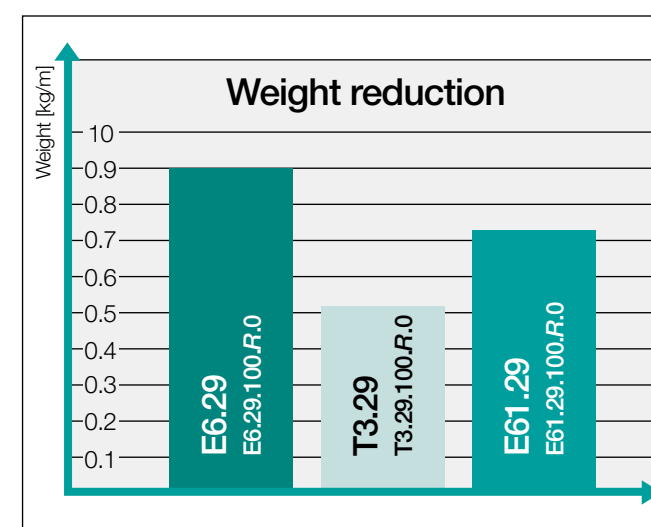


**IPA Qualification Certificate<sup>2)</sup> - Report IG 1303-640-1:**  
ISO Class 1, according to DIN EN ISO 14644-1 for system E6.1, series E61.29.50.075.0 and E61.29.50.075.0.CR at v = 0.5m/s, 1m/s, 2m/s

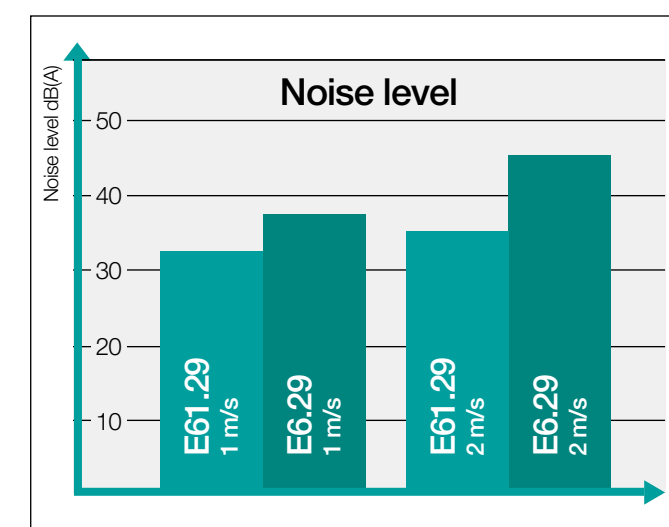


The fact that the interior of the new E6.1 has been designed to be extremely cable-friendly underlines its suitability for cleanrooms by increasing the service life of cables and hoses even more. The crossbars are very smooth and rounded as is the transition from e-chain® link to crossbar, and all markings have been moved outside of the e-chain® cross section.

## System E6.1 tests in the igus® lab




The E6.1 generation can take up higher accelerations, due to a weight reduction, making it a highly dynamic yet still extremely quiet e-chain®



The results of the E61.29 series noise-measurement tests in the igus® test laboratory showed noise levels below the already very low values for the E6.29 series. 32dB(A) - level determined at the igus® test-lab, v = 1.0m/s unsupported, series E61.29.070.055.0

## Technical data



 Speed gliding<sup>1)</sup> / acceleration gliding<sup>1)</sup> upon request

 Speed  $FL_G$  / acceleration  $FL_G$   $\leq 20$  [m/s] /  $\leq 200$  [m/s<sup>2</sup>]

 Speed  $FL_B$  / acceleration  $FL_B$   $\leq 3$  [m/s] /  $\leq 6$  [m/s<sup>2</sup>]

 Material - permitted temperature °C, igumid G upon request

 Flammability class, igumid G **VDE 0304 IIC UL94-HB**

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

<sup>1)</sup> Gliding applications for long travels are available upon request, please consult igus®.

## Installation types, maximum travels

Series	 Unsupported	 Gliding <sup>1)</sup>	 Vertical hanging	 Vertical standing	 Side mounted unsupported
EF61.29/E61.29	$\leq 3.50\text{m}$	upon request	$\leq 25\text{m}$	$\leq 2.0\text{m}$	upon request
E61.35	$\leq 3.80\text{m}$	upon request	$\leq 30\text{m}$	$\leq 2.0\text{m}$	upon request
E61.40	$\leq 5.00\text{m}$	upon request	$\leq 30\text{m}$	$\leq 2.0\text{m}$	upon request
E61.52	$\leq 6.00\text{m}$	upon request	$\leq 50\text{m}$	$\leq 2.0\text{m}$	upon request
E61.62	$\leq 8.00\text{m}$	upon request	$\leq 60\text{m}$	$\leq 3.0\text{m}$	upon request
E61.80	$\leq 10.0\text{m}$	upon request	$\leq 60\text{m}$	$\leq 4.0\text{m}$	upon request

<sup>1)</sup> Gliding applications for long travels are available upon request, please consult igus®.

## Options with order keys | Examples based on series E61.52

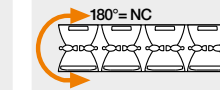
 **Standard**


Simply turn outer side link, no additional rework

Part No.  
Standard




Part No.  
NC version



 **E61.52.100.R.0**


**E61.52.100.R.0.NC**

 **Ready to ship\***  
in 24 - 48hrs.

**Ready to ship\***  
in 24 - 48hrs.

\*The delivery times indicated correspond to the average time until the ordered goods are dispatched.

## Order example | Order key and colour examples | Examples based on series E61.52

 **Order example for complete e-chain® (1.0m), colour black, with mounting brackets and interior separation:**








<b>e-chain® (1.0m)</b>	Please indicate e-chain® length or number of links: 1.0m or 34 links	<b>E61.52.100.075.0</b>
<b>+ Mounting brackets</b>	KMA pivoting - 1 set	<b>E61.520.100.12</b>
<b>Interior separation</b>	with 2 separators assembled every 2 <sup>nd</sup> link	<b>2 x E6.52.1.1</b>
<b>Order text:</b>	<b>1 m E61.52.100.075.0 + E61.520.100.12 + 2 x E6.52.1.1</b>	

 **Order key**

Crossbars removable

**E61.52.100.075.0**

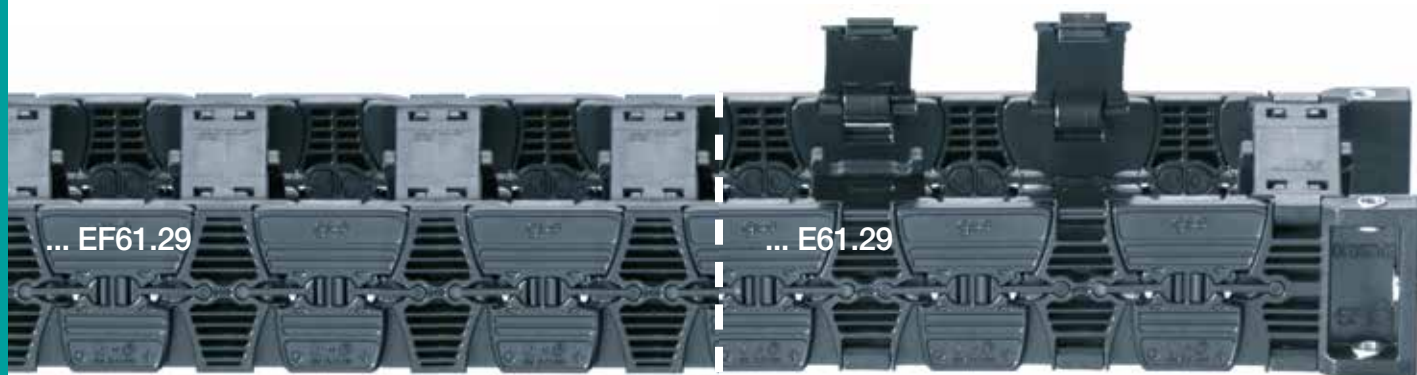
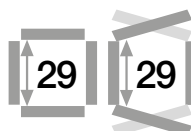
**Order index for colour options**

Series / Type	Width index (depends on $B_i$ )	Bend radius $R$	Colour index (standard black)	Colour	Order index	Colour	Order index
				 <b>Black</b>	Standard	 <b>Orange</b>	Special colour
				 <b>Silver-grey</b>	Special colour	 <b>Yellow</b>	Special colour
				 <b>White</b>	Special colour	 <b>Light grey</b>	Special colour
				 <b>Grey-white</b>	Special colour		

**Black e-chains® available from stock.**

**Above special colours upon request.**





e-chains® | EF61.29 | Crossbars removable along the inner and outer radius  
 e-chains® | E61.29 | Crossbars openable along the inner and outer radius, from both sides

Part No. crossbars removable	Part No. openable from both sides	Bi [mm]	Ba [mm]	EF61.29 [kg/m]	E61.29 [kg/m]	Part No. crossbars removable	Part No. openable from both sides	Bi [mm]	Ba [mm]	EF61.29 [kg/m]	E61.29 [kg/m]
EF61.29.030.R.0	E61.29.030.R.0	30	44	≈ 0.558	≈ 0.558	EF61.29.090.R.0	E61.29.090.R.0	90	104	≈ 0.707	≈ 0.707
EF61.29.040.R.0	E61.29.040.R.0	40	54	≈ 0.583	≈ 0.583	EF61.29.100.R.0	E61.29.100.R.0	100	114	≈ 0.732	≈ 0.732
EF61.29.050.R.0	E61.29.050.R.0	50	64	≈ 0.608	≈ 0.608	EF61.29.110.R.0	E61.29.110.R.0	110	124	≈ 0.757	≈ 0.757
EF61.29.060.R.0	E61.29.060.R.0	60	74	≈ 0.633	≈ 0.633	EF61.29.120.R.0	E61.29.120.R.0	120	134	≈ 0.782	≈ 0.782
EF61.29.070.R.0	E61.29.070.R.0	70	84	≈ 0.657	≈ 0.657	EF61.29.140.R.0	E61.29.140.R.0	140	154	≈ 0.807	≈ 0.807
EF61.29.080.R.0	E61.29.080.R.0	80	94	≈ 0.682	≈ 0.682						

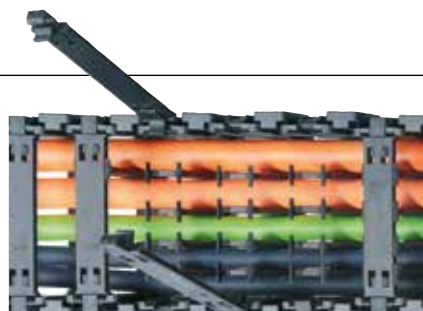
Available bend radii

R [mm] | 055 | 075 | 100 | 125 | 150 |

Complete Part No. with required radius (R). Example: EF61.29.050.100.0 / E61.29.050.100.0

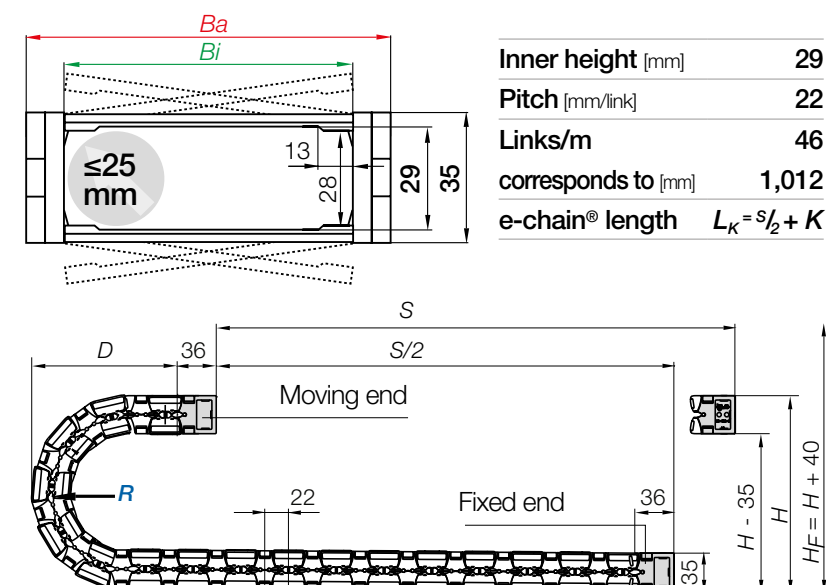
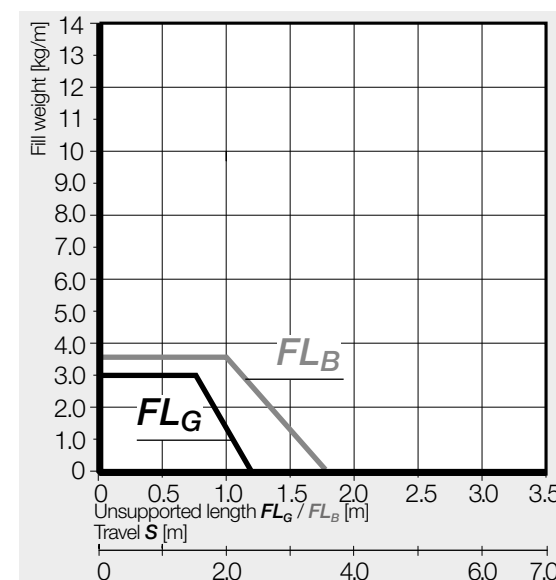
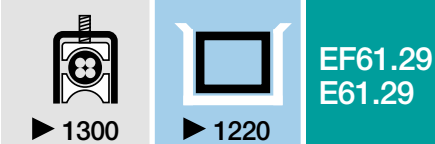
Series E61.29 special feature: openable crossbars

Crossbar openable along inner and outer radius, from both sides  
 Assembly video available online at ► [www.igus.eu/E61\\_assembly](http://www.igus.eu/E61_assembly)



Cost-effective - Series EF61.29

- Series EF61.29 - 29mm inner height
  - Available at an even lower price without the pivoting function of the crossbars
  - Crossbars removable from both sides
  - Otherwise, technically the same as the E61.29 series.
- More information ► [www.igus.eu/EF61.29](http://www.igus.eu/EF61.29)



R	055	075	100	125	150
H	175	215	265	315	365
D	105.5	125.5	150.5	175.5	200.5
K	220	280	360	440	520

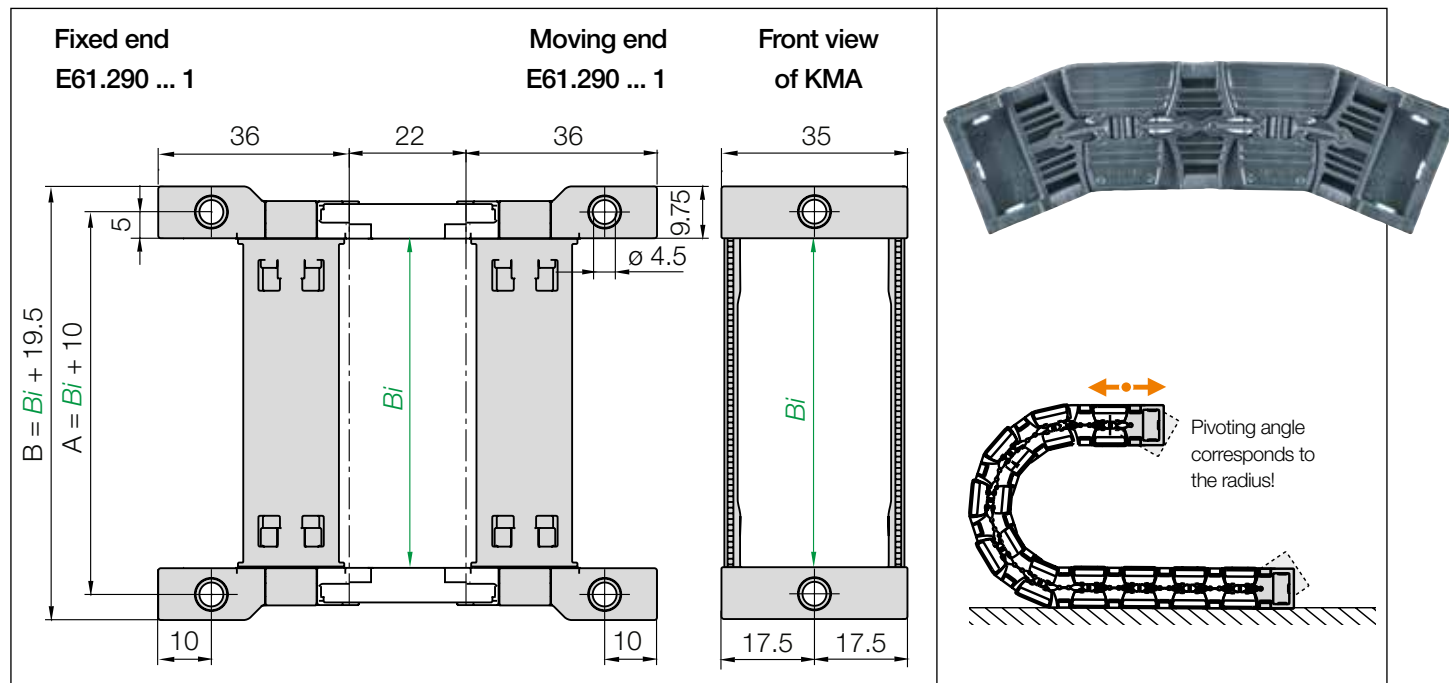
The required clearance height:  $H_F = H + 40\text{mm}$  (with 2.0kg/m fill weight)

If a gliding application is required for a long travel, please consult igus®.

Aluminium support tray

- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
  - Noise-reducing glide strip integrated as standard
  - Easy installation and connection of the e-chain®
  - Open design - dirt and debris fall through
- More information ► From page 1270





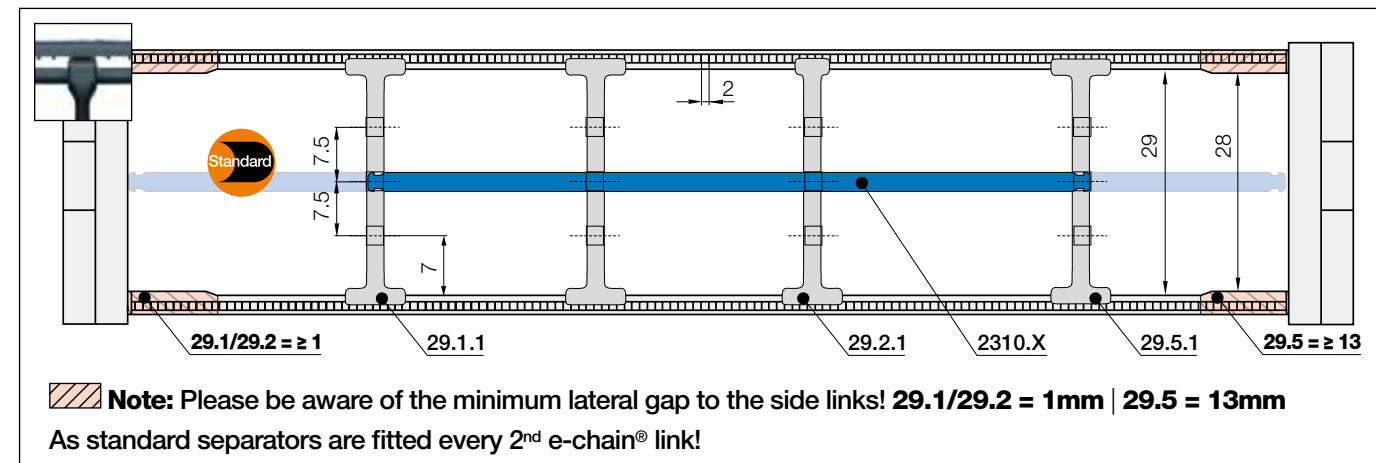
**KMA pivoting | Recommended for unsupported applications**

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
030.	E61.290.030.12	40	49.5	30	090.	E61.290.090.12	100	109.5	90
040.	E61.290.040.12	50	59.5	40	100.	E61.290.100.12	110	119.5	100
050.	E61.290.050.12	60	69.5	50	110.	E61.290.110.12	120	129.5	110
060.	E61.290.060.12	70	79.5	60	120.	E61.290.120.12	130	139.5	120
070.	E61.290.070.12	80	89.5	70	140.	E61.290.140.12	140	149.5	140
080.	E61.290.080.12	90	99.5	80					

(KMA = polymer metal mounting bracket) KMA mounting brackets are only available for an uneven number of links.



**Strain relief** e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ▶ From page 1300



			<b>Standard separator, wide base</b>	
			unassembled	29.1
			assembled	29.1.1

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.

			<b>Separator, narrow top</b>	
			unassembled	29.2
			assembled	29.2.1

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

			<b>Notch separator for notched crossbar</b>	
			unassembled	29.5
			assembled	29.5.1

**Locks securely in preset increments**  
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

			<b>Shelf, lockable</b>	
			unassembled	2300.X
			assembled	2310.X

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

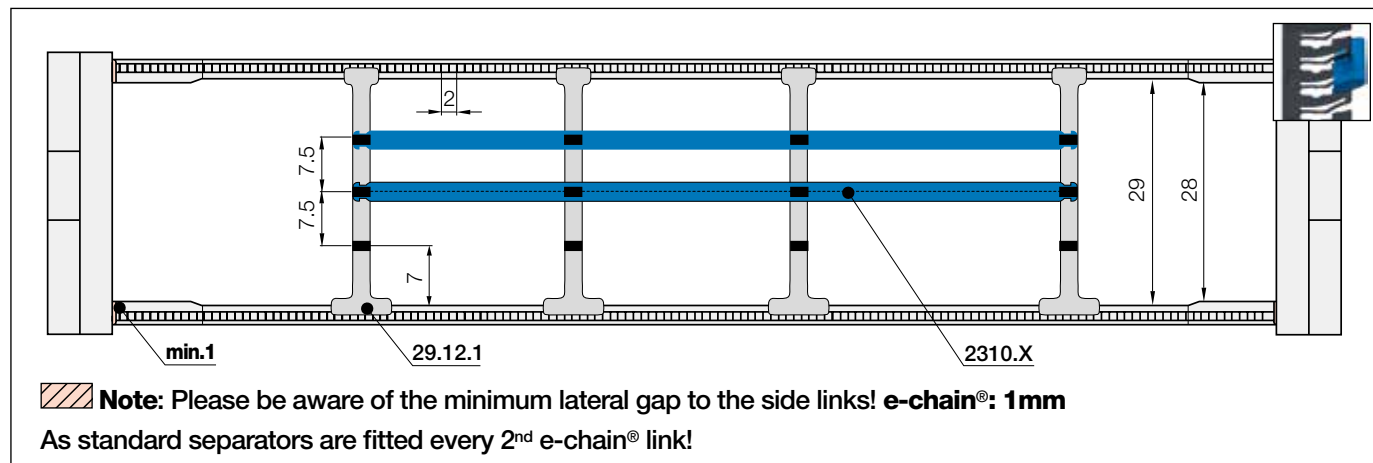
Shelves Width = X [mm]	X [mm]	unassembled		assembled		X [mm]	unassembled		assembled		X [mm]	unassembled		assembled	
	015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087		090	2300.090	2310.090		
	025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090		100	2300.100	2310.100		
	030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100		103	2300.103	2310.103		
	038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103		110	2300.110	2310.110		
	040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110		120	2300.120	2310.120		
	050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120		125	2300.125	2310.125		
	057	2300.057	2310.057	080	2300.080	2310.080									

**Separator with integrated strain relief teeth**

- Can be integrated into the mounting bracket or placed at any point in the e-chain®
- Combines strain relief and interior separation, for restricted space conditions
- Strain relief separator is easy to assemble without any screws

Part No. E6.29.02.Z. More information ▶ From page 1326





Lean separator	
unassembled	29.12
assembled	29.12.1

**Lean separators**

New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

Lean separator design - several layers of cables fitted quickly, save up to 50%\* assembly time

(\*Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)



Cleanroom suitable E6.1 series as harnessed readychain® system for a semiconductor industry



## e-chains® | Series E61.35 | Crossbars removable along the inner and outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	E61.35	Part No.	<i>Bi</i>	<i>Ba</i>	E61.35
e-chains®	[mm]	[mm]	[kg/m]	e-chains®	[mm]	[mm]	[kg/m]
E61.35.030.R.0	30	46	≈ 0.653	E61.35.090.R.0	90	106	≈ 0.783
E61.35.040.R.0	40	56	≈ 0.675	E61.35.100.R.0	100	116	≈ 0.804
E61.35.050.R.0	50	66	≈ 0.696	E61.35.110.R.0	110	126	≈ 0.826
E61.35.060.R.0	60	76	≈ 0.718	E61.35.120.R.0	120	136	≈ 0.848
E61.35.070.R.0	70	86	≈ 0.739	E61.35.140.R.0	140	156	≈ 0.891
E61.35.080.R.0	80	96	≈ 0.761				

## Available bend radii

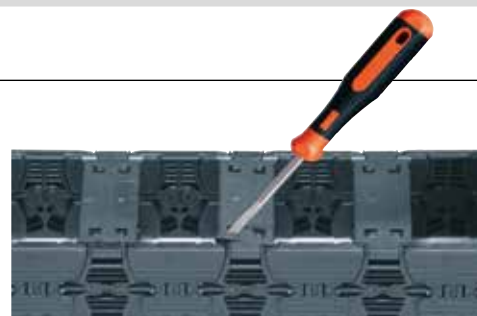
*R* [mm] | 055 | 075 | 100 | 125 | 150 |

Complete Part No. with required radius (*R*). Example: E61.35.100.100.0

## Installation note - system E6.1

Open by removing the crossbar with a screwdriver.  
Repeat the procedure on the other side.

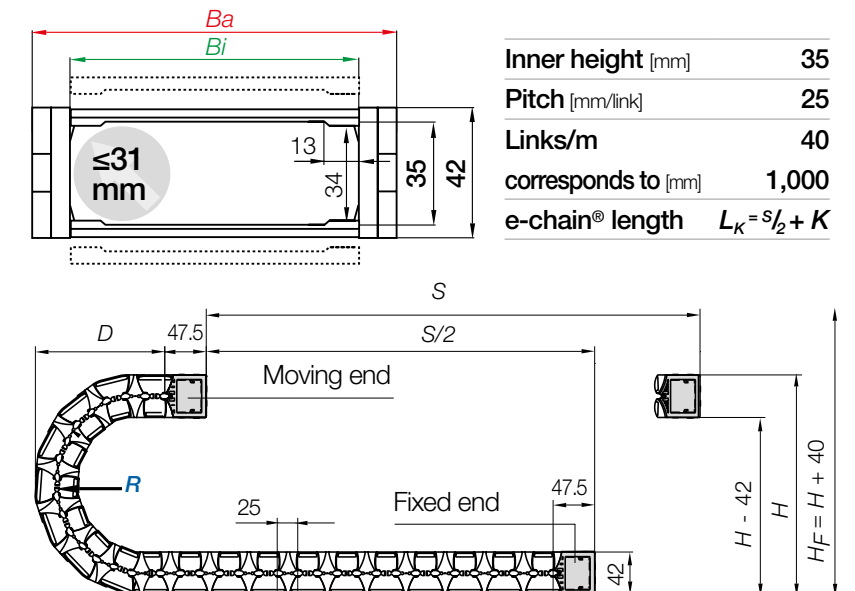
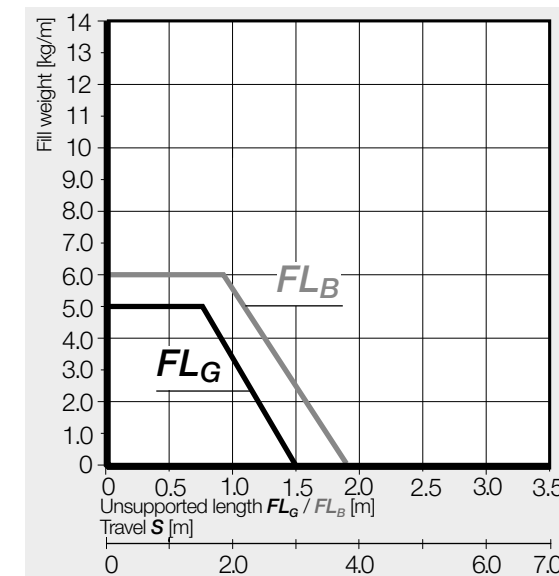
Assembly video available online at ► [www.igus.eu/E61\\_assembly](http://www.igus.eu/E61_assembly)



▶ 1300



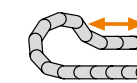
▶ 1222



Inner height [mm]	35
Pitch [mm/link]	25
Links/m	40
corresponds to [mm]	1,000
e-chain® length $L_K = S/2 + K$	

<i>R</i>	055	075	100	125	150
<i>H</i>	192	232	282	332	382
<i>D</i>	113.5	133.5	158.5	183.5	208.5
<i>K</i>	225	290	365	445	525

The required clearance height:  $H_F = H + 40$ mm (with 2.0kg/m fill weight)



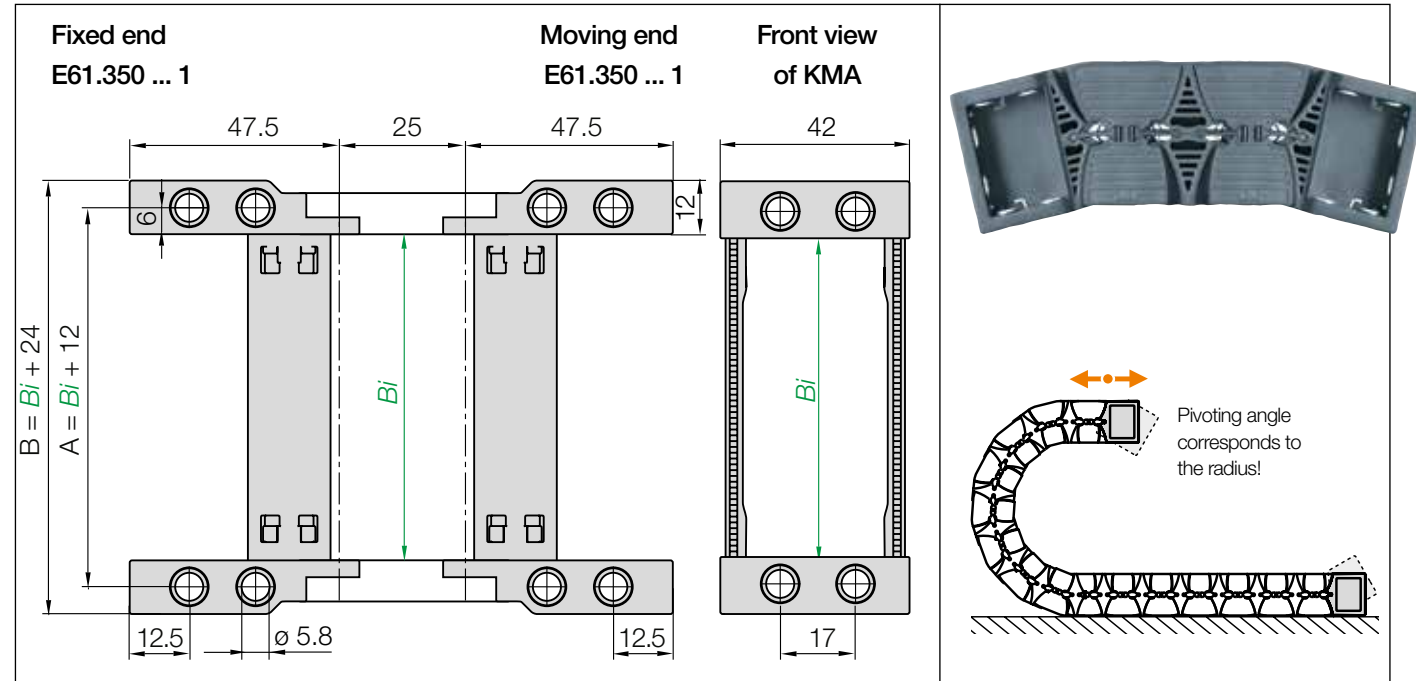
**i** If a gliding application is required for a long travel, please consult igus®.

## Aluminium support tray

- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
  - Noise-reducing glide strip integrated as standard
  - Easy installation and connection of the e-chain®
  - Open design - dirt and debris fall through
- More information ► From page 1270



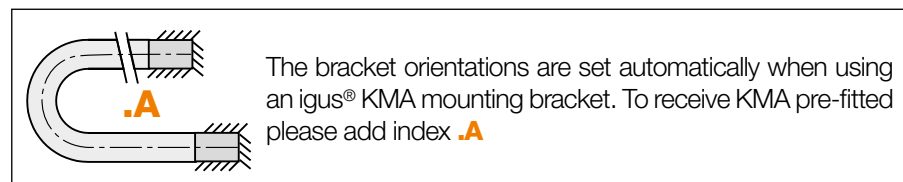




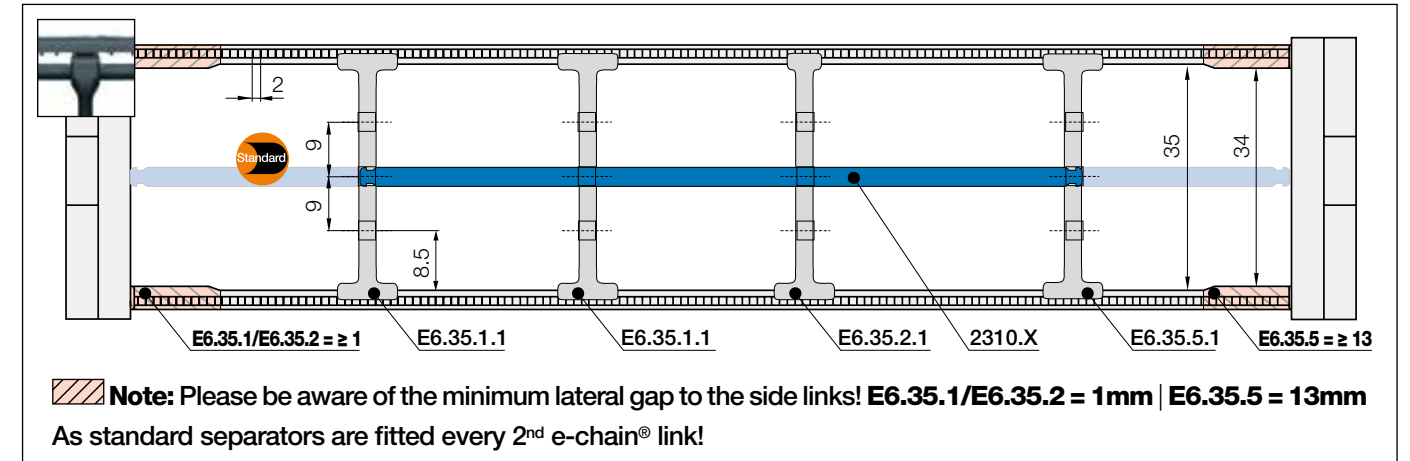
**KMA pivoting | Recommended for unsupported applications**

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
030.	E61.350.030.12	42	54	30	090.	E61.350.090.12	102	114	90
040.	E61.350.040.12	52	64	40	100.	E61.350.100.12	112	124	100
050.	E61.350.050.12	62	74	50	110.	E61.350.110.12	122	134	110
060.	E61.350.060.12	72	84	60	120.	E61.350.120.12	132	144	120
070.	E61.350.070.12	82	94	70	140.	E61.350.140.12	152	164	140
080.	E61.350.080.12	92	104	80					

(KMA = polymer metal mounting bracket) KMA mounting brackets are only available for an uneven number of links.



**Strain relief** e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ▶ From page 1300



**Standard separator, wide base**

unassembled **E6.35.1**  
assembled **E6.35.1.1**

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.

**Separator, narrow top**

unassembled **E6.35.2**  
assembled **E6.35.2.1**

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**Notch separator for notched crossbar**

unassembled **E6.35.5**  
assembled **E6.35.5.1**

**Locks securely in preset increments**  
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

**Shelf, lockable**

unassembled **2300.X**  
assembled **2310.X**

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]			
	unassembled	assembled	unassembled	assembled	unassembled	assembled		
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

**Separator with integrated strain relief teeth**

- Can be integrated into the mounting bracket or placed at any point in the e-chain®
- Combines strain relief and interior separation, for restricted space conditions
- Strain relief separator is easy to assemble without any screws

Part No. E6.35.02.Z. More information ▶ From page 1326



## e-chains® | Series E61.40 | Crossbars removable along the inner and outer radius

Part No. e-chains®	Bi [mm]	Ba [mm]	E61.40 [kg/m]	Part No. e-chains®	Bi [mm]	Ba [mm]	E61.40 [kg/m]
E61.40.040 R.0	40	56	≈ 0.913	E61.40.125 R.0	125	141	≈ 1.226
E61.40.050 R.0	50	66	≈ 0.950	E61.40.150 R.0	150	166	≈ 1.318
E61.40.052 R.0	52	68	≈ 0.957	E61.40.175 R.0	175	191	≈ 1.410
E61.40.062 R.0	62	78	≈ 0.994	E61.40.200 R.0	200	216	≈ 1.502
E61.40.070 R.0	70	86	≈ 1.023	E61.40.225 R.0	225	241	≈ 1.595
E61.40.075 R.0	75	91	≈ 1.042	E61.40.250 R.0	250	266	≈ 1.687
E61.40.087 R.0	87	103	≈ 1.086	E61.40.275 R.0	275	291	≈ 1.779
E61.40.100 R.0	100	116	≈ 1.134	E61.40.300 R.0	300	316	≈ 1.871

\*Radius available upon request. Please consult igus® for delivery time.

## Available bend radii

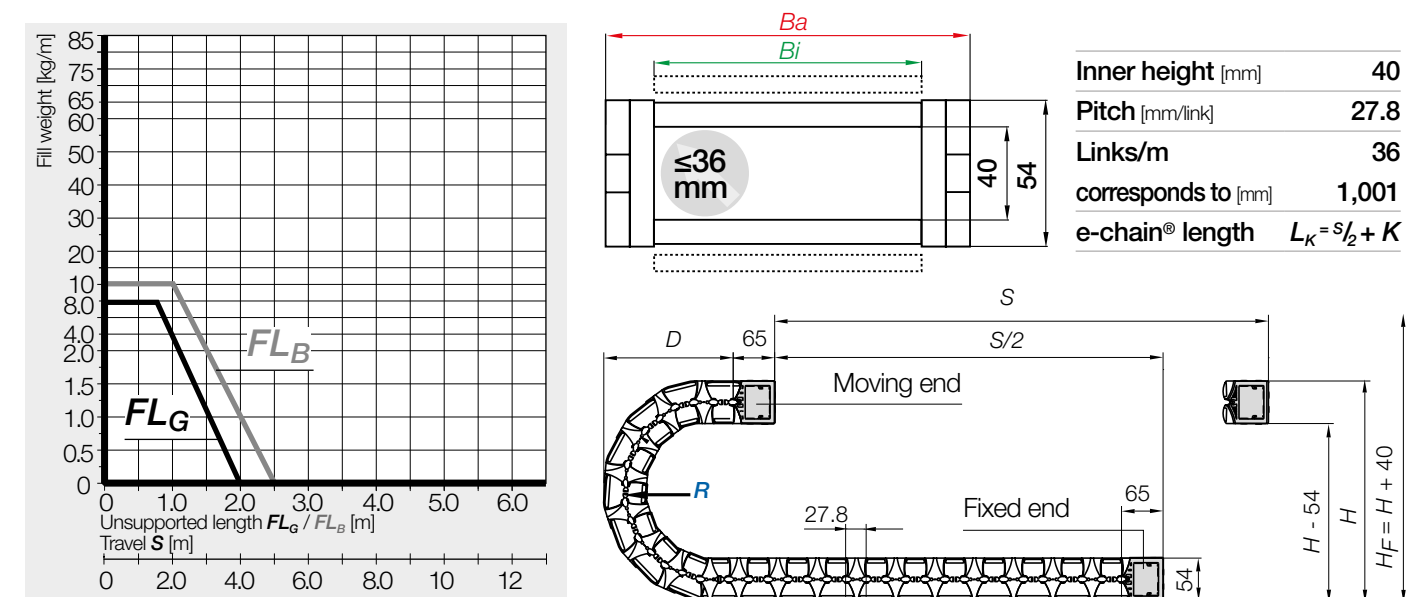
R [mm] | 063 | 075 | 100 | 125 | 150 | 175\* | 200 |

Complete Part No. with required radius (R). Example: E61.40.100.100.0

## Installation note - system E6.1

Open by removing the crossbar with a screwdriver.  
Repeat the procedure on the other side.

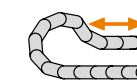
Assembly video available online at ► [www.igus.eu/E61\\_assembly](http://www.igus.eu/E61_assembly)



R	063	075	100	125	150	175*	200
H	220	244	294	344	394	444	494
D	132	144	169	194	219	244	269
K	255	295	370	450	530	610	685

The required clearance height:  $H_F = H + 40\text{mm}$  (with 2.0kg/m fill weight)

\*Radius available upon request. Please consult igus® for delivery time.



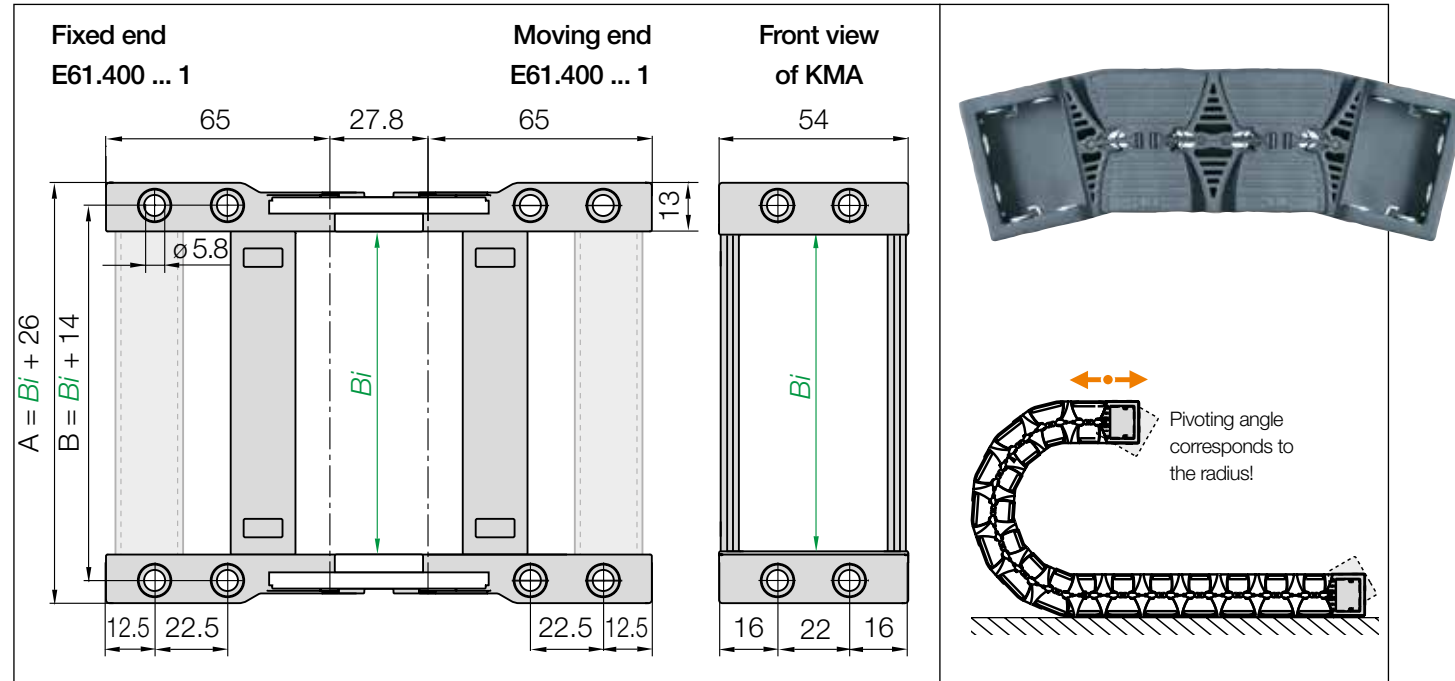
**i** If a gliding application is required for a long travel, please consult igus®.

## Aluminium support tray

- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
  - Noise-reducing glide strip integrated as standard
  - Easy installation and connection of the e-chain®
  - Open design - dirt and debris fall through
- More information ► From page 1270



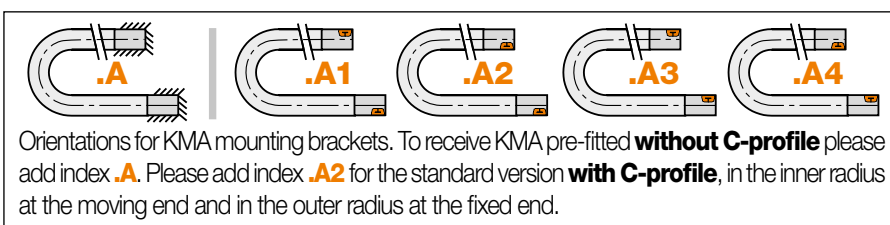




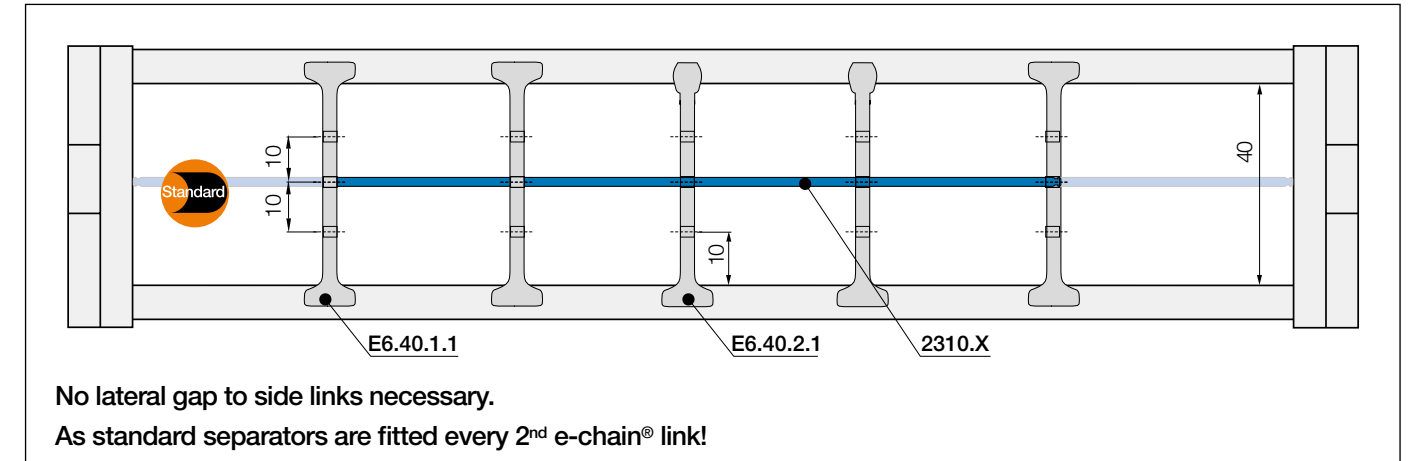
KMA pivoting | Recommended for unsupported applications

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
040.	E61.400.040.12.C	54	66	40	125.	E61.400.125.12.C	139	151	125
050.	E61.400.050.12.C	64	76	50	150.	E61.400.150.12.C	164	176	150
052.	E61.400.052.12.C	66	78	52	175.	E61.400.175.12.C	189	201	175
062.	E61.400.062.12.C	76	88	62	200.	E61.400.200.12.C	214	226	200
070.	E61.400.070.12.C	84	96	70	225.	E61.400.225.12.C	239	251	225
075.	E61.400.075.12.C	89	101	75	250.	E61.400.250.12.C	264	276	250
087.	E61.400.087.12.C	101	113	87	275.	E61.400.275.12.C	289	301	275
100.	E61.400.100.12.C	114	126	100	300.	E61.400.300.12.C	314	326	300

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C. KMA mounting brackets are only available for an uneven number of links.



**Strain relief** e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ▶ From page 1300



**Standard separator, wide base**

unassembled E6.40.1  
assembled E6.40.1.1

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.

**Separator, narrow top**

unassembled E6.40.2  
assembled E6.40.2.1

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**Shelf, lockable**

unassembled 2300.X  
assembled 2310.X

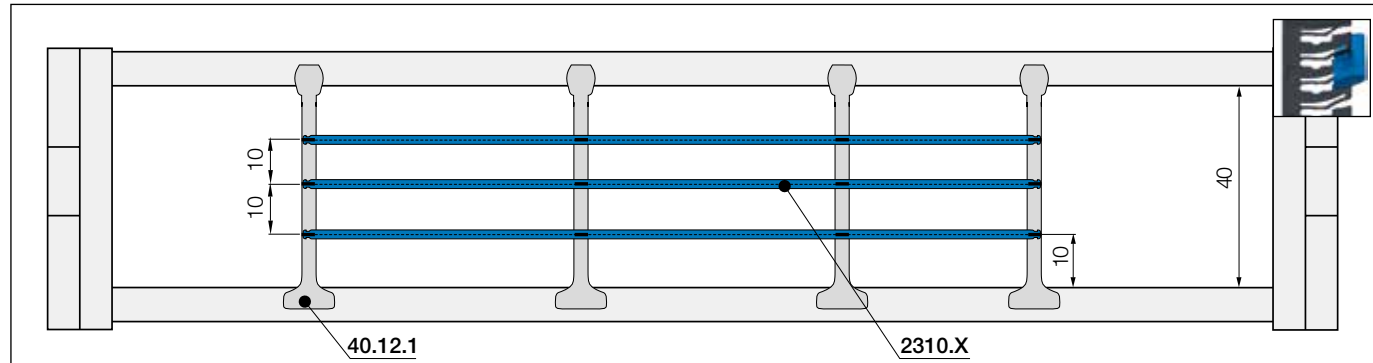
**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]		X [mm]	
	unassembled	assembled	unassembled	assembled	unassembled	assembled	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

**Separator with integrated strain relief teeth**

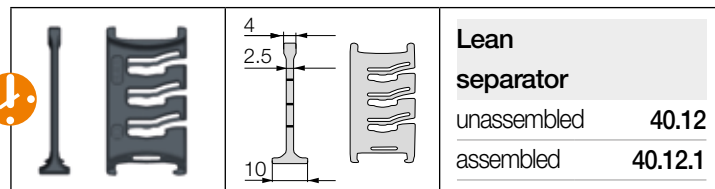
- Can be integrated into the mounting bracket or placed at any point in the e-chain®
- Combines strain relief and interior separation, for restricted space conditions
- Strain relief separator is easy to assemble without any screws

Part No. E6.40.02.Z. More information ▶ From page 1326



No lateral gap to side links necessary.

As standard separators are fitted every 2<sup>nd</sup> e-chain® link!



### Lean separators

New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

Lean separator design - several layers of cables fitted quickly, save up to 50%\* assembly time

(\*Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)



Very small bend radii are possible with chainflex® CF98 control cable in this E6.1 readychain® system. It offers smooth operation and is suitable for cleanrooms





## e-chains® | Series E61.52 | Crossbars removable along the inner and outer radius

Part No. e-chains®	Bi [mm]	Ba [mm]	E61.52 [kg/m]	Part No. e-chains®	Bi [mm]	Ba [mm]	E61.52 [kg/m]
E61.52.040 R.0	40	64	≈ 1.679	E61.52.125 R.0	125	149	≈ 2.060
E61.52.050 R.0	50	74	≈ 1.724	E61.52.150 R.0	150	174	≈ 2.172
E61.52.052 R.0	52	76	≈ 1.733	E61.52.175 R.0	175	199	≈ 2.283
E61.52.062 R.0	62.5	86.5	≈ 1.780	E61.52.200 R.0	200	224	≈ 2.395
E61.52.070 R.0	70	94	≈ 1.814	E61.52.225 R.0	225	249	≈ 2.507
E61.52.075 R.0	75	99	≈ 1.836	E61.52.250 R.0	250	274	≈ 2.619
E61.52.087 R.0	87.5	111.5	≈ 1.892	E61.52.275 R.0	275	299	≈ 2.731
E61.52.100 R.0	100	124	≈ 1.948	E61.52.300 R.0	300	324	≈ 2.843

\*Radius available upon request. Please consult igus® for delivery time.

## Available bend radii

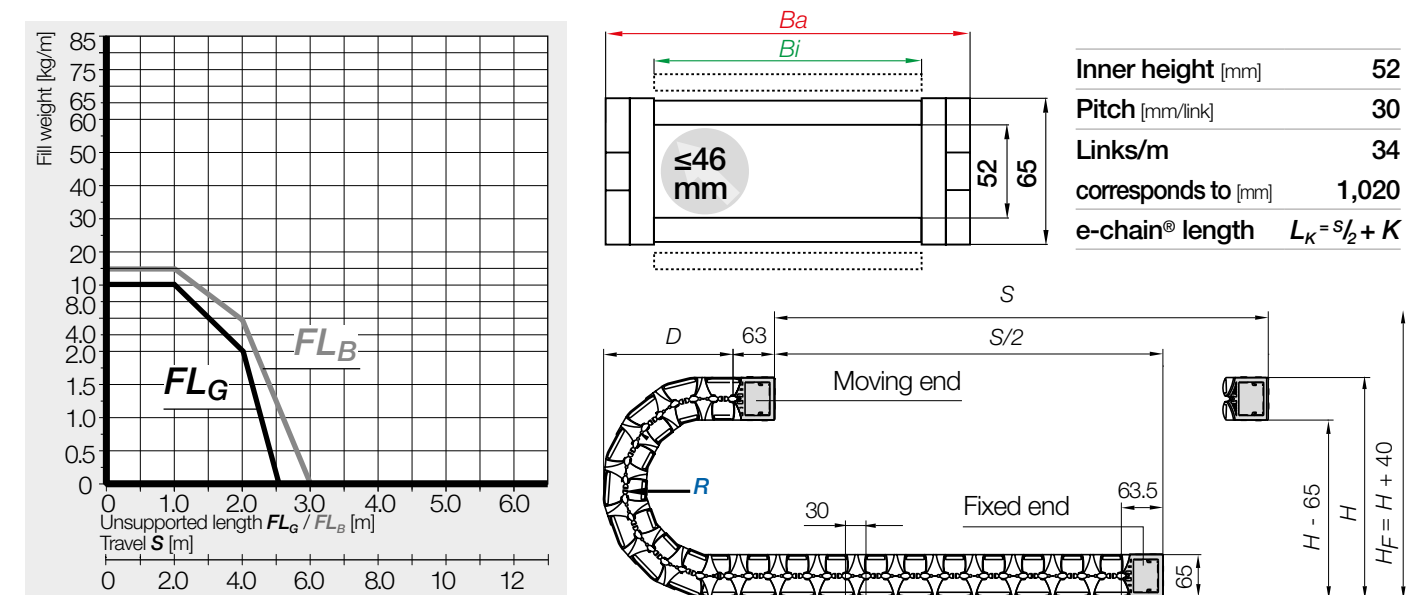
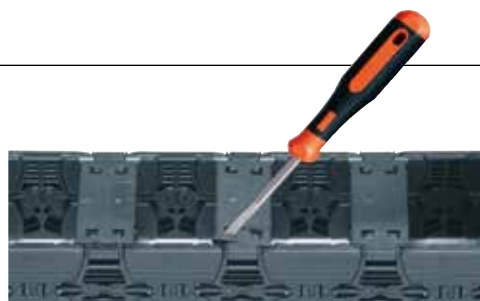
R [mm] | 075 | 100 | 125 | 150 | 175\* | 200\* |

Complete Part No. with required radius (R). Example: E61.52.100.100.0

## Installation note - system E6.1

Open by removing the crossbar with a screwdriver.  
Repeat the procedure on the other side.

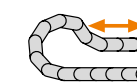
Assembly video available online at ► [www.igus.eu/E61\\_assembly](http://www.igus.eu/E61_assembly)



R	075	100	125	150	175*	200*
H	265	315	365	415	465	515
D	153	178	203	228	253	278
K	300	375	455	535	610	690

The required clearance height:  $H_F = H + 40\text{mm}$  (with 2.0kg/m fill weight)

\*Radius available upon request. Please consult igus® for delivery time.



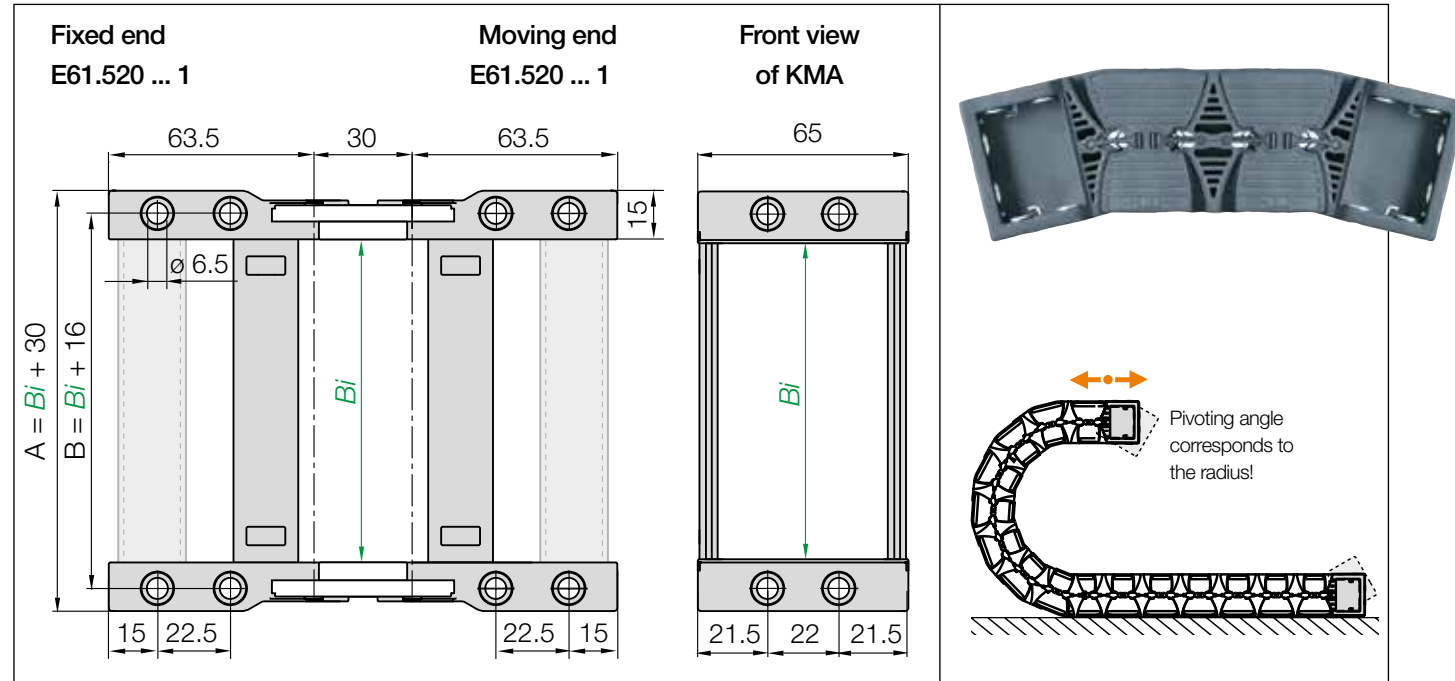
**i** If a gliding application is required for a long travel, please consult igus®.

## Steel support tray for support of the lower run

- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available

More information ► From page 1264

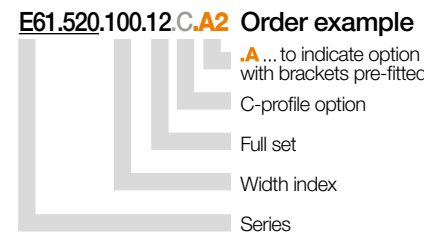
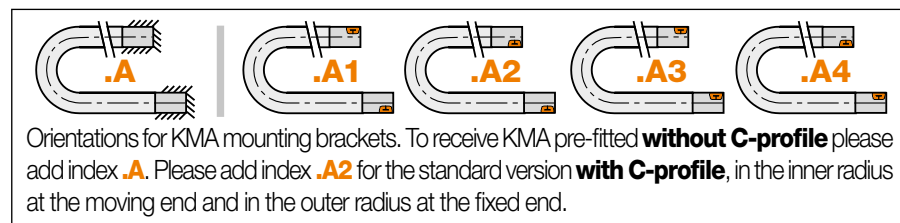




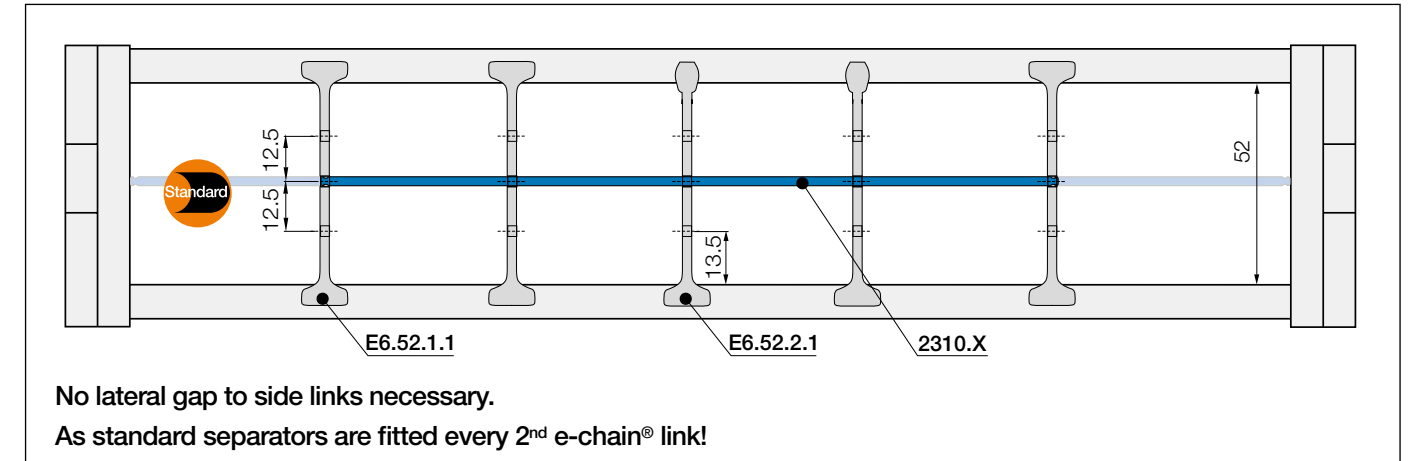
KMA pivoting | Recommended for unsupported applications

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
040.	E61.520.040.12.C	70	56	40	125.	E61.520.125.12.C	155	141	125
050.	E61.520.050.12.C	80	66	50	150.	E61.520.150.12.C	180	166	150
052.	E61.520.052.12.C	82	68	52	175.	E61.520.175.12.C	205	191	175
062.	E61.520.062.12.C	92,5	78,5	62,5	200.	E61.520.200.12.C	230	216	200
070.	E61.520.070.12.C	100	86	70	225.	E61.520.225.12.C	255	241	225
075.	E61.520.075.12.C	105	91	75	250.	E61.520.250.12.C	280	266	250
087.	E61.520.087.12.C	117,5	103,5	87,5	275.	E61.520.275.12.C	300	291	275
100.	E61.520.100.12.C	130	116	100	300.	E61.520.300.12.C	330	316	300

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C. KMA mounting brackets are only available for an uneven number of links.



**Strain relief** e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300



**Standard separator, wide base**

unassembled **E6.52.1**  
assembled **E6.52.1.1**

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.

**Separator, narrow top**

unassembled **E6.52.2**  
assembled **E6.52.2.1**

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**Shelf, lockable**

unassembled **2300.X**  
assembled **2310.X**

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

**Shelves**

Width = X [mm]



X [mm]	unassembled	assembled	X [mm]	unassembled	assembled	X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.87	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.90	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125





... E61.62

## e-chains® | Series E61.52 | Crossbars removable along the inner and outer radius

Part No.	<i>Bi</i>	<i>Ba</i>	E61.62	Part No.	<i>Bi</i>	<i>Ba</i>	E61.62
e-chains®	[mm]	[mm]	[kg/m]	e-chains®	[mm]	[mm]	[kg/m]
E61.62. 05. R.0	50	82	≈ 2.514	E61.62. 212.R.0	212	244	≈ 3.076
E61.62. 06. R.0	68	100	≈ 2.577	E61.62. 23. R.0	225	257	≈ 3.121
E61.62. 07. R.0	75	107	≈ 2.601	E61.62. 237.R.0	237	269	≈ 3.162
E61.62. 087.R.0	87	119	≈ 2.642	E61.62. 25. R.0	250	282	≈ 3.207
E61.62. 097.R.0	97	129	≈ 2.673	E61.62. 262.R.0	262	294	≈ 3.249
E61.62. 10. R.0	100	132	≈ 2.687	E61.62. 28. R.0	275	307	≈ 3.294
E61.62. 11. R.0	108	140	≈ 2.715	E61.62. 29. R.0	287	319	≈ 3.336
E61.62. 112.R.0	112	144	≈ 2.729	E61.62. 30. R.0	300	332	≈ 3.381
E61.62. 12. R.0	125	157	≈ 2.774	E61.62. 312.R.0	312	344	≈ 3.422
E61.62. 137.R.0	137	169	≈ 2.816	E61.62. 325.R.0	325	357	≈ 3.467
E61.62. 15. R.0	150	182	≈ 2.861	E61.62. 337.R.0	337	369	≈ 3.509
E61.62. 162.R.0	162	194	≈ 2.902	E61.62. 350.R.0	350	382	≈ 3.554
E61.62. 17. R.0	168	200	≈ 2.923	E61.62. 362.R.0	362	394	≈ 3.596
E61.62. 18. R.0	175	207	≈ 2.947	E61.62. 375.R.0	375	407	≈ 3.641
E61.62. 187.R.0	187	219	≈ 2.989	E61.62. 387.R.0	387	419	≈ 3.682
E61.62. 20. R.0	200	232	≈ 3.034	E61.62. 400.R.0	400	432	≈ 3.782

\*Radius available upon request. Please consult igus® for delivery time.

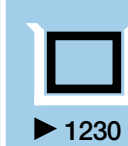
## Available bend radii

*R* [mm] | 115 | 150\* | 200\* | 250\* | 300\* | 350\*Complete Part No. with required radius (*R*). Example: E61.62.100.115.0

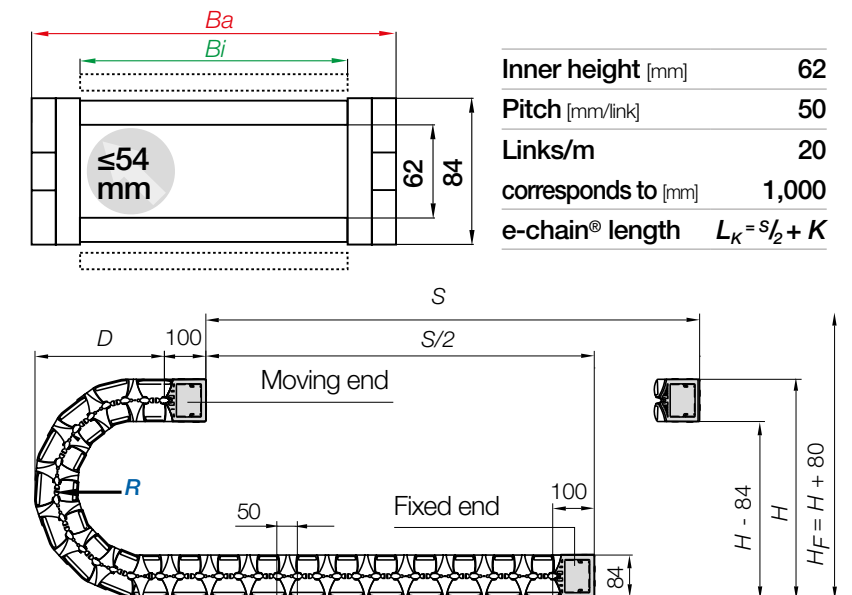
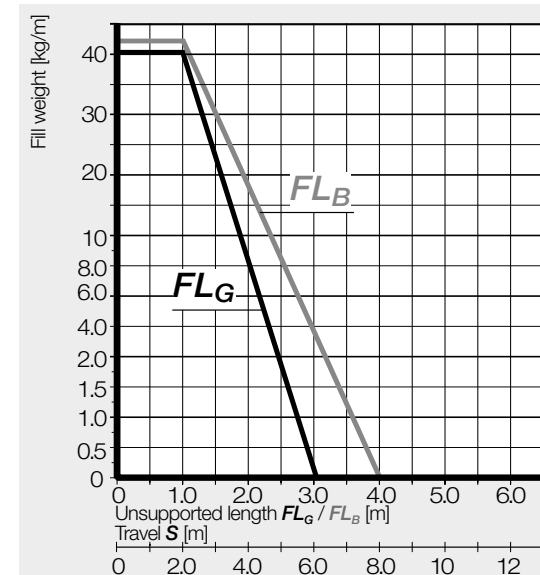
## Installation note - system E6.1

Open by removing the crossbar with a screwdriver.  
Repeat the procedure on the other side.Assembly video available online at ► [www.igus.de/E61\\_assembly](http://www.igus.de/E61_assembly)

► 1300



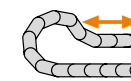
► 1230



<i>R</i>	115	150*	200*	250*	300*	350*
<i>H</i>	384	454	554	654	754	854
<i>D</i>	232	267	317	367	417	467
<i>K</i>	465	575	730	890	1,045	1,200

The required clearance height:  $H_F = H + 80\text{mm}$  (with 2.0kg/m fill weight)

\*Radius available upon request. Please consult igus® for delivery time.



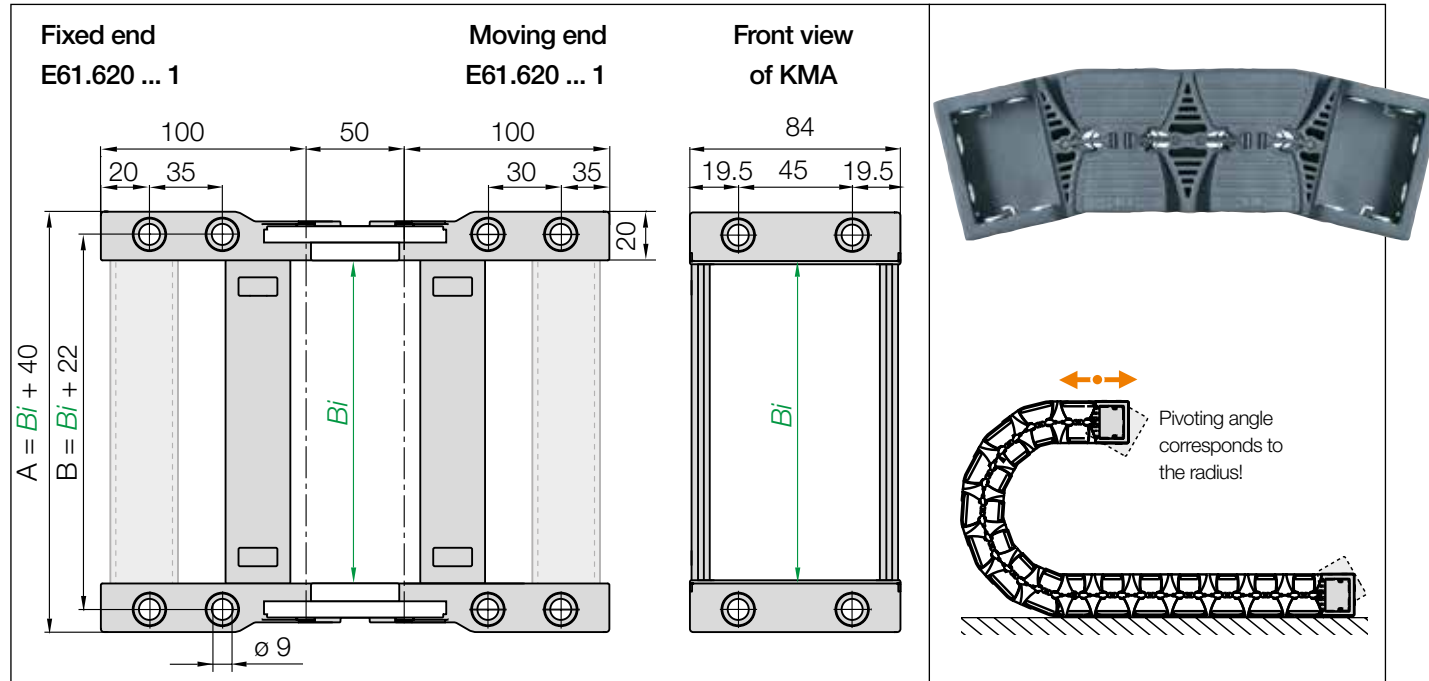
If a gliding application is required for a long travel, please consult igus®.

## Steel support tray for support of the lower run

- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available

More information ► From page 1264





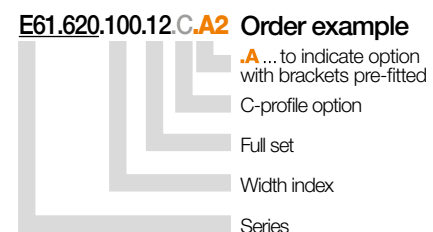
**KMA pivoting | Recommended for unsupported applications**

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
05.	E61.620.05. 12.C	90	72	50	212.	E61.620.212.12.C	252	234	212
06.	E61.620.06. 12.C	108	90	68	23.	E61.620.23. 12.C	265	247	225
07.	E61.620.07. 12.C	115	97	75	237.	E61.620.237.12.C	277	259	237
087.	E61.620.087.12.C	127	109	87	25.	E61.620.25. 12.C	290	272	250
097.	E61.620.097.12.C	137	119	97	262.	E61.620.262.12.C	302	284	262
10.	E61.620.10. 12.C	140	122	100	28.	E61.620.28. 12.C	315	297	275
11.	E61.620.11. 12.C	148	130	108	29.	E61.620.29. 12.C	327	309	287
112.	E61.620.112.12.C	152	134	112	30.	E61.620.30. 12.C	340	322	300
12.	E61.620.12. 12.C	165	147	125	312.	E61.620.312.12.C	352	334	312
137.	E61.620.137.12.C	177	159	137	325.	E61.620.325.12.C	365	347	325
15.	E61.620.15. 12.C	190	172	150	337.	E61.620.337.12.C	377	359	337
162.	E61.620.162.12.C	202	184	162	350.	E61.620.350.12.C	390	372	350
17.	E61.620.17. 12.C	208	190	168	362.	E61.620.362.12.C	402	384	362
18.	E61.620.18. 12.C	215	197	175	375.	E61.620.375.12.C	415	397	375
187.	E61.620.187.12.C	227	209	187	387.	E61.620.387.12.C	427	409	387
20.	E61.620.20. 12.C	240	222	200	400.	E61.620.400.12.C	440	442	400

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C. KMA mounting brackets are only available for an uneven number of links.

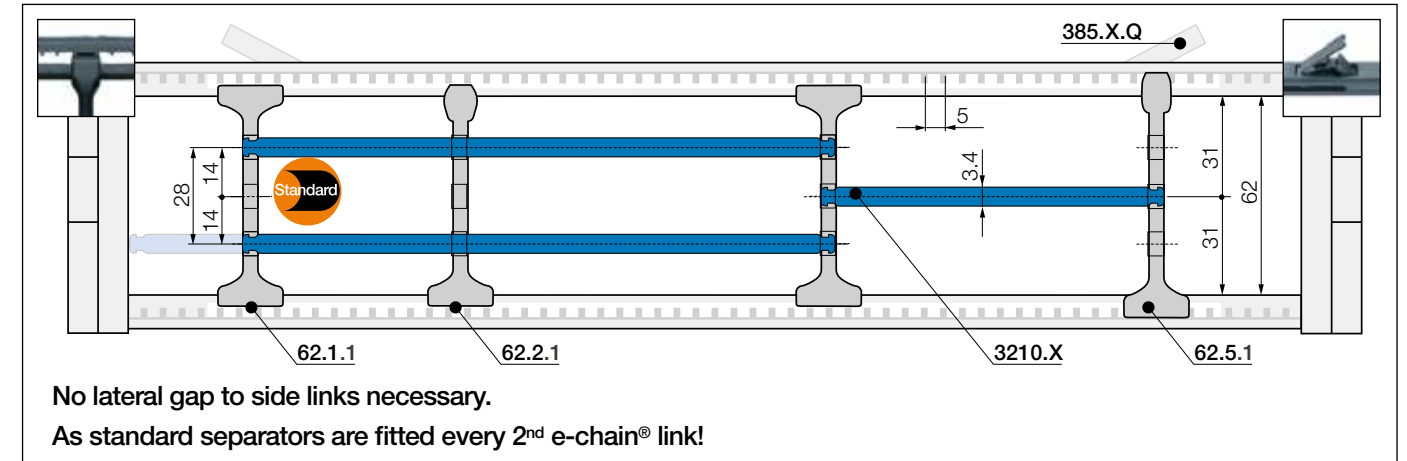



Orientations for KMA mounting brackets. To receive KMA pre-fitted **without C-profile** please add index .A. Please add index .A2 for the standard version **with C-profile**, in the inner radius at the moving end and in the outer radius at the fixed end.



**Strain relief** e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300

Previous interior separation with optional elements ► [www.igus.eu/E61.62](http://www.igus.eu/E61.62)






**Standard separator, wide base**

unassembled **62.1**

assembled **62.1.1**

**Standard - for any application**  
Separator with a wide base for maximum holding force in the e-chain®.




**Separator for QuickLock crossbar**

unassembled **62.2**

assembled **62.2.1**

**For even faster installation**  
Separator for igus® QuickLock crossbar **385.X.Q**. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

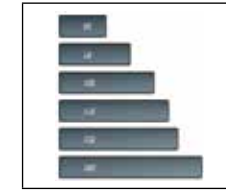


**Notch separator for notched crossbar**

unassembled **62.5**

assembled **62.5.1**

**Locks securely in preset increments**  
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



**Shelf, lockable**

unassembled **3200.X**

assembled **3210.X**

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]			
	unassembled	assembled	unassembled	assembled	unassembled	assembled		
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			



Dynamic, quiet, light and cleanroom suitable

80



... E61.80

## e-chains® | Series E61.80 | Crossbars removable along the inner and outer radius

Part No. e-chains®	Bi [mm]	Ba [mm]	E61.80 [kg/m]	Part No. e-chains®	Bi [mm]	Ba [mm]	E61.80 [kg/m]
E61.80. 05. R.0	50	100	≈ 2.906	E61.80. 31. R.0	312	362	≈ 4.185
E61.80. 06. R.0	65	115	≈ 2.979	E61.80. 32. R.0	325	375	≈ 4.249
E61.80. 07. R.0	75	125	≈ 3.028	E61.80. 33. R.0	337	387	≈ 4.307
E61.80. 08. R.0	87	137	≈ 3.089	E61.80. 35. R.0	350	400	≈ 4.371
E61.80. 10. R.0	100	150	≈ 3.150	E61.80. 36. R.0	362	412	≈ 4.429
E61.80. 11. R.0	112	162	≈ 3.209	E61.80. 37. R.0	375	425	≈ 4.493
E61.80. 12. R.0	125	175	≈ 3.272	E61.80. 38. R.0	387	437	≈ 4.551
E61.80. 13. R.0	137	187	≈ 3.331	E61.80. 40. R.0	400	450	≈ 4.615
E61.80. 15. R.0	150	200	≈ 3.394	E61.80. 41. R.0	412	462	≈ 4.673
E61.80. 16. R.0	162	212	≈ 3.453	E61.80. 42. R.0	425	475	≈ 4.737
E61.80. 17. R.0	175	225	≈ 3.516	E61.80. 43. R.0	437	487	≈ 4.787
E61.80. 18. R.0	187	237	≈ 3.575	E61.80. 45. R.0	450	500	≈ 4.847
E61.80. 20. R.0	200	250	≈ 3.638	E61.80. 46. R.0	462	512	≈ 4.907
E61.80. 21. R.0	212	262	≈ 3.697	E61.80. 47. R.0	475	525	≈ 4.967
E61.80. 22. R.0	225	275	≈ 3.760	E61.80. 48. R.0	487	537	≈ 5.027
E61.80. 23. R.0	237	287	≈ 3.819	E61.80. 50. R.0	500	550	≈ 5.087
E61.80. 25. R.0	250	300	≈ 3.882	E61.80. 51. R.0	512	562	≈ 5.147
E61.80. 26. R.0	262	312	≈ 3.941	E61.80. 52. R.0	525	575	≈ 5.207
E61.80. 27. R.0	275	325	≈ 4.004	E61.80. 53. R.0	537	587	≈ 5.267
E61.80. 28. R.0	287	337	≈ 4.063	E61.80. 55. R.0	550	600	≈ 5.327
E61.80. 30. R.0	300	350	≈ 4.127	E61.80. 60. R.0	600	650	≈ 5.557

\*Radius available upon request. Please consult igus® for delivery time.

## Available bend radii

R [mm] | 150 | 200\* | 250\* | 300\* | 350\* | 400\*

Complete Part No. with required radius (R). Example: E61.80.100.150.0

## Installation note - system E6.1

Open by removing the crossbar with a screwdriver.  
Repeat the procedure on the other side.Assembly video available online at ► [www.igus.eu/E61\\_assembly](http://www.igus.eu/E61_assembly)

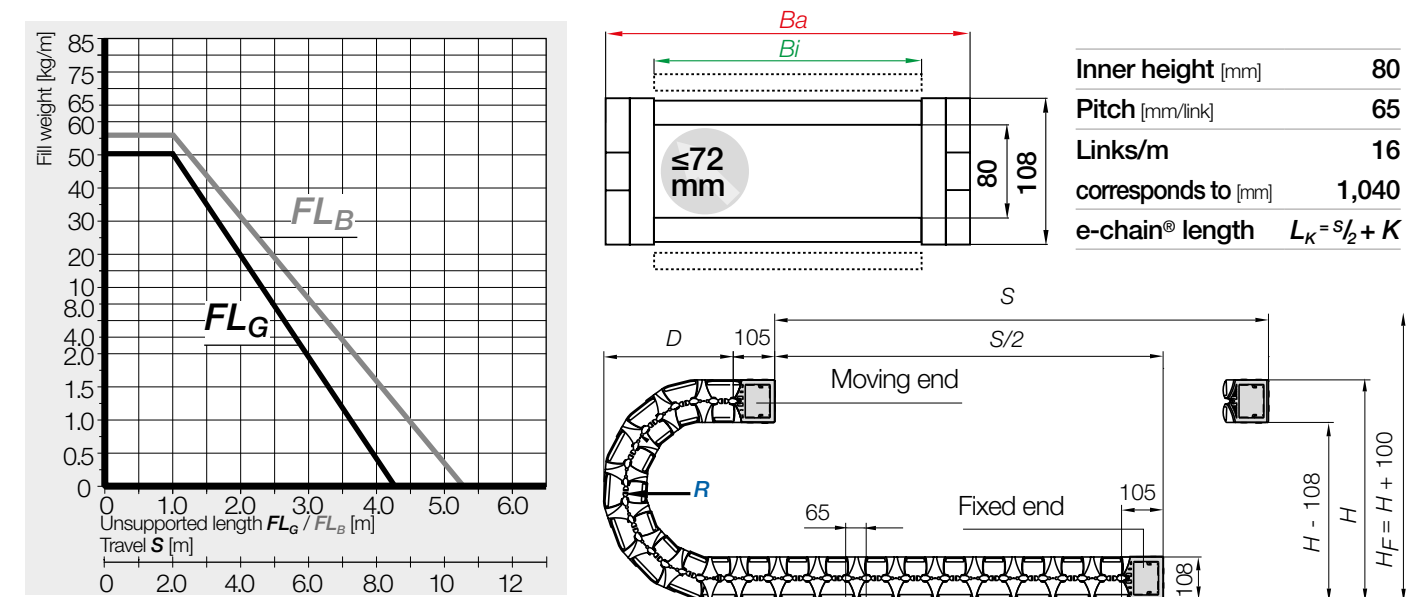
Unsupported applications | Short travels



▶ 1300



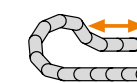
▶ 1232



R	150	200*	250*	300*	350*	400*
H	508	608	708	808	908	1,008
D	301.5	351.5	401.5	451.5	501.5	551.5
K	605	760	920	1,075	1,230	1,390

The required clearance height:  $H_F = H + 80\text{mm}$  (with 5.0kg/m fill weight)

\*Radius available upon request. Please consult igus® for delivery time.

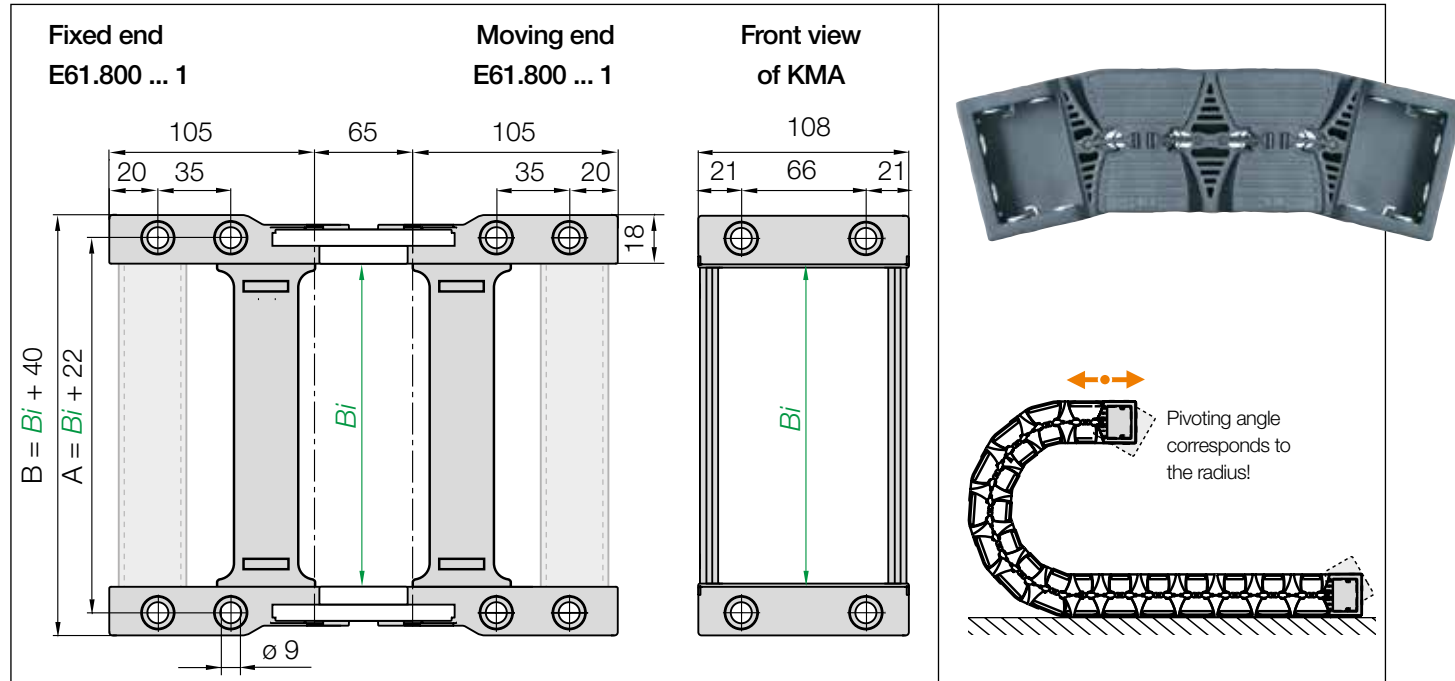


**i** If a gliding application is required for a long travel, please consult igus®.

## Steel support tray for support of the lower run

- Simple one-piece support trays for the lower run
  - To your requirements and specification
  - 4 options available
- More information ► From page 1264

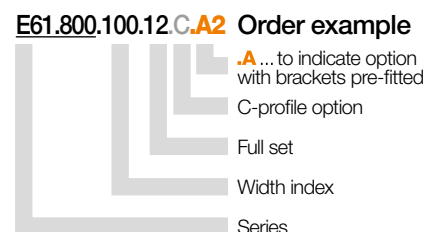
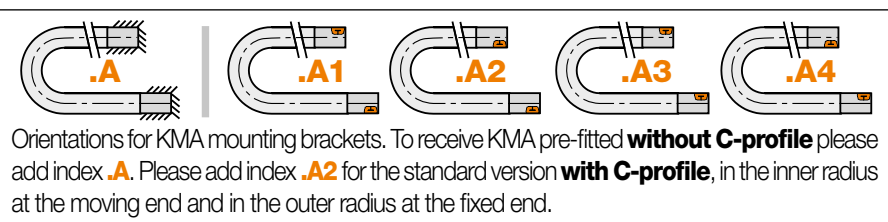




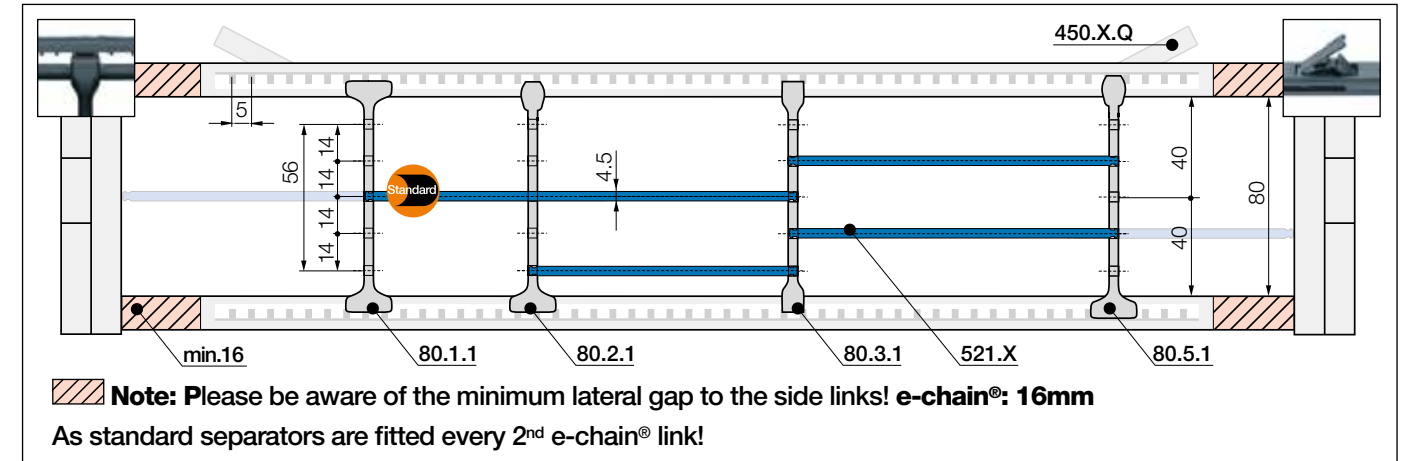
KMA pivoting | Recommended for unsupported applications

Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]	Width index	Part No. full set KMA pivoting	A [mm]	B [mm]	Bi [mm]
05.	E61.800.05.12.C	72	90	50	31.	E61.800.31.12.C	334	352	312
06.	E61.800.06.12.C	87	105	65	32.	E61.800.32.12.C	347	365	325
07.	E61.800.07.12.C	97	115	75	33.	E61.800.33.12.C	359	377	337
08.	E61.800.08.12.C	109	127	87	35.	E61.800.35.12.C	372	390	350
10.	E61.800.10.12.C	122	140	100	36.	E61.800.36.12.C	384	402	362
11.	E61.800.11.12.C	134	152	112	37.	E61.800.37.12.C	397	415	375
12.	E61.800.12.12.C	147	165	125	38.	E61.800.38.12.C	409	427	387
13.	E61.800.13.12.C	159	177	137	40.	E61.800.40.12.C	422	440	400
15.	E61.800.15.12.C	172	190	150	41.	E61.800.41.12.C	434	452	412
16.	E61.800.16.12.C	184	202	162	42.	E61.800.42.12.C	447	465	425
17.	E61.800.17.12.C	197	215	175	43.	E61.800.43.12.C	459	477	437
18.	E61.800.18.12.C	209	227	187	45.	E61.800.45.12.C	472	490	450
20.	E61.800.20.12.C	222	240	200	46.	E61.800.46.12.C	484	502	462
21.	E61.800.21.12.C	234	252	212	47.	E61.800.47.12.C	497	515	475
22.	E61.800.22.12.C	247	265	225	48.	E61.800.48.12.C	509	527	487
23.	E61.800.23.12.C	259	277	237	50.	E61.800.50.12.C	522	540	500
25.	E61.800.25.12.C	272	290	250	51.	E61.800.51.12.C	534	552	512
26.	E61.800.26.12.C	284	302	262	52.	E61.800.52.12.C	547	565	525
27.	E61.800.27.12.C	297	315	275	53.	E61.800.53.12.C	559	577	537
28.	E61.800.28.12.C	309	327	287	55.	E61.800.55.12.C	572	590	550
30.	E61.800.30.12.C	322	340	300	60.	E61.800.60.12.C	622	640	600

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C. KMA mounting brackets are only available for an uneven number of links.



Previous interior separation with optional elements ► [www.igus.eu/E61.80](http://www.igus.eu/E61.80)



		<b>Standard separator, wide base</b>	unassembled <b>80.1</b>	assembled <b>80.1.1</b>
		<b>Separator for QuickLock crossbar</b>	unassembled <b>80.2</b>	assembled <b>80.2.1</b>
		<b>Separator, narrow</b>	unassembled <b>80.3</b>	assembled <b>80.3.1</b>
		<b>Notch separator for notched crossbar</b>	unassembled <b>80.5</b>	assembled <b>80.5.1</b>
		<b>Shelf, lockable</b>	unassembled <b>520.X</b>	assembled <b>521.X</b>

**Standard - for any application**

Separator with a wide base for maximum holding force in the e-chain®.

**For even faster installation**

Separator for igus® QuickLock crossbar 450.X.Q. Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**For small cables**

Separator with a narrow base for a large number of small cables side by side. Saves space in the e-chain®. Also available for QuickLock crossbars.

**Locks securely in preset increments**

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

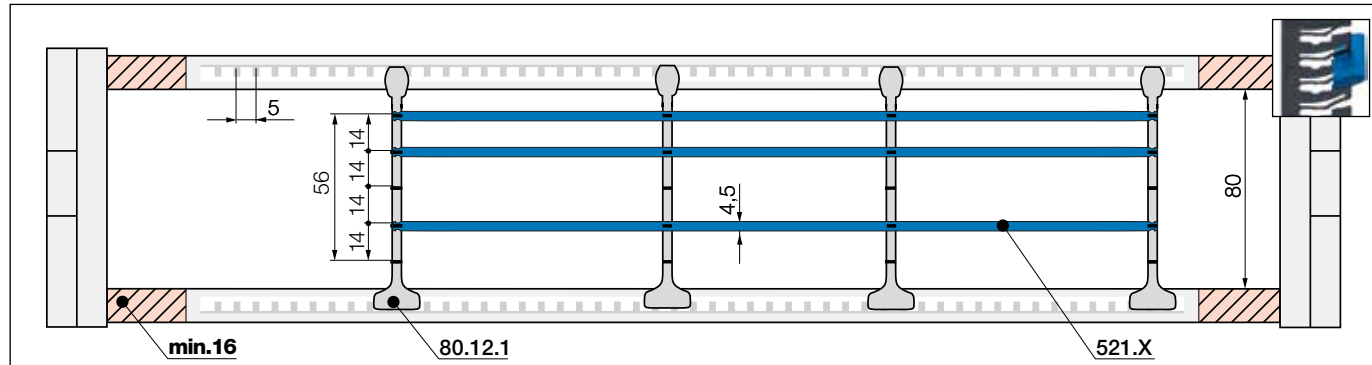
**Horizontal separation**

Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]	unassembled		assembled		X [mm]	unassembled		assembled	
		unassembled	assembled	unassembled	assembled		unassembled	assembled		
	050	520.050	521.050	150	520.150	521.150	300	520.300	521.300	
	065	520.065	521.065	175	520.175	521.175	350	520.350	521.350	
	075	520.075	521.075	200	520.200	521.200	375	520.375	521.375	
	100	520.100	521.100	225	520.225	521.225	387	520.387	521.387	
	125	520.125	521.125	250	520.250	521.250	450	520.450	521.450	

**Strain relief** e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with ordering options ► From page 1300





**Note:** Please be aware of the minimum lateral gap to the side links! **e-chain®: 16mm**  
As standard separators are fitted every 2<sup>nd</sup> e-chain® link!

		<b>Lean separator</b>	
		unassembled	80.12
		assembled	80.12.1

**Lean separators**

New design allows extremely fast fitting of shelves in several layers, which significantly reduces assembly time. Enables extremely fast replacement of individual cables in a very full e-chain®.

**Lean separator design - several layers of cables fitted quickly, save up to 50%\* assembly time**

(\*Lean separator vs. standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory)



Customised, fully harnessed E6.1 e-chain® system complete with chainflex® cables; both cleanroom suitable and used here in the semiconductor industry