



E4

Universal modular kit, e-chains[®],
e-tubes for all applications

E4.1 | E4/light | E4/00 | E4/4



System E4.1 - the Standard - Recommended for new constructions

Long travels, large unsupported lengths, simple installation and quiet operation

- Combines all design features of the systems E4/00 and E4/4
- Optimum lateral stability and high push/pull force on long travels due to the undercut design
- Ideal for side-mounted applications
- Large unsupported lengths due to stable, double stop dog
- Noise dampening pads as additional noise-reducing option
- Outer and inner links for fast assembly

► www.igus.eu/e4.1

Technical Data - System E4 (E4.350 upon request)



Speed / acceleration FL_G max. max. 20 [m/s] / max. 200 [m/s²]

Speed / acceleration FL_B max. max. 3 [m/s] / max. 6 [m/s²]

Gliding speed / acceleration (maximum) max. 10 [m/s] / max. 50 [m/s²]



Material - permitted temperature °C igumid G / -40° up to +120° C



Flammability class, igumid G VDE 0304 IIC UL94 HB



System E4/light - light and stable

Low weight, stable and cost-effective. Smaller outer links for reduction of weight and costs

- For short travels and vertical hanging/standing applications
- With undercut for high stability
- Optimized ratio of interior and exterior dimension

► www.igus.eu/e4light

E4/00 and E4/4 are still available!









System E4/00 - The predecessor of the E4.1 system for low-noise operation and simple installation. E4/00 continues to be available on the long term. Please select the igus® E4.1 system for new designs.









System E4/4 - The predecessor of the E4.1 system for long travels and side-mounted applications. E4/4 continues to be available on the long term. Please select the igus® E4.1 system for new designs.

System E4 | Broad system of modular accessories







New generation interior separation - Standard for new designs

 Standard separator, wide base	 Separator for QuickLock crossbar	 Separator, narrow base	 Asymmetrical separator	 Notch separator for notch crossbar	 Full-width shelf, lockable
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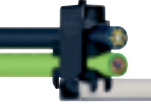

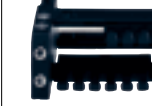



Previous interior separation - still available

 Separator, wide base	 Separator, slotted	 Middle plate for e-chains*	 Side plate for e-chains*	 Spacer for e-chains*	 Clip-on shelf
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Mounting brackets

 KMA with attachment capability on all sides	 Mounting brackets with strain relief	 Mounting brackets with C-profile option	 KMA mounting brackets pivoting	 KMA mounting brackets locking	 Mounting bracket made of steel
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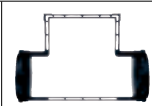



chainfix strain relief elements

 Strain relief for easy fit into C-profile	 Integration with KMA mounting brackets	 Clip-on tiwrap plates for opening crossbars	 Tiwrap plates with clip-on connection for the C-profile	 chainfix clip - Modular snap-on for the C-profile	 chainfix Nugget
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Guide troughs


 Aluminum "Super Trough" Basic	 Aluminum "Super Trough" Heavy-Duty	 Fixed end module, aluminum "Super Trough"	 Steel guide troughs	 Fixed end module, steel guide trough	 For support of the lower run - Support Tray tool kit
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Additional features ► use product link on each page for details

 QuickLock crossbar	 Extension links - for extremely wide e-chains*	 Extender crossbars for hoses applications	 Hinged crossbars	 snapclip	 autoglide crossbars
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System E4 | Many accessories

Application Profile

E4 System	E4.1	E4/light	E4/00	E4/4	
Application					
High tensile forces	++	O	+	+	++ very well-suited + well-suited O conditionally suitable - not suitable
High shearing forces	++	O	+	++	
Long unsupported length through special stop dogs, undercut	++	+	+	++	
Unsupported length, straight	++	O	+	+	
Unsupported length, with sag	++	+	+	+	
Unsupported, side-mounted	++	+	+	++	
Gliding, side-mounted	++	+	+	++	
High speeds	++	++	+	+	
High accelerations	++	++	+	+	
Ratio of inner dimension to outer dimension (space required)	+	++	+	+	
Low fill weight required	+	++	+	O	
Zig-zag applications	+	-	-	+	
Rotary motions	++	O	+	++	
Hanging and standing installation	++	++	O	+	
Installation space	++	++	O	+	
Environment					
Rolling noise generation	++	+	++	+	
Gliding noise generation	++	+	++	+	
High, constant humidity and temperature	++	-	+	++	
Dirt resistance	++	++	++	++	
Chip protection	++	+	++	++	
Insensitivity to vibration and shock	++	-	++	++	
Closed exterior and stop dogs	++	++	++	++	
ESD, ATEX (Special version in conductive material)	++	++	O	++	
Cleanroom	++	++	++	O	
Service life					
Unsupported, straight	++	++	++	++	
Unsupported, with sag	++	+	++	+	
Gliding	++	+	++	++	
Increase service life of cable	++	++	++	++	
Installation					
Opening/closing	++	++	++	++	
Separating/joining	+	+	++	O	





E4.1

The Standard of the E4 program!
igus® e-chains® and e-tubes
for almost all applications

E4.1 - ONE e-chain® series for almost all applications

The E4.1 system combines all the advantages of its three predecessors. E4.1 profits from 25 years of igus® experience in 4-piece e-chains® and is the best igus® e-chain® in the product range. The E4.1 series is more stable with the same or smaller dimensions than their predecessors. Almost all accessory components and mounting dimensions are identical. With the E4.1, the service life of your application can be still increased with lower costs.

- Undercut design for ideal lateral stability, high shear force on long travels and for large unsupported lengths
- Well suited for side-mounted applications
- Noise dampening pads
- Outer and inner links for quick assembly, with or without pretension
- Dirt repellent, with smooth, wear-resistant surface and side wear pads

Typical industries and applications

- Crane ● Indoor crane ● Composting plants
- Sewage plants ● Machine tools ● General mechanical engineering ● Materials handling technology ● Refrigeration engineering ● Construction machinery ● Wood working ● Any type of machines ● Robotics and handling systems



Cleanroom test
upon request



41 dB(A) tested at igus® lab, $v = 1,8 \text{ m/s}$
unsupported, Series E4.21.060.038.0



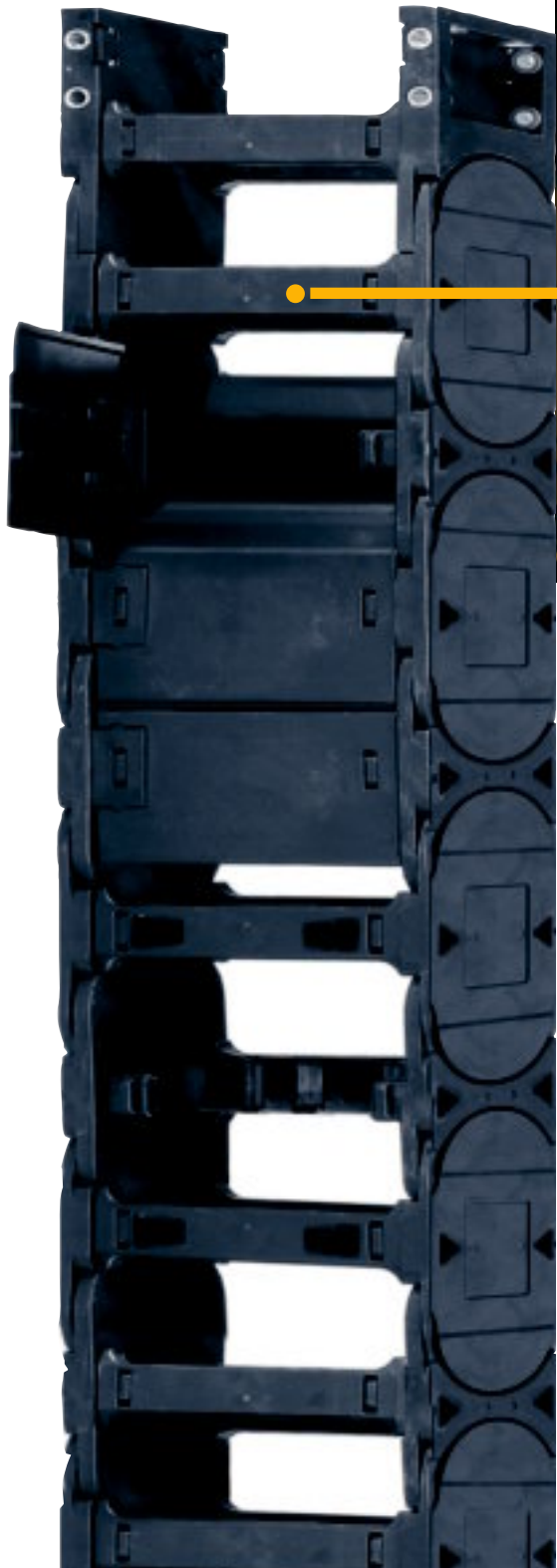
ESD classification: Electrically conductive
ESD/ATEX version upon request



System E4.1 proved
with long travels



e-tubes available as special design with HT
material for 850°C (1562° F) hot chips





The E4.42 Series in a machine tool, completely assembled with igus® chainflex® cables

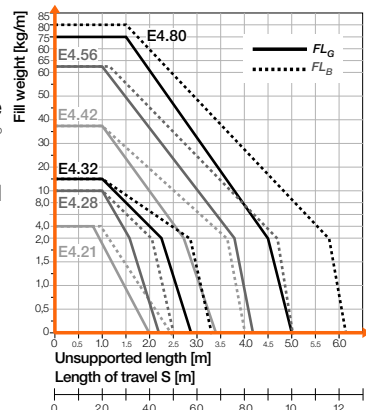
Application	Design feature
Large unsupported length	Special stop dogs, undercut
Low-noise, unsupported gliding	Integrated "brake", smooth gliding surfaces - rubber dampers optional
Hanging and standing installation	Torsional stability through undercut, "no camber" option by flipping the outer link
Long travels	High push/pull forces through undercut design and stop dogs, large and smooth gliding surfaces
Side-mounted, unsupported	Undercut increases unsupported length by about 30% mounted on the side
Fast assembly	"Inner link/outer link" design
Rotary motion	Through simple flipping of links or easy modification, gliding surfaces on the side
Increase service life of cable	Smooth, wide solid polymer support for cables, many quick-mounting shelving options
Increase service life of e-chains®	Large pins, optimized material, high stability
ESD, ATEX	Undercut for secure contact surfaces in motion (special version in conductive material)
Operation under dirt, chips, humidity	Undercut design prevents e-chain® breakage, dirt-resistant design

E4.1 e-chains®: You can "do away" with expensive additional components

- Up to 33% more unsupported length*. Save in the purchase cost, as you can now use smaller e-chains®
- Due to the large unsupported lengths or loads, oversized energy supply systems can be optimized with the igus® E4.1 system
- Best of class - Utmost stability** compared to other polymer e-chains®

* Compared to the igus® E4/00 system series

** Test at igus® laboratory: Sag tested with defined weight and length over 96h



E4.1 | Utilized advantages of the approved E4 Series

The design principle of the undercut combined with the inner/outer-link solution - Series E4.1 - All applications with one e-chain®

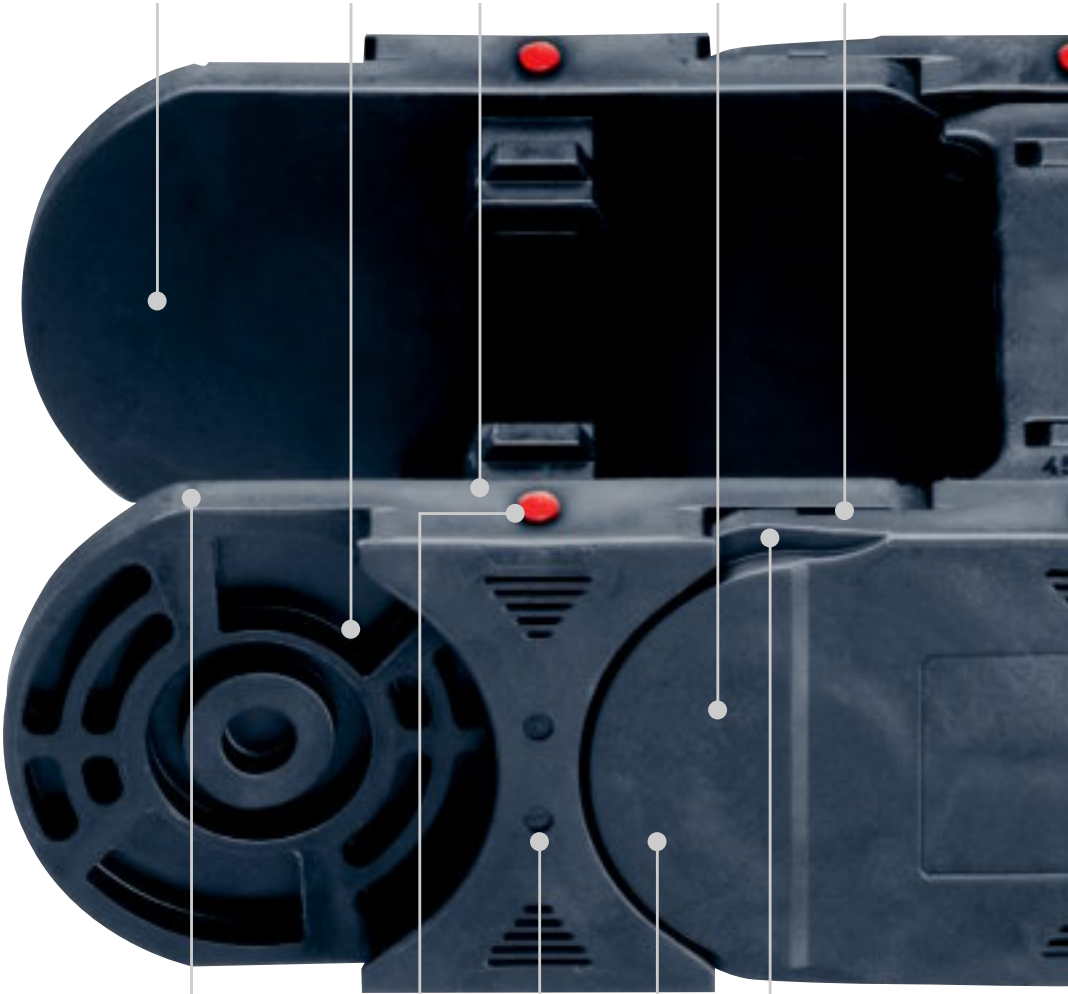
Smooth, cable-friendly inner surfaces

Low noise operation through integrated "brake" on the radial stop dogs

Smooth and wear-resistant gliding surface - no additional gliding shoe

Lateral wear pads for a long service life (also for side-mounted applications)

ESD version ideal through "tongue and groove" contact



Special e-chain® link contour provide for low rolling noise

Additional noise dampening pads

Straight run and fast assembly due to inner- / outer-link design

Very high stiffening and carrying capacity when shear forces appear due to the undercut design

E4.1 | Utilized advantages of the approved E4 Series

Stable crossbars with double locking

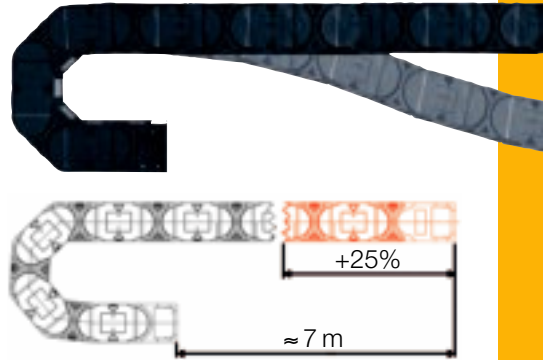
Types "with" or "without pretension" due to flipping outer links



Cable-friendly, rounded crossbar

Vertical stop dog system for larger unsupported lengths

Still more unsupported length with the igus® XXL plastic*

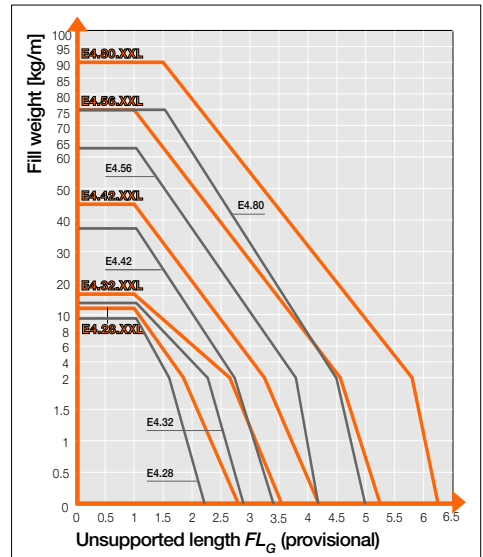


Up to 25% more unsupported length

The new igus® XXL material for igus® E4.1 e-chains® offers you the potential to implement 7 m of travel without troughs and supports, or to implement higher fill weights with constant unsupported length.

- Larger unsupported lengths
- Higher fill weights
- Eliminates guide troughs and supports
- Less space requirement

*optional upon request



For detailed information:

www.igus.de/en/XXL-Material

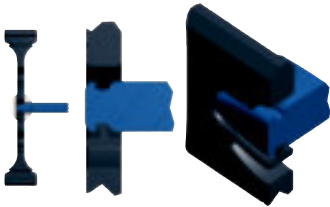
E4.1 | Interior separation kit and crossbars



Realize a better separation, with fewer, standardized parts

Optimized and extended interior separation range for E4.1. The very cable friendly design increases your cables cycle life even further.

- Same separation for e-chains® and e-tubes
- Safe force closure connection
- Cable friendly plastic crossbars, optimized for low cable wear and long cycle life
- Fast assembly



For horizontal separation: full-width shelves

- Shelf locks safely into separators on both ends due to special locking clip
- Separators can be moved freely over the shelf in horizontal direction
- No side plates necessary
- Multilayer separation continuous or in single divisions with only one part possible



Notch crossbars, notch bottoms and lids

New standardized crossbar. Notch teeth in 5 mm gaps on the crossbar ensure safe fit against the notch separators, for side-mount applications. The additional, plane surface scaling makes exact positioning of the separator easy, without increasing cable wear.

- No additional spacers necessary for side-mounted applications
- Approx. 25 kg holding force of separator in raster position
- Clearly visible, plane scaling
- Clearly notches and scaling on crossbars for e-chains® and bottoms and lids of e-tubes



QuickLock Crossbar "Q"

- One-click opening of the QuickLock crossbar:
= 25 % faster assembly compared to standard crossbars
 - Faster assembly with less effort
 - Free access to the top, e-chain® can remain in the guide trough
- www.igus.de/en/E4quickassembly

E4.1 | Longer cycle life



Cables last up to 4 times longer

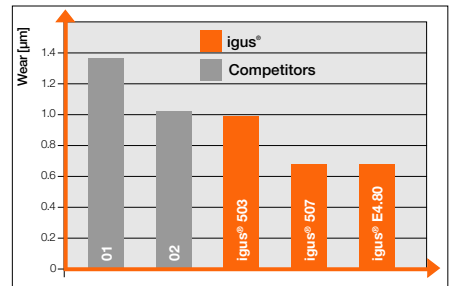
The new separators can increase cycle life of cables by a factor of 4 - their rounded base ensures a smooth junction to the crossbar and avoids edges, which could increase cable wear. A strong force closure fit for e-chains® and e-tubes. Tests in the igus® lab have shown the lowest cable wear in e-chains® with the new plastic separators.



Longer life with Polymer Crossbars

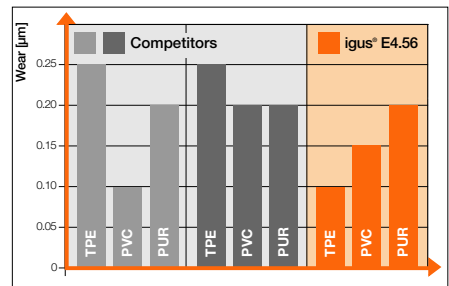
Tests in the igus® lab have shown, that minimized cable wear is achieved in e-chains® with plastic crossbars which are designed cable friendly, with rounded contours. All igus® e-chains®/e-tubes are equipped with plastic crossbars. Where it makes sense, other material can be considered, subject to prior test runs. The locking strength of igus® crossbars is also convincing. Crossbars from different materials underwent a pull-out strength test in the igus® lab. The locking strength is evident. Also, plastic crossbars are elastic yet very torsion resistant and do not plastically deform, like i.e. aluminum crossbars.

Cable wear tests at igus® lab



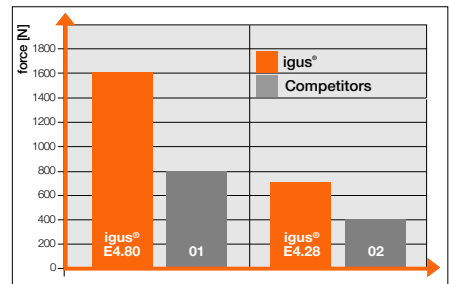
Wear on plastic separators:

Wear could be reduced to nearly half with the new separators



Wear on plastic crossbars:

Longest service life with igus® polymer crossbars



Retention force comparison polymer-/aluminum-crossbars - longest service life!

Maximum holding force of the crossbars

E4.1 | Content Overview | Selection Table

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]	Bending radius <i>R</i> [mm]	Unsupported length max. [m]	page
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Crossbars every link
for particularly demanding
applications

E4.21	21	30 - 120	44 - 134	28	38 - 200	2,50	7.18
E4.28	28	40 - 300	60 - 320	42	55 - 250	2,50	7.28
E4.32	32	50 - 400	73 - 423	54	63 - 300	3,30	7.42
E4.42	42	50 - 400	76 - 426	64	75 - 350	4,00	7.60
E4.56	56	50 - 600	84 - 634	84	135 - 500	5,00	7.78
E4.80	80	50 - 600	100 - 650	108	150 - 1000	6,20	7.96
1640	112	50 - 600	84 - 634	140	200 - 600	4,50	7.114
800	200	200 - 600	260 - 660	236	325 - 1000	8,00	7.130
840	204	100 - 563	160 - 623	236	325 - 1000	8,00	7.140
E4.350	350	400 - 800	540 - 940	450	500 - 1000	6,20	7.150



Crossbars every 2nd link
for almost all
applications

H4.32	32	50 - 400	73 - 423	54	63 - 300	3,30	7.42
H4.42	42	50 - 400	76 - 426	64	75 - 350	4,00	7.60
H4.56	56	50 - 600	84 - 634	84	135 - 500	5,00	7.78
H4.80	80	50 - 600	100 - 650	108	150 - 1000	6,20	7.96

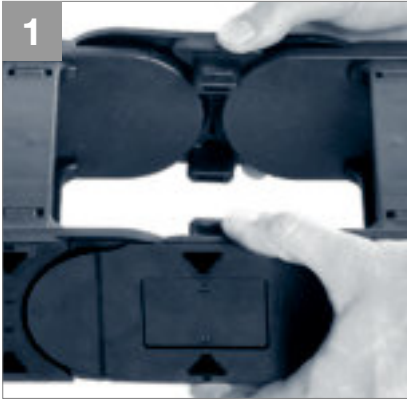


e-tubes
fully enclosed,
excellent cable protection

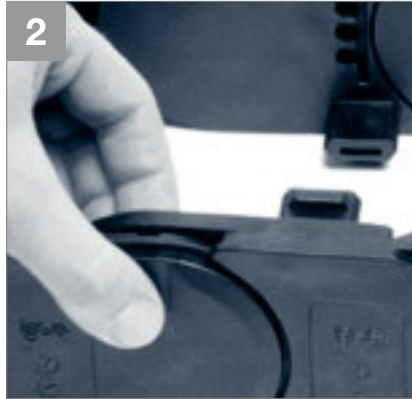
R4.28	28	50 - 300	70 - 320	42	75 - 250	2,50	7.28
R4.32	32	50 - 300	73 - 323	54	125 - 300	3,30	7.42
R4.42	42	50 - 300	76 - 326	64	125 - 350	4,00	7.60
R4.56	56	75 - 462	109 - 497	84	135 - 500	5,00	7.78
R4.80	80	150 - 200	250 - 513	108	200 - 1000	6,20	7.96
1608	108	200 - 400	234 - 434	140	250 - 600	4,50	7.114



E4.1 | Assembly Instruction



Line up two inner side links, side by side...



...attach an outer side link between



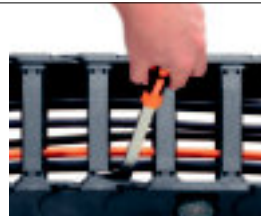
Assemble crossbars - push down and snap in by using a screwdriver



Assemble e-tube lids/bottoms - attach to the connector at an angle - snap in


The **NEW** E4 e-chain® opener reduces assembly time

e-chain® opener tools for convenient opening and closing of E4 series igus® e-chains® ● Especially for e-chains® with many crossbars the assembly is much easier ● Especially in areas difficult to access mounting is simplified big savings in assembly time. Please call us or ► www.igus.eu/E4savetime

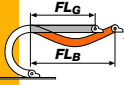


 **Technical data overview** ► next page

 **Part No. of e-chain® links as single parts** ► next page

 **Assembly video available online at** ► www.igus.de/en/E4_assembly

Technical data - E4.1

Speed / acceleration FL_G max.max. 20 [m/s] / max. 200 [m/s²]Speed / acceleration FL_B max.max. 3 [m/s] / max. 6 [m/s²]

Gliding speed / acceleration (maximum)

max. 10 [m/s] / max. 50 [m/s²]

Material - permitted temperature °C

igumid G / -40° up to +120° C











Flammability class, igumid G

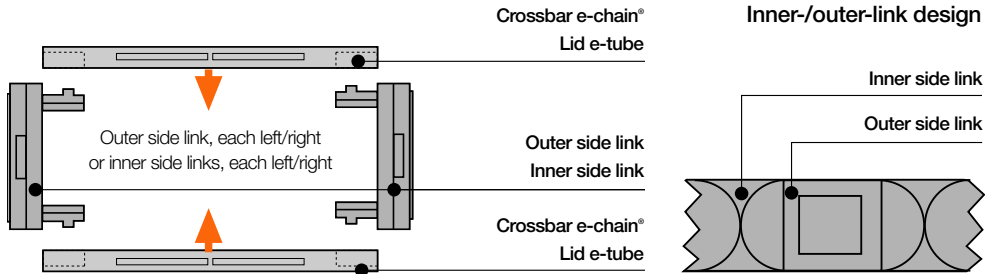
VDE 0304 IIC UL94 HB


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

Installation methods overview, maximum travels - E4.1

Series e-chain® / e-tube	 Unsupported	 Gliding	 Vertical hanging	 Vertical standing	 Side-mounted	 Circular	 Zig-zag	 Unsupported length lower run
E4.21	≤ 2,5 m	≤ 120 m	≤ 40 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request
E4.28/R4.28	≤ 2,5 m	≤ 200 m	≤ 80 m	≤ 5,0 m	≤ 1,2 m	with rework	upon request	upon request
E4.32/R4.32	≤ 3,3 m	≤ 200 m	≤ 80 m	≤ 5,0 m	≤ 1,5 m	with rework	upon request	upon request
E4.42/R4.42	≤ 4,0 m	≤ 300 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
E4.56/R4.56	≤ 5,0 m	≤ 400 m	≤ 100 m	≤ 6,0 m	≤ 2,5 m	with rework	upon request	upon request
E4.80/R4.80	≤ 6,2 m	≤ 400 m	≤ 120 m	≤ 6,0 m	≤ 3,0 m	with rework	upon request	upon request
1640/1608	≤ 4,5 m	≤ 400 m	≤ 100 m	≤ 5,0 m	≤ 2,0 m	with rework	upon request	upon request
800	≤ 8,0 m	≤ 450 m	≤ 120 m	≤ 6,0 m	≤ 6,0 m	with rework	upon request	upon request
840	≤ 8,0 m	≤ 450 m	≤ 120 m	≤ 6,0 m	≤ 6,0 m	with rework	upon request	upon request

Part No. 4-piece e-chain® links as single parts - E4.1



 Series	Crossbar* e-chain®	Lid* e-tube	Bottom* e-tube	Outer side link**	Inner side link***
E4.21	2105. <i>Bi</i>	–	–	210.01	210.02. <i>R</i>
E4.28/R4.28	225. <i>Bi</i>	765. <i>Bi</i>	766. <i>Bi</i>	E4.28.01	E4.28.02. <i>R</i>
E4.32/R4.32	385. <i>Bi</i>	775. <i>Bi</i>	776. <i>Bi</i>	E4.32.01	E4.32.02. <i>R</i>
E4.42/R4.42	385. <i>Bi</i>	785. <i>Bi</i>	786. <i>Bi</i>	E4.42.01	E4.42.02. <i>R</i>
E4.56/R4.56	450. <i>Bi</i>	885. <i>Bi</i>	886. <i>Bi</i>	E4.56.01	E4.56.02. <i>R</i>
E4.80/R4.80	450. <i>Bi</i>	E4.805. <i>Bi</i>	E4.806. <i>Bi</i>	E4.56.01	E4.56.02. <i>R</i>
1640/1608	450. <i>Bi</i>	16085. <i>Bi</i>	16086. <i>Bi</i>	1600.01	1600.02. <i>R</i>
800	850. <i>Bi</i>	–	–	800.01	800.02. <i>R</i>
840	450. <i>Bi</i>	–	–	800.01	800.02. <i>R</i>

* Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 450.150

** Outer side link - suitable for all radii

*** Inner side link - supplement Part No. with required width index (*Bi*) and required radius (*R*), example: E4.56.02.100

 **Available from stock. Delivery in 24h or today!***

*Delivery time means time until shipping of goods



All-sides attachment

Optional with noise dampening pads
≈40 dB(A)

Gliding surfaces,
long travels

Very high stiffening
and carrying
capacity due to the
undercut design

NC without
pretension

Straight run due to
the inner/outer
link principle

Low noise
operation due to
integrated "brake"

⊕ **Stable due to undercut design, small inner height**

When to use Series E4.21:

- If a robust e-chain® with an inner height of 21 mm is required
- If inner widths up to 120 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 4,0 kg/m
- For long travels up to 120 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired
- If a crossbar with locking function is required



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required
 - ▶ **Series E3.22, page 8.18**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
 - ▶ **Series E3.22, page 8.18**
- If snap-open capability from one side (e-chains® / e-tubes) is desired for economic reasons
 - ▶ **Series 1400/1450/1480/1500, page 5.142**
 - ▶ **Series R117/R118, page 6.6**

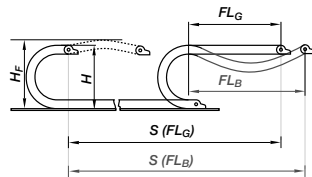
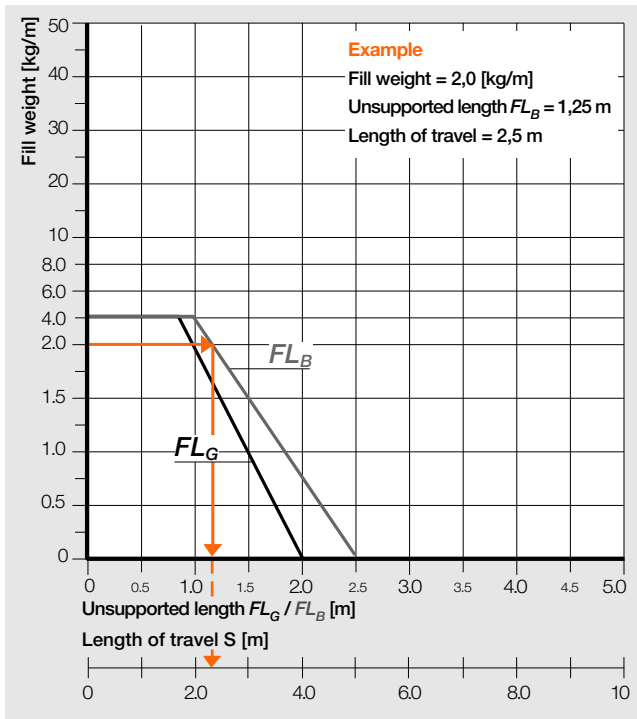


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.21



Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

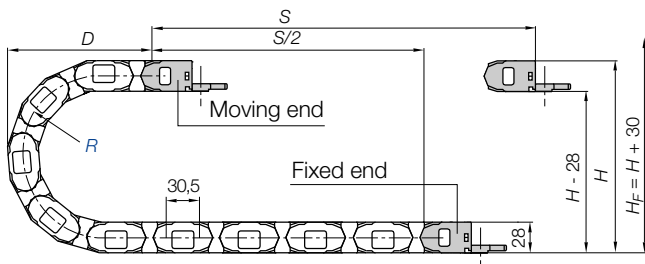
Gliding applications

Travels up to 120 m.
 More information ► **page 7.24**

Technical Data

Speed, material, temperature and flammability class ► **page 7.16**

- Pitch** = 30,5 mm/link
- Links/m** = 33 (1007 mm)
- Chain length** = $S/2 + K$



R	038	048	063	075	100	150	200
H	104	124	154	178	228	328	428
D	085	095	110	120	145	195	245
K	185	215	260	300	380	535	690

The required clearance height: $H_F = H + 30$ mm (with 1,5 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain", radius in final position
 $K = \pi \cdot R + "$ safety"



e-chains® | Series E4.21 with crossbars every link

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.21 [kg/m]
E4.21.030.R.0	30	44	≈ 0,60
E4.21.040.R.0	40	54	≈ 0,64
E4.21.050.R.0	50	64	≈ 0,67
E4.21.060.R.0	60	74	≈ 0,71
E4.21.070.R.0	70	84	≈ 0,74

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.21 [kg/m]
E4.21.080.R.0	80	94	≈ 0,78
E4.21.090.R.0	90	104	≈ 0,82
E4.21.100.R.0	100	114	≈ 0,85
E4.21.110.R.0	110	124	≈ 0,89
E4.21.120.R.0	120	134	≈ 0,92

Available bending radii R [mm] 038 | 048 | 063 | 075 | 100 | 150 | 200

Supplement Part No. with required radius (R). Example: E4.21.120.100.0

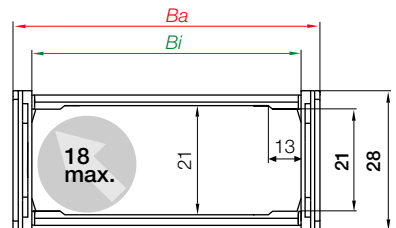


Order key

E4 .21. 120. 100. 0



Dimensioning



E4.21.120.100.0 = e-chain® with crossbars every link, inner width B_i 120 mm, radius R 100 mm, color black
More order examples, variations and configurations ► page 7.26

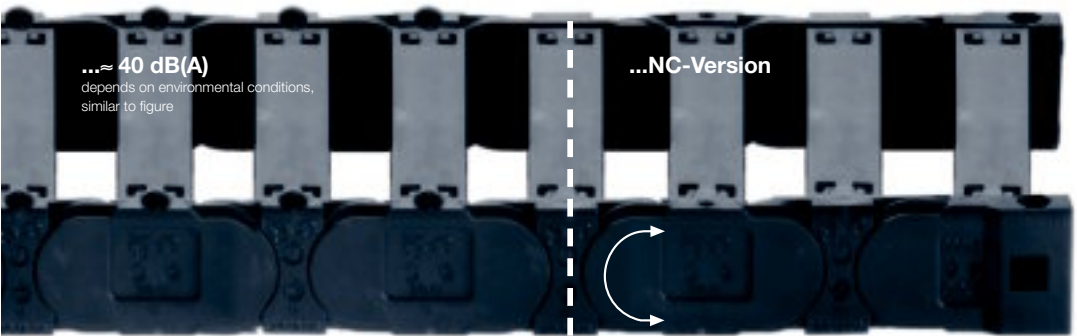


Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



Noise dampening | ≈ 40 dB(A)



NC-Version | Without pretension

With pads crossbars every link	Bi [mm]	With pads crossbars every link	Bi [mm]
ES4 .21. 030. R.0	30	ES4 .21. 080. R.0	80
ES4 .21. 040. R.0	40	ES4 .21. 090. R.0	90
ES4 .21. 050. R.0	50	ES4 .21. 100. R.0	100
ES4 .21. 060. R.0	60	ES4 .21. 110. R.0	110
ES4 .21. 070. R.0	70	ES4 .21. 120. R.0	120

NC-Version crossbars every link	Bi [mm]	NC-Version crossbars every link	Bi [mm]
E4 .21. 030. R.0.NC	30	E4 .21. 080. R.0.NC	80
E4 .21. 040. R.0.NC	40	E4 .21. 090. R.0.NC	90
E4 .21. 050. R.0.NC	50	E4 .21. 100. R.0.NC	100
E4 .21. 060. R.0.NC	60	E4 .21. 110. R.0.NC	110
E4 .21. 070. R.0.NC	70	E4 .21. 120. R.0.NC	120

Available bending radii R [mm] 038 | 048 | 063 | 075 | 100 | 150 | 200

Supplement Part No. with required radius (R). Example: **ES4.21.120.100.0** or **E4.21.120.100.0.NC**



For e-chains® with noise dampening pads supplement Part No. with required index "S"
 Example: **Part No. ES4.21.120.100.0** = e-chain® (crossbars every link) with noise dampening
 For NC-e-chains® without pretension supplement Part No. with required index "NC"
 Example: **Part No. E4.21.120.100.0.NC** = e-chain® (crossbars every link) without pretension

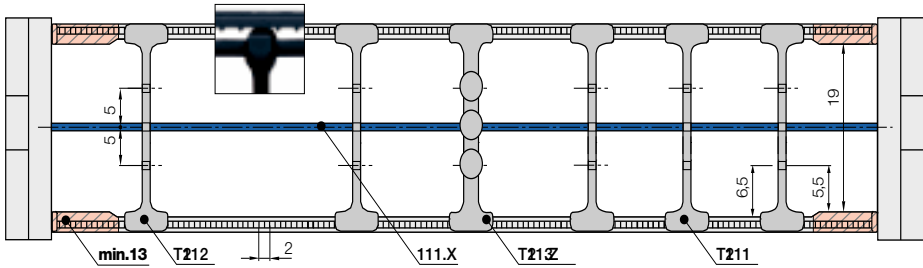


e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*

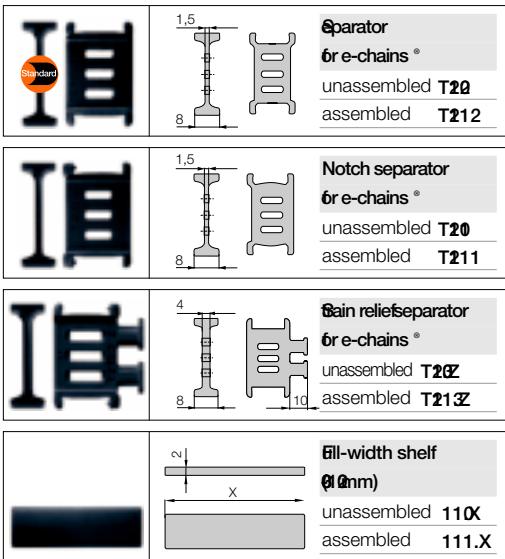
*Delivery time means time until shipping of goods



Full and half e-tubes with an inner height of 21 mm:
 E2/000 Series 1450/1480 ► from page 5.142



Note e-chain®: Please observe a lateral spacing of **13 mm** to the side link!
In the standard configuration separators are assembled every 2nd e-chain® link



Standard separator T20

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Notch separator T20

can be locked in 2 mm increments due to gaps on the crossbars of e-chains®. The separator cannot slide sideways during the operation.

Strain relief separator T20Z

can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation.

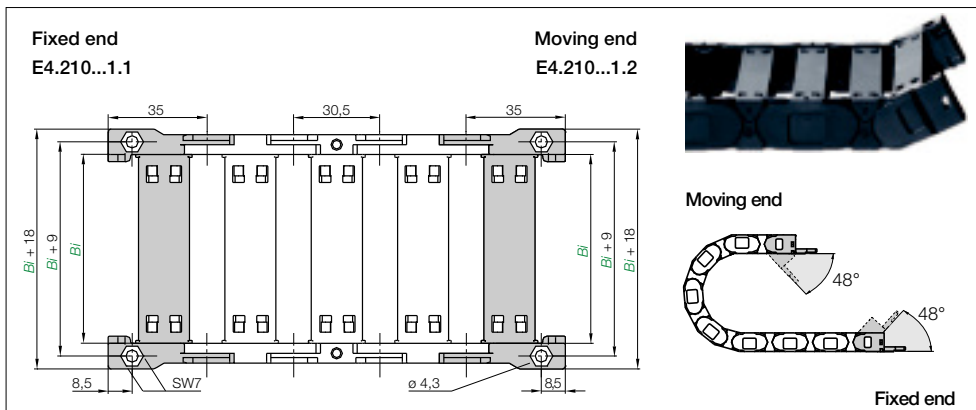
Full-width shelf 110X

this option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelf

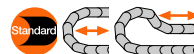
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
030	110	111.0	070	110	111.70	110	110	111.10
040	110	111.40	080	110	111.8	120	110	111.10
050	110	111.50	090	110	111.9			
060	110	111.6	100	110	111.10			

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting	Bi [mm]	Width index	Part No. full set pivoting	Bi [mm]
030.	E4.210.030.1.12	30	080.	E4.210.080.1.12	80
040.	E4.210.040.1.12	40	090.	E4.210.090.1.12	90
050.	E4.210.050.1.12	50	100.	E4.210.100.1.12	100
060.	E4.210.060.1.12	60	110.	E4.210.110.1.12	110
070.	E4.210.070.1.12	70	120.	E4.210.120.1.12	120



- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Special feature mounting brackets: Series E4.21

- Mounting brackets with attachment points on all sides
- Note:** Series E4.21: mounting brackets always need to end with an inner plate (odd number of links)!
- Special design of the counterbore as hexagon - the inlay of the nut (M4) and the counterboring of the hexagon socket head screw (M4), is consequently possible



Part No. structure (pivoting)

E4.210.120.1.12

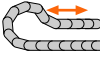


Single-part order:

Mounting bracket **Moving end**
E4.210.120.1.2 (odd number of links)
 Mounting bracket **Fixed end**
E4.210.120.1.1 (odd number of links)

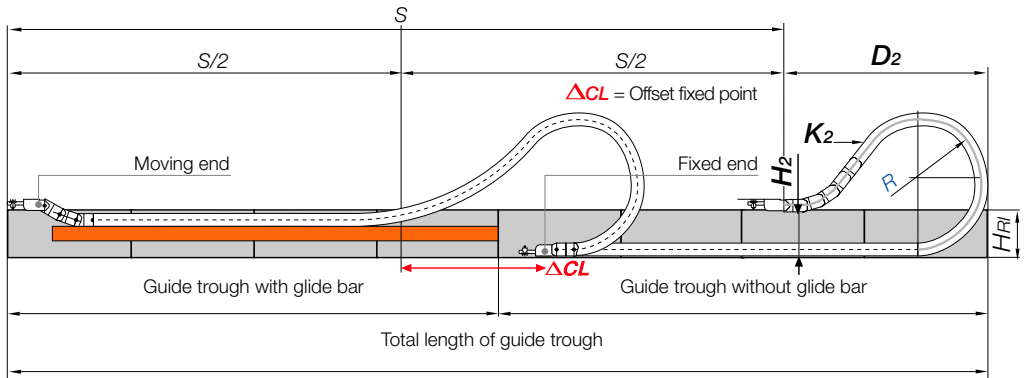


Strain relief, e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Gliding applications | For long travels from 10 m to max. 120 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 4 and 10 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 30,5 mm/link · Links/m = 33 (1007 mm) · Chain length = $\frac{S}{2} + K$

R	038	048	063	075	100	150	200
H_2	76	96	126	152	135	135	135
D_2^{+25}	085	095	110	120	490	530	665
K_2	185	215	260	300	782	920	1104
ΔCL	-	-	-	-	270	370	470



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



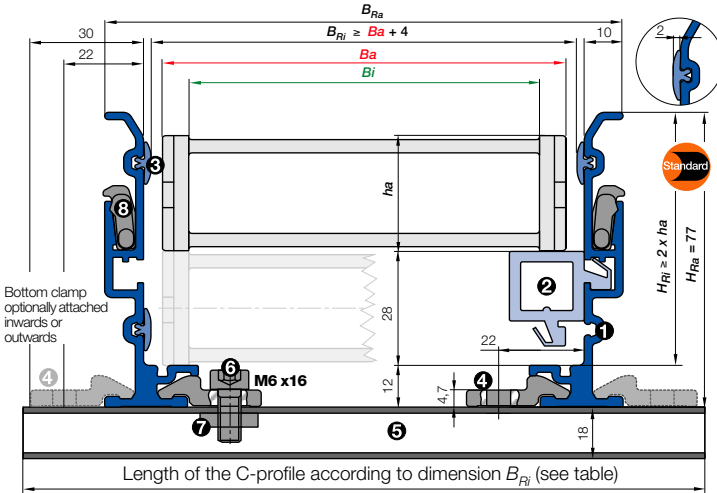
H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔCL = Offset fixed point
 H_{RI} = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Aluminum "SuperTrough" | Basic Version



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.21.050.100.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	-	960.30.150
.040	960.30.125	960.30.150
.050	960.30.125	960.30.175
.060	960.30.125	960.30.175
.070	960.30.150	960.30.175
.080	960.30.150	960.30.200
.090	960.30.175	960.30.200
.100	960.30.175	960.30.225
.110	960.30.175	960.30.225
.120	960.30.200	960.30.225

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request)
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M6 x 16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.21.050.100.0 with $B_{Ri} = 68$

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No.** 970.30.SL

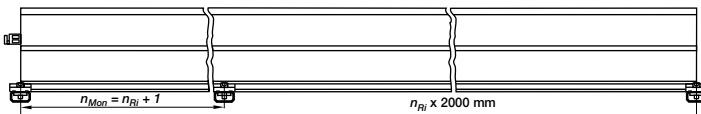
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No.** 970.32.SL

Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets **Part No.** 960.30.30.125

Module for the fixed end upon request



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.22



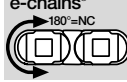
- Trough set
- Installation set
- Glide bar

- C-Profile
- Ba = Outer width e-chains*
- Bi = Inner width e-chains*

- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height

- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

E4.1 | Series E4.21 | Options and order key

**Standard***Additional noise dampening with pads**Simply turn outer side link without additional work**Reverse bending radius for circular movements**Unsupported lengths +25% possible***Part No. Standard e-chains®****Part No. Low noise (with pads) e-chains®/e-tubes****Part No. NC-Material e-chains®****Part No. RBR e-chains®****Part No. XXL-Material** e-chains®****E4.21.120.R.0****ES4.21.120.R.0****E4.21.120.R.0.NC****E4.21.120.R1/R2.0****E4.21.120.R.0.XXL****Delivery in 24h or today!*****Delivery time: 3-5 work days****Delivery in 24h or today!*****Delivery time: 10 work days**

(2-5 work days with express surcharge)

Delivery time: 1-2 weeks

**Sidebands made from XXL-Material

Combination possibilities | Examples

	Low-noise option	NC-Version	RBR-Version	XXL-Material	ESD-Material
Low-noise option		ES4.21.120.R.0.NC	-	ES4.21.120.R.0.XXL	ES4.21.120.R.0.ESD
NC-Version	ES4.21.120.R.0.NC		-	-	E4.21.120.R.0.ESD.NC
RBR-Version	-	-		-	E4.21.120.R1/R2.0.ESD
XXL-Material	ES4.21.120.R.0.XXL	-	-		-
ESD-Material	ES4.21.120.R.0.ESD	E4.21.120.R.0.ESD.NC	E4.21.120.R1/R2.0.ESD	-	

E4.1 | Series E4.21 | Options and order key

ATEX/ESD classi-
fied e-chains® -
II 2 GD

Part No.
ESD-Material
e-chains®



E4.21.120.R.0.ESD

Delivery time:
5 work days

Order example | Order key and color options



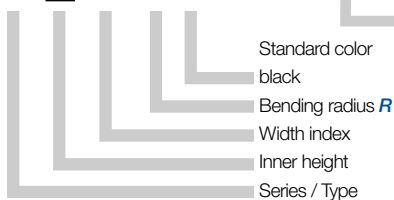
Order example for complete e-chain® (3,0 m, with crossbars every link),
color black, mounting brackets and interior separation

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 99 links	E4.21.120.100.0
+ Mounting brackets	1 set	E4.210.120.1.12
+ Interior separation	with 2 separators assembled every 2 nd link	2 x T2112

Order text: 3,0 m E4.21.120.100.0 + E4.210.120.1.12 + 2 x Part No. T2112



Order key
E4.21.120.100.0



Color options for e-chains® and e-tubes

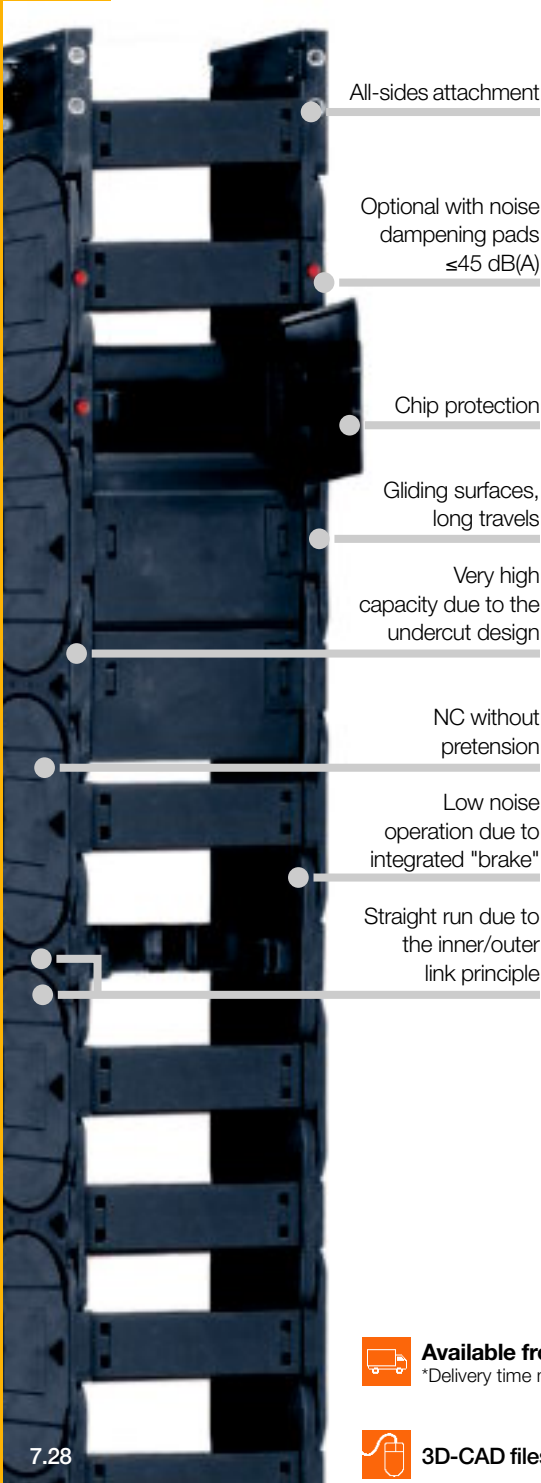
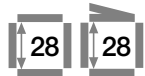
Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® delivered in 15 work days
(Delivery in 5 work days at an express surcharge, available upon request!)



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Optional with noise dampening pads ≤ 45 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

NC without pretension

Low noise operation due to integrated "brake"

Straight run due to the inner/outer link principle

+ Stable due to undercut design, small inner height

When to use Series E4.28:

- If a robust e-chain®/e-tube with an inner height of 28 mm is required
- If inner widths up to 300 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 10 kg/m
- For long travels up to 200 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required
 - ▶ **Series E6.29, page 8.40**
 - ▶ **Series R6.29, page 8.46**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
 - ▶ **Series E6.29, page 8.40**
- If a less stable e-chain® can be used for economical reasons
 - ▶ **Series 2400/2450/2480/2500, page 5.160**

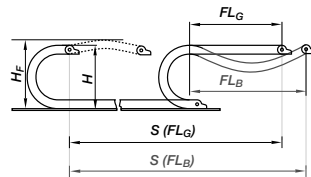
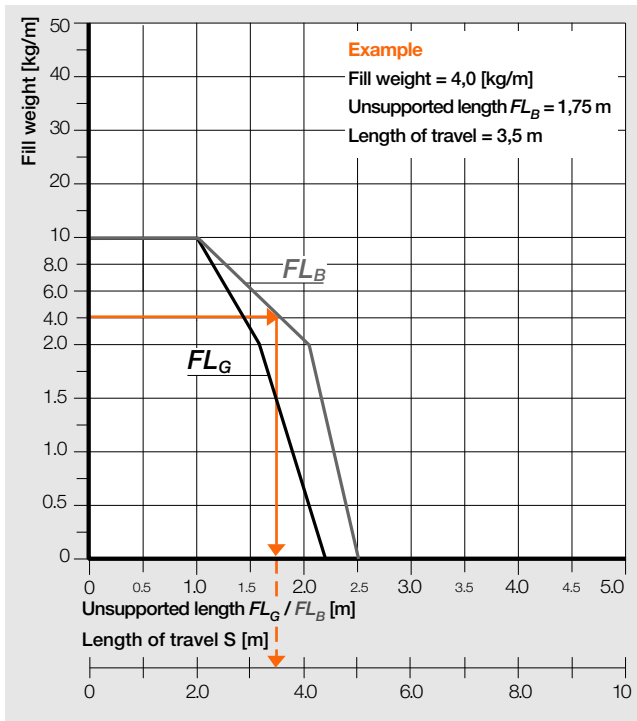


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.28

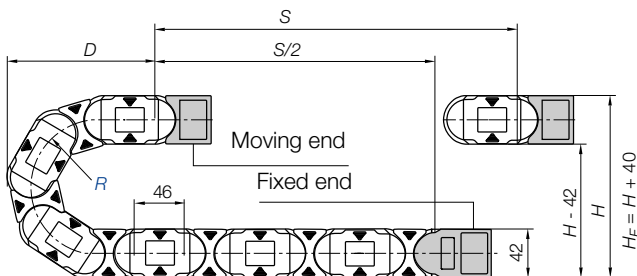


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 200 m.
 More information ► **page 7.38**



Technical Data

Speed, material, temperature and flammability class ► **page 1.16**

- Pitch** = 46 mm/link
- Links/m** = 22 (1012 mm)
- Chain length** = $S/2 + K$

R	055	063	075	100	125	150	175	200	250
H	152	168	192	242	292	342	392	442	542
D	122	130	142	167	192	217	242	267	317
K	265	290	330	410	485	565	655	725	880

The required clearance height: $H_F = H + 40$ mm (with 3,0 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain, radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series E4.28 with crossbars every link

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.28 [kg/m]
E4.28. 040. R.0	40	60	≈ 1,06
E4.28. 050. R.0	50	70	≈ 1,11
E4.28. 062. R.0	62	82	≈ 1,17
E4.28. 070. R.0	70	90	≈ 1,20
E4.28. 075. R.0	75	95	≈ 1,23
E4.28. 087. R.0	87	107	≈ 1,28
E4.28. 100. R.0	100	120	≈ 1,37
E4.28. 125. R.0	125	145	≈ 1,51

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.28 [kg/m]
E4.28. 150. R.0	150	170	≈ 1,61
E4.28. 175. R.0	175	195	≈ 1,71
E4.28. 200. R.0	200	220	≈ 1,84
E4.28. 225. R.0	225	245	≈ 1,99
E4.28. 250. R.0	250	270	≈ 2,14
E4.28. 275. R.0	275	295	≈ 2,27
E4.28. 300. R.0	300	320	≈ 2,39

Available bending radii R [mm] 055 | 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250

Supplement Part No. with required radius (R). Example: E4.28.100.100.0



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series **R4.28** - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.28 [kg/m]
R4.28. 050. R.0	50	70	2,20
R4.28. 075. R.0	75	95	2,32
R4.28. 100. R.0	100	120	2,54
R4.28. 125. R.0	125	145	2,78
R4.28. 150. R.0	150	170	3,02

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.28 [kg/m]
R4.28. 175. R.0	175	195	3,26
R4.28. 200. R.0	200	220	3,50
R4.28. 225. R.0	225	245	3,82
R4.28. 250. R.0	250	270	3,98
R4.28. 300. R.0	300	320	4,46

Available bending radii *R* [mm] 075 | 100 | 125 | 150 | 175 | 200 | 250

Supplement Part No. with required radius (*R*). Example: **R4.28.100.100.0**

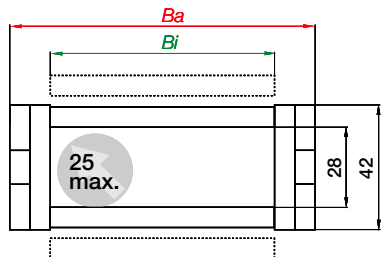
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

E4.28.100.100.0 e-chain® (crossbars every link)
R4.28.100.100.0 e-chain® (crossbars every 2nd link)

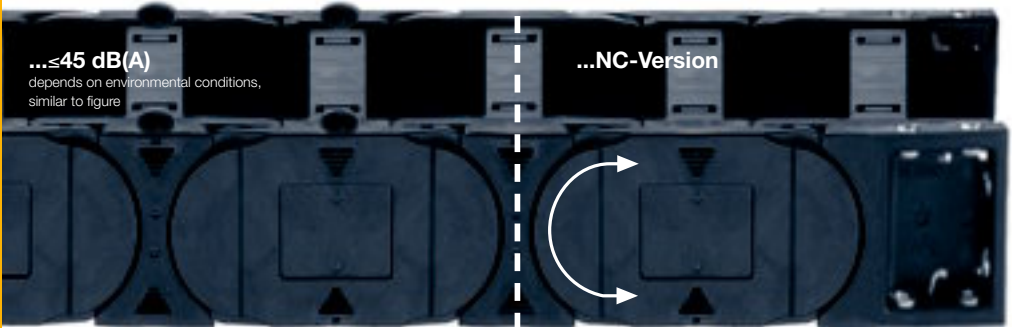


Dimensioning



-  **E4.28.100.100.0** = e-chain® with **crossbars every link**, inner width *Bi* 100 mm, radius *R* 100 mm, color black
 - R4.28.100.100.0** = **Fully enclosed** e-tube, inner width *Bi* 100 mm, radius *R* 100 mm, color black
- More order examples, variations and configurations ► page 7.40

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***
 *Delivery time means time until shipping of goods



...≤45 dB(A)
depends on environmental conditions,
similar to figure

...NC-Version



Noise dampening | ≤45 dB(A)

With pads Crossb. e-tube every: link fully enclosed	<i>Bi</i> [mm]	With pads Crossb. e-tube every: link fully enclosed	<i>Bi</i> [mm]
ES4 – .28.040.R.0	40	ES4 RS4 .28.150.R.0	150
ES4 RS4 .28.050.R.0	50	ES4 RS4 .28.175.R.0	175
ES4 – .28.062.R.0	62	ES4 RS4 .28.200.R.0	200
ES4 – .28.070.R.0	70	ES4 RS4 .28.225.R.0	225
ES4 RS4 .28.075.R.0	75	ES4 RS4 .28.250.R.0	250
ES4 – .28.087.R.0	87	ES4 – .28.275.R.0	275
ES4 RS4 .28.100.R.0	100	ES4 RS4 .28.300.R.0	300
ES4 RS4 .28.125.R.0	125		



NC-Version | Without pretension

NC-Version crossb. e-tube every: link fully enclosed	<i>Bi</i> [mm]	NC-Version crossb. e-tube every: link fully enclosed	<i>Bi</i> [mm]
E4 – .28.040.R.0.NC	40	E4 R4 .28.150.R.0.NC	150
E4 R4 .28.050.R.0.NC	50	E4 R4 .28.175.R.0.NC	175
E4 – .28.062.R.0.NC	62	E4 R4 .28.200.R.0.NC	200
E4 – .28.070.R.0.NC	70	E4 R4 .28.225.R.0.NC	225
E4 R4 .28.075.R.0.NC	75	E4 R4 .28.250.R.0.NC	250
E4 – .28.087.R.0.NC	87	E4 – .28.275.R.0.NC	275
E4 R4 .28.100.R.0.NC	100	E4 R4 .28.300.R.0.NC	300
E4 R4 .28.125.R.0.NC	125		

Available bending radii *R* [mm] 055* | 063* | 075 | 100 | 125 | 150 | 175 | 200 | 250

*not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.28.100.100.0 or E4.28.100.100.0.NC



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: Part No. ES4.28.100.100.0 = e-chain® (crossbars every link) with noise dampening

For NC-e-chains® without pretension supplement Part No. with required index "NC"

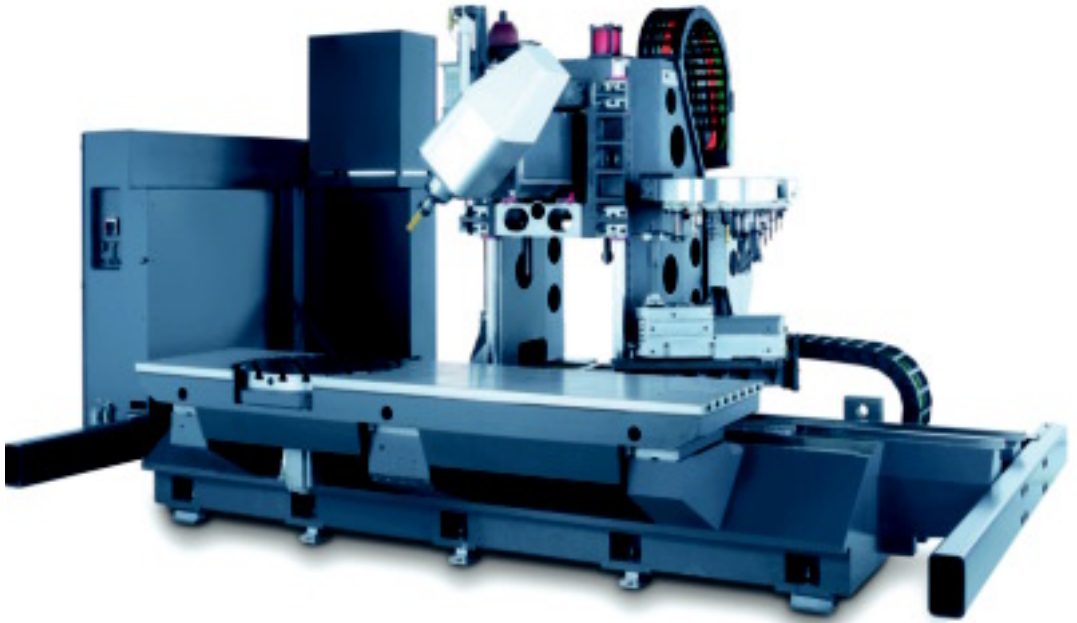
Example: Part No. E4.28.100.100.0.NC = e-chain® (crossbars every link) without pretension



e-chain® with noise dampening pads - Delivery time: 3-5 work days.

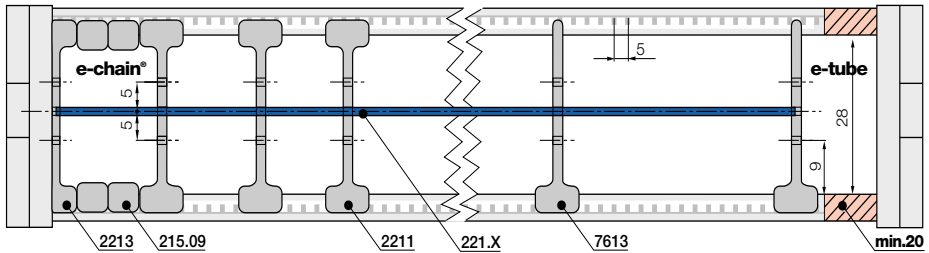
NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods



Due to the "undercut design" igus® E4.1 series feature high lateral stability.
High lateral accelerations of up to 8m/s^2 can be managed on this milling machine for bicycles

Option 1 | Separators and spacers* (*side-mounted applications)



Note e-tube: Please observe a lateral spacing of **20 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!

Separator for e-chains®

unassembled **2201**
assembled **2211**

Separator 2201 (e-chains® only)
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Separator for e-tubes

unassembled **7603**
assembled **7613**

Separator 7603 (e-tubes only)
For e-tubes R4.28.

Spacer* for e-chains®

unassembled **205.09**
assembled **215.09**

Spacer* 205.09 (e-chains® only)
Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications).

Side plate for e-chains®

unassembled **2203**
assembled **2213**

Side plate 2203 (e-chains® only)
Works like separator.
Allows modular shelving close to the side links.

Full-width shelf (40-200 mm)

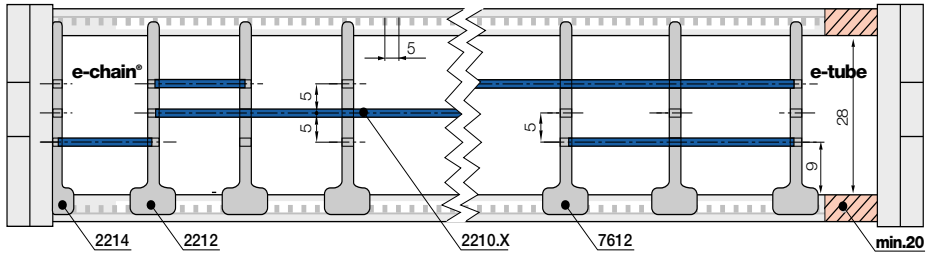
unassembled **220.X**
assembled **221.X**

Full-width shelf 220.X
This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelf

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
040	220.40	221.40	075	220.75	221.75	150	220.150	221.150
050	220.50	221.50	087	220.87	221.87	175	220.175	221.175
062	220.62	221.62	100	220.100	221.100	200	220.200	221.200
070	220.70	221.70	125	220.125	221.125			

Option 2 | Shelves



Note e-tube: Please observe a lateral spacing of **20 mm** to the side links!

In the standard configuration separators are assembled every 2nd e-chain® link!

		<p>Middle plate for e-chains®</p> <p>unassembled 2202</p> <p>assembled 2212</p>
--	--	--

Middle plate 2202 (e-chains® only)

To achieve a modular shelving by shelf 2220.X arranged at 3 different heights (in 5 mm increments).

		<p>Middle plate for e-tubes</p> <p>unassembled 7602</p> <p>assembled 7612</p>
--	--	--

Middle plate 7602 (e-tubes only)

For e-tubes R4.28.
A side plate is not available for the e-tube.

		<p>Side plate for e-chains®</p> <p>unassembled 2204</p> <p>assembled 2214</p>
--	--	--

Side plate 2204 (e-chains® only)

Works like middle plate.
Allows modular shelving close to the side links.

		<p>Shelf (18-149 mm)</p> <p>unassembled 2220.X</p> <p>assembled 2210.X</p>
--	--	---

Shelf 2220.X

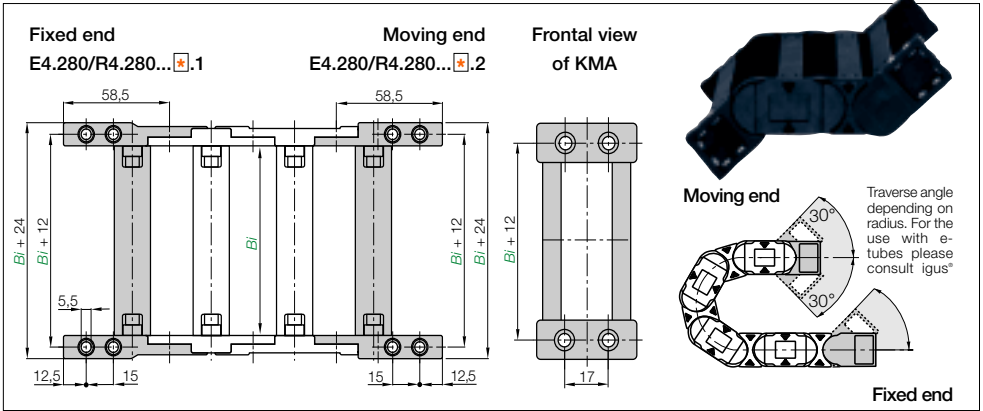
For horizontal separation. Shelves of various widths can be arranged at 3 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			

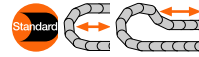
E4.1 | Series E4.28 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting	Bi [mm]	Width index	Part No. full set pivoting	Bi [mm]
040. ▶	E4.280. - 040 ..12 40	150. ▶	E4.280. R4.280. 150 ..12 150		
050. ▶	E4.280. R4.280. 050 ..12 50	175. ▶	E4.280. R4.280. 175 ..12 175		
062. ▶	E4.280. - 062 ..12 62	200. ▶	E4.280. R4.280. 200 ..12 200		
070. ▶	E4.280. - 070 ..12 70	225. ▶	E4.280. R4.280. 225 ..12 225		
075. ▶	E4.280. R4.280. 075 ..12 75	250. ▶	E4.280. R4.280. 250 ..12 250		
087. ▶	E4.280. - 087 ..12 87	275. ▶	E4.280. - 275 ..12 275		
100. ▶	E4.280. R4.280. 100 ..12 100	300. ▶	E4.280. R4.280. 300 ..12 300		
125. ▶	E4.280. R4.280. 125 ..12 125				



- Standard
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.280.100..12



Single-part order:

Mounting bracket **Moving end**

E4.280.100..2 (even number of links)

Mounting bracket **Fixed end**

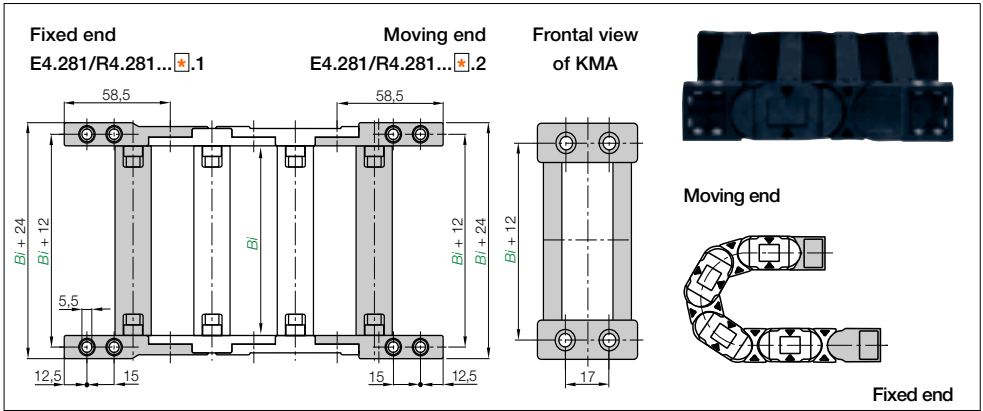
E4.280.100..1 (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index (for odd) or (for even)!

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

E4.1 | Series E4.28 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking	Bi [mm]	Width index	Part No. full set locking	Bi [mm]
040.	▶ E4.281. - 040. 1.12 40	40	150.	▶ E4.281. R4.281. 150. 1.12 150	150
050.	▶ E4.281. R4.281. 050. 1.12 50	50	175.	▶ E4.281. R4.281. 175. 1.12 175	175
062.	▶ E4.281. - 062. 1.12 62	62	200.	▶ E4.281. R4.281. 200. 1.12 200	200
070.	▶ E4.281. - 070. 1.12 70	70	225.	▶ E4.281. R4.281. 225. 1.12 225	225
075.	▶ E4.281. R4.281. 075. 1.12 75	75	250.	▶ E4.281. R4.281. 250. 1.12 250	250
087.	▶ E4.281. - 087. 1.12 87	87	275.	▶ E4.281. - 275. 1.12 275	275
100.	▶ E4.281. R4.281. 100. 1.12 100	100	300.	▶ E4.281. R4.281. 300. 1.12 300	300
125.	▶ E4.281. R4.281. 125. 1.12 125	125			



- Locked connections
- At high acceleration
- Universally mountable
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.281.100.2.12



Single-part order:

Mounting bracket **Moving end**

E4.281.100.2.2 (even number of links)

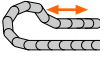
Mounting bracket **Fixed end**

E4.281.100.2.1 (even number of links)

Note: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even).

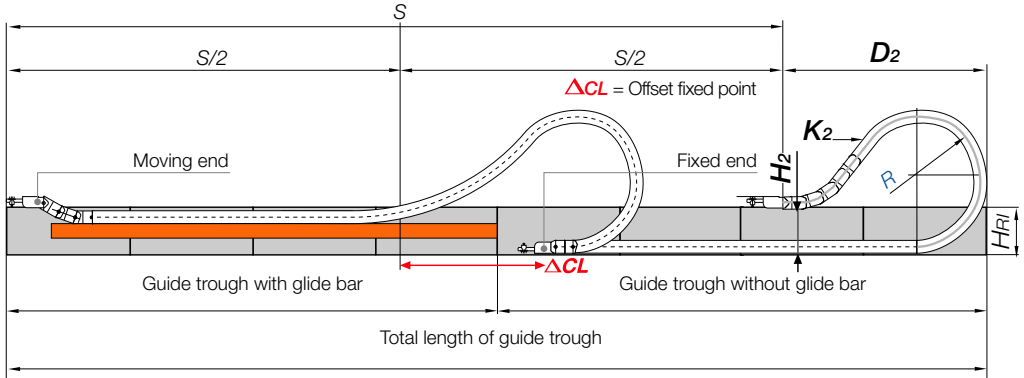


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Gliding applications | For long travels from 10 m to max. 200 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 5 and 10 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 46 mm/link · Links/m = 22 (1012 mm) · Chain length = $\frac{S}{2} + K$

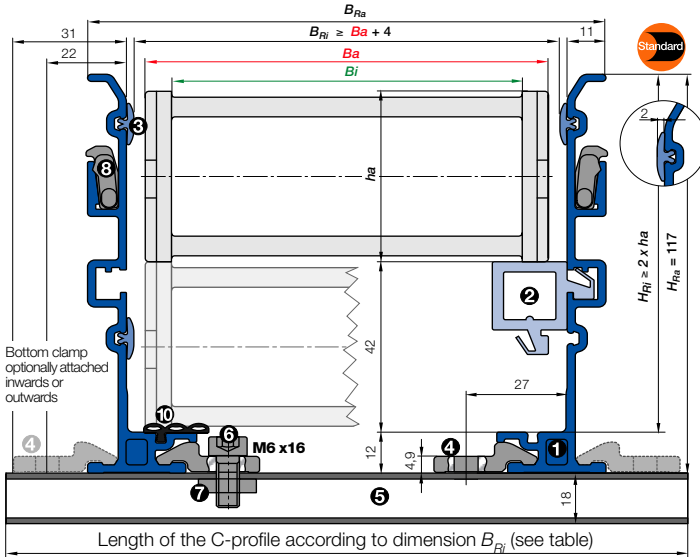
R	055	063	075	100	125	150	175	200	250
H_2	110	126	150	158	158	158	158	158	158
D_2^{+25}	122	130	142	350	490	530	665	730	935
K_2	265	290	330	598	782	920	1104	1242	1610
ΔCL	-	-	-	150	270	300	400	450	600



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
 D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.28.070.250.0 ▶ Order example

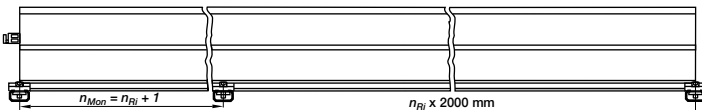
B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	-	960.30.175
.050	960.30.125	960.30.175
.062	960.30.150	960.30.200
.070	960.30.150	960.30.200
.075	960.30.150	960.30.200
.087	960.30.175	960.30.225
.100	960.30.175	960.30.225
.125	960.30.200	960.30.275
.150	960.30.225	960.30.275
.175	960.30.250	960.30.300
.200	960.30.275	960.30.325
.225	960.30.300	960.30.350
.250	960.30.325	960.30.375
.275	960.30.350	960.30.400
.300	960.30.375	960.30.425

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of **960.30.XXX** on the right column "attached outwards"

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M6 x 16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.28.070.250.0 with $B_{Ri} = 94$

- Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No 972.02.30.SL
- Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No 972.02.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets Part No. 960.30.150
- Module for the fixed end ▶ page 9.16
Order text: 1 set Part No. 972.82
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No 972.02.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.26

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains
- B_i = Inner width e-chains
- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

E4.1 | Series E4.28 | Options and order key



Standard

Additional noise dampening with pads

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

Part No. Standard
e-chains®/e-tubes

Part No. Low noise (with pads)
e-chains®/e-tubes

Part No. NC-Material
e-chains®/e-tubes

Part No. RBR
e-chains®/e-tubes

Part No. XXL-Material**
e-chains®/e-tubes



E4.28.100.R.0
Crossbar every link

ES4.28.100.R.0
Crossbar every link

E4.28.100.R.0.NC
Crossbar every link

E4.28.100.R1/R2.0
Crossbar every link

E4.28.100.R.0.XXL
Crossbar every link

R4.28.100.R.0
e-tube, closed

RS4.28.100.R.0
e-tube, closed

R4.28.100.R.0.NC
e-tube, closed

R4.28.100.R1/R2.0
e-tube, closed

R4.28.100.R.0.XXL
e-tube, closed



Delivery in 24h or today!*

Delivery time: 3-5 work days

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Combination possibilities | Examples

	Low-noise option	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.28.100.R.0.NC	-	ES4.28.100.R.0.XXL	RS4.28.100.R.0.HT	ES4.28.100.R.0.ESD
NC-Version	ES4.28.100.R.0.NC		-	-	R4.28.100.R.0.HT.NC	E4.28.100.R.0.ESD.NC
RBR-Version	-	-		-	R4.28.100.R1/R2.0.HT	E4.28.100.R1/R2.0.ESD
XXL-Material	ES4.28.100.R.0.XXL	-	-		-	-
HT-Material*	RS4.28.100.R.0.HT	R4.28.100.R.0.HT.NC	R4.28.100.R1/R2.0.HT	-		-
ESD-Material	ES4.28.100.R.0.ESD	E4.28.100.R.0.ESD.NC	E4.28.100.R1/R2.0.ESD	-	-	

*for gliding applications please consult igus®

E4.1 | Series E4.28 | Options and order key

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
HT-Material
only for e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



R4.28.100.R.0.HT
Complete e-tube*

E4.28.100.R.0.ESD
Crossbar every link

R4.28.100HT.R.0
Lid and bottom

R4.28.100.R.0.ESD
e-tube, closed

R4.28.100HTZ.R.0
Bottom only

R4.28.100HTE.R.0
Lid only

Delivery time:
10 work days

Delivery time:
5 work days

*for gliding applications please consult igus®

Order example | Order key and color options



Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 66 links **E4.28.100.100.0**

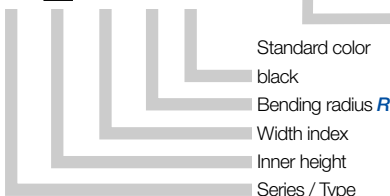
+ Mounting brackets 1 set **E4.280.100.1.12**

+ Interior separation with 2 separators assembled every 2nd link **2 x 2211**

Order text: 3,0 m E4.28.100.100.0 + E4.280.100.1.12 + 2 x Part No. 2211



Order key
E4.28.100.100.0



Color options for e-chains® and e-tubes

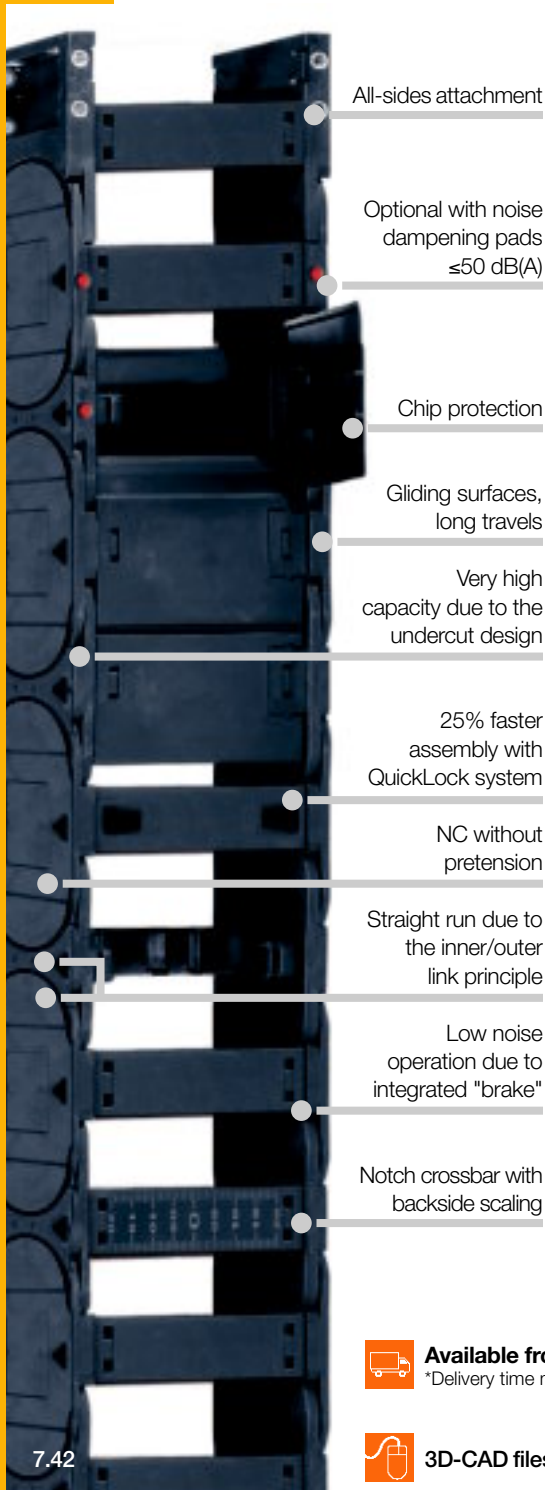
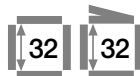
Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® delivered in 15 work days (Delivery in 5 work days at an express surcharge, available upon request!)



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Optional with noise dampening pads ≤ 50 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

+ Stable due to undercut design, medium inner height

When to use Series E4.32:

- If a robust e-chain®/e-tube with an inner height of 32 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 3,25 m and fill weights up to 15 kg/m
- For long travels up to 200 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))

► **Series E6.35, page 8.50**

- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)

► **Series E6.35, page 8.50**

- If a less stable e-chain® can be used for economical reasons

► **Series 2600/2650/2680/2700, page 5.182**

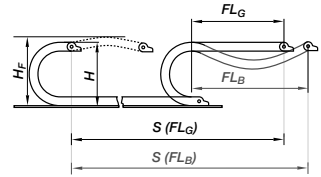
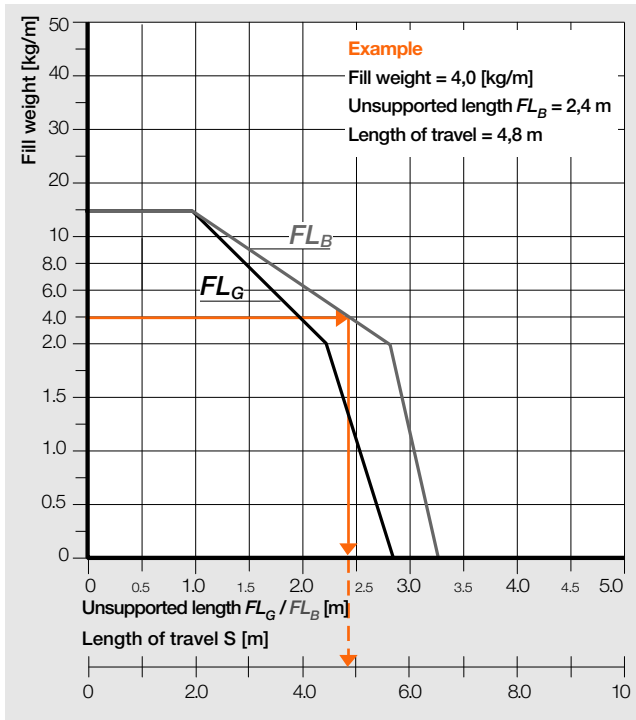


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ► www.igus.de/en/E4.32



Standard Unsupported applications

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

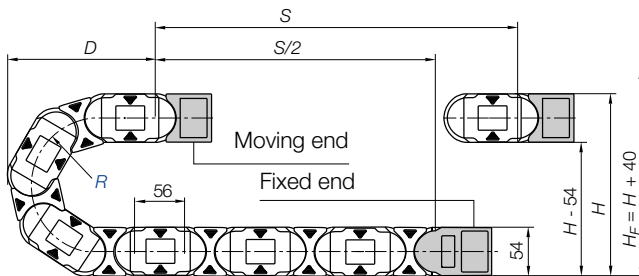
Gliding applications

Travels up to 200 m.
 More information ► **page 7.56**

Technical Data

Speed, material, temperature and flammability class ► **page 7.16**

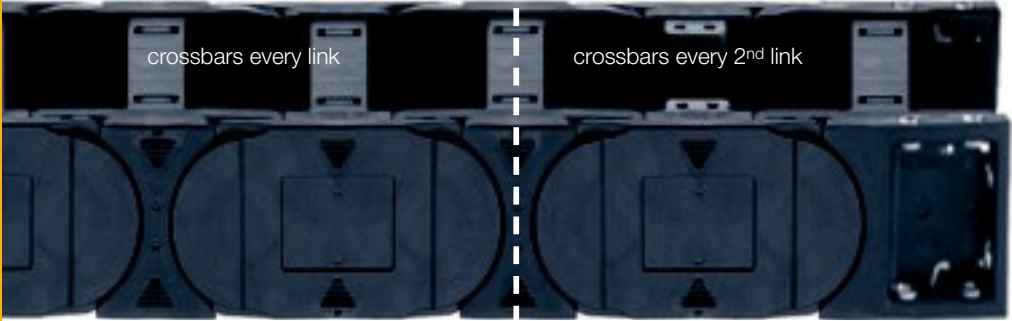
- Pitch** = 56 mm/link
- Links/m** = 18 (1008 mm)
- Chain length** = $S/2 + K$



R	063	075	100	125	150	175	200	220	250	300
$H + 20$	180	204	254	304	354	404	454	494	554	654
D	146	158	183	208	233	258	283	303	333	383
K	310	350	430	505	585	665	745	805	900	1055

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain, radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series E4.32 crossbars every link | Series H4.32 crossbars every 2nd link

Part No. crossbars every link			<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.32 [kg/m]	H4.32 [kg/m]
E4.32. H4.32. 05. <i>R.0</i>			50	73	1,567	1,425
E4.32. H4.32. 06. <i>R.0</i>			68	91	1,697	1,49
E4.32. H4.32. 07. <i>R.0</i>			75	98	1,730	1,507
E4.32. H4.32. 087. <i>R.0</i>			87	110	1,803	1,543
E4.32. H4.32. 09. <i>R.0**</i>			97	120	1,867	1,575
E4.32. H4.32. 10. <i>R.0</i>			100	123	1,886	1,584
E4.32. H4.32. 11. <i>R.0</i>			108	131	1,942	1,612
E4.32. H4.32. 112. <i>R.0</i>			112	136	1,956	1,619
E4.32. H4.32. 12. <i>R.0</i>			125	148	2,069	1,676
E4.32. H4.32. 137. <i>R.0</i>			137	161	2,122	1,702
E4.32. H4.32. 15. <i>R.0</i>			150	173	2,212	1,747
E4.32. H4.32. 162. <i>R.0</i>			162	186	2,240	1,762
E4.32. H4.32. 17. <i>R.0</i>			168	191	2,323	1,803
E4.32. H4.32. 18. <i>R.0</i>			175	198	2,345	1,814
E4.32. H4.32. 187. <i>R.0</i>			187	211	2,392	1,837
E4.32. H4.32. 20. <i>R.0</i>			200	223	2,518	1,900

Part No. crossbars every link			<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.32 [kg/m]	H4.32 [kg/m]
E4.32. H4.32. 212. <i>R.0</i>			212	236	2,568	1,925
E4.32. H4.32. 23. <i>R.0</i>			225	248	2,669	1,976
E4.32. H4.32. 237. <i>R.0</i>			237	261	2,698	1,990
E4.32. H4.32. 25. <i>R.0</i>			250	273	2,834	2,059
E4.32. H4.32. 262. <i>R.0</i>			262	286	2,917	2,100
E4.32. H4.32. 28. <i>R.0</i>			275	298	2,989	2,136
E4.32. H4.32. 29. <i>R.0</i>			287	311	3,023	2,153
E4.32. H4.32. 30. <i>R.0</i>			300	323	3,151	2,217
E4.32. H4.32. 312. <i>R.0</i>			312	336	3,175	2,229
E4.32. H4.32. 325. <i>R.0</i>			325	348	3,277	2,280
E4.32. H4.32. 337. <i>R.0</i>			337	361	3,338	2,311
E4.32. H4.32. 350. <i>R.0</i>			350	373	3,565	2,424
E4.32. H4.32. 362. <i>R.0</i>			362	386	3,662	2,473
E4.32. H4.32. 375. <i>R.0</i>			375	398	3,735	2,509
E4.32. H4.32. 387. <i>R.0</i>			387	411	3,803	2,543
E4.32. H4.32. 400. <i>R.0</i>			400	423	3,868	2,575

Available bending radii *R* [mm] 063 | 075 | 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300

Supplement Part No. with required radius (*R*). Example: E4.32.30.300.0

****NEW** in this catalog

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series **R4.32** - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.32 [kg/m]
R4.32. 05. R.0*	50	73	2,450
R4.32. 07. R.0	75	98	2,570
R4.32. 10. R.0	100	123	2,650
R4.32. 11. R.0	108	131	2,760
R4.32. 12. R.0	125	148	2,850
R4.32. 15. R.0	150	173	3,010


Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.32 [kg/m]
R4.32. 17. R.0	168	191	3,210
R4.32. 20. R.0	200	223	3,410
R4.32. 25. R.0	250	273	3,860
R4.32. 30. R.0	300	323	4,250

*Removable lid only, no hinged option

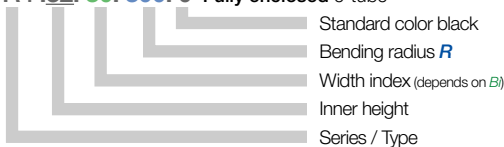
Available bending radii *R* [mm] **125 | 150 | 175 | 200 | 220 | 250 | 300**

Supplement Part No. with required radius (*R*). Example: **R4.32.30.300.0**

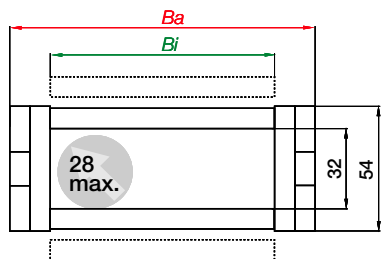
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

- E4 .32 .30. 300. 0** e-chain® (crossbars every link)
- H4 .32 .30. 300. 0** e-chain® (crossbars every 2nd link)
- R4 .32 .30. 300. 0** Fully enclosed e-tube



Dimensioning



-  **E4.32.30.300.0** = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - H4.32.30.300.0** = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - R4.32.30.300.0** = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.58

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>			
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]		
E4.32. H4.32.	10	QZ.R.0	10	QE.R.0	10	Q.R.0	100
E4.32. H4.32.	11	QZ.R.0	11	QE.R.0	11	Q.R.0	108
E4.32. H4.32.	112	QZ.R.0	112	QE.R.0	112	Q.R.0	112
E4.32. H4.32.	12	QZ.R.0	12	QE.R.0	12	Q.R.0	125
E4.32. H4.32.	137	QZ.R.0	137	QE.R.0	137	Q.R.0	137
E4.32. H4.32.	15	QZ.R.0	15	QE.R.0	15	Q.R.0	150
E4.32. H4.32.	162	QZ.R.0	162	QE.R.0	162	Q.R.0	162
E4.32. H4.32.	17	QZ.R.0	17	QE.R.0	17	Q.R.0	168
E4.32. H4.32.	18	QZ.R.0	18	QE.R.0	18	Q.R.0	175
E4.32. H4.32.	187	QZ.R.0	187	QE.R.0	187	Q.R.0	187
E4.32. H4.32.	20	QZ.R.0	20	QE.R.0	20	Q.R.0	200
E4.32. H4.32.	212	QZ.R.0	212	QE.R.0	212	Q.R.0	212
E4.32. H4.32.	23	QZ.R.0	23	QE.R.0	23	Q.R.0	225
E4.32. H4.32.	237	QZ.R.0	237	QE.R.0	237	Q.R.0	237
E4.32. H4.32.	25	QZ.R.0	25	QE.R.0	25	Q.R.0	250
E4.32. H4.32.	262	QZ.R.0	262	QE.R.0	262	Q.R.0	262

Part No.	QuickLock crossbar for			<i>Bi</i>			
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]		
E4.32. H4.32.	28	QZ.R.0	28	QE.R.0	28	Q.R.0	275
E4.32. H4.32.	29	QZ.R.0	29	QE.R.0	29	Q.R.0	287
E4.32. H4.32.	30	QZ.R.0	30	QE.R.0	30	Q.R.0	300
E4.32. H4.32.	312	QZ.R.0	312	QE.R.0	312	Q.R.0	312
E4.32. H4.32.	325	QZ.R.0	325	QE.R.0	325	Q.R.0	325
E4.32. H4.32.	337	QZ.R.0	337	QE.R.0	337	Q.R.0	337
E4.32. H4.32.	350	QZ.R.0	350	QE.R.0	350	Q.R.0	350
E4.32. H4.32.	362	QZ.R.0	362	QE.R.0	362	Q.R.0	362
E4.32. H4.32.	375	QZ.R.0	375	QE.R.0	375	Q.R.0	375
E4.32. H4.32.	387	QZ.R.0	387	QE.R.0	387	Q.R.0	387
E4.32. H4.32.	400	QZ.R.0	400	QE.R.0	400	Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] 063 | 075 | 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300

Supplement Part No. with required radius (*R*). Example: E4.32.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. E4.32.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. E4.32.30QE.300.0 = QuickLock crossbar for outer radius

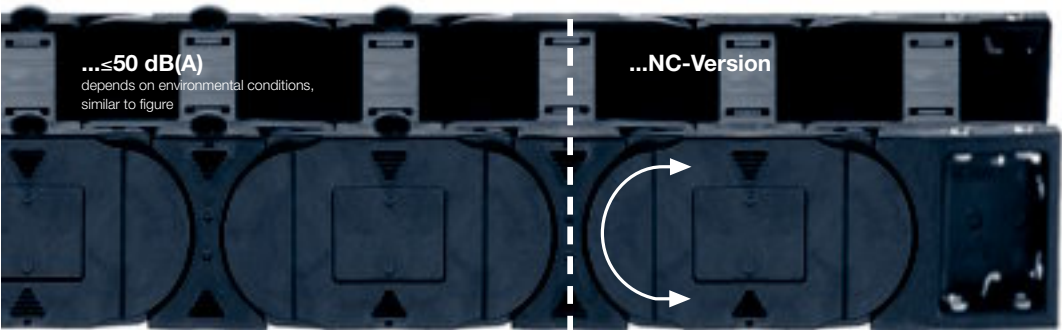
Part No. E4.32.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.32 | Product range | Options



Noise dampening | ≤ 50 dB(A)

NC-Version | Without pretension

With pads crossbars e-tube every; fully link | 2 nd enclosed	Bi [mm]	With pads crossbars e-tube every; fully link | 2 nd enclosed	Bi [mm]
ES4 HS4 RS4 .32.05. R.0	50	ES4 HS4 - .32.212.R.0	212
ES4 HS4 - .32.06. R.0	68	ES4 HS4 - .32.23. R.0	225
ES4 HS4 RS4 .32.07. R.0	75	ES4 HS4 - .32.237.R.0	237
ES4 HS4 RS4 .32.087.R.0	87	ES4 HS4 RS4 .32.25. R.0	250
ES4 HS4 - .32.09. R.0	97	ES4 HS4 - .32.262.R.0	262
ES4 HS4 RS4 .32.10. R.0	100	ES4 HS4 - .32.28. R.0	275
ES4 HS4 RS4 .32.11. R.0	108	ES4 HS4 - .32.29. R.0	287
ES4 HS4 - .32.112.R.0	112	ES4 HS4 RS4 .32.30. R.0	300
ES4 HS4 RS4 .32.12. R.0	125	ES4 HS4 - .32.312.R.0	312
ES4 HS4 - .32.137.R.0	137	ES4 HS4 - .32.325.R.0	325
ES4 HS4 - .32.15. R.0	150	ES4 HS4 - .32.337.R.0	337
ES4 HS4 RS4 .32.162.R.0	162	ES4 HS4 - .32.350.R.0	350
ES4 HS4 RS4 .32.17. R.0	168	ES4 HS4 - .32.362.R.0	362
ES4 HS4 - .32.18. R.0	175	ES4 HS4 - .32.375.R.0	375
ES4 HS4 - .32.187.R.0	187	ES4 HS4 - .32.387.R.0	387
ES4 HS4 RS4 .32.20. R.0	200	ES4 HS4 - .32.400.R.0	400

NC-Version crossbars e-tube every; fully link | 2 nd enclosed	Bi [mm]	NC-Version crossbars e-tube every; fully link | 2 nd enclosed	Bi [mm]
E4 H4 R4 .32..05. R.0.NC	50	E4 H4 - .32.212.R.0.NC	212
E4 H4 - .32.06. R.0.NC	68	E4 H4 - .32.23. R.0.NC	225
E4 H4 R4 .32.07. R.0.NC	75	E4 H4 - .32.237.R.0.NC	237
E4 H4 R4 .32.087.R.0.NC	87	E4 H4 R4 .32.25. R.0.NC	250
E4 H4 - .32.09. R.0.NC	97	E4 H4 - .32.262.R.0.NC	262
E4 H4 R4 .32.10. R.0.NC	100	E4 H4 - .32.28. R.0.NC	275
E4 H4 R4 .32.11. R.0.NC	108	E4 H4 - .32.29. R.0.NC	287
E4 H4 - .32.112.R.0.NC	112	E4 H4 R4 .32.30. R.0.NC	300
E4 H4 R4 .32.12. R.0.NC	125	E4 H4 - .32.312.R.0.NC	312
E4 H4 - .32.137.R.0.NC	137	E4 H4 - .32.325.R.0.NC	325
E4 H4 - .32.15. R.0.NC	150	E4 H4 - .32.337.R.0.NC	337
E4 H4 R4 .32.162.R.0.NC	162	E4 H4 - .32.350.R.0.NC	350
E4 H4 R4 .32.17. R.0.NC	168	E4 H4 - .32.362.R.0.NC	362
E4 H4 - .32.18. R.0.NC	175	E4 H4 - .32.375.R.0.NC	375
E4 H4 - .32.187.R.0.NC	187	E4 H4 - .32.387.R.0.NC	387
E4 H4 R4 .32.20. R.0.NC	200	E4 H4 - .32.400.R.0.NC	400

Available bending radii R [mm] 063* | 075* | 100* | 125 | 150 | 175 | 200 | 220 | 250 | 300 *not available for e-tubes

Supplement Part No. with required radius (R). Example: **ES4.32.30.300.0** or **E4.32.30.300.0.NC**



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: **Part No. ES4.32.30.300.0** = e-chain® (crossbars every link) with noise dampening

For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: **Part No. E4.32.30.300.0.NC** = e-chain® (crossbars every link) without pretension

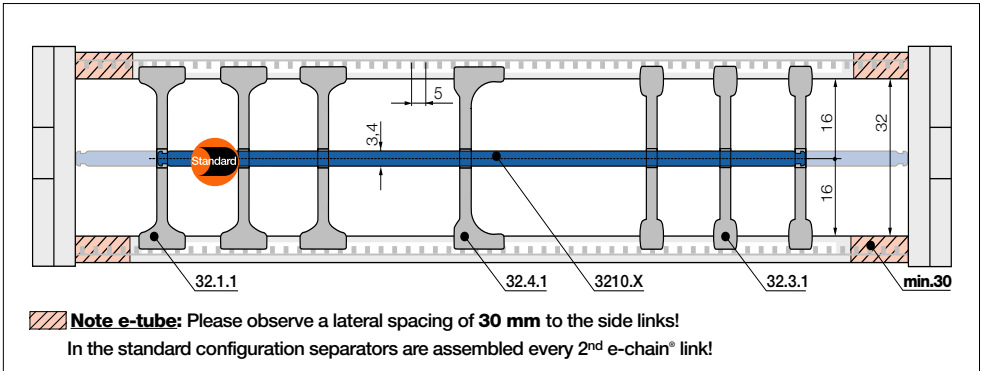


e-chain® with noise dampening pads - Delivery time: 3-5 work days.

NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Standard separator, wide base

unassembled	32.1
assembled	32.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.

Separator, narrow base

unassembled	32.3
assembled	32.3.1

For many thin cables

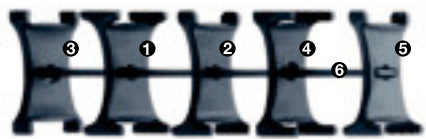
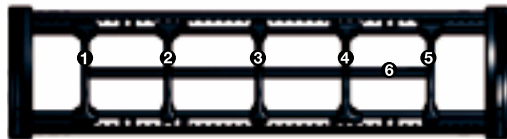
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

Asymmetrical separator

unassembled	32.4
assembled	32.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



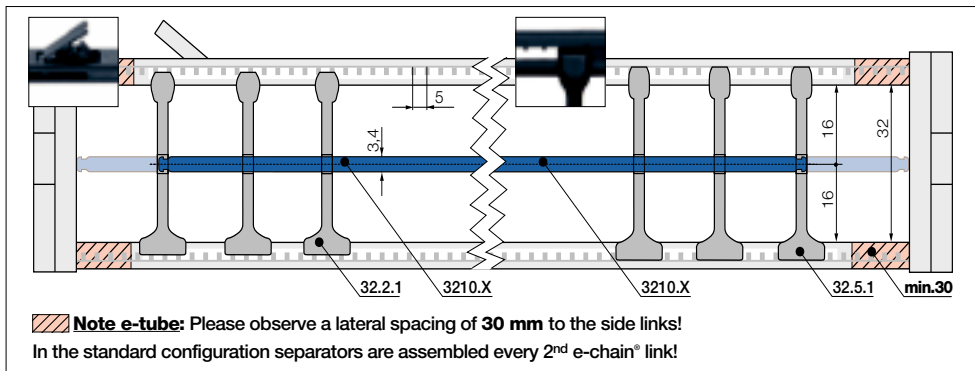
- ① Standard separator, wide base - Part No. 32.1
- ② Separator for QuickLock crossbar - Part No. 32.2
- ③ Separator, narrow base - Part No. 32.3
- ④ Separator, asymmetrical - Part No. 32.4
- ⑤ Notch separator - Part No. 32.5
- ⑥ Full-width self, lockable - Part No. 3200.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
 unassembled **32.2**
 assembled **32.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
 unassembled **32.5**
 assembled **32.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar. With scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
 unassembled **3200.X**
 assembled **3210.X**

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 1 level.

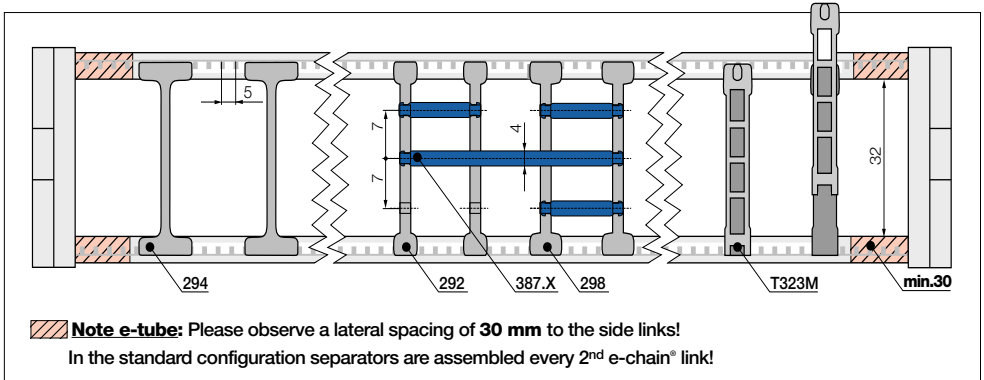


Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	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			

E4.1 | Series E4.32 | Interior separation | Options

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.32



		<p>Open slotted separator for e-chains®/e-tubes</p> <p>unassembled 297</p> <p>assembled 298</p>
		<p>Slotted separator for e-chains®/e-tubes</p> <p>unassembled 291</p> <p>assembled 292</p>
		<p>Split separator for e-chains®</p> <p>unassembled T323</p> <p>assembled T323M</p>
		<p>Locking separator for e-chains®</p> <p>unassembled 293</p> <p>assembled 294</p>
		<p>Shelf</p> <p>unassembled 386.X</p> <p>assembled 387.X</p>

Open, slotted separator 297 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Slotted separator 291

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

Split separator T323 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

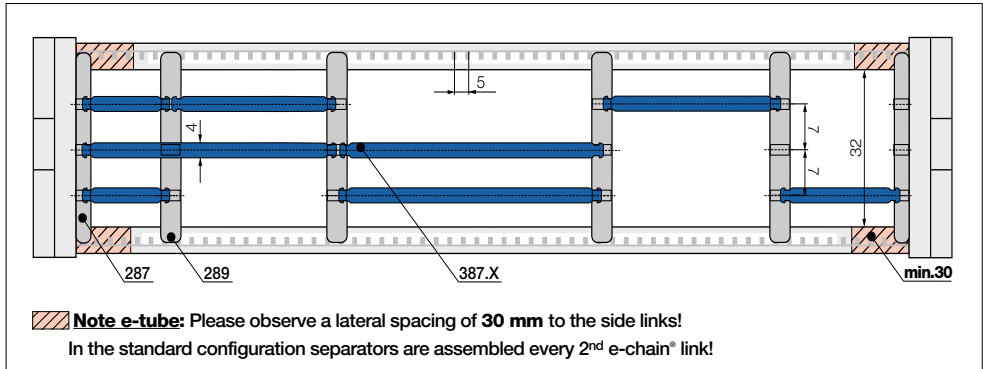
Locking separator 293 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

Shelf 386.X

For horizontal separation. Shelves of various widths can be arranged at 3 different heights (in 7 mm increments). (not in combination with 3804, 383).

Previous interior separation All elements can still be ordered ▶ www.igus.de/en/E4.32



		Middle plate for e-chains® / e-tubes unassembled 288 assembled 289

		Side plate for e-chains® / e-tubes unassembled 286 assembled 287

Middle plate 288
Middle plates form the basic pattern of a shelf system. Shelves 386.X (table below) can be arranged at 3 different heights (in 7 mm increments).

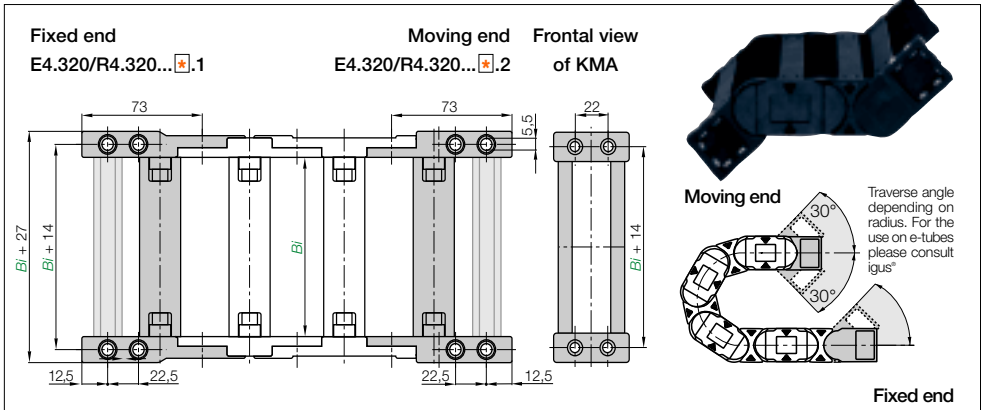
Side plate 286
Works like middle plate.
Allows modular shelving close to the side links.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	054	386.54	387.54	150	386.150	387.150
023	386.23	387.23	062	386.62	387.62	175	386.175	387.175
025	386.25	387.25	075	386.75	387.75	200	386.200	387.200
028	386.28	387.28	087	386.87	387.87	208	386.208	387.208
033	386.33	387.33	100	386.100	387.100	225	386.225	387.225
043	386.43	387.43	108	386.108	387.108			
050	386.50	387.50	125	386.125	387.125			

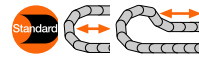
E4.1 | Series E4.32 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	E4.320. R4.320.05 .12.C	50	212.	E4.320. - 212.12.C	212
06.	E4.320. - 06 .12.C	68	23.	E4.320. - 23 .12.C	225
07.	E4.320. R4.320.07 .12.C	75	237.	E4.320. - 237.12.C	237
087.	E4.320. - 09 .12.C	87	25.	E4.320. R4.320.25 .12.C	250
09.	E4.320. - 087.12.C	97	262.	E4.320. - 262.12.C	262
10.	E4.320. R4.320.10 .12.C	100	28.	E4.320. - 28 .12.C	275
11.	E4.320. R4.320.11 .12.C	108	29.	E4.320. - 29 .12.C	287
112.	E4.320. - 112.12.C	112	30.	E4.320. R4.320.30 .12.C	300
12.	E4.320. R4.320.12 .12.C	125	312.	E4.320. - 312.12.C	312
137.	E4.320. - 137.12.C	137	325.	E4.320. - 325.12.C	325
15.	E4.320. R4.320.15 .12.C	150	337.	E4.320. - 337.12.C	337
162.	E4.320. - 162.12.C	162	350.	E4.320. - 350.12.C	350
17.	E4.320. R4.320.17 .12.C	168	362.	E4.320. - 362.12.C	362
18.	E4.320. - 18 .12.C	175	375.	E4.320. - 375.12.C	375
187.	E4.320. - 187.12.C	187	387.	E4.320. - 387.12.C	387
20.	E4.320. R4.320.20 .12.C	200	400.	E4.320. - 400.12.C	400



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.320.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.320.30.2.2.C (even number of links)

Mounting bracket **Fixed end**

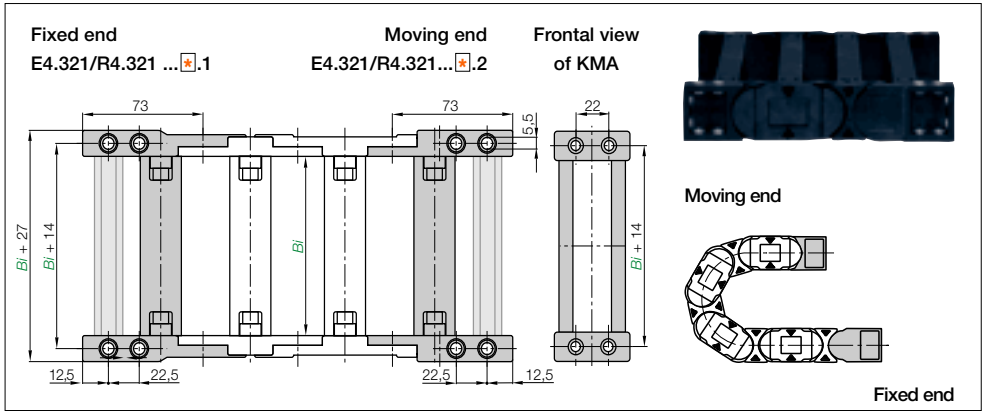
E4.320.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1

E4.1 | Series E4.32 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

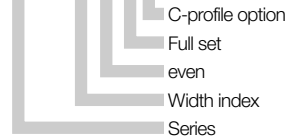
Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	▶ E4.321. R4.321.05	50	212.	▶ E4.321. - 212	212
06.	▶ E4.321. - 06	68	23.	▶ E4.321. - 23	225
07.	▶ E4.321. R4.321.07	75	237.	▶ E4.321. - 237	237
087.	▶ E4.321. - 09	87	25.	▶ E4.321. R4.321.25	250
09.	▶ E4.321. - 087	97	262.	▶ E4.321. - 262	262
10.	▶ E4.321. R4.321.10	100	28.	▶ E4.321. - 28	275
11.	▶ E4.321. R4.321.11	108	29.	▶ E4.321. - 29	287
112.	▶ E4.321. - 112	112	30.	▶ E4.321. R4.321.30	300
12.	▶ E4.321. R4.321.12	125	312.	▶ E4.321. - 312	312
137.	▶ E4.321. - 137	137	325.	▶ E4.321. - 325	325
15.	▶ E4.321. R4.321.15	150	337.	▶ E4.321. - 337	337
162.	▶ E4.321. - 162	162	350.	▶ E4.321. - 350	350
17.	▶ E4.321. R4.321.17	168	362.	▶ E4.321. - 362	362
18.	▶ E4.321. - 18	175	375.	▶ E4.321. - 375	375
187.	▶ E4.321. - 187	187	387.	▶ E4.321. - 387	387
20.	▶ E4.321. R4.321.20	200	400.	▶ E4.321. - 400	400



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.321.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.321.30.2.2.C (even number of links)

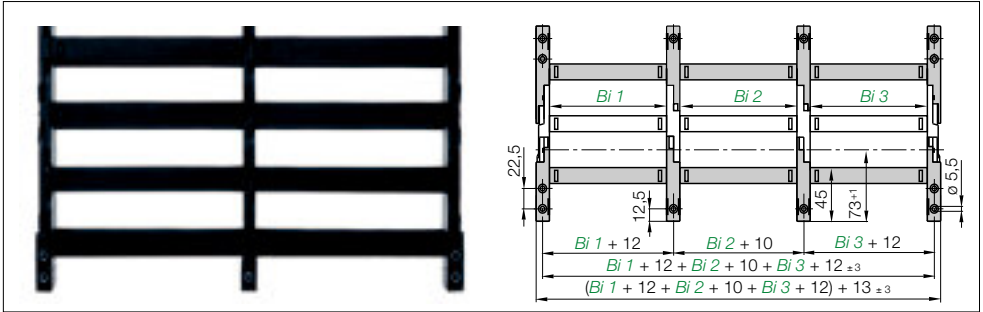
Mounting bracket **Fixed end**

E4.321.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



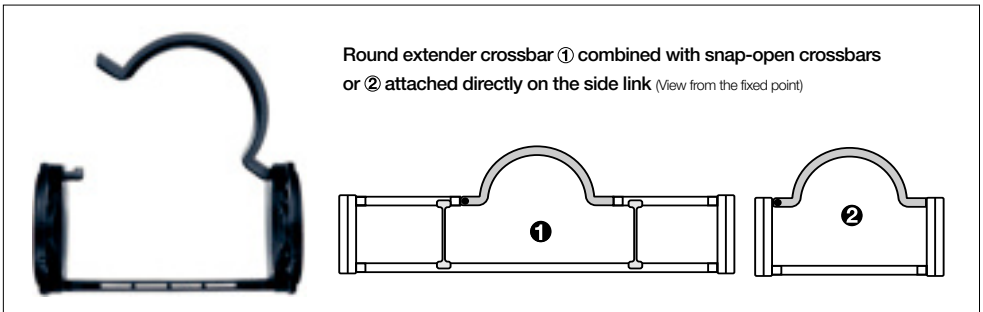
Order example - 3 chambers

E4.32.Bi1 / Bi2 / Bi3.R.0 =

E4.32.10 / 20 / 10.200.0

Extension link - single-part order

284.R. (please indicate radius)



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

E4.32.10/15RHD E 115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

E4.32.10/15RHD Z 115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

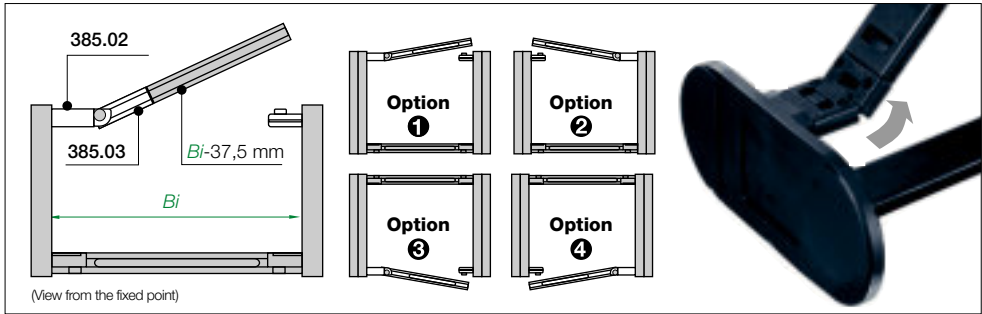
E4.32.18RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

E4.32.18RD Z 115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	105	○ round	no	yes
385.18.RD115	105	○ round	yes	no

E4.1 | Series E4.32 | More options



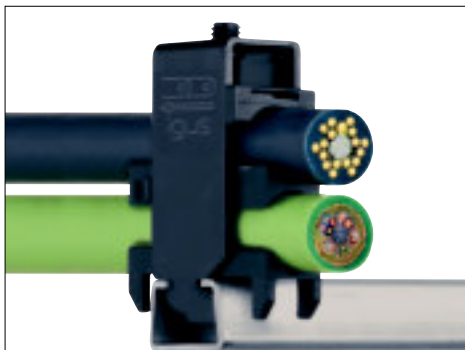
Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- **Hinged crossbar: Part No. 385.02**
Snap-open crossbar (shortened): *Bi*-37,5 mm Part No. **385.03**
(smallest inner width *Bi* = 87,5)



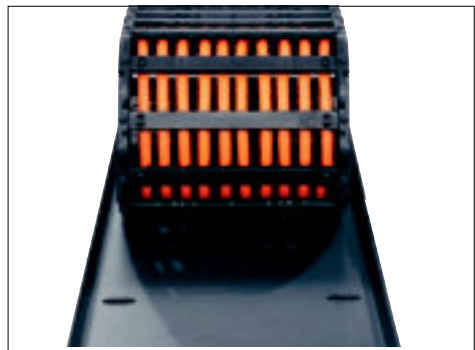
Order example (here: inner width *Bi* 150)
E4.32.15.Z.R.0 =
E4.32.15.01.R.0
Supplement Index "Z" with required
option number ①, ②, ③ or ④

E4.1 | Series E4.32 | e-chain® accessories



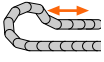
Strain relief system

Clamps, tie-wrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



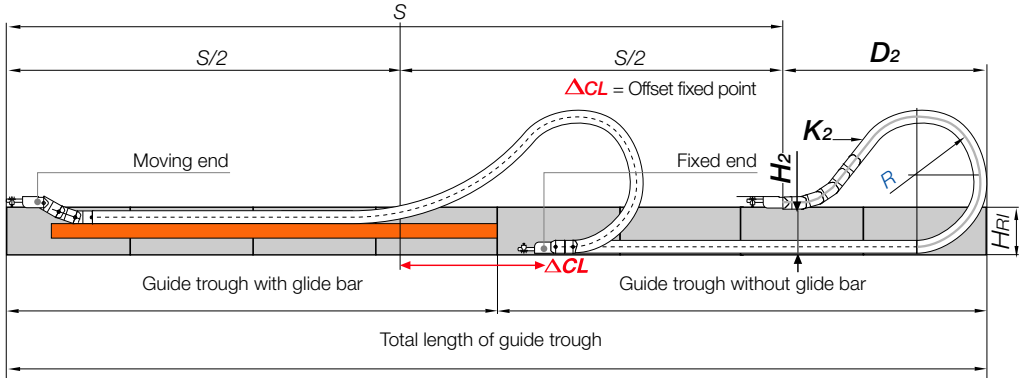
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 10 m to max. 200 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 7 and 10 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 56 mm/link · Links/m = 18 (1008 mm) · Chain length = $\frac{S}{2} + K$

R	063	075	100	125	150	175	200	220	250	300
H ₂	126	150	166	166	166	166	166	166	166	166
D ₂ ⁺²⁵	146	158	370	470	500	655	770	900	930	1100
K ₂	310	350	616	784	896	1120	1288	1456	1568	1904
ΔCL	-	-	160	210	240	370	460	540	570	690

More solutions | for long travels

System P4.32 - Profile rol e-chain®, low-noise

Travels up to 600 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.82

rol e-chain® 2828R - Rolling instead of gliding

Travels up to 400 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide E4.32.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► page 9.92

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H₂ = Mounting height (if the moving end is set lower)
D₂ = Over length - long travels, gliding

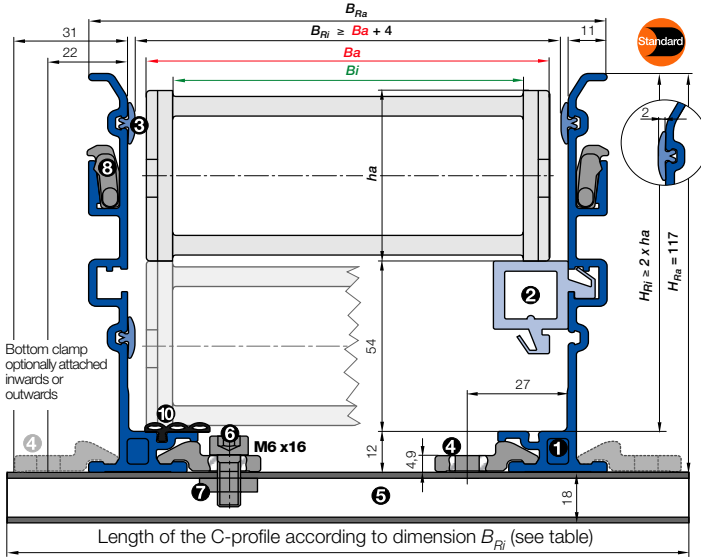
K₂ = Further add-on (if the moving end is set lower)
R = Bending radius

ΔCL = Offset fixed point
H_R = Inner trough height

S = Length of travel
S/2 = Half length of travel

Aluminum "SuperTrough" | Basic Version

E4.32
H4.32
R4.32



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.32.30.300.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	960.30.125	960.30.175
.06	960.30.150	960.30.200
.07	960.30.150	960.30.200
.087	960.30.175	960.30.225
.10	960.30.175	960.30.225
.11	960.30.200	960.30.250
.112	960.30.200	960.30.250
.12	960.30.200	960.30.250
.137	960.30.225	960.30.275
.15	960.30.225	960.30.275
.162	960.30.250	960.30.300
.17	960.30.250	960.30.300
.18	960.30.250	960.30.300
.187	960.30.275	960.30.325
.20	960.30.275	960.30.325
.212	960.30.300	960.30.350
.23	960.30.300	960.30.350
.237	960.30.325	960.30.375
.25	960.30.325	960.30.375
.262	960.30.350	960.30.400
.28	960.30.350	960.30.400
.29	960.30.375	960.30.425
.30	960.30.375	960.30.425
.312	960.30.400	960.30.450
.325	960.30.400	960.30.450
.337	960.30.425	960.30.475
.350	960.30.425	960.30.475
.362	960.30.450	960.30.500
.375	960.30.450	960.30.500
.387	960.30.475	960.30.525
.400	960.30.475	960.30.525

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M6 x 16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.32.30.300.0 with $B_{Ri} = 327$

Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 972.30.SL**

Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 972.31.SL**

Installation set "Basic" complete (guide trough-sets + 1)

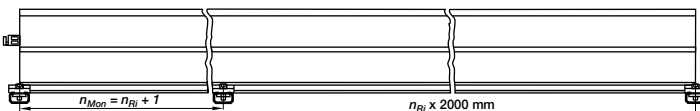
Order text: 17 installation sets **Part No. 960.30.375**

Module for the fixed end ▶ page 9.16

Order text: 1 set **Part No. 972.80**

Option: For an additional noise dampening

with silencer profile, please add Index **A** - Example: **Part No. 972.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.29

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*
- B_{Ra} = Inner trough width
- B_{Ri} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of **960.30.XXX** on the right column "attached outwards"

E4.1 | Series E4.32 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes

Part No.
Low noise (with pads)
e-chains®/e-tubes

Part No.
QuickLock crossbar for inner radius

Part No.
QuickLock crossbar for outer radius

Part No.
QuickLock crossbar for both radii

QuickLock crossbars: inner widths from *Bi* 10 (100 mm)!



E4.32.30.R.0
Crossbar every link

ES4.32.30.R.0
Crossbar every link

E4.32.30.QZ.R.0
Crossbar every link

E4.32.30.QE.R.0
Crossbar every link

E4.32.30.Q.R.0
Crossbar every link

H4.32.30.R.0
Crossbar every 2nd link

HS4.32.30.R.0
Crossbar every 2nd link

H4.32.30.QZ.R.0
Crossbar every 2nd link

H4.32.30.QE.R.0
Crossbar every 2nd link

H4.32.30.Q.R.0
Crossbar every 2nd link

R4.32.30.R.0
e-tube, closed

RS4.32.30.R.0
e-tube, closed



Delivery in 24h or today!*

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.32.30.Q.R.0	ES4.32.30.R.0.NC	-	ES4.32.30.R.0.XXL	RS4.32.30.R.0.HT	ES4.32.30.R.0.ESD
QuickLock crossbar	ES4.32.30.Q.R.0		E4.32.30.Q.R.0.NC	E4.32.30.Q.R1/R2.0	E4.32.30.Q.R.0.XXL	-	E4.32.30.Q.R.0.ESD
NC-Version	ES4.32.30.R.0.NC	E4.32.30.Q.R.0.NC		-	-	R4.32.30.R.0.HT.NC	E4.32.30.R.0.ESD.NC
RBR-Version	-	E4.32.30.Q.R1/R2.0	-		-	R4.32.30.R1/R2.0.HT	E4.32.30.R1/R2.0.ESD
XXL-Material	ES4.32.30.R.0.XXL	E4.32.30.Q.R.0.XXL	-	-		-	-
HT-Material*	RS4.32.30.R.0.HT	-	R4.32.30.R.0.HT.NC	R4.32.30.R1/R2.0.HT	-		-
ESD-	ES4.32.30.R.0.ESD	E4.32.30.Q.R.0.ESD	E4.32.30.R.0.ESD.NC	E4.32.30.R1/R2.0.ESD	-	-	

*for gliding applications please consult igus®

E4.1 | Series E4.32 | Options and order key

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes

Part No.
RBR
e-chains®/e-tubes

Part No.
XXL-Material**
e-chains®/e-tubes

Part No.
HT-Material
only for e-tubes

Part No.
ESD-Material
e-chains®/e-tubes

E4.32.30.R.0.NC
Crossbar every link

E4.32.30.R1/R2.0
Crossbar every link

E4.32.30.R.0.XXL
Crossbar every link

R4.32.30.R.0.HT
Complete e-tube*

E4.32.30.R.0.ESD
Crossbar every link

H4.32.30.R.0.NC
Crossbar every 2nd link

H4.32.30.R1/R2.0
Crossbar every 2nd link

H4.32.30.R.0.XXL
Crossbar every 2nd link

R4.32.30.HT.R.0
Lid and bottom

H4.32.30.R.0.ESD
Crossbar every 2nd link

R4.32.30.R.0.NC
e-tube, closed

R4.32.30.R1/R2.0
e-tube, closed

R4.32.30.R.0.XXL
e-tube, closed

R4.32.30.HTZ.R.0
Bottom only

R4.32.30.R.0.ESD
e-tube, closed

R4.32.30.HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Delivery time: 10 work days
*for gliding applications please consult igus®

Delivery time: 5 work days

Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:

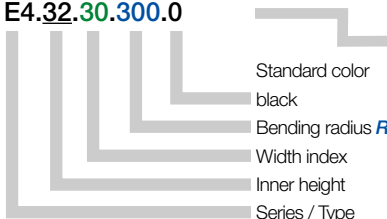
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 54 links **E4.32.30.300.0**

+ Mounting brackets 1 set (with odd number of links and integrated C-profiles) **E4.320.30.1.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 32.1.1**

Order text: 3,0 m E4.32.30.300.0 + E4.320.30.1.12.C + 2 x Part No. 32.1.1

Order key **E4.32.30.300.0**



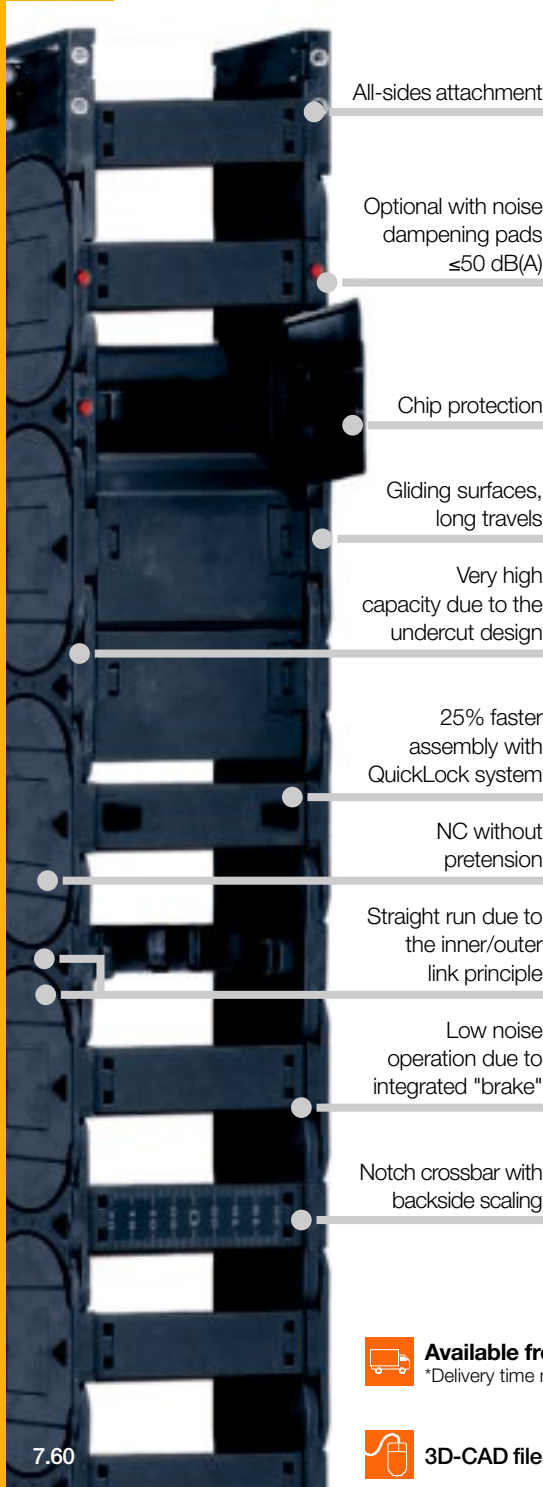
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Optional with noise dampening pads ≤ 50 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

⊕ Stable due to undercut design, medium inner height

When to use Series E4.42:

- If a robust e-chain®/e-tube with an inner height of 42 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 37 kg/m
- For long travels up to 300 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
 - ▶ **Series E6.40, page 8.56**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
 - ▶ **Series E6.40, page 8.56**
- If a less stable e-chain® can be used for economical reasons
 - ▶ **Series 3400/3450/3500/3480, page 5.204**

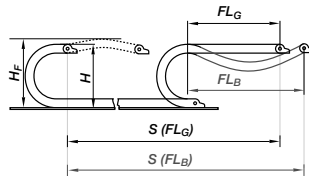
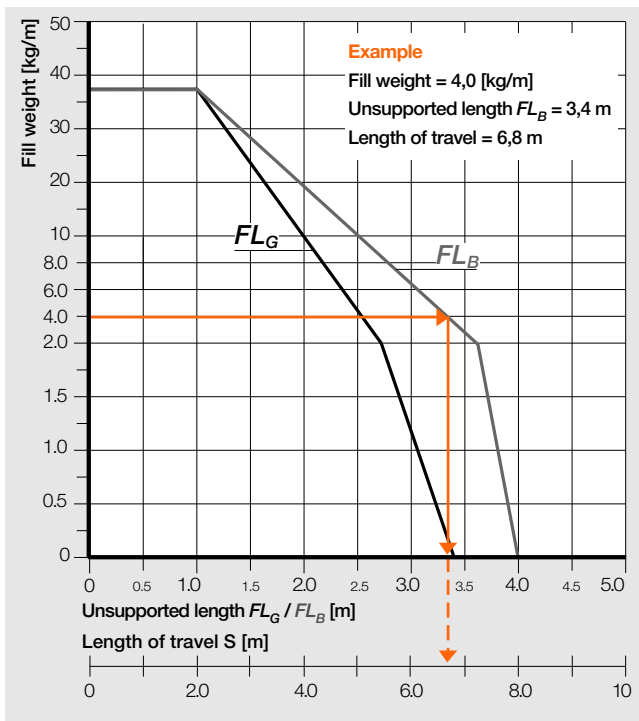


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.42

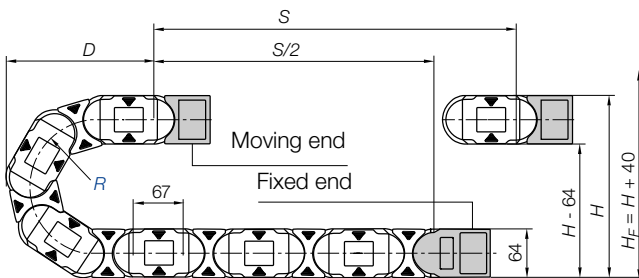


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 300 m.
 More information ► **page 7.74**



Technical Data

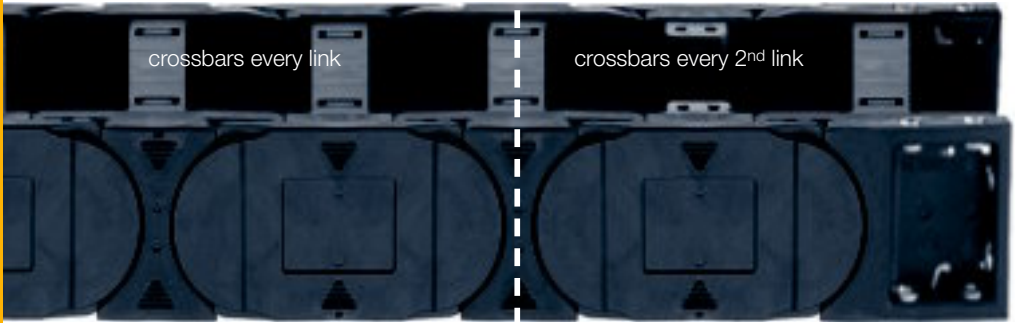
Speed, material, temperature and flammability class ► **page 7.16**

- Pitch** = 67 mm/link
- Links/m** = 15 (1005 mm)
- Chain length** = $S/2 + K$

R	075	100	115	125	150	160	175	200	250	300	350
H_{+25}	214	264	294	314	364	389	414	464	564	664	764
D	174	199	214	224	249	261,5	274	299	349	399	449
K	370	450	500	530	610	645	685	765	920	1080	1235

The required clearance height: $H_F = H + 40$ mm (with 3,0 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain, radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series E4.42 crossbars every link | Series H4.42 crossbars every 2nd link

Part No. crossbars every link	H4.42. crossbars every 2 nd link	Bi [mm]	Ba [mm]	E4.42 [kg/m]	H4.42 [kg/m]
E4.42.	H4.42. 05. R.0	50	76	1,923	1,804
E4.42.	H4.42. 06. R.0	68	94	2,031	1,858
E4.42.	H4.42. 07. R.0	75	101	2,059	1,872
E4.42.	H4.42. 087.R.0	87	114	2,119	1,903
E4.42.	H4.42. 09. R.0	97	120	2,135	1,919
E4.42.	H4.42. 10. R.0	100	126	2,188	1,973
E4.42.	H4.42. 11. R.0	108	134	2,235	1,960
E4.42.	H4.42. 112.R.0	112	139	2,247	1,966
E4.42.	H4.42. 12. R.0	125	151	2,341	2,014
E4.42.	H4.42. 137.R.0	137	164	2,385	2,035
E4.42.	H4.42. 15. R.0	150	176	2,460	2,073
E4.42.	H4.42. 162.R.0	162	189	2,484	2,085
E4.42.	H4.42. 17. R.0	168	194	2,553	2,119
E4.42.	H4.42. 18. R.0	175	201	2,571	2,128
E4.42.	H4.42. 187.R.0	187	214	2,610	2,148
E4.42..	H4.42. 20. R.0	200	226	2,715	2,200

Part No. crossbars every link	H4.42. crossbars every 2 nd link	Bi [mm]	Ba [mm]	E4.42 [kg/m]	H4.42 [kg/m]
E4.42.	H4.42. 212.R.0	212	239	2,757	2,221
E4.42.	H4.42. 23. R.0	225	251	2,841	2,263
E4.42.	H4.42. 237.R.0	237	264	2,865	2,275
E4.42.	H4.42. 25. R.0	250	276	2,979	2,332
E4.42.	H4.42. 262.R.0	262	289	3,048	2,367
E4.42.	H4.42. 28. R.0	275	301	3,108	2,397
E4.42.	H4.42. 29. R.0	287	314	3,136	2,411
E4.42.	H4.42. 30. R.0	300	326	3,243	2,464
E4.42.	H4.42. 312.R.0	312	339	3,262	2,474
E4.42.	H4.42. 325.R.0	325	351	3,348	2,517
E4.42.	H4.42. 337.R.0	337	364	3,399	2,542
E4.42.	H4.42. 350.R.0	350	376	3,588	2,637
E4.42.	H4.42. 362.R.0	362	389	3,669	2,677
E4.42.	H4.42. 375.R.0	375	402	3,730	2,708
E4.42.	H4.42. 387.R.0	387	414	3,786	2,736
E4.42.	H4.42. 400.R.0	400	426	3,840	2,763

Available bending radii R [mm] 075 | 100 | 115 | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350

Supplement Part No. with required radius (R). Example: E4.42.30.300.0

****NEW** in this catalog

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. **Delivery in 24h or today.***

*Delivery time means time until shipping of goods



e-tubes | Series R4.42 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.42 [kg/m]
R4.42. 05. R.0*	50	76	2,150
R4.42. 07. R.0	75	101	2,280
R4.42. 087. R.0	87	114	2,410
R4.42. 10. R.0	100	126	2,520
R4.42. 11. R.0	108	134	2,570
R4.42. 12. R.0	125	151	2,730

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.42 [kg/m]
R4.42. 15. R.0	150	176	2,980
R4.42. 17. R.0	168	194	3,150
R4.42. 20. R.0	200	226	3,450
R4.42. 25. R.0	250	276	4,250
R4.42. 30. R.0	300	326	4,890

*Removable lid only, no hinged option

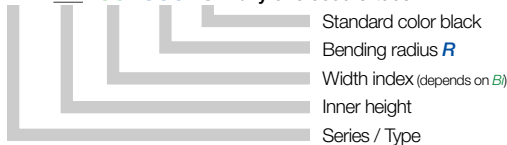
Available bending radii *R* [mm] 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350

Supplement Part No. with required radius (*R*). Example: R4.42.30.300.0

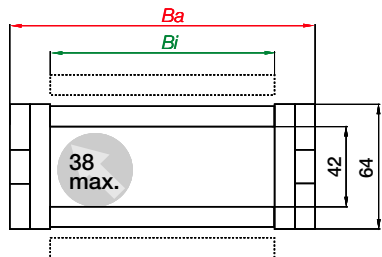
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 Order key for all types

- E4 .42. 30. 300. 0 e-chain® (crossbars every link)
- H4 .42. 30. 300. 0 e-chain® (crossbars every 2nd link)
- R4 .42. 30. 300. 0 Fully enclosed e-tube



Dimensioning



-  E4.42.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - H4.42.30.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - R4.42.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.76

 Standard e-tubes incl. accessories from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods

E4.1 | Series E4.42 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>				
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]			
E4.42.	H4.42.	10	QZ.R.0	10	QE.R.0	10	Q.R.0	100
E4.42.	H4.42.	11	QZ.R.0	11	QE.R.0	11	Q.R.0	108
E4.42.	H4.42.	112	QZ.R.0	112	QE.R.0	112	Q.R.0	112
E4.42.	H4.42.	12	QZ.R.0	12	QE.R.0	12	Q.R.0	125
E4.42.	H4.42.	137	QZ.R.0	137	QE.R.0	137	Q.R.0	137
E4.42.	H4.42.	15	QZ.R.0	15	QE.R.0	15	Q.R.0	150
E4.42.	H4.42.	162	QZ.R.0	162	QE.R.0	162	Q.R.0	162
E4.42.	H4.42.	17	QZ.R.0	17	QE.R.0	17	Q.R.0	168
E4.42.	H4.42.	18	QZ.R.0	18	QE.R.0	18	Q.R.0	175
E4.42.	H4.42.	187	QZ.R.0	187	QE.R.0	187	Q.R.0	187
E4.42.	H4.42.	20	QZ.R.0	20	QE.R.0	20	Q.R.0	200
E4.42.	H4.42.	212	QZ.R.0	212	QE.R.0	212	Q.R.0	212
E4.42.	H4.42.	23	QZ.R.0	23	QE.R.0	23	Q.R.0	225
E4.42.	H4.42.	237	QZ.R.0	237	QE.R.0	237	Q.R.0	237
E4.42.	H4.42.	25	QZ.R.0	25	QE.R.0	25	Q.R.0	250
E4.42.	H4.42.	262	QZ.R.0	262	QE.R.0	262	Q.R.0	262

Part No.	QuickLock crossbar for			<i>Bi</i>				
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]			
E4.42.	H4.42.	28	QZ.R.0	28	QE.R.0	28	Q.R.0	275
E4.42.	H4.42.	29	QZ.R.0	29	QE.R.0	29	Q.R.0	287
E4.42.	H4.42.	30	QZ.R.0	30	QE.R.0	30	Q.R.0	300
E4.42.	H4.42.	312	QZ.R.0	312	QE.R.0	312	Q.R.0	312
E4.42.	H4.42.	325	QZ.R.0	325	QE.R.0	325	Q.R.0	325
E4.42.	H4.42.	337	QZ.R.0	337	QE.R.0	337	Q.R.0	337
E4.42.	H4.42.	350	QZ.R.0	350	QE.R.0	350	Q.R.0	350
E4.42.	H4.42.	362	QZ.R.0	362	QE.R.0	362	Q.R.0	362
E4.42.	H4.42.	375	QZ.R.0	375	QE.R.0	375	Q.R.0	375
E4.42.	H4.42.	387	QZ.R.0	387	QE.R.0	387	Q.R.0	387
E4.42.	H4.42.	400	QZ.R.0	400	QE.R.0	400	Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] **075 | 100 | 115 | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350**

Supplement Part No. with required radius (*R*). Example: **E4.42.30QZ.300.0**



For e-chains® with **QuickLock crossbar** supplement Part No. with required Index **QZ / QE / Q**

Part No. **E4.42.30QZ.300.0** = QuickLock crossbar for inner radius

Part No. **E4.42.30QE.300.0** = QuickLock crossbar for outer radius

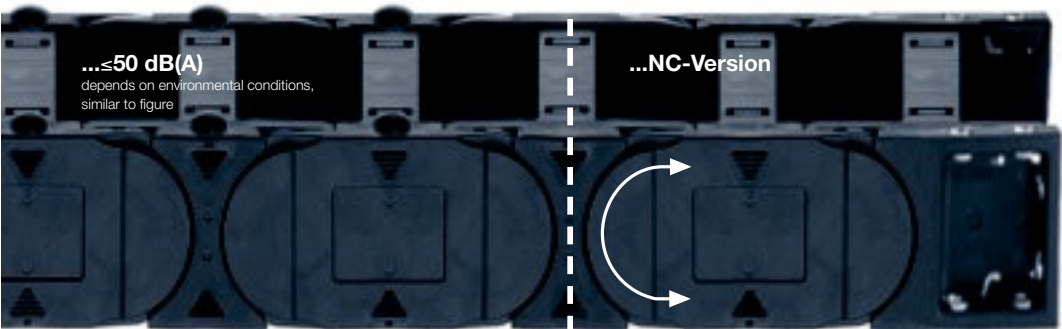
Part No. **E4.42.30Q .300.0** = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.42 | Product range | Options



Noise damping | ≤ 50 dB(A)



NC-Version | Without pretension

With pads crossbars every link | e-tube fully enclosed | 2 nd	Bi [mm]	With pads crossbars every link | e-tube fully enclosed | 2 nd	Bi [mm]
ES4 HS4 RS4 .42.05. R.0	50	ES4 HS4 - .42.212.R.0	212
ES4 HS4 - .42.06. R.0	68	ES4 HS4 - .42.23. R.0	225
ES4 HS4 RS4 .42.07. R.0	75	ES4 HS4 - .42.237.R.0	237
ES4 HS4 RS4 .42.087.R.0	87	ES4 HS4 RS4 .42.25. R.0	250
ES4 HS4 - .42.09. R.0	97	ES4 HS4 - .42.262.R.0	262
ES4 HS4 RS4 .42.10. R.0	100	ES4 HS4 - .42.28. R.0	275
ES4 HS4 RS4 .42.11. R.0	108	ES4 HS4 - .42.29. R.0	287
ES4 HS4 - .42.112.R.0	112	ES4 HS4 RS4 .42.30. R.0	300
ES4 HS4 RS4 .42.12. R.0	125	ES4 HS4 - .42.312.R.0	312
ES4 HS4 - .42.137.R.0	137	ES4 HS4 - .42.325.R.0	325
ES4 HS4 RS4 .42.15. R.0	150	ES4 HS4 - .42.337.R.0	337
ES4 HS4 - .42.162.R.0	162	ES4 HS4 - .42.350.R.0	350
ES4 HS4 RS4 .42.17. R.0	168	ES4 HS4 - .42.362.R.0	362
ES4 HS4 - .42.18. R.0	175	ES4 HS4 - .42.375.R.0	375
ES4 HS4 - .42.187.R.0	187	ES4 HS4 - .42.387.R.0	387
ES4 HS4 RS4 .42.20. R.0	200	ES4 HS4 - .42.400.R.0	400

NC-Version crossbars every link | e-tube fully enclosed | 2 nd	Bi [mm]	NC-Version crossbars every link | e-tube fully enclosed | 2 nd	Bi [mm]
E4 H4 R4 .42.05. R.0.NC	50	E4 H4 - .42.212.R.0.NC	212
E4 H4 - .42.06. R.0.NC	68	E4 H4 - .42.23. R.0.NC	225
E4 H4 R4 .42.07. R.0.NC	75	E4 H4 - .42.237.R.0.NC	237
E4 H4 R4 .42.087.R.0.NC	87	E4 H4 R4.42.25. R.0.NC	250
E4 H4 - .42.09. R.0.NC	97	E4 H4 - .42.262.R.0.NC	262
E4 H4 R4 .42.10. R.0.NC	100	E4 H4 - .42.28. R.0.NC	275
E4 H4 R4 .42.11. R.0.NC	108	E4 H4 - .42.29. R.0.NC	287
E4 H4 - .42.112.R.0.NC	112	E4 H4 R4.42.30. R.0.NC	300
E4 H4 R4 .42.12. R.0.NC	125	E4 H4 - .42.312.R.0.NC	312
E4 H4 - .42.137.R.0.NC	137	E4 H4 - .42.325.R.0.NC	325
E4 H4 R4 .42.15. R.0.NC	150	E4 H4 - .42.337.R.0.NC	337
E4 H4 - .42.162.R.0.NC	162	E4 H4 - .42.350.R.0.NC	350
E4 H4 R4 .42.17. R.0.NC	168	E4 H4 - .42.362.R.0.NC	362
E4 H4 - .42.18. R.0.NC	175	E4 H4 - .42.375.R.0.NC	375
E4 H4 - .42.187.R.0.NC	187	E4 H4 - .42.387.R.0.NC	387
E4 H4 R4 .42.20. R.0.NC	200	E4 H4 - .42.400.R.0.NC	400

Available bending radii R [mm] 075* | 100* | 115* | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350 *not available for e-tubes

Supplement Part No. with required radius (R). Example: **ES4.42.30.300.0** or **E4.42.30.300.0.NC**



For e-chains® with noise damping pads supplement Part No. with required index "S"

Example: Part No. **ES4.42.30.300.0** = e-chain® (crossbars every link) with noise damping

For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. **E4.42.30.300.0.NC** = e-chain® (crossbars every link) without pretension

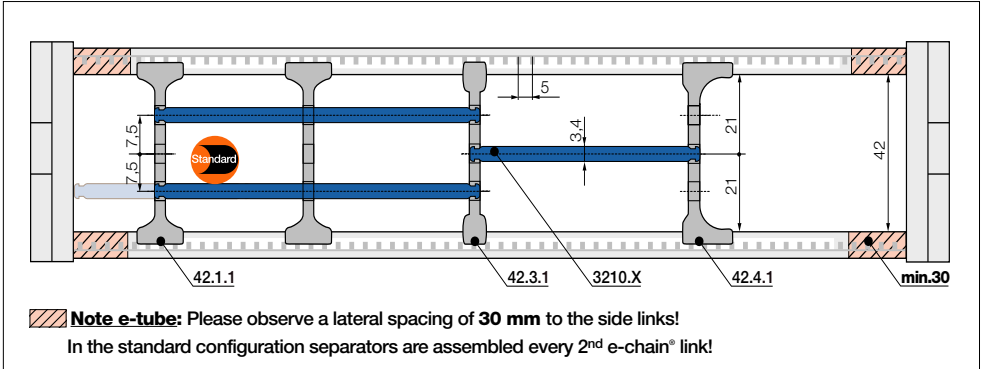


e-chain® with noise damping pads - Delivery time: 3-5 work days.

NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Standard separator, wide base
unassembled 42.1
assembled 42.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.

Separator, narrow base
unassembled 42.3
assembled 42.3.1

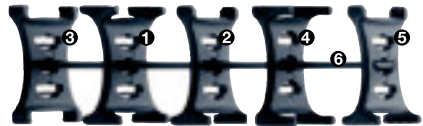
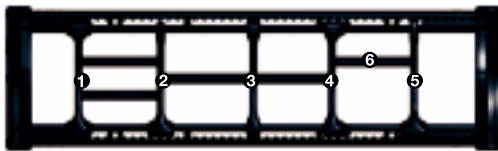
For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

Asymmetrical separator
unassembled 42.4
assembled 42.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



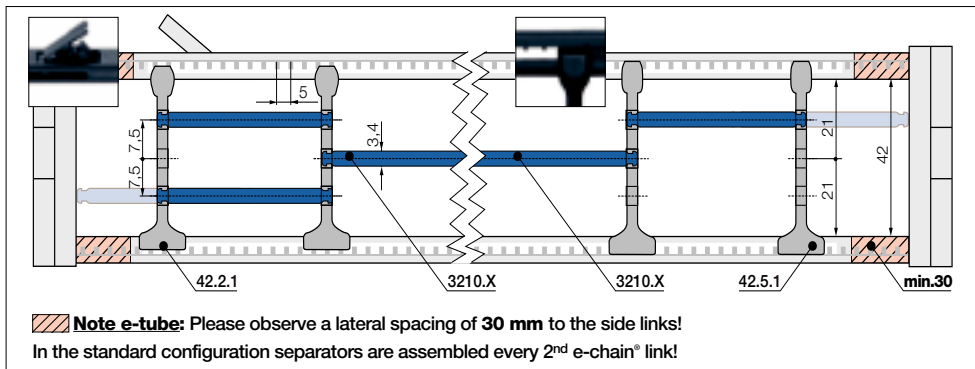
- ① Standard separator, wide base - Part No. 42.1
- ② Separator for QuickLock crossbar - Part No. 42.2
- ③ Separator, narrow base - Part No. 42.3
- ④ Separator, asymmetrical - Part No. 42.4
- ⑤ Notch separator - Part No. 42.5
- ⑥ Full-width self, lockable - Part No. 3200.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
 unassembled **42.2**
 assembled **42.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
 unassembled **42.5**
 assembled **42.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
 unassembled **3200.X**
 assembled **3210.X**

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.

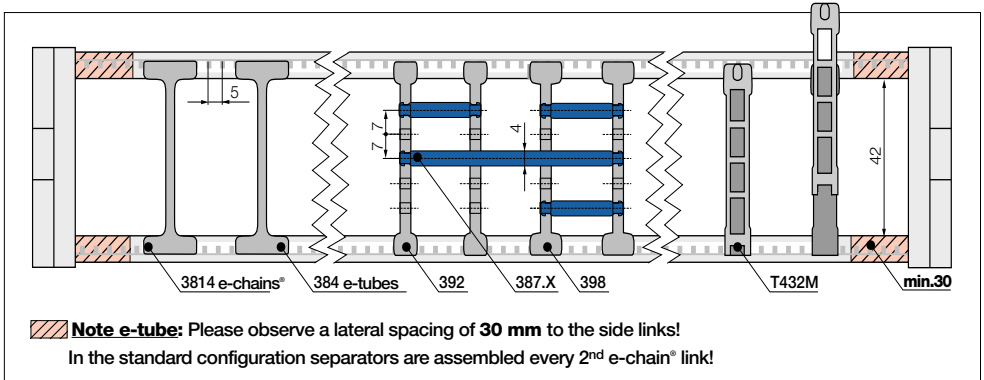
Lockable full-width shelves - for the standard interior separation



Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	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			

E4.1 | Series E4.42 | Interior separation | Options

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.42



		Open slotted separator for e-chains®/e-tubes
		unassembled 397 assembled 398

Open, slotted separator 397 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

		Slotted separator for e-chains®/e-tubes
		unassembled 391 assembled 392

Slotted separator 391

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

		Split separator for e-chains®
		unassembled T423 assembled T423M

Split separator T423 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

		Locking separator for e-chains®
		unassembled 3804 assembled 3814

Locking separator 3804 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

		Locking separator for e-tubes
		unassembled 383 assembled 384

Locking separator 383 (e-tubes only)

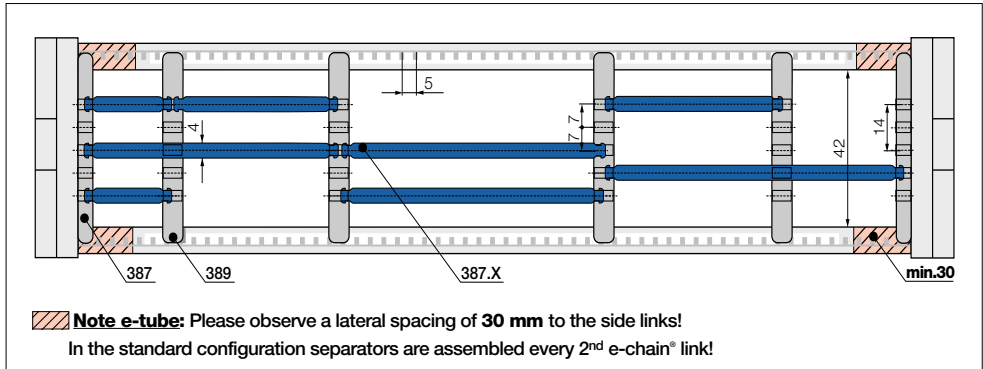
For e-tubes R4.42.


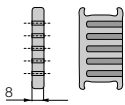

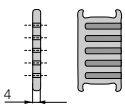
		Shelf
		unassembled 386.X assembled 387.X

Shelf 386.X

For horizontal separation. Shelves of various widths can be arranged at 5 different heights (in 7 mm increments). - see table beneath (not in combination with 3804, 383).

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.42



		Middle plate for e-chains® / e-tubes unassembled 388 assembled 389
		Side plate for e-chains® / e-tubes unassembled 386 assembled 387

Middle plate 388

Middle plates form the basic pattern of a shelf system. Shelves 386.X (table below) can be arranged at 5 different heights (in 7 mm increments).

Side plate 386

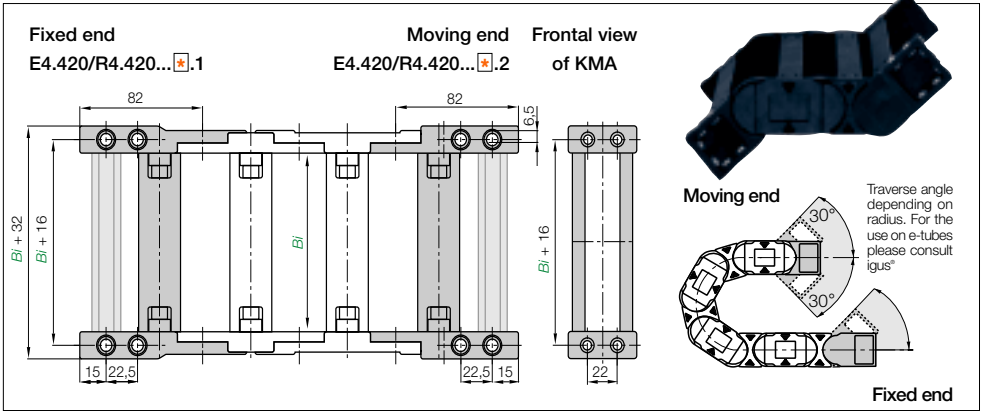
Works like middle plate.
Allows modular shelving close to the side links.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	050	386.50	387.50	108	386.108	387.108
023	386.23	387.23	054	386.54	387.54	125	386.125	387.125
025	386.25	387.25	062	386.62	387.62	150	386.150	387.150
028	386.28	387.28	075	386.75	387.75	175	386.175	387.175
033	386.33	387.33	087	386.87	387.87	200	386.200	387.200
043	386.43	387.43	100	386.100	387.100	208	386.208	387.208

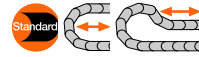
E4.1 | Series E4.42 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

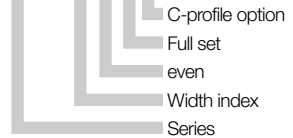
Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	E4.420. R4.420.05 .12.C	50	212.	E4.420. - 212.12.C	212
06.	E4.420. - 06 .12.C	68	23.	E4.420. - 23 .12.C	225
07.	E4.420. R4.420.07 .12.C	75	237.	E4.420. - 237.12.C	237
087.	E4.420. R4.420.087.12.C	87	25.	E4.420. R4.420.25 .12.C	250
09.	E4.420. - 097.12.C	97	262.	E4.420. - 262.12.C	262
10.	E4.420. R4.420.10 .12.C	100	28.	E4.420. - 28 .12.C	275
11.	E4.420. R4.420.11 .12.C	108	29.	E4.420. - 29 .12.C	287
112.	E4.420. - 112.12.C	112	30.	E4.420. R4.420.30 .12.C	300
12.	E4.420. R4.420.12 .12.C	125	312.	E4.420. - 312.12.C	312
137.	E4.420. - 137.12.C	137	325.	E4.420. - 325.12.C	325
15.	E4.420. R4.420.15 .12.C	150	337.	E4.420. - 337.12.C	337
162.	E4.420. - 162.12.C	162	350.	E4.420. - 350.12.C	350
17.	E4.420. R4.420.17 .12.C	168	362.	E4.420. - 362.12.C	362
18.	E4.420. - 18 .12.C	175	375.	E4.420. - 375.12.C	375
187.	E4.420. - 187.12.C	187	387.	E4.420. - 387.12.C	387
20.	E4.420. R4.420.20 .12.C	200	400.	E4.420. - 400.12.C	400



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.420.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.420.30.2.2.C (even number of links)

Mounting bracket **Fixed end**

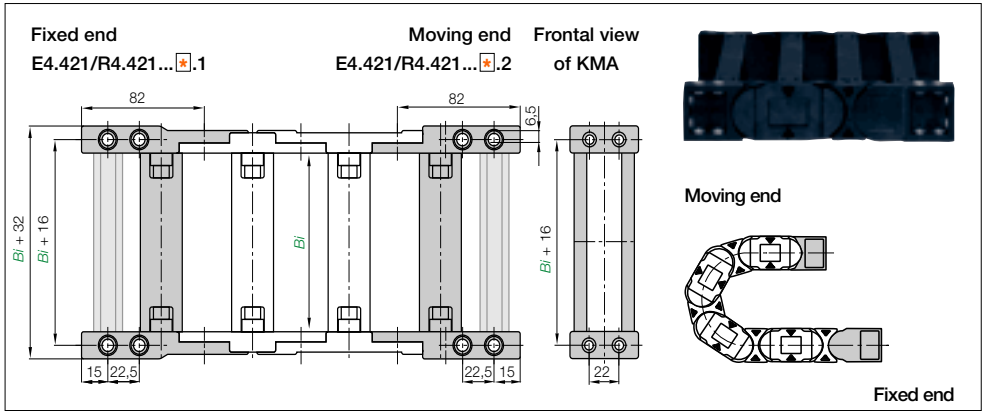
E4.420.30.2.1.C (even number of links)

Note: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain* link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1

E4.1 | Series E4.42 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

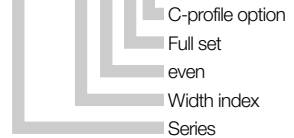
Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	E4.421. R4.421.05	50	212.	E4.421. - 212	212
06.	E4.421. - 06	68	23.	E4.421. - 23	225
07.	E4.421. R4.421.07	75	237.	E4.421. - 237	237
087.	E4.421. R4.421.087	87	25.	E4.421. R4.421.25	250
09.	E4.421. - 097	97	262.	E4.421. - 262	262
10.	E4.421. R4.421.10	100	28.	E4.421. - 28	275
11.	E4.421. R4.421.11	108	29.	E4.421. - 29	287
112.	E4.421. - 112	112	30.	E4.421. R4.421.30	300
12.	E4.421. R4.421.12	125	312.	E4.421. - 312	312
137.	E4.421. - 137	137	325.	E4.421. - 325	325
15.	E4.421. R4.421.15	150	337.	E4.421. - 337	337
162.	E4.421. - 162	162	350.	E4.421. - 350	350
17.	E4.421. R4.421.17	168	362.	E4.421. - 362	362
18.	E4.421. - 18	175	375.	E4.421. - 375	375
187.	E4.421. - 187	187	387.	E4.421. - 387	387
20.	E4.421. R4.421.20	200	400.	E4.421. - 400	400



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.421.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.421.30.2.2.C (even number of links)

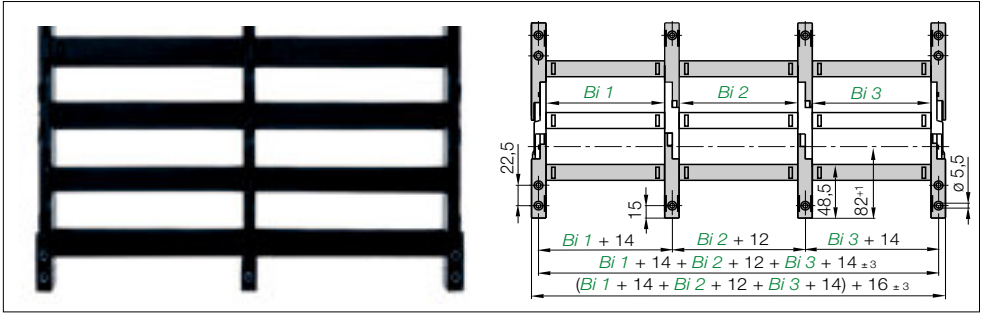
Mounting bracket **Fixed end**

E4.421.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



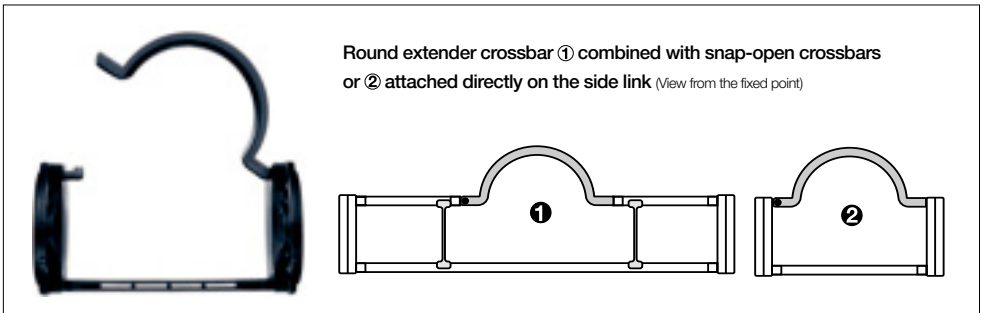
Order example - 3 chambers

E4.42.Bi1 / Bi2 / Bi3.R.0 =

E4.42.10 / 20 / 10.200.0

Extension link - single-part order

384.R. (please indicate radius)



Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

E4.42.10/15RHD E 115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

E4.42.10/15RHD Z 115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

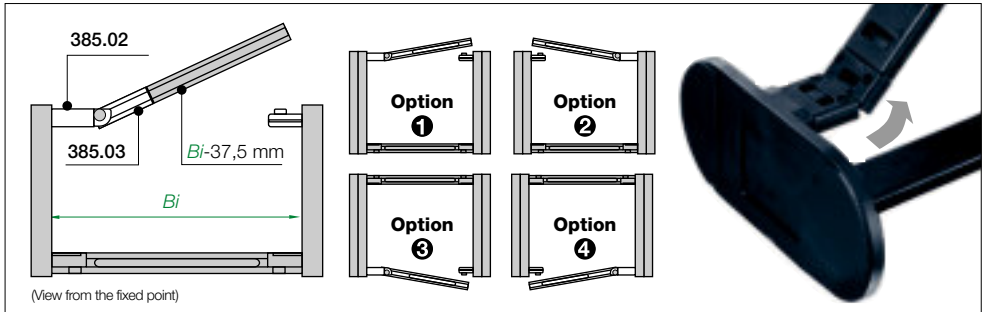
E4.42.18RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

E4.42.18RDZ115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	115	O round	no	yes
385.18.RD115	115	O round	yes	no

E4.1 | Series E4.42 | More options



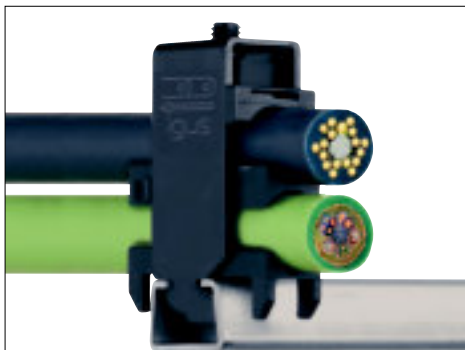
Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- **Hinged crossbar: Part No. 385.02**
Snap-open crossbar (shortened): *Bi-37,5 mm* Part No. **385.03**
(smallest inner width $B_i = 87,5$)



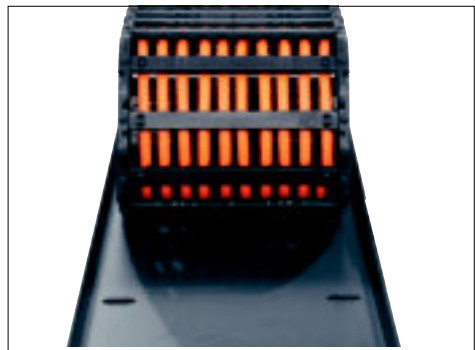
Order example (here: inner width B_i 150)
E4.32.15.Z.R.0 =
E4.32.15.01.R.0
Supplement Index "Z" with required
option number ①, ②, ③ or ④

E4.1 | Series E4.42 | e-chain® accessories



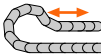
Strain relief system

Clamps, tie-wrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



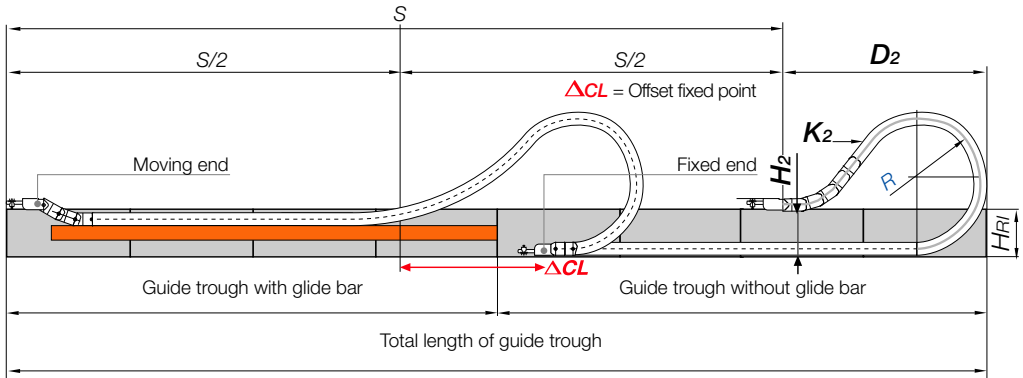
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 12 m to max. 300 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 8 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 67 mm/link · Links/m = 15 (1005 mm) · Chain length = $\frac{S}{2} + K$

R	075	100	115	125	150	160	175	200	250	300	350
H_2	150	200	230	186	186	186	186	186	186	186	186
D_2^{+25}	174	199	upon request	475	570	623	670	780	1030	1150	1500
K_2	370	450	upon request	804	938	1072	1139	1340	1675	1943	2412
ΔCL	-	-	-	230	300	380	380	460	660	730	1030

More solutions | for long travels

System P4.42 - Profile rol e-chain®, low-noise

Travels up to 800 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.83

rol e-chain® 3838R - Rolling instead of gliding

Travels up to 600 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide E4.42.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► page 9.92

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

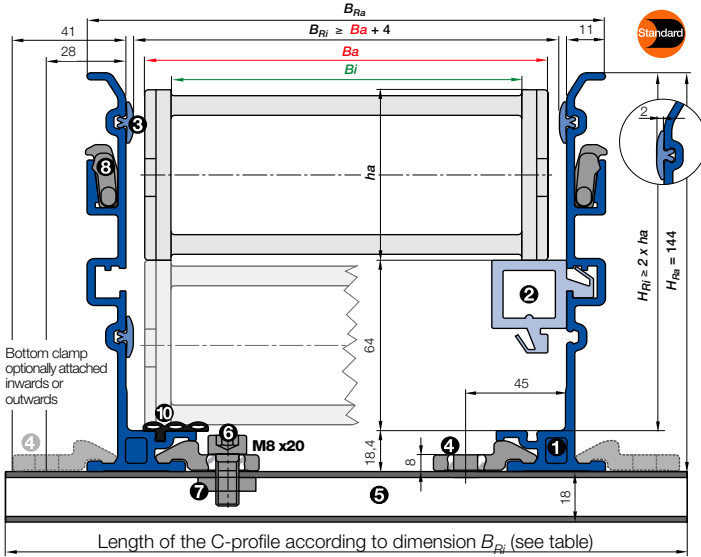
K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔCL = Offset fixed point
 H_R = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Aluminum "SuperTrough" | Basic Version

E4.42
H4.42
R4.42



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.42.20.300.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	960.40.200
.06	98	960.40.225
.07	105	960.40.225
.087	118	960.40.175
.10	130	960.40.200
.11	138	960.40.200
.112	143	960.40.200
.12	155	960.40.225
.137	168	960.40.225
.15	180	960.40.250
.162	193	960.40.250
.17	198	960.40.250
.18	205	960.40.275
.187	218	960.40.275
.20	230	960.40.300
.212	243	960.40.300
.23	255	960.40.325
.237	268	960.40.325
.25	280	960.40.350
.262	293	960.40.350
.28	305	960.40.375
.29	318	960.40.375
.30	330	960.40.400
.312	343	960.40.400
.325	355	960.40.425
.337	368	960.40.425
.350	380	960.40.450
.362	393	960.40.450
.375	406	960.40.475
.387	418	960.40.475
.400	430	960.40.500

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of **960.40.XXX** on the right column "attached outwards"

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.42.20.300.0 with $B_{Ri} = 230$

Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 973.30.SL**

Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 973.31.SL**

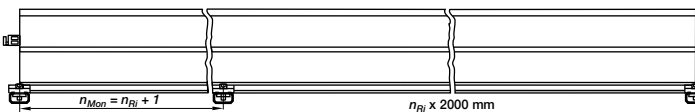
Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets **Part No. 960.40.300**

Module for the fixed end ▶ page 9.16

Order text: 1 set **Part No. 973.81**

Option: For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 973.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.33

- Trough set
- Installation set
- Glide bar
- C-Profile
- Ba = Outer width e-chains*
- Bi = Inner width e-chains*
- B_{Ri} = Inner trough width
- B_{Ro} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ro} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

E4.1 | Series E4.42 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 10 (100 mm)!



E4.42.30.R.0
Crossbar every link

ES4.42.30.R.0
Crossbar every link

E4.42.30.QZ.R.0
Crossbar every link

E4.42.30.QE.R.0
Crossbar every link

E4.42.30.Q.R.0
Crossbar every link

H4.42.30.R.0
Crossbar every 2nd link

HS4.42.30.R.0
Crossbar every 2nd link

H4.42.30.QZ.R.0
Crossbar every 2nd link

H4.42.30.QE.R.0
Crossbar every 2nd link

H4.42.30.Q.R.0
Crossbar every 2nd link

R4.42.30.R.0
e-tube, closed

RS4.42.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.42.30.Q.R.0	ES4.42.30.R.0.NC	–	ES4.42.30.R.0.XXL	RS4.42.30.R.0.HT	ES4.42.30.R.0.ESD
QuickLock crossbar	ES4.42.30.Q.R.0		E4.42.30.Q.R.0.NC	E4.42.30.Q.R1/R2.0	E4.42.30.Q.R.0.XXL	–	E4.42.30.Q.R.0.ESD
NC-Version	ES4.42.30.R.0.NC	E4.42.30.Q.R.0.NC		–	–	R4.42.30.R.0.HT.NC	E4.42.30.R.0.ESD.NC
RBR-Version	–	E4.42.30.Q.R1/R2.0	–		–	R4.42.30.R1/R2.0.HT	E4.42.30.R1/R2.0.ESD
XXL-Material	ES4.42.30.R.0.XXL	E4.42.30.Q.R.0.XXL	–	–		–	–
HT-Material*	RS4.42.30.R.0.HT	–	R4.42.30.R.0.HT.NC	R4.42.30.R1/R2.0.HT	–		–
ESD-	ES4.42.30.R.0.ESD	E4.42.30.Q.R.0.ESD	E4.42.30.R.0.ESD.NC	E4.42.30.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®

E4.1 | Series E4.42 | Options and order key

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes

Part No.
RBR
e-chains®/e-tubes

Part No.
XXL-Material**
e-chains®/e-tubes

Part No.
HT-Material
only for e-tubes

Part No.
ESD-Material
e-chains®/e-tubes

E4.42.30.R.0.NC
Crossbar every link

E4.42.30.R1/R2.0
Crossbar every link

E4.42.30.R.0.XXL
Crossbar every link

R4.42.30.R.0.HT
Complete e-tube*

E4.42.30.R.0.ESD
Crossbar every link

H4.42.30.R.0.NC
Crossbar every 2nd link

H4.42.30.R1/R2.0
Crossbar every 2nd link

H4.42.30.R.0.XXL
Crossbar every 2nd link

R4.42.30.HT.R.0
Lid and bottom

H4.42.30.R.0.ESD
Crossbar every 2nd link

R4.42.30.R.0.NC
e-tube, closed

R4.42.30.R1/R2.0
e-tube, closed

R4.42.30.R.0.XXL
e-tube, closed

R4.42.30.HTZ.R.0
Bottom only

R4.42.30.R.0.ESD
e-tube, closed

R4.42.30.HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Delivery time: 10 work days
*for gliding applications please consult igus®

Delivery time: 5 work days

Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:

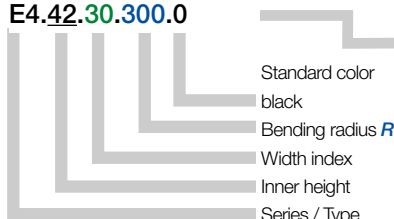
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 45 links **E4.42.30.300.0**

+ Mounting brackets 1 set (with odd number of links and integrated C-profiles) **E4.420.30.1.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 42.1.1**

Order text: 3,0 m E4.42.30.300.0 + E4.420.30.1.12.C + 2 x Part No. 42.1.1

Order key **E4.42.30.300.0**



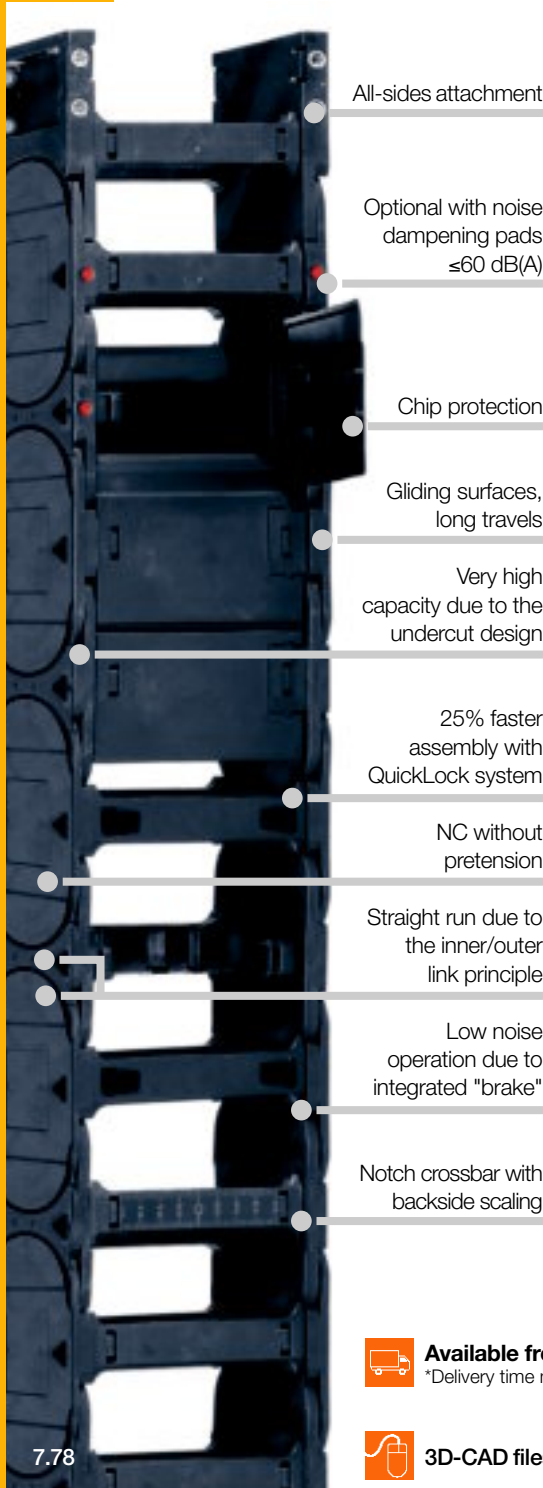
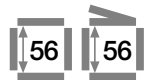
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Optional with noise dampening pads ≤ 60 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

⊕ Stable due to undercut design, large inner height

When to use Series E4.56:

- If a robust e-chain®/e-tube with an inner height of 56 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 5,0 m and fill weights up to 62 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
- ▶ **Series E6.52, page 8.66**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
- ▶ **Series E6.52, page 8.66**
- If a less stable e-chain® can be used for economical reasons
- ▶ **Series 14040/14140/R18840, page 7.164**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.15

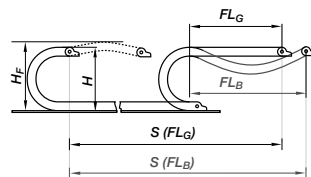
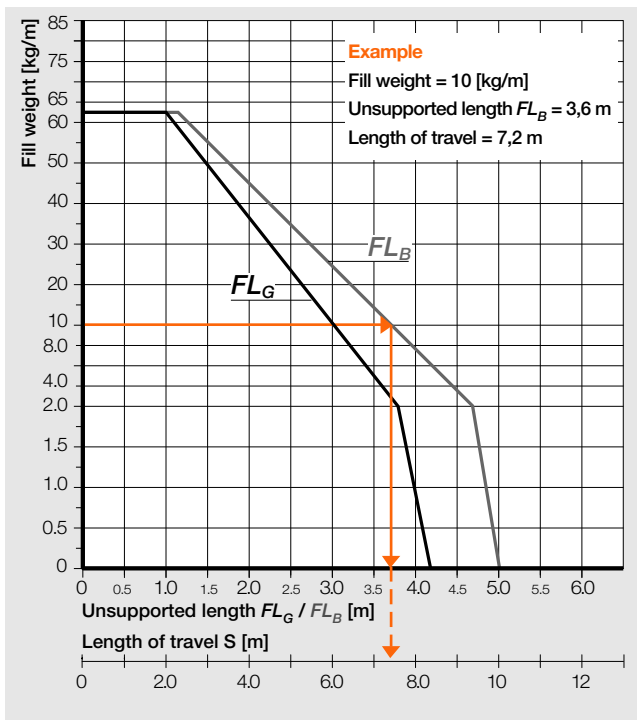


Available from stock. **Delivery in 24h or today!***

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.56



Standard Unsupported applications

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

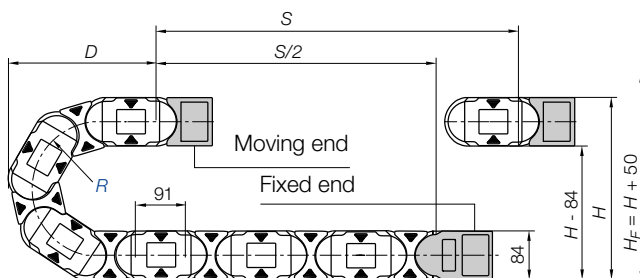
Gliding applications

Travels up to 400 m.
 More information ► **page 7.92**

Technical Data

Speed, material, temperature and flammability class ► **page 1.16**

Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$



R	135	150	175	200	240	250	300	350	400	450	500
H_{+25}^0	354	384	434	484	564	584	684	784	884	984	1084
D	268	283	308	333	373	383	433	483	533	583	633
K	610	655	735	815	940	970	1125	1285	1440	1600	1755

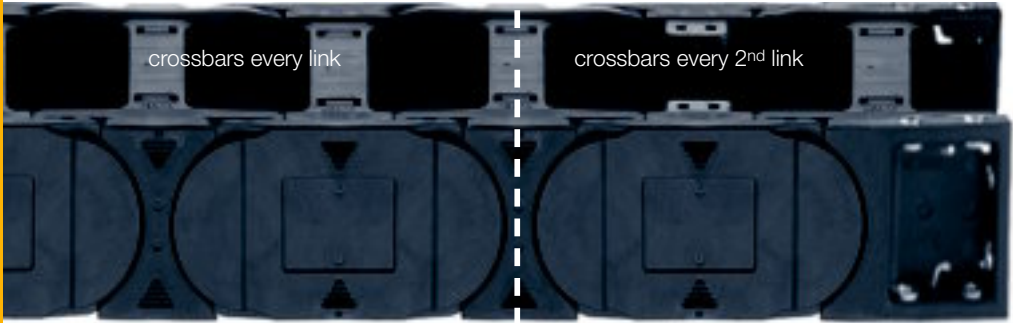
The required clearance height: $H_F = H + 50$ mm (with 3,0 kg/m fill weight)



FL_G = with straight upper run
 FL_B = with permitted sag

S = Length of travel
 R = Bending radius

H = Nominal clearance height
 H_F = Required clearance height
 D = Overlength e-chain", radius in final position
 K = $\pi \cdot R +$ "safety"



e-chains® | Series E4.56 crossbars every link | Series H4.56 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2 nd link	Bi [mm]	Ba [mm]	E4.56 [kg/m]	H4.56 [kg/m]
E4.56	H4.56. 05. R.0	50	84	3,301	3,158
E4.56	H4.56. 06. R.0	65	99	3,390	3,202
E4.56	H4.56. 07. R.0	75	109	3,458	3,236
E4.56	H4.56. 08. R.0	87	121	3,538	3,276
E4.56	H4.56. 10. R.0	100	134	3,633	3,323
E4.56	H4.56. 11. R.0	112	147	3,749	3,382
E4.56	H4.56. 12. R.0	125	159	3,827	3,420
E4.56	H4.56. 13. R.0	137	172	3,963	3,488
E4.56	H4.56. 15. R.0	150	184	4,000	3,507
E4.56	H4.56. 16. R.0	162	197	4,113	3,563
E4.56	H4.56. 17. R.0	175	209	4,245	3,630
E4.56	H4.56. 18. R.0	187	222	4,357	3,685
E4.56	H4.56. 20. R.0	200	234	4,413	3,713
E4.56	H4.56. 21. R.0	212	247	4,484	3,749
E4.56	H4.56. 22. R.0	225	259	4,553	3,784
E4.56	H4.56. 23. R.0	237	272	4,663	3,838
E4.56	H4.56. 25. R.0	250	284	4,774	3,894
E4.56	H4.56. 26. R.0	262	297	4,865	3,939
E4.56	H4.56. 27. R.0	275	309	4,967	3,990
E4.56	H4.56. 28. R.0	287	322	5,025	4,019
E4.56	H4.56. 30. R.0	300	334	5,177	4,095

Part No. crossbars every link	Part No. crossbars every 2 nd link	Bi [mm]	Ba [mm]	E4.56 [kg/m]	H4.56 [kg/m]
E4.56	H4.56. 31. R.0	312	347	5,214	4,114
E4.56	H4.56. 32. R.0	325	359	5,317	4,166
E4.56	H4.56. 33. R.0	337	372	5,437	4,225
E4.56	H4.56. 35. R.0	350	384	5,639	4,326
E4.56	H4.56. 36. R.0	362	397	5,549	4,282
E4.56	H4.56. 37. R.0	375	409	5,646	4,330
E4.56	H4.56. 38. R.0	387	422	5,762	4,388
E4.56	H4.56. 40. R.0	400	434	6,031	4,523
E4.56	H4.56. 41. R.0	412	447	5,955	4,484
E4.56	H4.56. 42. R.0	425	459	6,247	4,630
E4.56	H4.56. 43. R.0	437	472	6,090	4,552
E4.56	H4.56. 45. R.0	450	484	6,420	4,717
E4.56	H4.56. 46. R.0	462	497	6,372	4,693
E4.56	H4.56. 47. R.0	475	509	6,412	4,713
E4.56	H4.56. 48. R.0	487	522	6,658	4,836
E4.56	H4.56. 50. R.0	500	534	6,755	4,885
E4.56	H4.56. 51. R.0	512	547	6,668	4,841
E4.56	H4.56. 52. R.0	525	559	6,842	4,928
E4.56	H4.56. 53. R.0	537	572	6,934	4,974
E4.56	H4.56. 55. R.0	550	584	7,355	5,184
E4.56	H4.56. 60. R.0	600	634	7,584	5,299

Available bending radii R [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (R). Example: E4.56.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series **R4.56** - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.56 [kg/m]
R4.56. 07. R.0*	75	109	3,910
R4.56. 10. R.0	100	134	4,200
R4.56. 12. R.0	125	159	4,560
R4.56. 15. R.0	150	184	4,940
R4.56. 17. R.0	175	209	5,250
R4.56. 20. R.0	200	234	5,560

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.56 [kg/m]
R4.56. 25. R.0	250	284	6,290
R4.56. 27. R.0	275	309	6,650
R4.56. 30. R.0	300	334	6,950
R4.56. 35. R.0	350	384	7,650
R4.56. 40. R.0	400	434	8,650
R4.56. 46. R.0	462	497	9,118

Available bending radii *R* [mm] **150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500**

*Removable lid only, no hinged option

Supplement Part No. with required radius (*R*). Example: **R4.56.30.300.0**

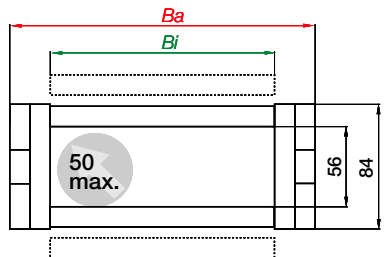
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

- E4 .56. 30. 300. 0** e-chain® (crossbars every link)
- H4 .56. 30. 300. 0** e-chain® (crossbars every 2nd link)
- R4 .56. 30. 300. 0** Fully enclosed e-tube



Dimensioning



-  **E4.56.30.300.0** = e-chain® with **crossbars every link**, inner width *Bi* **300** mm, radius *R* **300** mm, color black
 - H4.56.30.300.0** = e-chain® with **crossbars every 2nd link**, inner width *Bi* **300** mm, radius *R* **300** mm, color black
 - R4.56.30.300.0** = **Fully enclosed** e-tube, inner width *Bi* **300** mm, radius *R* **300** mm, color black
- More order examples, variations and configurations ► page 7.94

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods

E4.1 | Series E4.56 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]
E4.56.	H4.56.	15QZ.R.0	15QE.R.0	15Q.R.0	150
E4.56.	H4.56.	16QZ.R.0	16QE.R.0	16Q.R.0	162
E4.56.	H4.56.	17QZ.R.0	17QE.R.0	17Q.R.0	175
E4.56.	H4.56.	18QZ.R.0	18QE.R.0	18Q.R.0	187
E4.56.	H4.56.	20QZ.R.0	20QE.R.0	20Q.R.0	200
E4.56.	H4.56.	21QZ.R.0	21QE.R.0	21Q.R.0	212
E4.56.	H4.56.	22QZ.R.0	22QE.R.0	22Q.R.0	225
E4.56.	H4.56.	23QZ.R.0	23QE.R.0	23Q.R.0	237
E4.56.	H4.56.	25QZ.R.0	25QE.R.0	25Q.R.0	250
E4.56.	H4.56.	26QZ.R.0	26QE.R.0	26Q.R.0	262
E4.56.	H4.56.	27QZ.R.0	27QE.R.0	27Q.R.0	275
E4.56.	H4.56.	28QZ.R.0	28QE.R.0	28Q.R.0	287
E4.56.	H4.56.	30QZ.R.0	30QE.R.0	30Q.R.0	300
E4.56.	H4.56.	31QZ.R.0	31QE.R.0	31Q.R.0	312
E4.56.	H4.56.	32QZ.R.0	32QE.R.0	32Q.R.0	325
E4.56.	H4.56.	33QZ.R.0	33QE.R.0	33Q.R.0	337
E4.56.	H4.56.	35QZ.R.0	35QE.R.0	35Q.R.0	350
E4.56.	H4.56.	36QZ.R.0	36QE.R.0	36Q.R.0	362
E4.56.	H4.56.	37QZ.R.0	37QE.R.0	37Q.R.0	375
E4.56.	H4.56.	38QZ.R.0	38QE.R.0	38Q.R.0	387
E4.56.	H4.56.	40QZ.R.0	40QE.R.0	40Q.R.0	400

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]
E4.56.	H4.56.	41QZ.R.0	41QE.R.0	41Q.R.0	412
E4.56.	H4.56.	42QZ.R.0	42QE.R.0	42Q.R.0	425
E4.56.	H4.56.	43QZ.R.0	43QE.R.0	43Q.R.0	437
E4.56.	H4.56.	45QZ.R.0	45QE.R.0	45Q.R.0	450
E4.56.	H4.56.	46QZ.R.0	46QE.R.0	46Q.R.0	462
E4.56.	H4.56.	47QZ.R.0	47QE.R.0	47Q.R.0	475
E4.56.	H4.56.	48QZ.R.0	48QE.R.0	48Q.R.0	487
E4.56.	H4.56.	50QZ.R.0	50QE.R.0	50Q.R.0	500
E4.56.	H4.56.	51QZ.R.0	51QE.R.0	51Q.R.0	512
E4.56.	H4.56.	52QZ.R.0	52QE.R.0	52Q.R.0	525
E4.56.	H4.56.	53QZ.R.0	53QE.R.0	53Q.R.0	537
E4.56.	H4.56.	55QZ.R.0	55QE.R.0	55Q.R.0	550
E4.56.	H4.56.	60QZ.R.0	60QE.R.0	60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (*R*). Example: E4.56.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. E4.56.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. E4.56.30QE.300.0 = QuickLock crossbar for outer radius

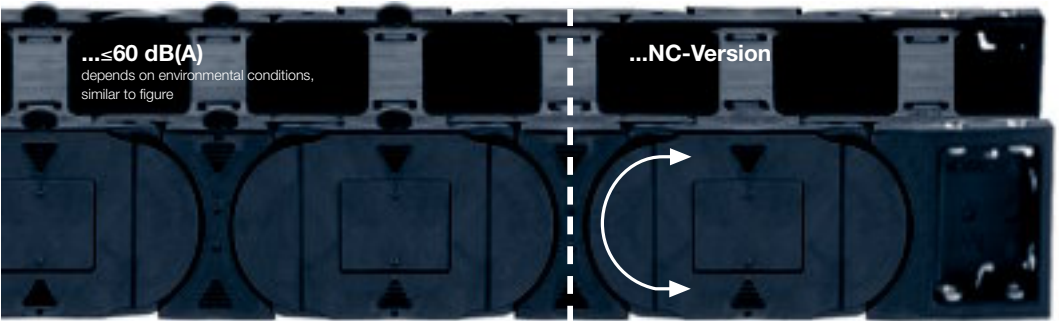
Part No. E4.56.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.56 | Product range | Options



Noise dampening | ≤ 60 dB(A)


NC-Version | Without pretension

With pads	Bi	With pads	Bi
crossbars every 2 nd link | e-tube fully enclosed	[mm]	crossbars every 2 nd link | e-tube fully enclosed	[mm]
ES4 HS4 -	.56.05.R.0 50	ES4 HS4 -	.56.31.R.0 312
ES4 HS4 -	.56.06.R.0 65	ES4 HS4 -	.56.32.R.0 325
ES4 HS4 RS4	.56.07.R.0 75	ES4 HS4 -	.56.33.R.0 337
ES4 HS4 -	.56.08.R.0 87	ES4 HS4 RS4	.56.35.R.0 350
ES4 HS4 RS4	.56.10.R.0 100	ES4 HS4 -	.56.36.R.0 362
ES4 HS4 -	.56.11.R.0 112	ES4 HS4 -	.56.37.R.0 375
ES4 HS4 RS4	.56.12.R.0 125	ES4 HS4 -	.56.38.R.0 387
ES4 HS4 -	.56.13.R.0 137	ES4 HS4 RS4	.56.40.R.0 400
ES4 HS4 RS4	.56.15.R.0 150	ES4 HS4 -	.56.41.R.0 412
ES4 HS4 -	.56.16.R.0 162	ES4 HS4 -	.56.42.R.0 425
ES4 HS4 RS4	.56.17.R.0 175	ES4 HS4 -	.56.43.R.0 437
ES4 HS4 -	.56.18.R.0 187	ES4 HS4 -	.56.45.R.0 450
ES4 HS4 RS4	.56.20.R.0 200	ES4 HS4 RS4	.56.46.R.0 462
ES4 HS4 -	.56.21.R.0 212	ES4 HS4 -	.56.47.R.0 475
ES4 HS4 -	.56.22.R.0 225	ES4 HS4 -	.56.48.R.0 487
ES4 HS4 -	.56.23.R.0 237	ES4 HS4 -	.56.50.R.0 500
ES4 HS4 RS4	.56.25.R.0 250	ES4 HS4 -	.56.51.R.0 512
ES4 HS4 -	.56.26.R.0 262	ES4 HS4 -	.56.52.R.0 525
ES4 HS4 RS4	.56.27.R.0 275	ES4 HS4 -	.56.53.R.0 537
ES4 HS4 -	.56.28.R.0 287	ES4 HS4 -	.56.55.R.0 550
ES4 HS4 RS4	.56.30.R.0 300	ES4 HS4 -	.56.60.R.0 600

NC-Version	Bi	NC-Version	Bi
crossbars every 2 nd link | e-tube fully enclosed	[mm]	crossbars every 2 nd link | e-tube fully enclosed	[mm]
E4 H4 -	.56.05.R.0.NC 50	E4 H4 -	.56.31.R.0.NC 312
E4 H4 -	.56.06.R.0.NC 65	E4 H4 -	.56.32.R.0.NC 325
E4 H4 R4	.56.07.R.0.NC 75	E4 H4 -	.56.33.R.0.NC 337
E4 H4 -	.56.08.R.0.NC 87	E4 H4 R4	.56.35.R.0.NC 350
E4 H4 R4	.56.10.R.0.NC 100	E4 H4 -	.56.36.R.0.NC 362
E4 H4 -	.56.11.R.0.NC 112	E4 H4 -	.56.37.R.0.NC 375
E4 H4 R4	.56.12.R.0.NC 125	E4 H4 -	.56.38.R.0.NC 387
E4 H4 -	.56.13.R.0.NC 137	E4 H4 R4	.56.40.R.0.NC 400
E4 H4 R4	.56.15.R.0.NC 150	E4 H4 -	.56.41.R.0.NC 412
E4 H4 -	.56.16.R.0.NC 162	E4 H4 -	.56.42.R.0.NC 425
E4 H4 R4	.56.17.R.0.NC 175	E4 H4 -	.56.43.R.0.NC 437
E4 H4 -	.56.18.R.0.NC 187	E4 H4 -	.56.45.R.0.NC 450
E4 H4 R4	.56.20.R.0.NC 200	E4 H4 R4	.56.46.R.0.NC 462
E4 H4 -	.56.21.R.0.NC 212	E4 H4 -	.56.47.R.0.NC 475
E4 H4 -	.56.22.R.0.NC 225	E4 H4 -	.56.48.R.0.NC 487
E4 H4 -	.56.23.R.0.NC 237	E4 H4 -	.56.50.R.0.NC 500
E4 H4 R4	.56.25.R.0.NC 250	E4 H4 -	.56.51.R.0.NC 512
E4 H4 -	.56.26.R.0.NC 262	E4 H4 -	.56.52.R.0.NC 525
E4 H4 R4	.56.27.R.0.NC 275	E4 H4 -	.56.53.R.0.NC 537
E4 H4 -	.56.28.R.0.NC 287	E4 H4 -	.56.55.R.0.NC 550
E4 H4 R4	.56.30.R.0.NC 300	E4 H4 -	.56.60.R.0.NC 600

Available bending radii R [mm] 135* | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500 *not available for e-tubes

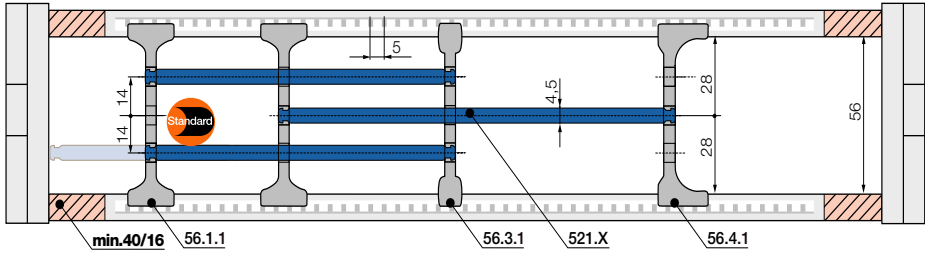
Supplement Part No. with required radius (R). Example: **ES4.56.30.300.0** or **E4.56.30.300.0.NC**

-  For e-chains® with noise dampening pads supplement Part No. with required index "S"
Example: **Part No. ES4.56.30.300.0** = e-chain® (crossbars every link) with noise dampening
- For NC-e-chains® without pretension supplement Part No. with required index "NC"
Example: **Part No. E4.56.30.300.0.NC** = e-chain® (crossbars every link) without pretension

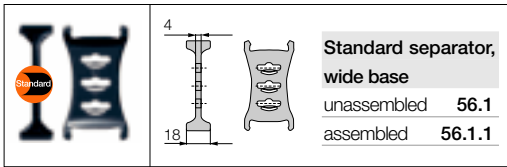
 **e-chain® with noise dampening pads - Delivery time: 3-5 work days.**
NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation

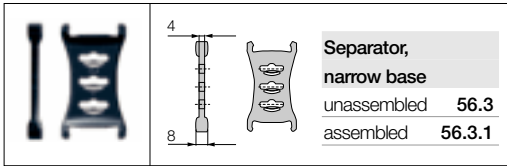


Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm | e-chain: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



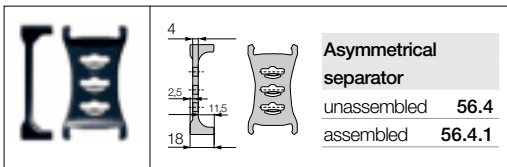
Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



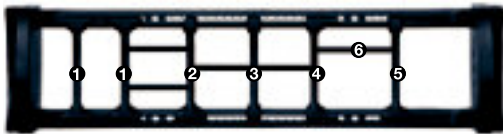
For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



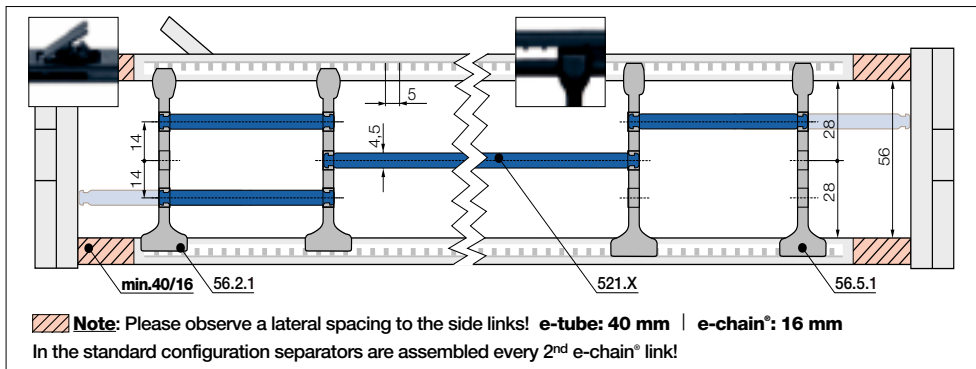
- ① Standard separator, wide base - Part No. 56.1
- ② Separator for QuickLock crossbar - Part No. 56.2
- ③ Separator, narrow base - Part No. 56.3
- ④ Separator, asymmetrical - Part No. 56.4
- ⑤ Notch separator - Part No. 56.5
- ⑥ Full-width self, lockable - Part No. 520.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
 unassembled **56.2**
 assembled **56.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
 unassembled **56.5**
 assembled **56.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
 unassembled **520.X**
 assembled **521.X**

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.

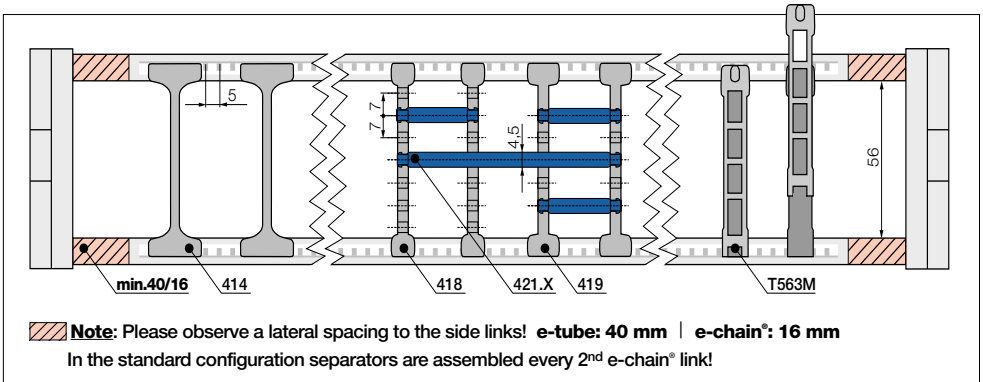


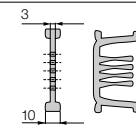
Lockable full-width shelves - for the standard interior separation



Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450

E4.1 | Series E4.56 | Interior separation | Options


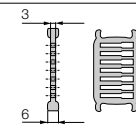
Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.56

Open slotted separator for e-chains®/e-tubes
unassembled **409**
assembled **419**

Open, slotted separator 409 (unilateral open)



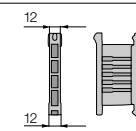
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Slotted separator for e-chains®/e-tubes
unassembled **408**
assembled **418**

Slotted separator 408


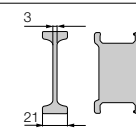
For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

Split separator for e-chains®
unassembled **T563**
assembled **T563M**

Split separator T563 (e-chains® only)


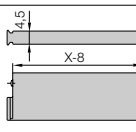
Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

Locking separator for e-chains®
unassembled **404**
assembled **414**

Locking separator 404 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

Shelf
unassembled **420.X**
assembled **421.X**

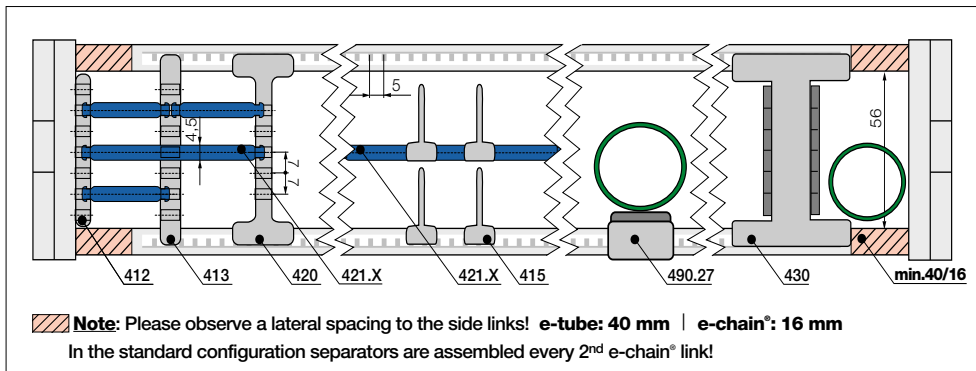
Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments). (not in combination with 404).

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.56



		Middle plate for e-chains® / e-tubes unassembled 403 assembled 413
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Middle plate 403

Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).

		Locking vertical separator for e-chains® unassembled 410 assembled 420
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Locking vertical separator 410 (e-chains® only)

Works like middle plate, for applications exposed to very high humidity (> 85%).

		Side plate for e-chains® / e-tubes unassembled 402 assembled 412
--	--	--

Side plate 402

Works like middle plate.
Allows modular shelving close to the side links.

Additional elements for interior separation

		Center crossbar for e-chains® unassembled 405 assembled 415
--	--	---

Center crossbar

For applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain® independently into upper and lower halves.

		Rollclip for e-chains® unassembled 489.27 assembled 490.27
--	--	--

Rollclip

Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

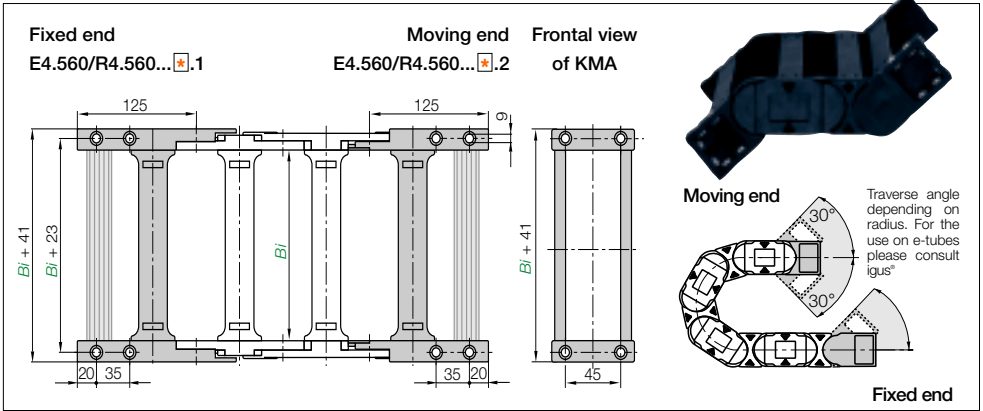
		Roller separator for e-chains® unassembled 429 assembled 430
--	--	--

Roller separator

Performs a similar function to the Rollclip, but doubles as a separator. For rigid cables and hoses.

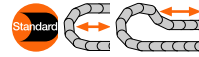
E4.1 | Series E4.56 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



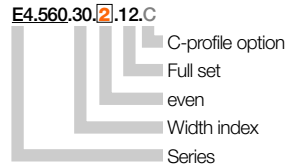
KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	E4.560. - 05 .*.12.C 50	50	31.	E4.560. - 31 .*.12.C 312	312
06.	E4.560. - 06 .*.12.C 65	65	32.	E4.560. - 32 .*.12.C 325	325
07.	E4.560. R4.560. 07 .*.12.C 75	75	33.	E4.560. - 33 .*.12.C 337	337
08.	E4.560. - 08 .*.12.C 87	87	35.	E4.560. R4.560. 35 .*.12.C 350	350
10.	E4.560. R4.560. 10 .*.12.C 100	100	36.	E4.560. - 36 .*.12.C 362	362
11.	E4.560. - 11 .*.12.C 112	112	37.	E4.560. - 37 .*.12.C 375	375
12.	E4.560. R4.560. 12 .*.12.C 125	125	38.	E4.560. - 38 .*.12.C 387	387
13.	E4.560. - 13 .*.12.C 137	137	40.	E4.560. R4.560. 40 .*.12.C 400	400
15.	E4.560. R4.560. 15 .*.12.C 150	150	41.	E4.560. - 41 .*.12.C 412	412
16.	E4.560. - 16 .*.12.C 162	162	42.	E4.560. - 42 .*.12.C 425	425
17.	E4.560. R4.560. 17 .*.12.C 175	175	43.	E4.560. - 43 .*.12.C 437	437
18.	E4.560. - 18 .*.12.C 187	187	45.	E4.560. - 45 .*.12.C 450	450
20.	E4.560. R4.560. 20 .*.12.C 200	200	46.	E4.560. R4.560. 46 .*.12.C 462	462
21.	E4.560. - 21 .*.12.C 212	212	47.	E4.560. - 47 .*.12.C 475	475
22.	E4.560. - 22 .*.12.C 225	225	48.	E4.560. - 48 .*.12.C 487	487
23.	E4.560. - 23 .*.12.C 237	237	50.	E4.560. - 50 .*.12.C 500	500
25.	E4.560. R4.560. 25 .*.12.C 250	250	51.	E4.560. - 51 .*.12.C 512	512
26.	E4.560. - 26 .*.12.C 262	262	52.	E4.560. - 52 .*.12.C 525	525
27.	E4.560. R4.560. 27 .*.12.C 275	275	53.	E4.560. - 53 .*.12.C 537	537
28.	E4.560. - 28 .*.12.C 287	287	55.	E4.560. - 55 .*.12.C 550	550
30.	E4.560. R4.560. 30 .*.12.C 300	300	60.	E4.560. - 60 .*.12.C 600	600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

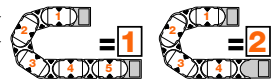
Part No. structure (pivoting)



Single-part order:

Mounting bracket **Moving end**
E4.560.30.2.2.C (even number of links)
 Mounting bracket **Fixed end**
E4.560.30.2.1.C (even number of links)

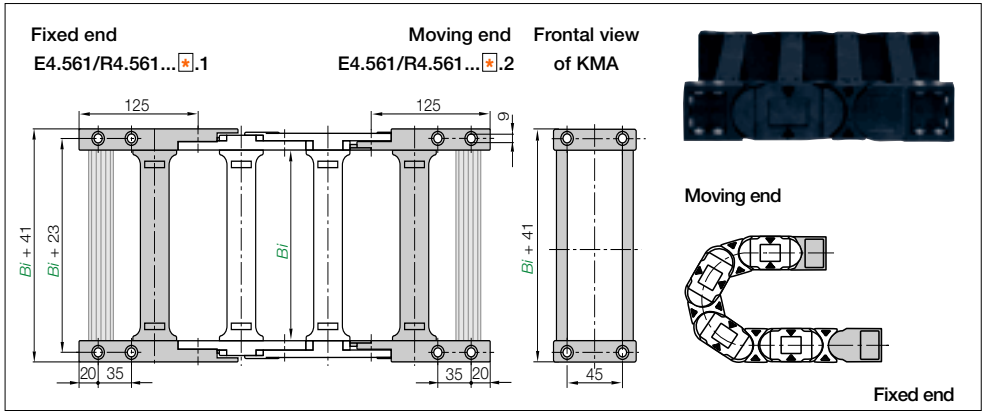
Note: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1

E4.1 | Series E4.56 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	E4.561. 05 .12.C 50	50	31.	E4.561. 31 .12.C 312	312
06.	E4.561. 06 .12.C 65	65	32.	E4.561. 32 .12.C 325	325
07.	E4.561. R4.561. 07 .12.C 75	75	33.	E4.561. 33 .12.C 337	337
08.	E4.561. 08 .12.C 87	87	35.	E4.561. R4.561. 35 .12.C 350	350
10.	E4.561. R4.561. 10 .12.C 100	100	36.	E4.561. 36 .12.C 362	362
11.	E4.561. 11 .12.C 112	112	37.	E4.561. 37 .12.C 375	375
12.	E4.561. R4.561. 12 .12.C 125	125	38.	E4.561. 38 .12.C 387	387
13.	E4.561. 13 .12.C 137	137	40.	E4.561. R4.561. 40 .12.C 400	400
15.	E4.561. R4.561. 15 .12.C 150	150	41.	E4.561. 41 .12.C 412	412
16.	E4.561. 16 .12.C 162	162	42.	E4.561. 42 .12.C 425	425
17.	E4.561. R4.560. 17 .12.C 175	175	43.	E4.561. 43 .12.C 437	437
18.	E4.561. 18 .12.C 187	187	45.	E4.561. 45 .12.C 450	450
20.	E4.561. R4.561. 20 .12.C 200	200	46.	E4.561. R4.561. 46 .12.C 462	462
21.	E4.561. 21 .12.C 212	212	47.	E4.561. 47 .12.C 475	475
22.	E4.561. 22 .12.C 225	225	48.	E4.561. 48 .12.C 487	487
23.	E4.561. 23 .12.C 237	237	50.	E4.561. 50 .12.C 500	500
25.	E4.561. R4.561. 25 .12.C 250	250	51.	E4.561. 51 .12.C 512	512
26.	E4.561. 26 .12.C 262	262	52.	E4.561. 52 .12.C 525	525
27.	E4.561. R4.561. 27 .12.C 275	275	53.	E4.561. 53 .12.C 537	537
28.	E4.561. 28 .12.C 287	287	55.	E4.561. 55 .12.C 550	550
30.	E4.561. R4.561. 30 .12.C 300	300	60.	E4.561. 60 .12.C 600	600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.561.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.561.30.2.2.C (even number of links)

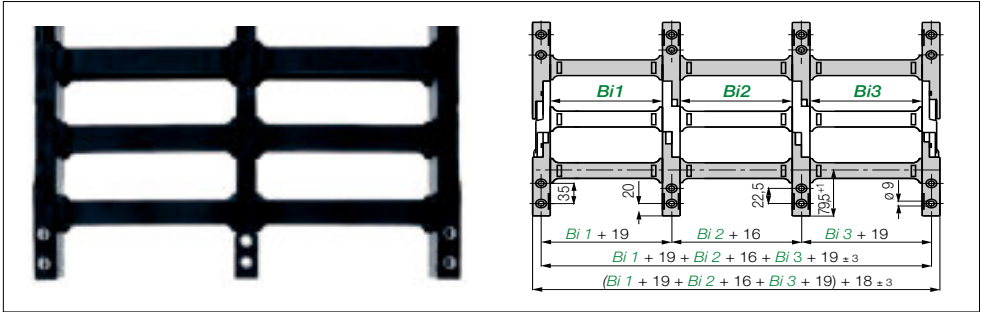
Mounting bracket **Fixed end**

E4.561.30.2.1.C (even number of links)

Note: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



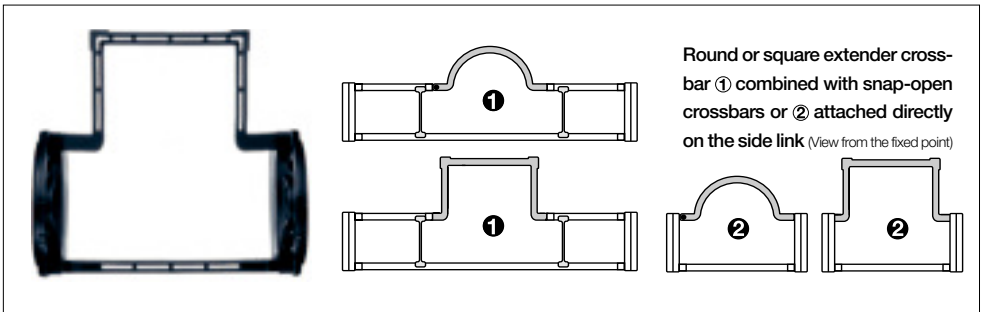
Order example - 3 chambers

E4.56.Bi1 / Bi2 / Bi3.R.0 =

E4.56.10 / 20 / 10.200.0

Extension link - single-part order

422.R. (please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

E4.56.10/15RHE115/10.R.0

RHD115 for inner radius "E" incl. e-chain®:

E4.56.10/15RHZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

E4.56.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

E4.56.17RDZ115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	180	□ square	yes	no
450.35.D250	195	□ square	yes	no
450.40.D300	245	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	180	□ square	no	yes
450.30.HD250	195	□ square	no	yes

E4.1 | Series E4.56 | More options



E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link



Order example (here: inner width B/ 150)
 Locking clip, to open along inner radius "Z":
E4.56.15.B12.200Z.R.0
 Locking clip, to open along outer radius "E":
E4.56.15.B12.200E.R.0

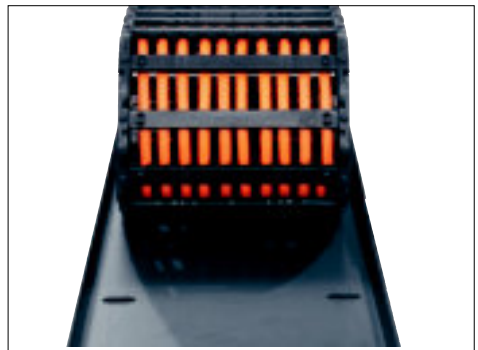
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

E4.1 | Series E4.56 | e-chain® accessories



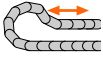
Strain relief system

Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



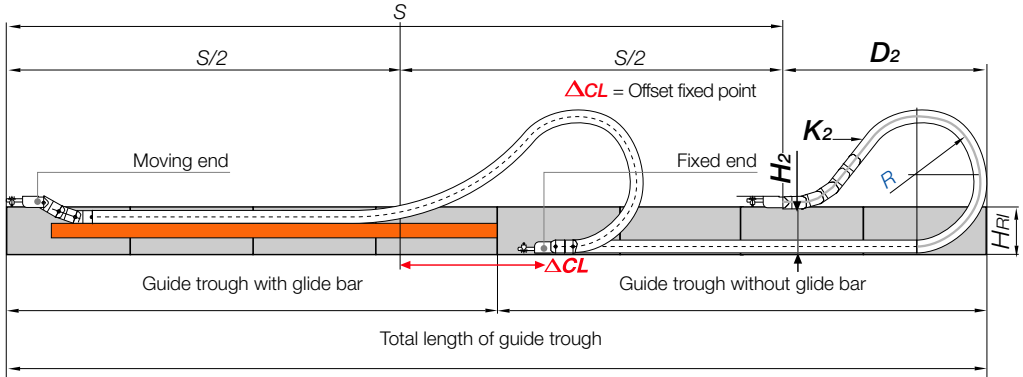
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 12 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 10 and 12 m we recommend a longer unsupported length.** More information ► **Design**, from page 1.16.



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $\frac{S}{2} + K$

R	135	150	175	200	240	250	300	350	400	450	500
H ₂	270	266	266	266	266	266	266	266	266	266	266
D ₂ ⁺²⁵	268	450	580	710	900	980	1180	1440	1530	1700	1850
K ₂	610	819	1092	1274	1547	1638	2002	2275	2548	2912	3276
ΔCL	-	159	259	359	509	559	709	909	959	1059	1159

More solutions | for long travels

System P4.56 - Profile rol e-chain®, low-noise

Travels up to 800 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.84

rol e-chain® 4040R - Rolling instead of gliding

Travels up to 800 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide E4.56.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► page 9.92

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H₂ = Mounting height (if the moving end is set lower)
D₂ = Over length - long travels, gliding

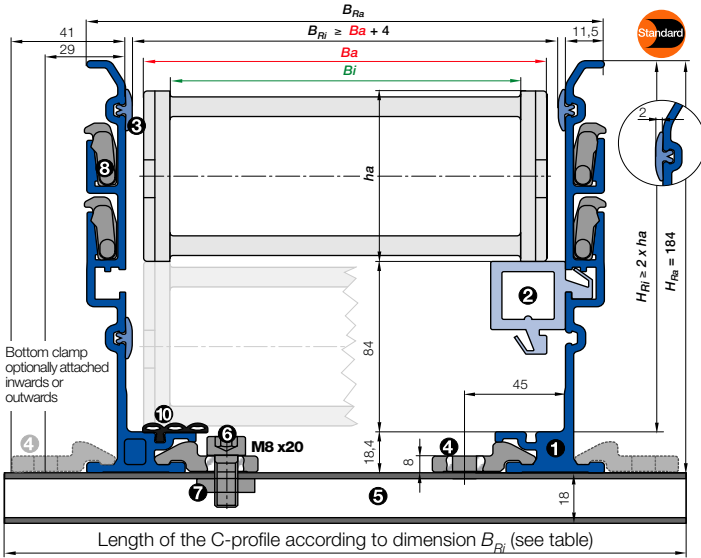
K₂ = Further add-on (if the moving end is set lower)
R = Bending radius

ΔCL = Offset fixed point
H_{RI} = Inner trough height

S = Length of travel
S/2 = Half length of travel

Aluminum "SuperTrough" | Basic Version

E4.56
H4.56
R4.56



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.56.10.200.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	88	960.50.225
.06	103	960.50.225
.07	113	960.50.250
.08	125	960.50.175
.10	138	960.50.200
.11	151	960.50.200
.12	163	960.50.225
.13	176	960.50.225
.15	188	960.50.250
.16	201	960.50.250
.17	213	960.50.275
.18	226	960.50.275
.20	238	960.50.300
.21	251	960.50.300
.22	263	960.50.325
.23	276	960.50.325
.25	288	960.50.350
.26	301	960.50.350
.27	313	960.50.375
.28	326	960.50.375
.30	338	960.50.400
.31	351	960.50.400
.32	363	960.50.425
.33	376	960.50.425
.35	388	960.50.450
.36	401	960.50.450
.37	413	960.50.475
.38	426	960.50.475
.40	438	960.50.500
.41	451	960.50.500
.42	463	960.50.525
.43	476	960.50.525
.45	488	960.50.550
.46	501	960.50.550
.47	513	960.50.575
.48	526	960.50.575
.50	538	960.50.600
.51	551	960.50.600
.52	563	960.50.625
.53	576	960.50.625
.55	588	960.50.650
.60	638	960.50.700

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.56.10.200.0 with $B_{Ri} = 138$

Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 974.31.SL**

Installation set "Basic" complete (guide trough-sets + 1)

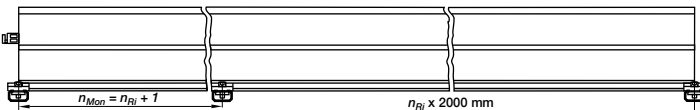
Order text: 17 installation sets **Part No. 960.50.200**

Module for the fixed end ▶ page 9.16

Order text: 1 set **Part No. 974.80**

Option: For an additional noise dampening

with silencer profile, please add Index A - Example: **Part No. 974.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.35

- Trough set
- Installation set
- Glide bar
- C-Profile
- Ba = Outer width e-chains
- Bi = Inner width e-chains
- B_{Ra} = Inner trough width
- B_{Ri} = Outer trough width
- H_{Ra} = Inner trough height
- H_{Ri} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

E4.1 | Series E4.56 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from Bi 15 (150 mm)!



E4.56.30.R.0
Crossbar every link

ES4.56.30.R.0
Crossbar every link

E4.56.30.QZ.R.0
Crossbar every link

E4.56.30.QE.R.0
Crossbar every link

E4.56.30.Q.R.0
Crossbar every link

H4.56.30.R.0
Crossbar every 2nd link

HS4.56.30.R.0
Crossbar every 2nd link

H4.56.30.QZ.R.0
Crossbar every 2nd link

H4.56.30.QE.R.0
Crossbar every 2nd link

H4.56.30.Q.R.0
Crossbar every 2nd link

R4.56.30.R.0
e-tube, closed

RS4.56.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.56.30.Q.R.0	ES4.56.30.R.0.NC	-	ES4.56.30.R.0.XXL	RS4.56.30.R.0.HT	ES4.56.30.R.0.ESD
QuickLock crossbar	ES4.56.30.Q.R.0		E4.56.30.Q.R.0.NC	E4.56.30.Q.R1/R2.0	E4.56.30.Q.R.0.XXL	-	E4.56.30.Q.R.0.ESD
NC-Version	ES4.56.30.R.0.NC	E4.56.30.Q.R.0.NC		-	-	R4.56.30.R.0.HT.NC	E4.56.30.R.0.ESD.NC
RBR-Version	-	E4.56.30.Q.R1/R2.0	-		-	R4.56.30.R1/R2.0.HT	E4.56.30.R1/R2.0.ESD
XXL-Material	ES4.56.30.R.0.XXL	E4.56.30.Q.R.0.XXL	-	-		-	-
HT-Material*	RS4.56.30.R.0.HT	-	R4.56.30.R.0.HT.NC	R4.56.30.R1/R2.0.HT	-		-
ESD-	ES4.56.30.R.0.ESD	E4.56.30.Q.R.0.ESD	E4.56.30.R.0.ESD.NC	E4.56.30.R1/R2.0.ESD	-	-	

*for gliding applications please consult igus®

Extreme glider with up to 70% larger gliding surfaces. For high additional loads and high surface speeds. Gliding applications without additional elements as well as 150% more wear allowance and enhancement of service life by factor 4! Order example: E4.56.35G.250.0 / E4.56.45G.250.0

E4.1 | Series E4.56 | Options and order key

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes

Part No.
RBR
e-chains®/e-tubes

Part No.
XXL-Material**
e-chains®/e-tubes

Part No.
HT-Material
only for e-tubes

Part No.
ESD-Material
e-chains®/e-tubes

E4.56.30.R.0.NC
Crossbar every link

E4.56.30.R1/R2.0
Crossbar every link

E4.56.30.R.0.XXL
Crossbar every link

R4.56.30.R.0.HT
Complete e-tube*

E4.56.30.R.0.ESD
Crossbar every link

H4.56.30.R.0.NC
Crossbar every 2nd link

H4.56.30.R1/R2.0
Crossbar every 2nd link

H4.56.30.R.0.XXL
Crossbar every 2nd link

R4.56.30.HT.R.0
Lid and bottom

H4.56.30.R.0.ESD
Crossbar every 2nd link

R4.56.30.R.0.NC
e-tube, closed

R4.56.30.R1/R2.0
e-tube, closed

R4.56.30.R.0.XXL
e-tube, closed

R4.56.30.HTZ.R.0
Bottom only

R4.56.30.R.0.ESD
e-tube, closed

R4.56.30.HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Delivery time: 10 work days
*for gliding applications please consult igus®

Delivery time: 5 work days

Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

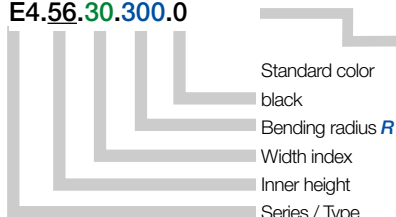
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 33 links **E4.56.30.300.0**

+ Mounting brackets 1 set (with odd number of links and integrated C-profiles) **E4.560.30.1.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 56.1.1**

Order text: 3,0 m E4.56.30.300.0 + E4.560.30.1.12.C + 2 x Part No. 56.1.1

Order key **E4.56.30.300.0**



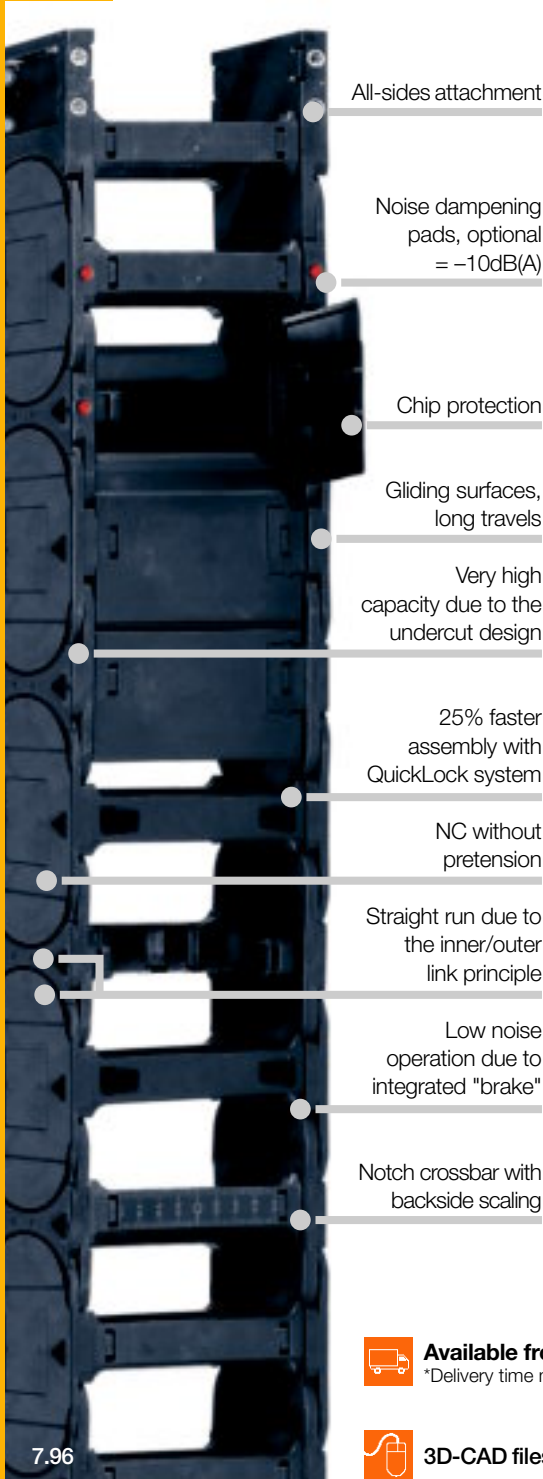
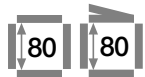
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored can be delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Noise dampening pads, optional
= -10dB(A)

Chip protection

Gliding surfaces,
long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

⊕ Stable due to undercut design, very large inner height

When to use Series E4.80:

- If a robust e-chain®/e-tube with an inner height of 80 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 6,0 m and fill weights up to 80 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 50 dB(A))
 - ▶ **Series E6.80, page 8.88**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
 - ▶ **Series E6.80, page 8.88**
- If a less stable e-chain® can be used for economical reasons
 - ▶ **Series 15050/15150/R19850, page 7.216**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.15

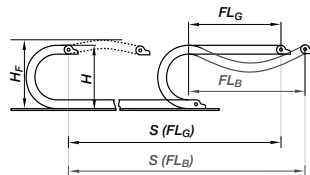
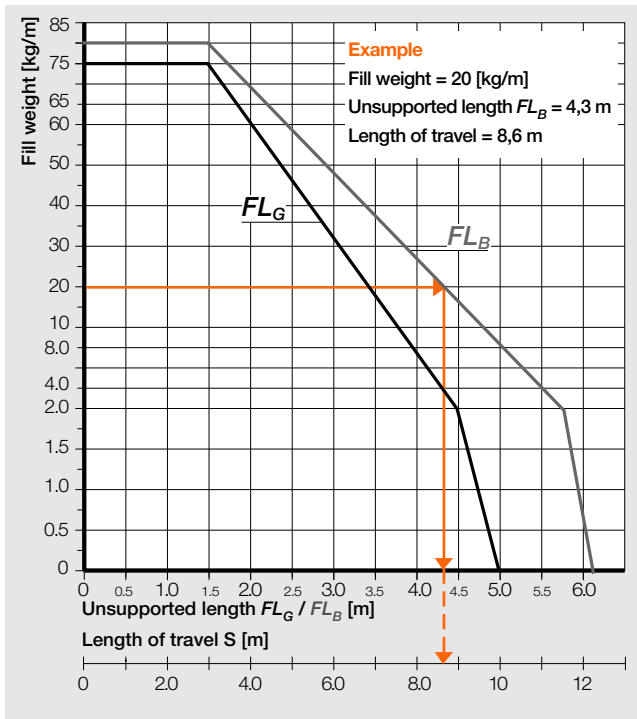


Available from stock. **Delivery in 24h or today!***

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.80

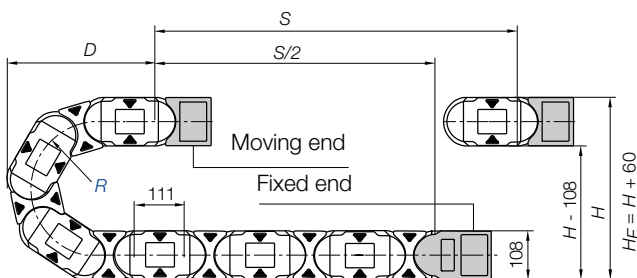


Standard Unsupported applications

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 400 m.
 More information ► **page 7.110**



Technical Data

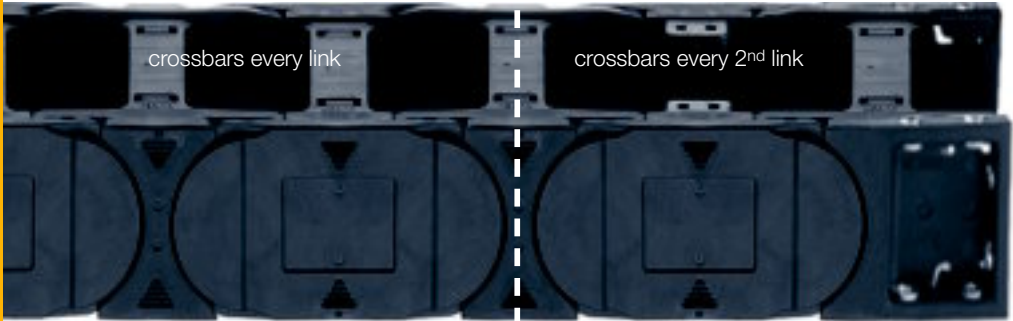
Speed, material, temperature and flammability class ► **page 7.16**

- Pitch** = 111 mm/link
- Links/m** = 9 (999 mm)
- Chain length** = $s/2 + K$

R	150	200	250	300	350	400	500	550	600	1000
H_{+25}	408	508	608	708	808	908	1108	1208	1308	2108
D	315	365	415	465	515	565	665	715	765	1165
K	695	855	1010	1165	1325	1480	1795	1950	2110	3365

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain, radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series E4.80 crossbars every link | Series H4.80 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	E4.80	H4.80
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
E4.80. H4.80. 05. R.0	50	100	5,339	5,221
E4.80. H4.80. 06. R.0	65	115	5,411	5,257
E4.80. H4.80. 07. R.0	75	125	5,467	5,285
E4.80. H4.80. 08. R.0	87	137	5,563	5,319
E4.80. H4.80. 10. R.0	100	150	5,610	5,357
E4.80. H4.80. 11. R.0	112	163	5,705	5,404
E4.80. H4.80. 12. R.0	125	175	5,769	5,436
E4.80. H4.80. 13. R.0	137	188	5,880	5,492
E4.80. H4.80. 15. R.0	150	200	5,911	5,507
E4.80. H4.80. 16. R.0	162	213	6,003	5,553
E4.80. H4.80. 17. R.0	175	225	6,111	5,607
E4.80. H4.80. 18. R.0	187	238	6,202	5,653
E4.80. H4.80. 20. R.0	200	250	6,248	5,676
E4.80. H4.80. 21. R.0	212	263	6,306	5,705
E4.80. H4.80. 22. R.0	225	275	6,363	5,733
E4.80. H4.80. 23. R.0	237	288	6,453	5,778
E4.80. H4.80. 25. R.0	250	300	6,543	5,824
E4.80. H4.80. 26. R.0	262	313	6,618	5,861
E4.80. H4.80. 27. R.0	275	325	6,701	5,902
E4.80. H4.80. 28. R.0	287	338	6,749	5,926
E4.80. H4.80. 30. R.0	300	350	6,873	5,988

Part No.	<i>Bi</i>	<i>Ba</i>	E4.80	H4.80
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
E4.80. H4.80. 31. R.0	312	363	6,904	6,004
E4.80. H4.80. 32. R.0	325	375	6,988	6,046
E4.80. H4.80. 33. R.0	337	388	7,086	6,095
E4.80. H4.80. 35. R.0	350	400	7,251	6,177
E4.80. H4.80. 36. R.0	362	413	7,178	6,141
E4.80. H4.80. 37. R.0	375	425	7,257	6,180
E4.80. H4.80. 38. R.0	387	438	7,352	6,228
E4.80. H4.80. 40. R.0	400	450	7,572	6,338
E4.80. H4.80. 41. R.0	412	463	7,510	6,307
E4.80. H4.80. 42. R.0	425	475	7,749	6,426
E4.80. H4.80. 43. R.0	437	488	7,621	6,362
E4.80. H4.80. 45. R.0	450	500	7,890	6,497
E4.80. H4.80. 46. R.0	462	513	7,851	6,477
E4.80. H4.80. 47. R.0	475	525	7,884	6,494
E4.80. H4.80. 48. R.0	487	538	8,086	6,595
E4.80. H4.80. 50. R.0	500	550	8,093	6,598
E4.80. H4.80. 51. R.0	512	563	8,165	6,634
E4.80. H4.80. 52. R.0	525	575	8,235	6,670
E4.80. H4.80. 53. R.0	537	588	8,311	6,707
E4.80. H4.80. 55. R.0	550	600	8,655	6,879
E4.80. H4.80. 60. R.0	600	650	8,843	6,973

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

Supplement Part No. with required radius (*R*). Example: E4.80.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series R4.80 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.80 [kg/m]
R4.80. 15. R.0**	150	200	6,720
R4.80. 20. R.0	200	250	7,230
R4.80. 25. R.0	250	300	8,060
R4.80. 30. R.0	300	350	8,730

More e-tube widths upon request.

Delivery Time: approx. 8-10 weeks after receipt of order


Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.80 [kg/m]
R4.80. 35. R.0	350	400	9,470
R4.80. 40. R.0	400	450	10,210
R4.80. 46. R.0**	462	513	10,960

**NEW in this catalog

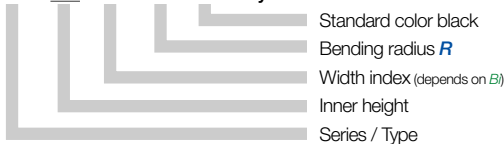
Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

Supplement Part No. with required radius (*R*). Example: R4.80.30.300.0

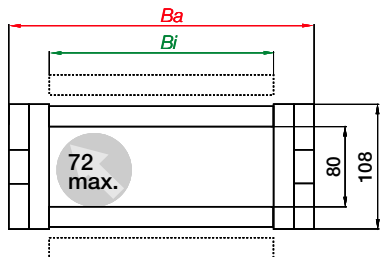
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 Order key for all types

- E4 .80. 30. 300. 0 e-chain® (crossbars every link)
- H4 .80. 30. 300. 0 e-chain® (crossbars every 2nd link)
- R4 .80. 30. 300. 0 Fully enclosed e-tube



Dimensioning



-  E4.80.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - H4.80.30.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - R4.80.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.112

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods

E4.1 | Series E4.80 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.		QuickLock crossbar for			Bi [mm]
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	
E4.80.	H4.80.	15QZ.R.0	15QE.R.0	15Q.R.0	150
E4.80.	H4.80.	16QZ.R.0	16QE.R.0	16Q.R.0	162
E4.80.	H4.80.	17QZ.R.0	17QE.R.0	17Q.R.0	175
E4.80.	H4.80.	18QZ.R.0	18QE.R.0	18Q.R.0	187
E4.80.	H4.80.	20QZ.R.0	20QE.R.0	20Q.R.0	200
E4.80.	H4.80.	21QZ.R.0	21QE.R.0	21Q.R.0	212
E4.80.	H4.80.	22QZ.R.0	22QE.R.0	22Q.R.0	225
E4.80.	H4.80.	23QZ.R.0	23QE.R.0	23Q.R.0	237
E4.80.	H4.80.	25QZ.R.0	25QE.R.0	25Q.R.0	250
E4.80.	H4.80.	26QZ.R.0	26QE.R.0	26Q.R.0	262
E4.80.	H4.80.	27QZ.R.0	27QE.R.0	27Q.R.0	275
E4.80.	H4.80.	28QZ.R.0	28QE.R.0	28Q.R.0	287
E4.80.	H4.80.	30QZ.R.0	30QE.R.0	30Q.R.0	300
E4.80.	H4.80.	31QZ.R.0	31QE.R.0	31Q.R.0	312
E4.80.	H4.80.	32QZ.R.0	32QE.R.0	32Q.R.0	325
E4.80.	H4.80.	33QZ.R.0	33QE.R.0	33Q.R.0	337
E4.80.	H4.80.	35QZ.R.0	35QE.R.0	35Q.R.0	350
E4.80.	H4.80.	36QZ.R.0	36QE.R.0	36Q.R.0	362
E4.80.	H4.80.	37QZ.R.0	37QE.R.0	37Q.R.0	375
E4.80.	H4.80.	38QZ.R.0	38QE.R.0	38Q.R.0	387
E4.80.	H4.80.	40QZ.R.0	40QE.R.0	40Q.R.0	400

Part No.		QuickLock crossbar for			Bi [mm]
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	
E4.80.	H4.80.	41QZ.R.0	41QE.R.0	41Q.R.0	412
E4.80.	H4.80.	42QZ.R.0	42QE.R.0	42Q.R.0	425
E4.80.	H4.80.	43QZ.R.0	43QE.R.0	43Q.R.0	437
E4.80.	H4.80.	45QZ.R.0	45QE.R.0	45Q.R.0	450
E4.80.	H4.80.	46QZ.R.0	46QE.R.0	46Q.R.0	462
E4.80.	H4.80.	47QZ.R.0	47QE.R.0	47Q.R.0	475
E4.80.	H4.80.	48QZ.R.0	48QE.R.0	48Q.R.0	487
E4.80.	H4.80.	50QZ.R.0	50QE.R.0	50Q.R.0	500
E4.80.	H4.80.	51QZ.R.0	51QE.R.0	51Q.R.0	512
E4.80.	H4.80.	52QZ.R.0	52QE.R.0	52Q.R.0	525
E4.80.	H4.80.	53QZ.R.0	53QE.R.0	53Q.R.0	537
E4.80.	H4.80.	55QZ.R.0	55QE.R.0	55Q.R.0	550
E4.80.	H4.80.	60QZ.R.0	60QE.R.0	60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii R [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

Supplement Part No. with required radius (R). Example: E4.80.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. E4.80.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. E4.80.30QE.300.0 = QuickLock crossbar for outer radius

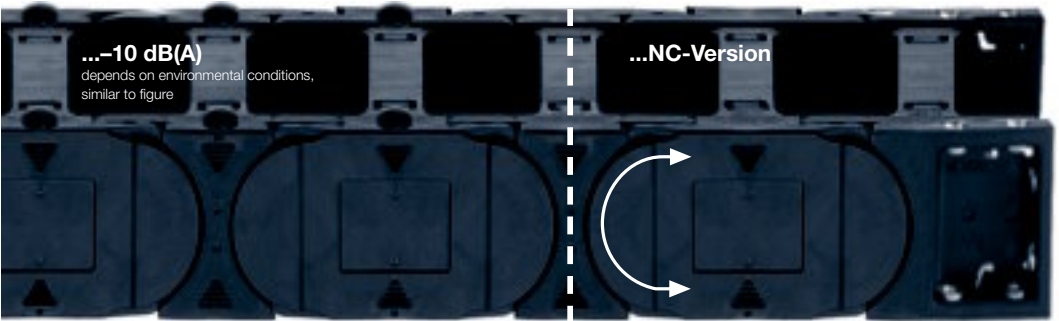
Part No. E4.80.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.80 | Product range | Options



Noise dampening | ≈ 10 dB(A)



NC-Version | Without pretension

With pads crossbars every: link | 2 nd e-tube fully enclosed	Bi [mm]	With pads crossbars every: link | 2 nd e-tube fully enclosed	Bi [mm]
ES4 HS4 - .80.05.R.0	50	ES4 HS4 - .80.31.R.0	312
ES4 HS4 - .80.06.R.0	65	ES4 HS4 - .80.32.R.0	325
ES4 HS4 - .80.07.R.0	75	ES4 HS4 - .80.33.R.0	337
ES4 HS4 - .80.08.R.0	87	ES4 HS4 RS4 .80.35.R.0	350
ES4 HS4 - .80.10.R.0	100	ES4 HS4 - .80.36.R.0	362
ES4 HS4 - .80.11.R.0	112	ES4 HS4 - .80.37.R.0	375
ES4 HS4 - .80.12.R.0	125	ES4 HS4 - .80.38.R.0	387
ES4 HS4 - .80.13.R.0	137	ES4 HS4 RS4 .80.40.R.0	400
ES4 HS4 RS4 .80.15.R.0	150	ES4 HS4 - .80.41.R.0	412
ES4 HS4 - .80.16.R.0	162	ES4 HS4 - .80.42.R.0	425
ES4 HS4 - .80.17.R.0	175	ES4 HS4 - .80.43.R.0	437
ES4 HS4 - .80.18.R.0	187	ES4 HS4 - .80.45.R.0	450
ES4 HS4 RS4 .80.20.R.0	200	ES4 HS4 RS4 .80.46.R.0	462
ES4 HS4 - .80.21.R.0	212	ES4 HS4 - .80.47.R.0	475
ES4 HS4 - .80.22.R.0	225	ES4 HS4 - .80.48.R.0	487
ES4 HS4 - .80.23.R.0	237	ES4 HS4 - .80.50.R.0	500
ES4 HS4 RS4 .80.25.R.0	250	ES4 HS4 - .80.51.R.0	512
ES4 HS4 - .80.26.R.0	262	ES4 HS4 - .80.52.R.0	525
ES4 HS4 - .80.27.R.0	275	ES4 HS4 - .80.53.R.0	537
ES4 HS4 - .80.28.R.0	287	ES4 HS4 - .80.55.R.0	550
ES4 HS4 RS4 .80.30.R.0	300	ES4 HS4 - .80.60.R.0	600

NC-Version crossbars every: link | 2 nd e-tube fully enclosed	Bi [mm]	NC-Version crossbars every: link | 2 nd e-tube fully enclosed	Bi [mm]
E4 H4 - .80.05.R.0.NC	50	E4 H4 - .80.31.R.0.NC	312
E4 H4 - .80.06.R.0.NC	65	E4 H4 - .80.32.R.0.NC	325
E4 H4 - .80.07.R.0.NC	75	E4 H4 - .80.33.R.0.NC	337
E4 H4 - .80.08.R.0.NC	87	E4 H4 R4 .80.35.R.0.NC	350
E4 H4 - .80.10.R.0.NC	100	E4 H4 - .80.36.R.0.NC	362
E4 H4 - .80.11.R.0.NC	112	E4 H4 - .80.37.R.0.NC	375
E4 H4 - .80.12.R.0.NC	125	E4 H4 - .80.38.R.0.NC	387
E4 H4 - .80.13.R.0.NC	137	E4 H4 R4 .80.40.R.0.NC	400
E4 H4 R4 .80.15.R.0.NC	150	E4 H4 - .80.41.R.0.NC	412
E4 H4 - .80.16.R.0.NC	162	E4 H4 - .80.42.R.0.NC	425
E4 H4 - .80.17.R.0.NC	175	E4 H4 - .80.43.R.0.NC	437
E4 H4 - .80.18.R.0.NC	187	E4 H4 - .80.45.R.0.NC	450
E4 H4 R4 .80.20.R.0.NC	200	E4 H4 R4 .80.46.R.0.NC	462
E4 H4 - .80.21.R.0.NC	212	E4 H4 - .80.47.R.0.NC	475
E4 H4 - .80.22.R.0.NC	225	E4 H4 - .80.48.R.0.NC	487
E4 H4 - .80.23.R.0.NC	237	E4 H4 - .80.50.R.0.NC	500
E4 H4 R4 .80.25.R.0.NC	250	E4 H4 - .80.51.R.0.NC	512
E4 H4 - .80.26.R.0.NC	262	E4 H4 - .80.52.R.0.NC	525
E4 H4 - .80.27.R.0.NC	275	E4 H4 - .80.53.R.0.NC	537
E4 H4 - .80.28.R.0.NC	287	E4 H4 - .80.55.R.0.NC	550
E4 H4 R4 .80.30.R.0.NC	300	E4 H4 - .80.60.R.0.NC	600

Available bending radii R [mm] 150* | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000 *not available for e-tubes

Supplement Part No. with required radius (R). Example: **ES4.80.30.300.0** or **E4.80.30.300.0.NC**



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: Part No. **ES4.80.30.300.0** = e-chain® (crossbars every link) with noise dampening

For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. **E4.80.30.300.0.NC** = e-chain® (crossbars every link) without pretension

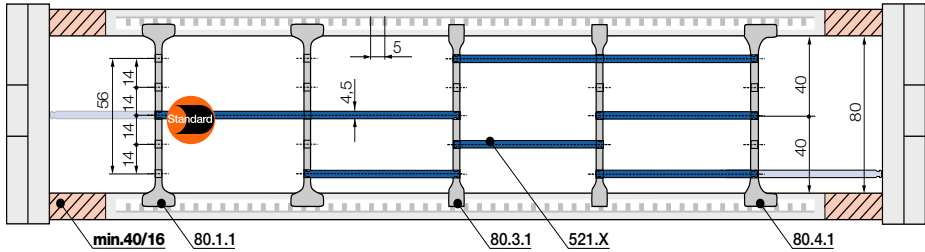


e-chain® with noise dampening pads - **Delivery time: 3-5 work days.**


NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!




Standard separator, wide base

unassembled	80.1
assembled	80.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.




Separator, narrow base

unassembled	80.3
assembled	80.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

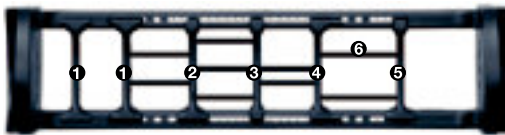


Asymmetrical separator

unassembled	80.4
assembled	80.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



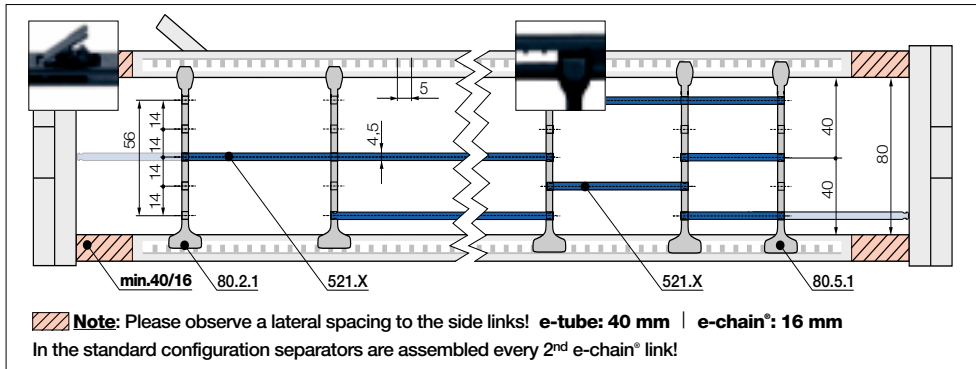
- ① Standard separator, wide base - Part No. 80.1
- ② Separator for QuickLock crossbar - Part No. 80.2
- ③ Separator, narrow base - Part No. 80.3
- ④ Separator, asymmetrical - Part No. 80.4
- ⑤ Notch separator - Part No. 80.5
- ⑥ Full-width self, lockable - Part No. 520.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
 unassembled **80.2**
 assembled **80.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
 unassembled **80.5**
 assembled **80.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
 unassembled **520.X**
 assembled **521.X**

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 5 levels.

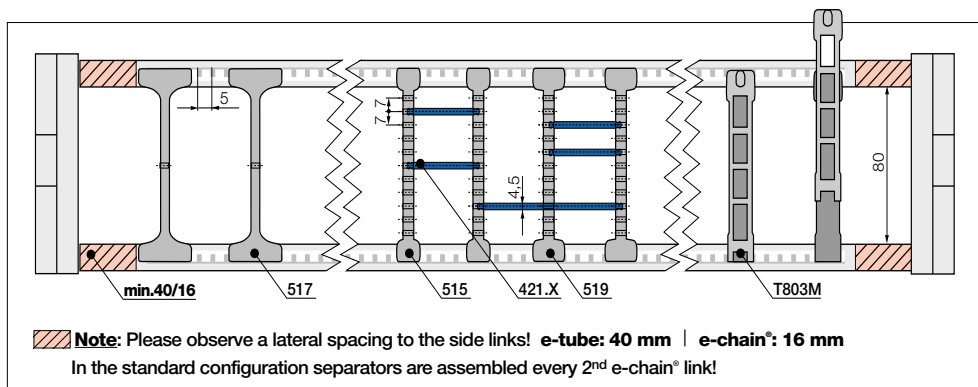




Lockable full-width shelves - for the standard interior separation

Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450

E4.1 | Series E4.80 | Interior separation | Options

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.80






Open, slotted separator for e-chains®/e-tubes

unassembled	509
assembled	519

Open, slotted separator 509 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.





Slotted separator for e-chains®/e-tubes

unassembled	505
assembled	515

Slotted separator 505

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.





Split separator for e-chains®

unassembled	T803
assembled	T803M

Split separator T803 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.




Locking separator for e-chains®

unassembled	507
assembled	517

Locking separator 507

For applications exposed to very high humidity (> 85%).

Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Shelf

unassembled	420.X
assembled	421.X

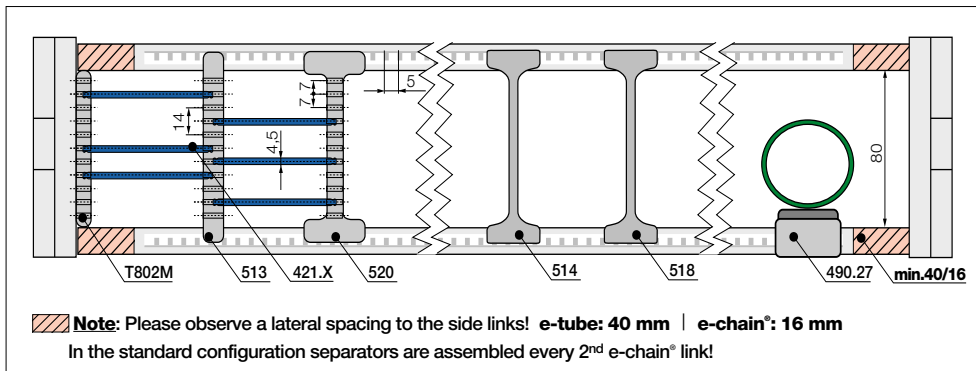
Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments). (not in combination with 504, 508).

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

Previous interior separation All elements can still be ordered ▶ www.igus.de/en/E4.80



		Middle plate for e-chains® / e-tubes unassembled 503 assembled 513
--	--	---

Middle plate 503 (e-chains® only)
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).

		Locking vertical separator for e-chains® unassembled 510 assembled 520
--	--	---

Locking vertical separator 510 (e-chains® only)
Works like middle plate, for applications exposed to very high humidity (> 85%).

		Side plate for e-chains® / e-tubes unassembled T802 assembled T802M
--	--	--

Side plate T802
Works like middle plate. Allows modular shelving close to the side links.

		Locking separator for e-chains® unassembled 504 assembled 514
--	--	--

Locking separator 504
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

		Locking separator for e-chains® unassembled 508 assembled 518
--	--	--

Locking separator 508
For applications exposed to very high humidity (> 85%). **Extra retention force** by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.

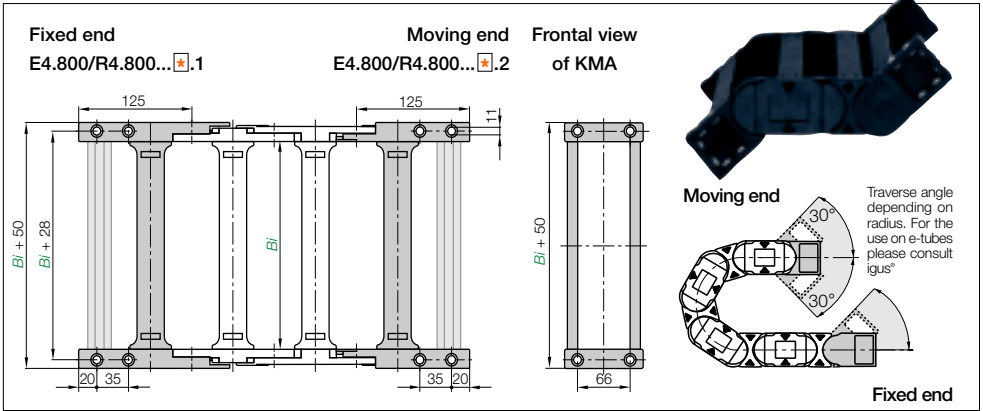
Additional elements for interior separation

		Rollclip for e-chains® unassembled 489.27 assembled 490.27
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Rollclip
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

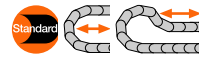
E4.1 | Series E4.80 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



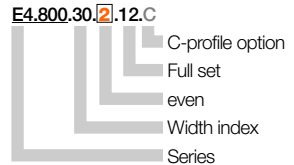
KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	E4.800. - 05 ..12.C 50	50	31.	E4.800. - 31 ..12.C 312	312
06.	E4.800. - 06 ..12.C 65	65	32.	E4.800. - 32 ..12.C 325	325
07.	E4.800. - 07 ..12.C 75	75	33.	E4.800. - 33 ..12.C 337	337
08.	E4.800. - 08 ..12.C 87	87	35.	E4.800. R4.800.35 ..12.C 350	350
10.	E4.800. - 10 ..12.C 100	100	36.	E4.800. - 36 ..12.C 362	362
11.	E4.800. - 11 ..12.C 112	112	37.	E4.800. - 37 ..12.C 375	375
12.	E4.800. - 12 ..12.C 125	125	38.	E4.800. - 38 ..12.C 387	387
13.	E4.800. - 13 ..12.C 137	137	40.	E4.800. R4.800.40 ..12.C 400	400
15.	E4.800. - 15 ..12.C 150	150	41.	E4.800. - 41 ..12.C 412	412
16.	E4.800. - 16 ..12.C 162	162	42.	E4.800. - 42 ..12.C 425	425
17.	E4.800. - 17 ..12.C 175	175	43.	E4.800. - 43 ..12.C 437	437
18.	E4.800. - 18 ..12.C 187	187	45.	E4.800. - 45 ..12.C 450	450
20.	E4.800. R4.800.20 ..12.C 200	200	46.	E4.800. R4.800.46 ..12.C 462	462
21.	E4.800. - 21 ..12.C 212	212	47.	E4.800. - 47 ..12.C 475	475
22.	E4.800. - 22 ..12.C 225	225	48.	E4.800. - 48 ..12.C 487	487
23.	E4.800. - 23 ..12.C 237	237	50.	E4.800. - 50 ..12.C 500	500
25.	E4.800. R4.800.25 ..12.C 250	250	51.	E4.800. - 51 ..12.C 512	512
26.	E4.800. - 26 ..12.C 262	262	52.	E4.800. - 52 ..12.C 525	525
27.	E4.800. - 27 ..12.C 275	275	53.	E4.800. - 53 ..12.C 537	537
28.	E4.800. - 28 ..12.C 287	287	55.	E4.800. - 55 ..12.C 550	550
30.	E4.800. R4.800.30 ..12.C 300	300	60.	E4.800. - 60 ..12.C 600	600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)



Single-part order:
 Mounting bracket **Moving end**
E4.800.30..2.2.C (even number of links)
 Mounting bracket **Fixed end**
E4.800.30..1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!

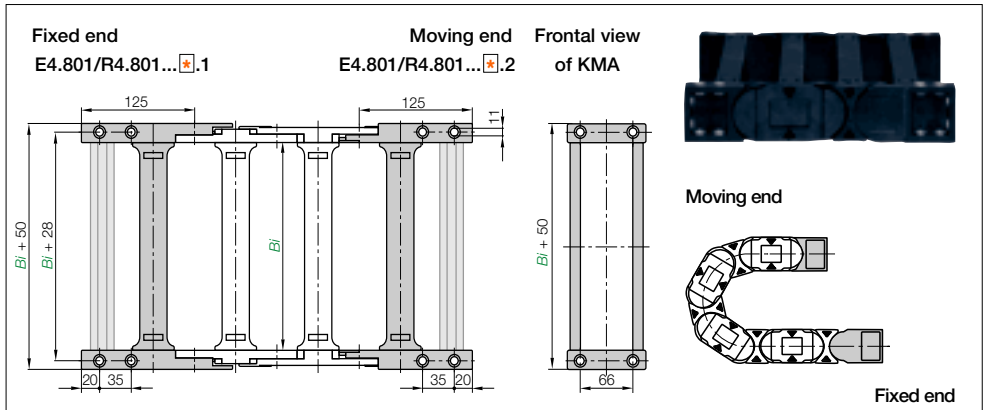


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1

E4.1 | Series E4.80 | KMA mounting brackets **locking**

E4.80
H4.80
R4.80

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	E4.801. - 05 .12.C 50	50	31.	E4.801. - 31 .12.C 312	312
06.	E4.801. - 06 .12.C 65	65	32.	E4.801. - 32 .12.C 325	325
07.	E4.801. - 07 .12.C 75	75	33.	E4.801. - 33 .12.C 337	337
08.	E4.801. - 08 .12.C 87	87	35.	E4.801. R4.801.35 .12.C 350	350
10.	E4.801. - 10 .12.C 100	100	36.	E4.801. - 36 .12.C 362	362
11.	E4.801. - 11 .12.C 112	112	37.	E4.801. - 37 .12.C 375	375
12.	E4.801. - 12 .12.C 125	125	38.	E4.801. - 38 .12.C 387	387
13.	E4.801. - 13 .12.C 137	137	40.	E4.801. R4.801.40 .12.C 400	400
15.	E4.801. - 15 .12.C 150	150	41.	E4.801. - 41 .12.C 412	412
16.	E4.801. - 16 .12.C 162	162	42.	E4.801. - 42 .12.C 425	425
17.	E4.801. - 17 .12.C 175	175	43.	E4.801. - 43 .12.C 437	437
18.	E4.801. - 18 .12.C 187	187	45.	E4.801. - 45 .12.C 450	450
20.	E4.801. R4.801. 20 .12.C 200	200	46.	E4.801. R4.801.46 .12.C 462	462
21.	E4.801. - 21 .12.C 212	212	47.	E4.801. - 47 .12.C 475	475
22.	E4.801. - 22 .12.C 225	225	48.	E4.801. - 48 .12.C 487	487
23.	E4.801. - 23 .12.C 237	237	50.	E4.801. - 50 .12.C 500	500
25.	E4.801. R4.801. 25 .12.C 250	250	51.	E4.801. - 51 .12.C 512	512
26.	E4.801. - 26 .12.C 262	262	52.	E4.801. - 52 .12.C 525	525
27.	E4.801. - 27 .12.C 275	275	53.	E4.801. - 53 .12.C 537	537
28.	E4.801. - 28 .12.C 287	287	55.	E4.801. - 55 .12.C 550	550
30.	E4.801. R4.801. 30 .12.C 300	300	60.	E4.801. - 60 .12.C 600	600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.801.30.2.12.C



Single-part order:

Mounting bracket **Moving end**

E4.801.30.2.2.C (even number of links)

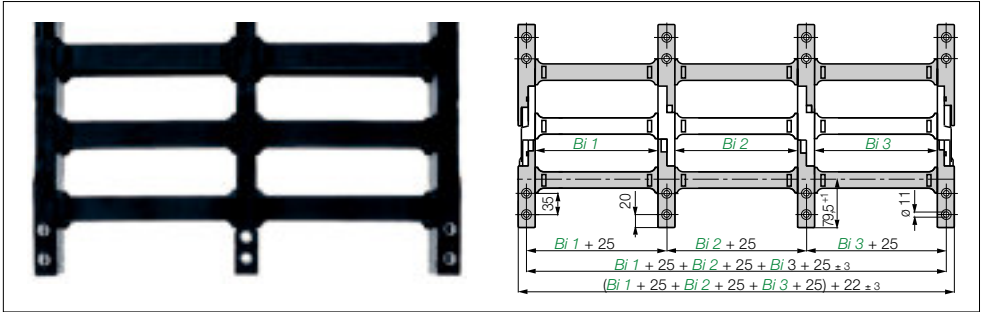
Mounting bracket **Fixed end**

E4.801.30.2.1.C (even number of links)

Note: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



Order example - 3 chambers

E4.80.Bi1 / Bi2 / Bi3.R.0 =

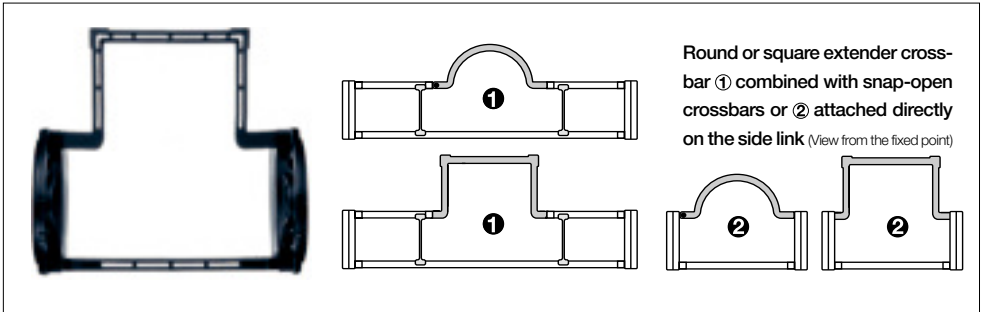
E4.80.10 / 20 / 10.200.0

Extension links: single-part order:

E4.80M.01 (outer link)

E4.80M.02.R. (inner link)

(please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

E4.80.10/15RHD115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

E4.80.10/15RHDZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

E4.80.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

E4.80.17RDZ115.R.0

Part No.	Max Ø [mm]	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes

E4.1 | Series E4.80 | More options



E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link



Order example (here: inner width B/ 150)

Locking clip, to open along inner radius "Z":

E4.80.15.B12.200Z.R.0

Locking clip, to open along outer radius "E":

E4.80.15.B12.200E.R.0

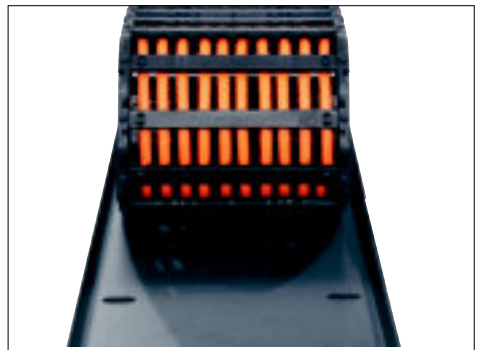
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

E4.1 | Series E4.80 | e-chain® accessories



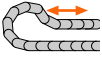
Strain relief system

Clamps, tiwrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



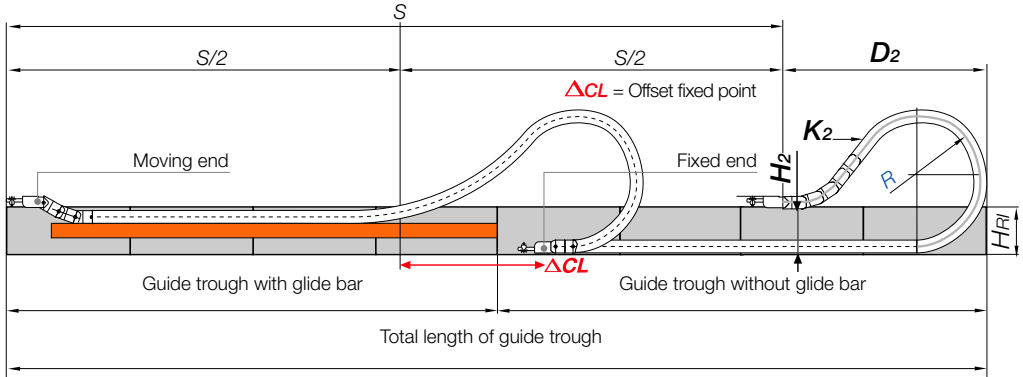
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 12 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 10 and 12 m we recommend a longer unsupported length.** More information ► **Design**, from page 1.16.



Pitch = 111 mm/link · Links/m = 9 (999 mm) · Chain length = $S/2 + K$

R	150	200	250	300	350	400	500	550	600	1000
H_2	242	242	242	242	242	242	242	-	-	-
D_2^{+25}	550	800	1000	1200	1450	1600	2100	-	-	-
K_2	890	1330	1665	2000	2330	2660	3440	-	-	-
ΔCL	189	389	539	689	889	989	1389	-	-	-

More solutions | for long travels

System P4.80 - Profile rol e-chain®, low-noise

Travels up to 800 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.85

rol e-chain® 5050R - Rolling instead of gliding

Travels up to 800 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide E4.80.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► page 9.92

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



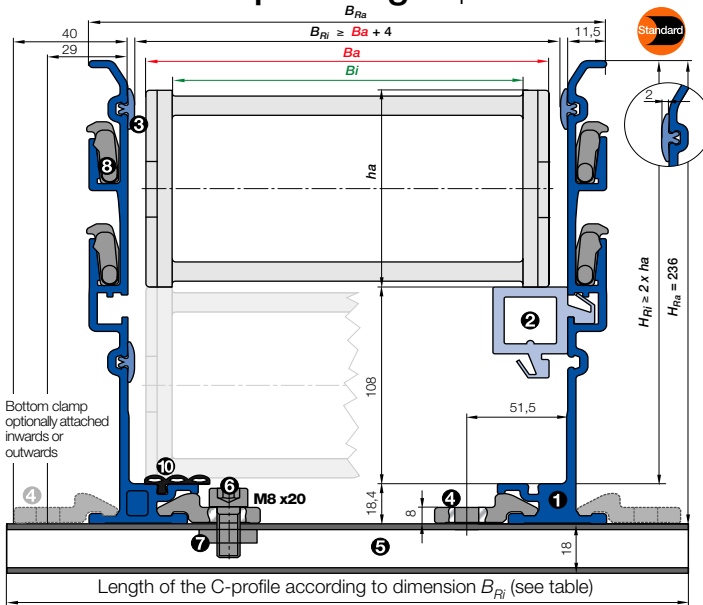
H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔCL = Offset fixed point
 H_R = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Aluminum "SuperTrough" | Basic Version



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

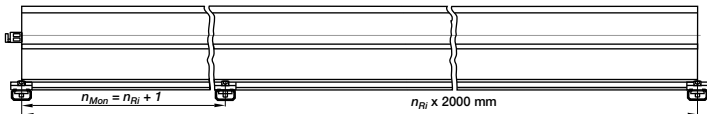
E4.80.30.300.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	104	960.50.225
.06	119	960.50.250
.07	129	960.50.250
.08	141	960.50.200
.10	154	960.50.225
.11	167	960.50.225
.12	179	960.50.250
.13	192	960.50.250
.15	204	960.50.275
.16	217	960.50.275
.17	229	960.50.300
.18	242	960.50.300
.20	254	960.50.325
.21	267	960.50.325
.22	279	960.50.350
.23	292	960.50.350
.25	304	960.50.375
.26	317	960.50.375
.27	329	960.50.400
.28	342	960.50.400
.30	354	960.50.425
.31	367	960.50.425
.32	379	960.50.450
.33	392	960.50.450
.35	404	960.50.475
.36	417	960.50.475
.37	429	960.50.500
.38	442	960.50.500
.40	454	960.50.525
.41	467	960.50.525
.42	479	960.50.550
.43	492	960.50.550
.45	504	960.50.575
.46	517	960.50.575
.47	529	960.50.600
.48	542	960.50.600
.50	554	960.50.625
.51	567	960.50.625
.52	579	960.50.650
.53	592	960.50.650
.55	604	960.50.675
.60	654	960.50.725

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.80.30.300.0 with $B_{Ri} = 354$

- Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 975.30.SL
- Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 975.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets Part No. 960.50.425
- Module for the fixed end ▶ page 9.16
Order text: 1 set Part No. 975.80
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 975.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.39

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains
- B_i = Inner width e-chains
- B_{Ra} = Inner trough width
- B_{Ri} = Outer trough width
- H_{Ra} = Inner trough height
- H_{Ri} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

E4.1 | Series E4.80 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 15 (150 mm)!



E4.80.30.R.0
Crossbar every link

ES4.80.30.R.0
Crossbar every link

E4.80.30.QZ.R.0
Crossbar every link

E4.80.30.QE.R.0
Crossbar every link

E4.80.30.Q.R.0
Crossbar every link

H4.80.30.R.0
Crossbar every 2nd link

HS4.80.30.R.0
Crossbar every 2nd link

H4.80.30.QZ.R.0
Crossbar every 2nd link

H4.80.30.QE.R.0
Crossbar every 2nd link

H4.80.30.Q.R.0
Crossbar every 2nd link

R4.80.30.R.0
e-tube, closed

RS4.80.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.80.30.Q.R.0	ES4.80.30.R.0.NC	–	ES4.80.30.R.0.XXL	RS4.80.30.R.0.HT	ES4.80.30.R.0.ESD
QuickLock crossbar	ES4.80.30.Q.R.0		E4.80.30.Q.R.0.NC	E4.80.30.Q.R1/R2.0	E4.80.30.Q.R.0.XXL	–	E4.80.30.Q.R.0.ESD
NC-Version	ES4.80.30.R.0.NC	E4.80.30.Q.R.0.NC		–	–	R4.80.30.R.0.HT.NC	E4.80.30.R.0.ESD.NC
RBR-Version	–	E4.80.30.Q.R1/R2.0	–		–	R4.80.30.R1/R2.0.HT	E4.80.30.R1/R2.0.ESD
XXL-Material	ES4.80.30.R.0.XXL	E4.80.30.Q.R.0.XXL	–	–		–	–
HT-Material*	RS4.80.30.R.0.HT	–	R4.80.30.R.0.HT.NC	R4.80.30.R1/R2.0.HT	–		–
ESD-	ES4.80.30.R.0.ESD	E4.80.30.Q.R.0.ESD	E4.80.30.R.0.ESD.NC	E4.80.30.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®

Extreme glider with up to 70% larger gliding surfaces. For high additional loads and high surface speeds. Gliding applications without additional elements as well as 150% more wear allowance and enhancement of service life by factor 4! Order example: E4.80.35G.250.0 / E4.80.45G.250.0

E4.1 | Series E4.80 | Options and order key

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes

Part No.
RBR
e-chains®/e-tubes

Part No.
XXL-Material**
e-chains®/e-tubes

Part No.
HT-Material
only for e-tubes

Part No.
ESD-Material
e-chains®/e-tubes

E4.80.30.R.0.NC
Crossbar every link

E4.80.30.R1/R2.0
Crossbar every link

E4.80.30.R.0.XXL
Crossbar every link

R4.80.30.R.0.HT
Complete e-tube*

E4.80.30.R.0.ESD
Crossbar every link

H4.80.30.R.0.NC
Crossbar every 2nd link

H4.80.30.R1/R2.0
Crossbar every 2nd link

H4.80.30.R.0.XXL
Crossbar every 2nd link

R4.80.30.HT.R.0
Lid and bottom

H4.80.30.R.0.ESD
Crossbar every 2nd link

R4.80.30.R.0.NC
e-tube, closed

R4.80.30.R1/R2.0
e-tube, closed

R4.80.30.R.0.XXL
e-tube, closed

R4.80.30.HTZ.R.0
Bottom only

R4.80.30.R.0.ESD
e-tube, closed

R4.80.30.HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Delivery time: 10 work days
*for gliding applications please consult igus®

Delivery time: 5 work days

Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:

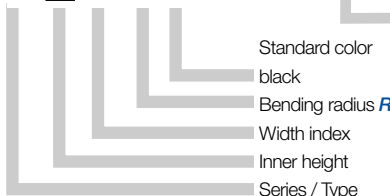
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 27 links **E4.80.30.300.0**

+ Mounting brackets 1 set (with odd number of links and integrated C-profiles) **E4.800.30.1.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 80.1.1**

Order text: 3,0 m E4.80.30.300.0 + E4.800.30.1.12.C + 2 x Part No. 80.1.1

Order key **E4.80.30.300.0**



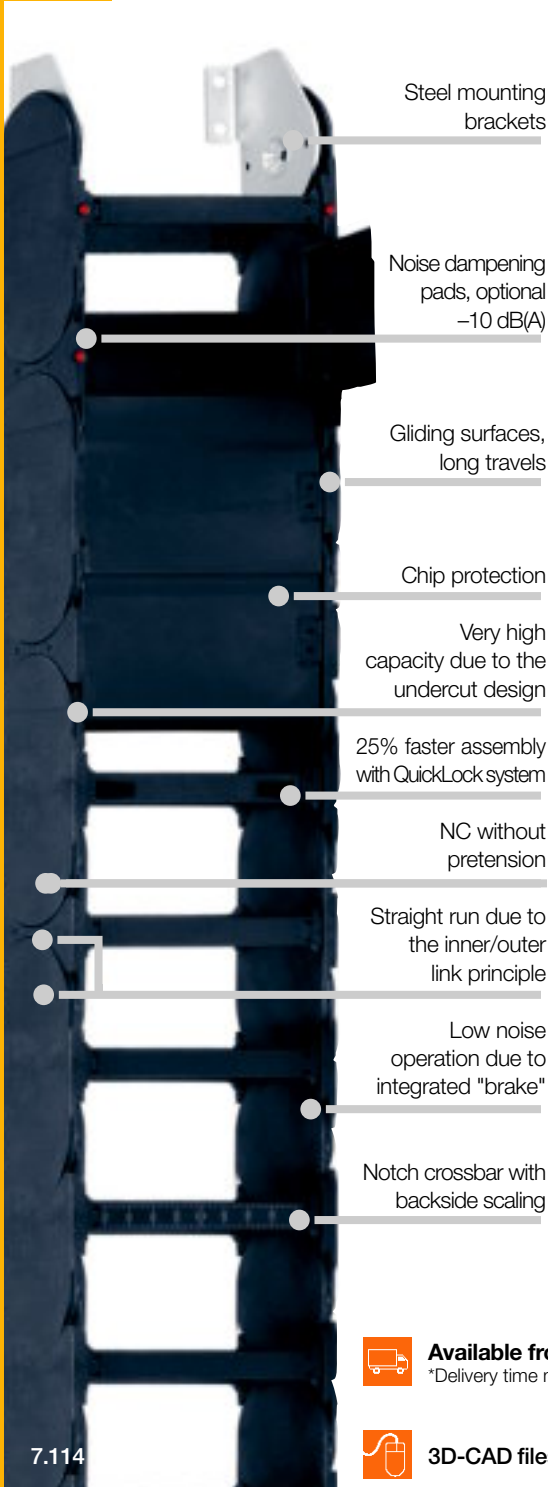
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored can be delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



Steel mounting
brackets

Noise dampening
pads, optional
-10 dB(A)

Gliding surfaces,
long travels

Chip protection

Very high
capacity due to the
undercut design

25% faster assembly
with QuickLock system

NC without
pretension

Straight run due to
the inner/outer
link principle

Low noise
operation due to
integrated "brake"

Notch crossbar with
backside scaling

⊕ Stable due to undercut design, very large inner height

When to use Series 1640-1608:

- If a robust e-chain® with an inner height of 112 mm is required (108 mm on e-tube)
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,5 m and fill weights up to 50 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired
- Optimized ratio of interior/exterior dimension



When to use a different igus® Series

- If maximum stability is required
- Series 600/R608, page 7.294



The new igus® E4 e-chain® opener
reduces assembly time ► page 7.15

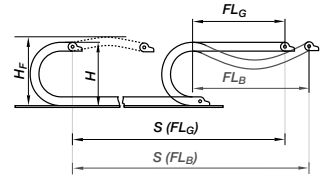
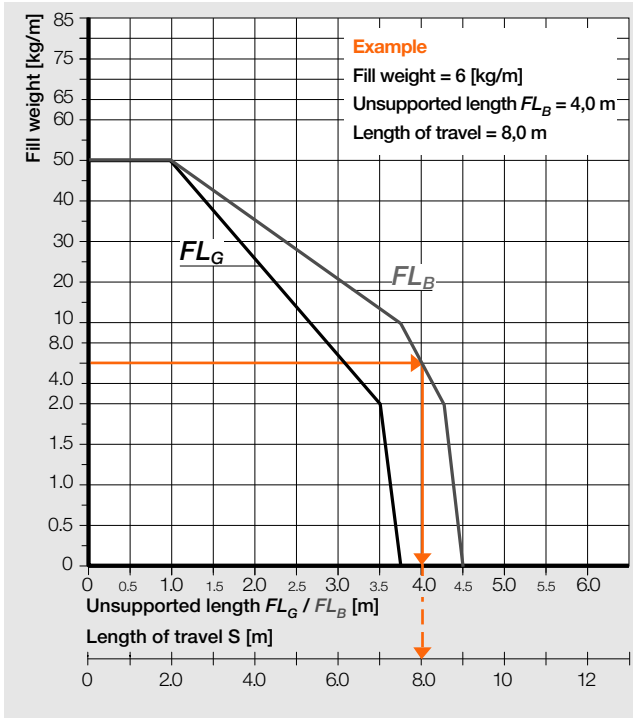


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ► www.igus.de/en/1640

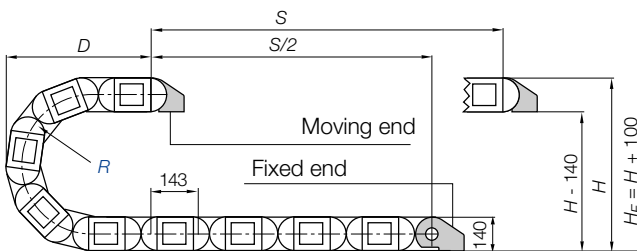


Standard **Unsupported applications**

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 400 m.
 More information ► **page 7.126**



Technical Data

Speed, material, temperature and flammability class ► **page 7.16**

- Pitch** = 143 mm/link
- Links/m** = 7 (1001 mm)
- Chain length** = $\frac{S}{2} + K$

R	200	250	300	350	400	450	500	550	600
H	545	645	747	845	945	1045	1145	1245	1345
D	415	465	515	565	615	665	715	765	815
K	920	1080	1240	1400	1560	1720	1870	2020	2175

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

- i** FL_G = with straight upper run
 FL_B = with permitted sag
- S** = Length of travel
R = Bending radius
- H** = Nominal clearance height
 H_F = Required clearance height
- D** = Overlength e-chain*, radius in final position
K = $\pi \cdot R +$ "safety"



e-chains® | Series 1640 with crossbars every link

Part No.		<i>Bi</i>	<i>Ba</i>	1640
crossbars every link				
		[mm]	[mm]	[kg/m]
1640. 05.	R.0	50	84	≈ 5,10
1640. 06.	R.0	65	99	≈ 5,18
1640. 07.	R.0	75	109	≈ 5,27
1640. 08.	R.0	87	121	≈ 5,31
1640. 10.	R.0	100	134	≈ 5,36
1640. 11.	R.0	112	146	≈ 5,45
1640. 12.	R.0	125	159	≈ 5,54
1640. 13.	R.0	137	171	≈ 5,63
1640. 15.	R.0	150	184	≈ 5,67
1640. 16.	R.0	162	196	≈ 5,74
1640. 17.	R.0	175	209	≈ 5,81
1640. 18.	R.0	187	221	≈ 5,88
1640. 20.	R.0	200	234	≈ 5,89
1640. 21.	R.0	212	246	≈ 5,96
1640. 22.	R.0	225	259	≈ 6,01
1640. 23.	R.0	237	271	≈ 6,09
1640. 25.	R.0	250	284	≈ 6,15
1640. 26.	R.0	262	296	≈ 6,20
1640. 27.	R.0	275	309	≈ 6,27
1640. 28.	R.0	287	321	≈ 6,29
1640. 30.	R.0	300	334	≈ 6,34

Part No.		<i>Bi</i>	<i>Ba</i>	1640
crossbars every link				
		[mm]	[mm]	[kg/m]
1640. 31.	R.0	312	346	≈ 6,41
1640. 32.	R.0	325	359	≈ 6,48
1640. 33.	R.0	337	371	≈ 6,59
1640. 35.	R.0	350	384	≈ 6,61
1640. 36.	R.0	362	396	≈ 6,67
1640. 37.	R.0	375	409	≈ 6,71
1640. 38.	R.0	387	421	≈ 6,76
1640. 40.	R.0	400	434	≈ 6,89
1640. 41.	R.0	412	446	≈ 6,99
1640. 42.	R.0	425	459	≈ 7,08
1640. 43.	R.0	437	471	≈ 7,13
1640. 45.	R.0	450	484	≈ 7,17
1640. 46.	R.0	462	496	≈ 7,18
1640. 47.	R.0	475	509	≈ 7,22
1640. 48.	R.0	487	521	≈ 7,27
1640. 50.	R.0	500	534	≈ 7,35
1640. 51.	R.0	512	546	≈ 7,36
1640. 52.	R.0	525	559	≈ 7,39
1640. 53.	R.0	537	571	≈ 7,49
1640. 55.	R.0	550	584	≈ 7,80
1640. 60.	R.0	600	634	≈ 7,92

Available bending radii R [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

Supplement Part No. with required radius (R). Example: 1640.30.300.0

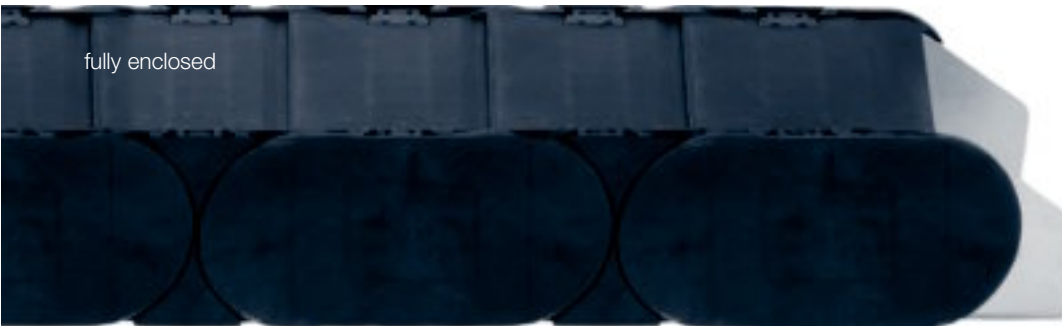


Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series 1608 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	1608 [kg/m]
1608. 20. <i>R.0</i>	200	234	7,690
1608. 25. <i>R.0</i>	250	284	8,390
1608. 30. <i>R.0</i>	300	334	9,090

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	1608 [kg/m]
1608. 35. <i>R.0</i>	350	384	9,790
1608. 40. <i>R.0</i>	400	434	10,490

Available bending radii *R* [mm] 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

Supplement Part No. with required radius (*R*). Example: 1608.30.300.0

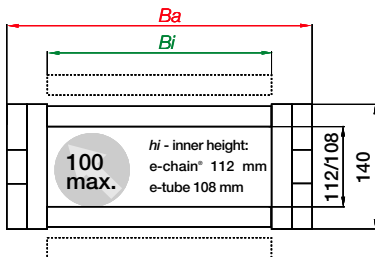
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)

Order key for all types

1640. 30. 300. 0 e-chain® (crossbars every link)
1608. 30. 300. 0 Fully enclosed e-tube



Dimensioning



- 1640.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - 1608.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.128

Standard e-tubes incl. accessories from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			Bi [mm]
	crossbars every link	crossbars every 2 nd link	Both radii	
1640.	15 QZ.R.0	15 QE.R.0	15 Q.R.0	150
1640.	16 QZ.R.0	16 QE.R.0	16 Q.R.0	162
1640.	17 QZ.R.0	17 QE.R.0	17 Q.R.0	175
1640.	18 QZ.R.0	18 QE.R.0	18 Q.R.0	187
1640.	20 QZ.R.0	20 QE.R.0	20 Q.R.0	200
1640.	21 QZ.R.0	21 QE.R.0	21 Q.R.0	212
1640.	22 QZ.R.0	22 QE.R.0	22 Q.R.0	225
1640.	23 QZ.R.0	23 QE.R.0	23 Q.R.0	237
1640.	25 QZ.R.0	25 QE.R.0	25 Q.R.0	250
1640.	26 QZ.R.0	26 QE.R.0	26 Q.R.0	262
1640.	27 QZ.R.0	27 QE.R.0	27 Q.R.0	275
1640.	28 QZ.R.0	28 QE.R.0	28 Q.R.0	287
1640.	30 QZ.R.0	30 QE.R.0	30 Q.R.0	300
1640.	31 QZ.R.0	31 QE.R.0	31 Q.R.0	312
1640.	32 QZ.R.0	32 QE.R.0	32 Q.R.0	325
1640.	33 QZ.R.0	33 QE.R.0	33 Q.R.0	337
1640.	35 QZ.R.0	35 QE.R.0	35 Q.R.0	350
1640.	36 QZ.R.0	36 QE.R.0	36 Q.R.0	362
1640.	37 QZ.R.0	37 QE.R.0	37 Q.R.0	375
1640.	38 QZ.R.0	38 QE.R.0	38 Q.R.0	387
1640.	40 QZ.R.0	40 QE.R.0	40 Q.R.0	400

Part No.	QuickLock crossbar for			Bi [mm]
	crossbars every link	crossbars every 2 nd link	Both radii	
1640.	41 QZ.R.0	41 QE.R.0	41 Q.R.0	412
1640.	42 QZ.R.0	42 QE.R.0	42 Q.R.0	425
1640.	43 QZ.R.0	43 QE.R.0	43 Q.R.0	437
1640.	45 QZ.R.0	45 QE.R.0	45 Q.R.0	450
1640.	46 QZ.R.0	46 QE.R.0	46 Q.R.0	462
1640.	47 QZ.R.0	47 QE.R.0	47 Q.R.0	475
1640.	48 QZ.R.0	48 QE.R.0	48 Q.R.0	487
1640.	50 QZ.R.0	50 QE.R.0	50 Q.R.0	500
1640.	51 QZ.R.0	51 QE.R.0	51 Q.R.0	512
1640.	52 QZ.R.0	52 QE.R.0	52 Q.R.0	525
1640.	53 QZ.R.0	53 QE.R.0	53 Q.R.0	537
1640.	55 QZ.R.0	55 QE.R.0	55 Q.R.0	550
1640.	60 QZ.R.0	60 QE.R.0	60 Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii R [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

Supplement Part No. with required radius (R). Example: 1640.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. 1640.30QZ.300.0 = QuickLock crossbar for inner radius

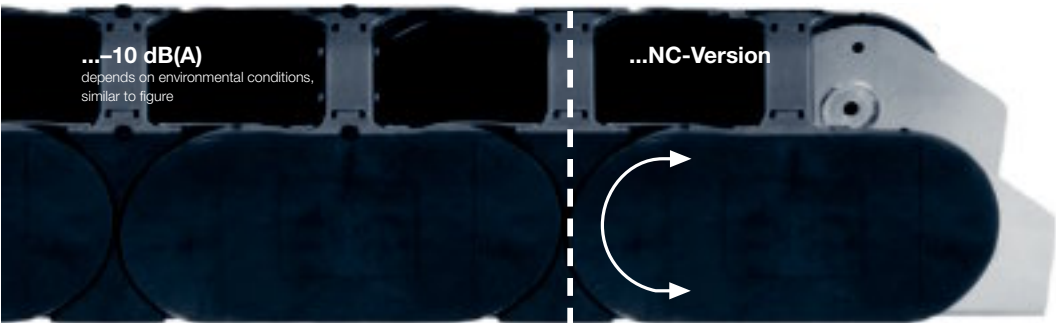
Part No. 1640.30QE.300.0 = QuickLock crossbar for outer radius

Part No. 1640.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods



Noise dampening | ≈ -10 dB(A)



NC-Version | Without pretension

With pads		Bi	With pads		Bi
crossb. every link	e-tube fully enclosed	[mm]	crossb. every link	e-tube fully enclosed	[mm]
S1640 -	.05. R.0	50	S1640 -	.31. R.0	312
S1640 -	.06. R.0	65	S1640 -	.32. R.0	325
S1640 -	.07. R.0	75	S1640 -	.33. R.0	337
S1640 -	.08. R.0	87	S1640 S1608	.35. R.0	350
S1640 -	.10. R.0	100	S1640 -	.36. R.0	362
S1640 -	.11. R.0	112	S1640 -	.37. R.0	375
S1640 -	.12. R.0	125	S1640 -	.38. R.0	387
S1640 -	.13. R.0	137	S1640 S1608	.40. R.0	400
S1640 -	.15. R.0	150	S1640 -	.41. R.0	412
S1640 -	.16. R.0	162	S1640 -	.42. R.0	425
S1640 -	.17. R.0	175	S1640 -	.43. R.0	437
S1640 -	.18. R.0	187	S1640 -	.45. R.0	450
S1640 S1608	.20. R.0	200	S1640 -	.46. R.0	462
S1640 -	.21. R.0	212	S1640 -	.47. R.0	475
S1640 -	.22. R.0	225	S1640 -	.48. R.0	487
S1640 -	.23. R.0	237	S1640 -	.50. R.0	500
S1640 S1608	.25. R.0	250	S1640 -	.51. R.0	512
S1640 -	.26. R.0	262	S1640 -	.52. R.0	525
S1640 -	.27. R.0	275	S1640 -	.53. R.0	537
S1640 -	.28. R.0	287	S1640 -	.55. R.0	550
S1640 S1608	.30. R.0	300	S1640 -	.60. R.0	600

NC-Version		Bi	NC-Version		Bi
crossb. every link	e-tube fully enclosed	[mm]	crossb. every link	e-tube fully enclosed	[mm]
1640 -	.05. R.0.NC	50	1640 -	.31. R.0.NC	312
1640 -	.06. R.0.NC	65	1640 -	.32. R.0.NC	325
1640 -	.07. R.0.NC	75	1640 -	.33. R.0.NC	337
1640 -	.08. R.0.NC	87	1640 1608	.35. R.0.NC	350
1640 -	.10. R.0.NC	100	1640 -	.36. R.0.NC	362
1640 -	.11. R.0.NC	112	1640 -	.37. R.0.NC	375
1640 -	.12. R.0.NC	125	1640 -	.38. R.0.NC	387
1640 -	.13. R.0.NC	137	1640 1608	.40. R.0.NC	400
1640 -	.15. R.0.NC	150	1640 -	.41. R.0.NC	412
1640 -	.16. R.0.NC	162	1640 -	.42. R.0.NC	425
1640 -	.17. R.0.NC	175	1640 -	.43. R.0.NC	437
1640 -	.18. R.0.NC	187	1640 -	.45. R.0.NC	450
1640 1608	.20. R.0.NC	200	1640 -	.46. R.0.NC	462
1640 -	.21. R.0.NC	212	1640 -	.47. R.0.NC	475
1640 -	.22. R.0.NC	225	1640 -	.48. R.0.NC	487
1640 -	.23. R.0.NC	237	1640 -	.50. R.0.NC	500
1640 1608	.25. R.0.NC	250	1640 -	.51. R.0.NC	512
1640 -	.26. R.0.NC	262	1640 -	.52. R.0.NC	525
1640 -	.27. R.0.NC	275	1640 -	.53. R.0.NC	537
1640 -	.28. R.0.NC	287	1640 -	.55. R.0.NC	550
1640 1608	.30. R.0.NC	300	1640 -	.60. R.0.NC	600

Available bending radii R [mm] 200* | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 *not available for e-tubes

Supplement Part No. with required radius (R). Example: **S1640.30.300.0** or **1640.30.300.0.NC**



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: **Part No. S1640.30.300.0** = e-chain® (crossbars every link) with noise dampening

For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: **Part No. 1640.30.300.0.NC** = e-chain® (crossbars every link) without pretension

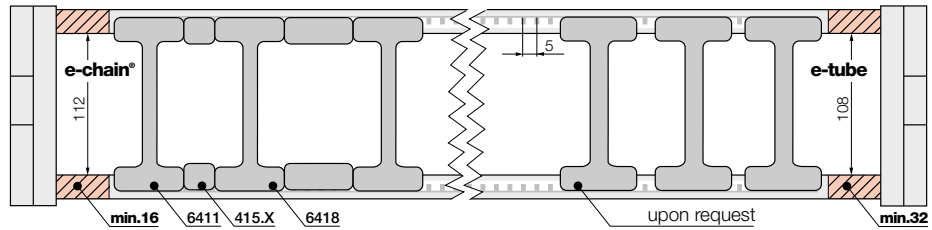


e-chain® with noise dampening pads - Delivery time: 3-5 work days.

NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

Option 1 | Separators and spacers* (*side-mounted applications)



Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm | e-chain*: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain* link!

		<p>Separator for e-chains*</p> <p>unassembled 6401</p> <p>assembled 6411</p>
		<p>Locking separator for e-chains*</p> <p>unassembled 6408</p> <p>assembled 6418</p>
		<p>Spacer* for e-chains*</p> <p>unassembled 405.XX</p> <p>assembled 415.XX</p>

Separator 6401 (e-chains* only)

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses (Separator for e-tubes 1608 upon request).

Locking separator 6408 (e-chains* only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain* link for better mounting.

Spacer* 405.XX (e-chains* only)

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). **XX = width of the spacer** (please choose between 10, 15, 20, 30, 40 mm).

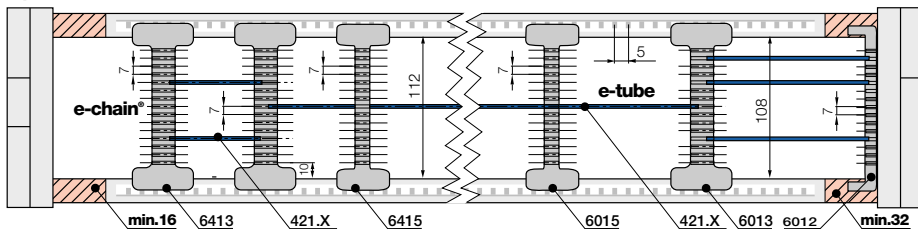
Additional elements for interior separation

		<p>Rollclip for e-chains*</p> <p>unassembled 489.27</p> <p>assembled 490.27</p>
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Rollclip

Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain* and hose.

Option 2 | Shelves



Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm** | **e-chain*: 16 mm**
 In the standard configuration separators are assembled every 2nd e-chain* link!

**Open slotted separator
for e-chains***

unassembled **6405**
 assembled **6415**

Open, slotted separator 6405 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves. e-chains* only!

**Open slotted separator
for e-tubes**

unassembled **6005**
 assembled **6005**

Open, slotted separator 6005

(e-tubes only, unilateral open)

Works like open, slotted separator 6405 on e-tube 1608

**Middle plate
for e-chains***

unassembled **6403**
 assembled **6413**

Middle plate 6403 (e-chains* only)

To achieve a modular shelving shelf 420.X can be arranged at 15 different heights (in 7 mm increments).

**Middle plate
for e-tubes**

unassembled **6003**
 assembled **6013**

Middle plate 6003 (e-tubes only)

Works like middle plate 6403 on e-tube 1608

**Side plate
for e-chains*/e-tubes**

unassembled **6002**
 assembled **6012**

Side plate 6002 (e-chains*/e-tubes)

Works like middle plate.

Allows modular shelving close to the side links.

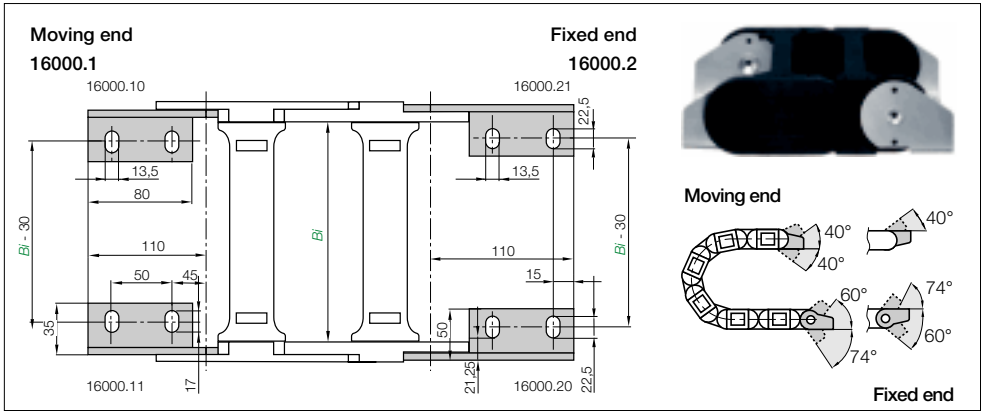
Shelf

unassembled **420.X**
 assembled **421.X**

Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments). - see table below.

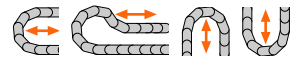
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	033	420.33	421.33	075	420.75	421.75	150	420.150	421.150
023	420.23	421.23	043	420.43	421.43	088	420.88	421.88	175	420.175	421.175
025	420.25	421.25	050	420.50	421.50	100	420.100	421.100	187	420.187	421.187
028	420.28	421.28	062	420.62	421.62	125	420.125	421.125	200	420.200	421.200



Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No.	Mounting bracket
16000.1.12.E	Full attachment set (both sides) for e-chain®, ending with outer side link
16000.3.12.E	Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
16000.1	Mounting bracket set moving end (one side) for outer side link
16000.2	Mounting bracket set fixed end (one side) for inner side link

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E** (Material: stainless steel 1.4301)

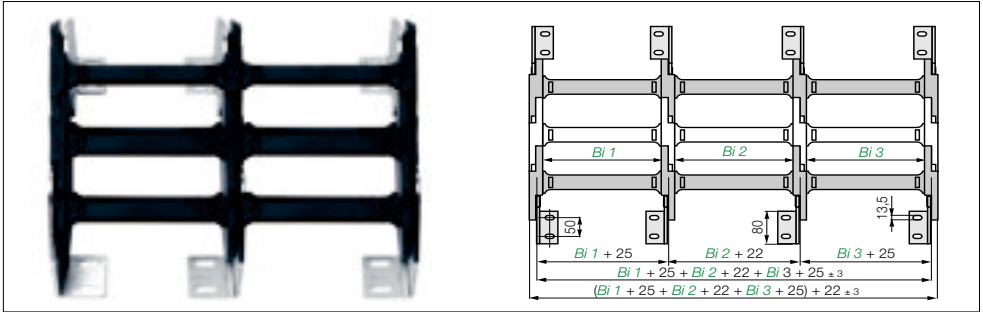
Note: Depending on the e-chain® length, the carrier will end with **1** outer or **3** inner side links. For the best appearance, make sure the e-chain® ends with **1** outer side link whenever possible. (with odd number of links)



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1



Unsupported, harnessed Series 1640 in a stone machining application



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



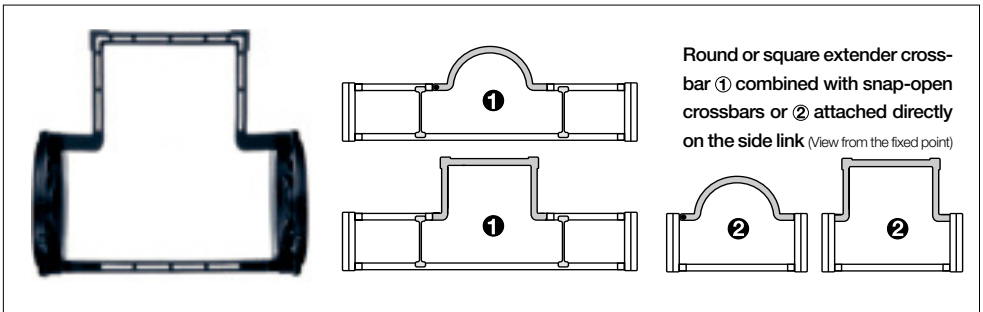
Order example - 3 chambers

1640.Bi1 / Bi2 / Bi3.R.0 =

1640.10 / 20 / 10.200.0

Extension link - single-part order

6022.R. (please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 300 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

1640.10/15RHDE115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

1640.10/15RHDZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

1640.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

1640.17RDZ115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	250	□ square	yes	no
450.40.D300	300	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	250	□ square	no	yes



E4 snapclip | clip-on cable binder

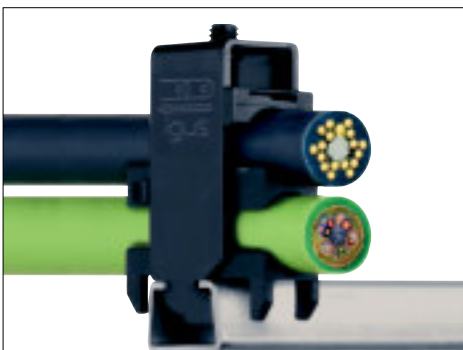
- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link



Order example (here: inner width B/ 150)
 Locking clip, to open along inner radius "Z":
1640.15.B12.200Z.R.0
 Locking clip, to open along outer radius "E":
1640.15.B12.200E.R.0

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

E4.1 | Series 1640-1608 | e-chain® accessories



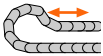
Strain relief system

Clamps, tiwrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



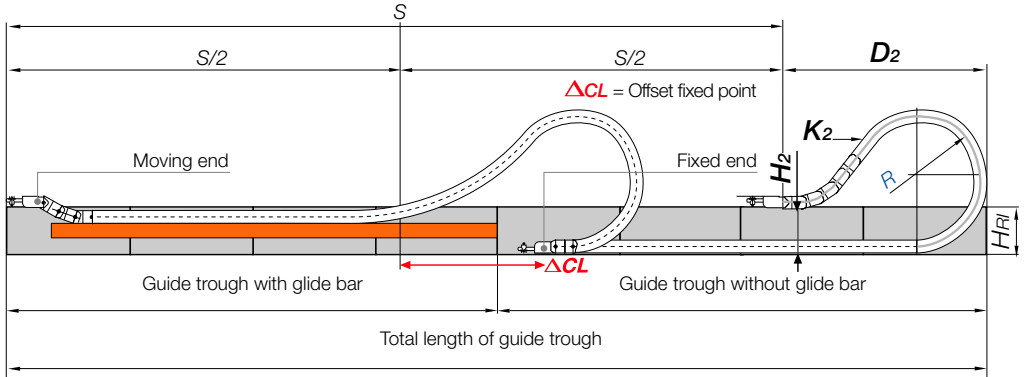
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 14 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 9 and 14 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 143 mm/link · **Links/m** = 7 (1001 mm) · **Chain length** = $\frac{S}{2} + K$

R	200	250	300	350	400	450	500	550	600
H ₂	325	325	325	325	325	325	325	325	325
D ₂ ⁺²⁵	900	1000	1100	1250	1450	1600	1700	1900	2050
K ₂	1573	1716	1859	2288	2574	2860	3146	3432	3861
ΔCL	450	500	550	650	800	900	950	1100	1200

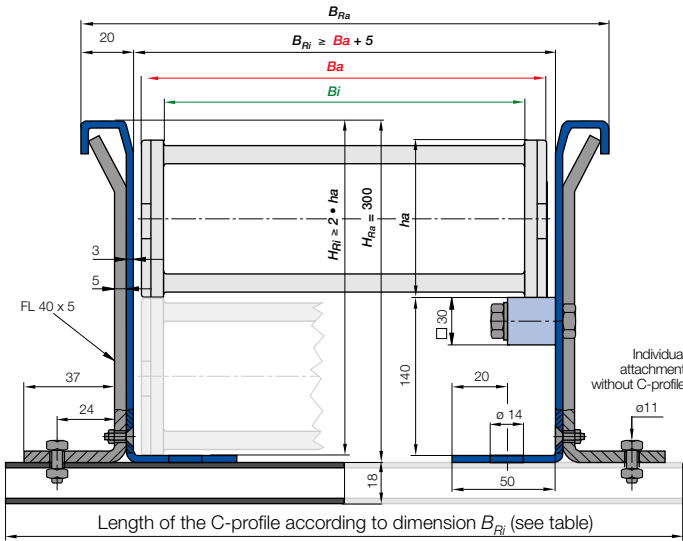


The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H₂ = Mounting height (if the moving end is set lower) K₂ = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D₂ = Over length - long travels, gliding R = Bending radius H_R = Inner trough height S/2 = Half length of travel

Steel Guide Troughs

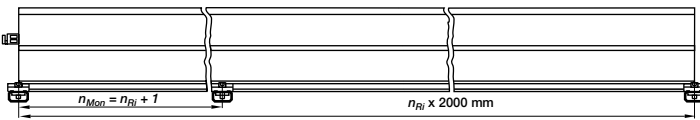


- Guide trough without glide bars **Part No. 98.30**
- Guide trough with glide bars **Part No. 98.31**
- Installation sets as end connectors **Part No. 98.50.XX**

.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series 1640.12.300.0 with $B_{Ri} = 164$

- Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 98.30**
- Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 98.31**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets **Part No. 98.50.300**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details on steel guide troughs ▶ from page 9.58

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*
- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®
1640.12.300.0 ▶ Order example

B_{Ri} [mm]	Part No. Installation set
.05	89 -
.06	104 98.50.225
.07	114 98.50.250
.08	125 98.50.250
.10	139 98.50.275
.11	151 98.50.275
.12	164 98.50.300
.13	176 98.50.300
.15	189 98.50.325
.16	201 98.50.325
.17	214 98.50.350
.18	226 98.50.350
.20	239 98.50.375
.21	251 98.50.375
.22	264 98.50.400
.23	276 98.50.400
.25	289 98.50.425
.26	301 98.50.425
.27	314 98.50.450
.28	326 98.50.450
.30	339 98.50.475
.31	351 98.50.475
.32	364 98.50.500
.33	376 98.50.500
.35	389 98.50.525
.36	401 98.50.525
.37	414 98.50.550
.38	426 98.50.550
.40	439 98.50.575
.41	451 98.50.575
.42	464 98.50.600
.43	476 98.50.600
.45	489 98.50.625
.46	501 98.50.625
.47	514 98.50.650
.48	526 98.50.650
.50	539 98.50.675
.51	551 98.50.675
.52	564 98.50.700
.53	576 98.50.700
.55	589 98.50.725
.60	639 98.50.775

E4.1 | Series 1640-1608 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 150 mm!



1640.30.R.0
Crossbar every link

S1640.30.R.0
Crossbar every link

1640.30.QZ.R.0
Crossbar every link

1640.30.QE.R.0
Crossbar every link

1640.30.Q.R.0
Crossbar every link

1608.30.R.0
e-tube, closed

S1608.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		S1640.30.Q.R.0	S1640.30.R.0.NC	–	S1640.30.R.0.XXL	RS4.1640.30.R.0.HT	S1640.30.R.0.ESD
QuickLock crossbar	S1640.30.Q.R.0		1640.30.Q.R.0.NC	1640.30.Q.R1/R2.0	1640.30.Q.R.0.XXL	–	1640.30.Q.R.0.ESD
NC-Version	S1640.30.R.0.NC	1640.30.Q.R.0.NC		–	–	1608.30.R.0.HT.NC	1640.30.R.0.ESD.NC
RBR-Version	–	1640.30.Q.R1/R2.0	–		–	1608.30.R1/R2.0.HT	1640.30.R1/R2.0.ESD
XXL-Material	S1640.30.R.0.XXL	1640.30.Q.R.0.XXL	–	–		–	–
HT-Material*	RS4.1640.30.R.0.HT	–	1608.30.R.0.HT.NC	1608.30.R1/R2.0.HT	–		–
ESD-	S1640.30.R.0.ESD	1640.30.Q.R.0.ESD	1640.30.R.0.ESD.NC	1640.30.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®

E4.1 | Series 1640-1608 | Options and order key

Simply turn outer side link without additional work

Reverse bending radius for circular movements

Unsupported lengths +25% possible

No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes

Part No.
RBR
e-chains®/e-tubes

Part No.
XXL-Material**
e-chains®/e-tubes

Part No.
HT-Material
only for e-tubes

Part No.
ESD-Material
e-chains®/e-tubes

1640.30.R.0.NC
Crossbar every link

1640.30.R1/R2.0
Crossbar every link

1640.30.R.0.XXL
Crossbar every link

1608.30.R.0.HT
Complete e-tube*

1640.30.R.0.ESD
Crossbar every link

1608.30.R.0.NC
e-tube, closed

1608.30.R1/R2.0
e-tube, closed

1608.30.R.0.XXL
e-tube, closed

1608.30HT.R.0
Lid and bottom

1608.30.R.0.ESD
e-tube, closed

1608.30HTZ.R.0
Bottom only

1608.30HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days
(2-5 work days with express surcharge)

Delivery time: 1-2 weeks
**Sidebands made from XXL-Material

Delivery time: 10 work days
*for gliding applications please consult igus®

Delivery time: 5 work days

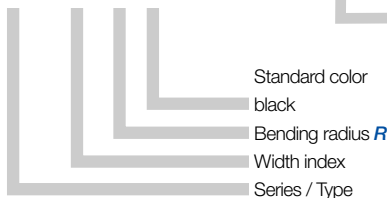
Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 21 links	1640.30.300.0
+ Mounting brackets	Full attachment set (both sides), ending with outer side link	16000.1.12
+ Interior separation	with 2 separators assembled every 2 nd link	2 x 6411

Order text: 3,0 m 1640.30.300.0 + 16000.1.12 + 2 x Part No. 6411

Order key **1640.30.300.0**




Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods



Steel mounting brackets

Stiffened link by four crossbars

Gliding surfaces, long travels

Very high capacity due to the undercut design

NC without pretension

Low noise operation due to integrated "brake"

Straight run due to the inner/outer link principle

Weight and price reduction

+ For rough conditions, very large inner height

When to use Series 800:

- If a robust e-chain® with an inner height of 200 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 8,0 m and fill weights up to 90 kg/m
- For long travels up to 450 m
- For rough environmental conditions or rigid hoses



When to use a different igus® Series

- If a light weighted, less stable e-chain® with identical inner height is required
- ▶ **Series 840, page 7.140**

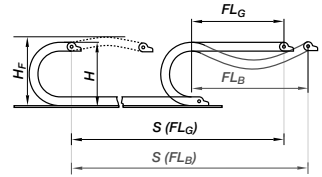
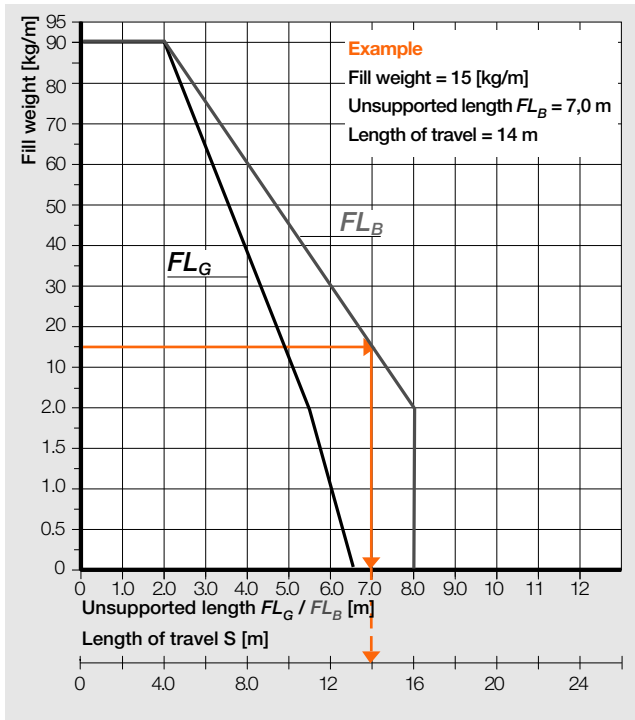


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/800



Standard Unsupported applications

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

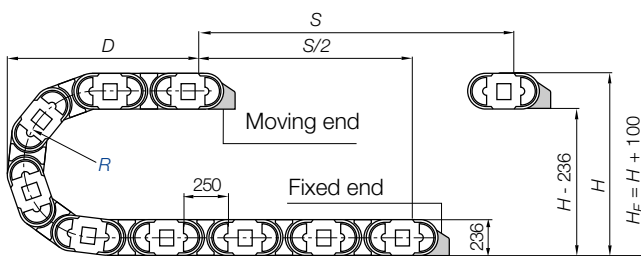
Gliding applications

Travels up to 450 m.
 More information ► **page 7.136**

Technical Data

Speed, material, temperature and flammability class ► **page 7.16**

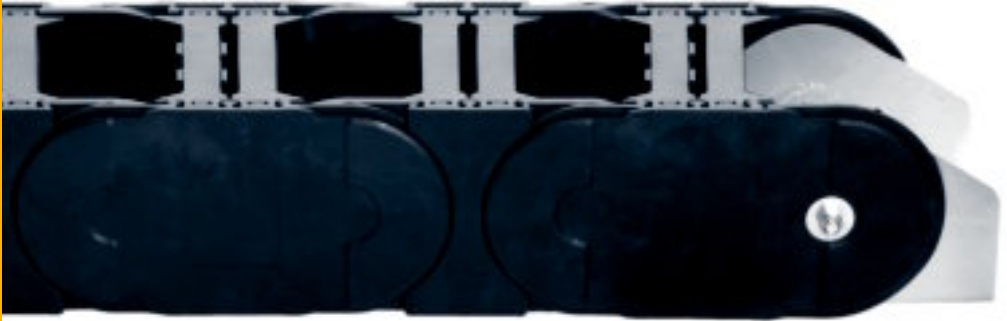
- Pitch** = 250 mm/link
- Links/m** = 4 (1000 mm)
- Chain length** = $S/2 + K$



R	325	350	400	450	500	600	750	1000
H	886	936	1036	1136	1236	1436	1736	2236
D	725	750	800	850	900	1000	1150	1400
K	1525	1600	1760	1915	2075	2385	2860	3645

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

- FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
 R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain, radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series 800 with crossbars every link

Part No.		<i>Bi</i>	<i>Ba</i>	800
crossbars every link		[mm]	[mm]	[kg/m]
800.	20. <i>R.0</i>	200	260	≈ 15,09
800.	25. <i>R.0</i>	250	310	≈ 15,50
800.	30. <i>R.0</i>	300	360	≈ 15,89
800.	32. <i>R.0</i>	325	385	≈ 16,05
800.	35. <i>R.0</i>	350	410	≈ 16,22

Part No.		<i>Bi</i>	<i>Ba</i>	800
crossbars every link		[mm]	[mm]	[kg/m]
800.	40. <i>R.0</i>	400	460	≈ 16,74
800.	45. <i>R.0</i>	450	510	≈ 16,88
800.	50. <i>R.0</i>	500	560	≈ 17,23
800.	55. <i>R.0</i>	550	610	≈ 17,63
800.	60. <i>R.0</i>	600	660	≈ 18,19

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: 800.40.400.0



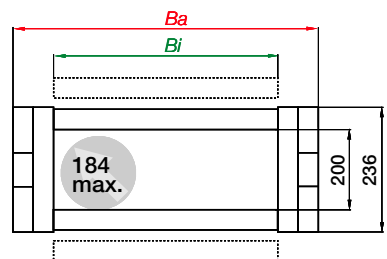
Order key

800. 40. 400. 0



- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



800.40.400.0 = e-chain® with crossbars every link, inner width *Bi* 400 mm, radius *R* 400 mm, color black

More order examples, variations and configurations ► page 7.138



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



NC-Version | Without pretension

Part No.			<i>Bi</i> [mm]
800.	20.	<i>R.0.NC</i>	200
800.	25.	<i>R.0.NC</i>	250
800.	30.	<i>R.0.NC</i>	300
800.	32.	<i>R.0.NC</i>	325
800.	35.	<i>R.0.NC</i>	350

Part No.			<i>Bi</i> [mm]
800.	40.	<i>R.0.NC</i>	400
800.	45.	<i>R.0.NC</i>	450
800.	50.	<i>R.0.NC</i>	500
800.	55.	<i>R.0.NC</i>	550
800.	60.	<i>R.0.NC</i>	600

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: **800.40.400.0.NC**



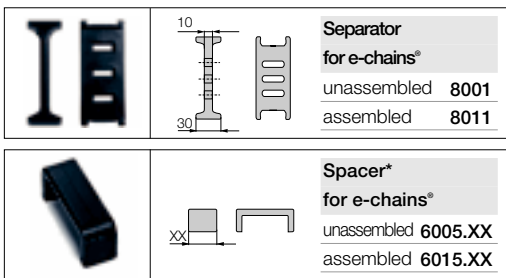
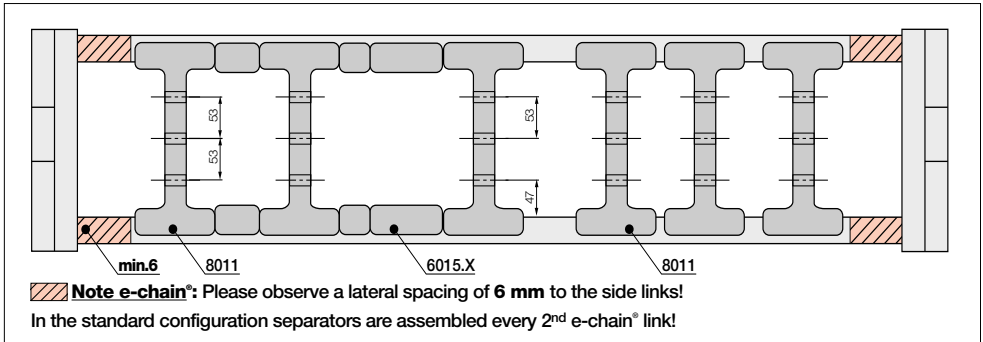
For NC-e-chains® without pretension supplement Part No. with required index "**NC**"

Example: **Part No. 800.40.400.0.NC** = e-chain® (crossbars every link) without pretension



NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods



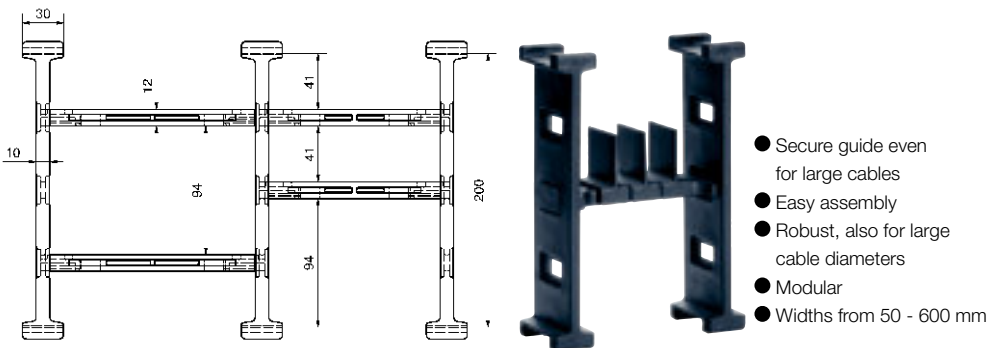
Separator 8001

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

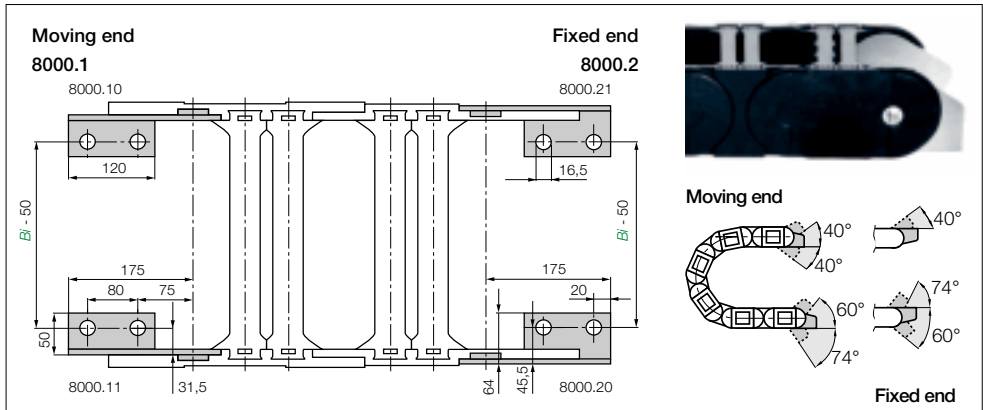
Spacer* 6005.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). **XX = width of the spacer** (please choose between 10, 15, 20 mm).

Modular E4 shelving system for Series 800



Part No.	Part No.	Snap in tab	Part No.	Part No.	Width
unassembled	assembled		separator	crossbar	[mm]
8001H1	8011H1	single-sided	8001	450.XX	50-600
8001H2	8011H2	double-sided	8001	450.XX	50-600



Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No. Mounting bracket

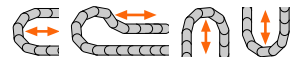
- 8000.1.12.E Full attachment set (both sides) for e-chain®, ending with outer side link

- 8000.3.12.E Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)

- 8000.1.E Mounting bracket set **moving end** (one side) for outer side link

- 8000.2.E Mounting bracket set **fixed end** (one side) for inner side link

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!

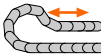


- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
(Material: stainless steel 1.4301)

Note: Depending on the e-chain® length, the carrier will end with **1** outer or **3** inner side links. For the best appearance, make sure the e-chain® ends with **1** outer side link whenever possible. (with odd number of links)

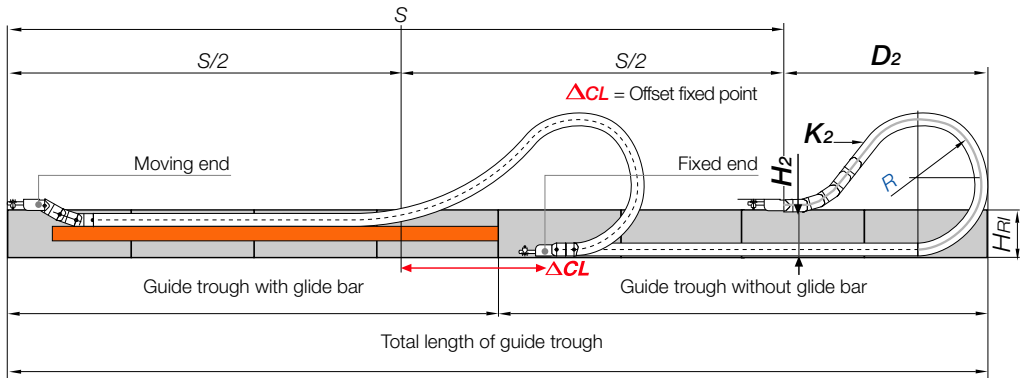


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Gliding applications | For long travels from 15 m to max. 450 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 12 and 15 m we recommend a longer unsupported length.** More information ► **Design**, from page 1.16.



$$\text{Pitch} = 250 \text{ mm/link} \cdot \text{Links/m} = 4 (1000 \text{ mm}) \cdot \text{Chain length} = \frac{S}{2} + K$$

R	325	350	400	450	500	600	750	1000
H_2	580	580	580	580	580	580	580	580
D_2^{+25}	1030	1080	1380	1610	2000	2480	*	*
K_2	2000	2000	2500	3000	3250	4000	*	*
ΔCL	250	300	550	750	1050	1400	*	*

*upon request!

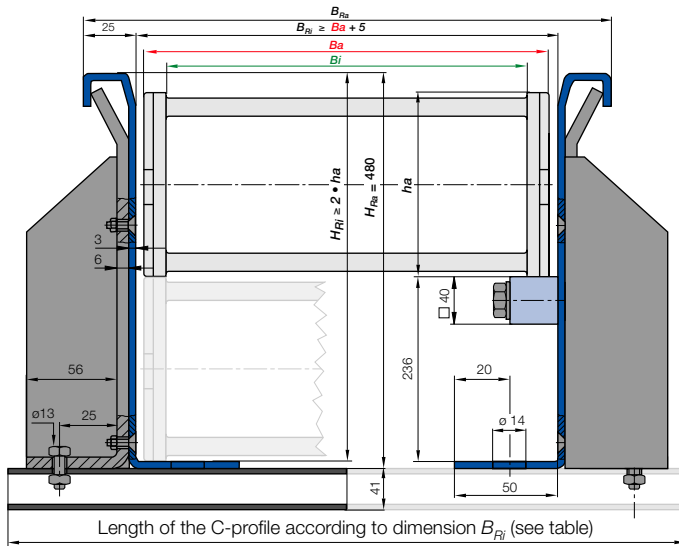


The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
 D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height $S/2$ = Half length of travel

Steel Guide Troughs



Installation set with C-profile for e-chains®

800.20.325.0 ▶ Order example

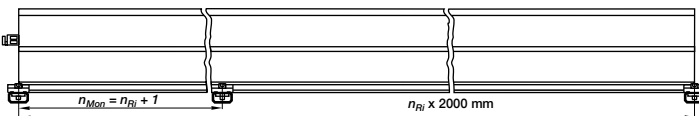
B_{Ri} [mm]	Part No. Installation set
.20	265 90.50.450
.25	315 90.50.500
.30	365 90.50.550
.32	390 90.50.575
.35	415 90.50.600
.40	465 90.50.650
.45	515 90.50.700
.50	565 90.50.750
.55	615 90.50.800
.60	665 90.50.850

- Guide trough without glide bars **Part No. 90.30**
- Guide trough with glide bars **Part No. 90.31**
- Installation sets as end connectors **Part No. 90.50.XX**

.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series 800.20.325.0 with $B_{Ri} = 256$

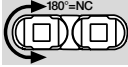
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)	Part No.	90.30
Order text: 16 m guide trough without glide bar (8 x 2 m sections)		
Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)	Part No.	90.31
Order text: 16 m guide trough with glide bar (8 x 2 m sections)		
Installation set "Basic" complete (guide trough-sets + 1)	Part No.	90.50.450
Order text: 17 installation sets		



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details on steel guide troughs ▶ from page 9.60

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains®
- B_i = Inner width e-chains®
- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

**Standard***Simply turn outer side link without additional work**Reverse bending radius for circular movements**Unsupported lengths +25% possible**ATEX/ESD classified e-chains® - II 2 GD***Part No. Standard e-chains****Part No. NC-Material e-chains****Part No. RBR e-chains®****Part No. XXL-Material** e-chains®****Part No. ESD-Material e-chains®****800.30.R.0**

Crossbar every link

800.30.R.0.NC

Crossbar every link

800.30.R1/R2.0

Crossbar every link

800.30.R.0.XXL

Crossbar every link

800.30.R.0.ESD

Crossbar every link

**Delivery in 24h or today!*****Delivery in 24h or today!*****Delivery time: 10 work days**

(2-5 work days with express surcharge)

Delivery time: 1-2 weeks

**Sidebands made from XXL-Material

Delivery time: 5 work days

Combination possibilities | Examples

	NC-Version	RBR-Version	XXL-Material	ESD-Material
NC-Version		-	-	800.30.R.0.ESD.NC
RBR-Version	-		-	800.30.R1/R2.0.ESD
XXL-Material	-	-		-
ESD - Material*	800.30.R.0.ESD.NC	800.30.R1/R2.0.ESD	-	

*for gliding applications please consult igus®



Assembling of an e-chain® Series 800 in an igus® steel guide trough

Order example | Order key and color options



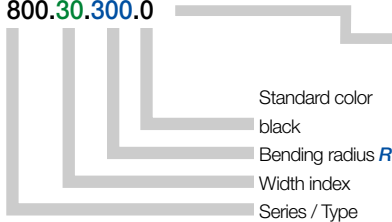
Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 12 links	800.30.300.0
+ Mounting brackets	Full attachment set (both sides), ending with outer side link	8000.1.12
+ Interior separation	with 2 separators assembled every 2 nd link	2 x 8011

Order text: 3,0 m 800.30.300.0 + 8000.1.12 + 2 x Part No. 8011



Order key
800.30.300.0



Color options for e-chains® and e-tubes

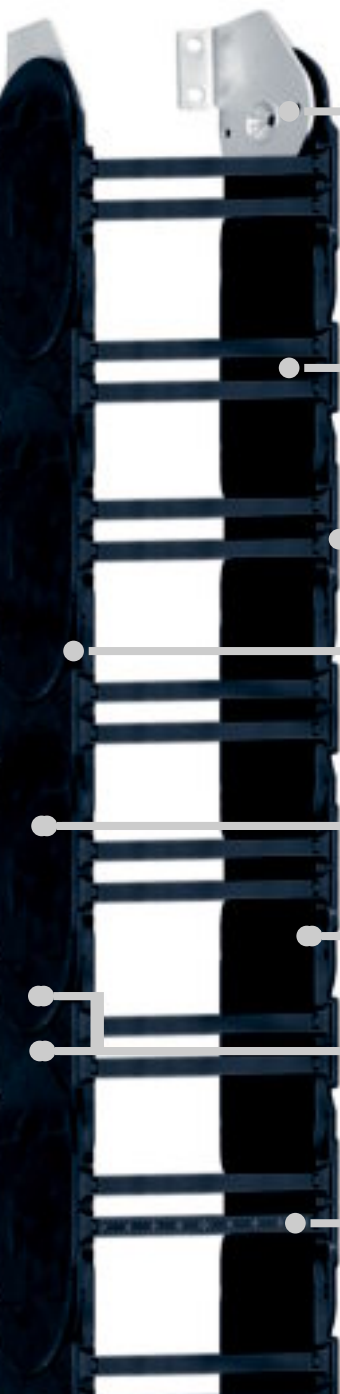
Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



Steel mounting brackets

Stiffened link by four crossbars

Gliding surfaces, long travels

Very high capacity due to the undercut design

NC without pretension

Low noise operation due to integrated "brake"

Straight run due to the inner/outer link principle

Notch crossbar with backside scaling

⊕ For rough conditions, very large inner height

When to use Series 840:

- If a robust e-chain® with an inner height of 204 mm is required
- If inner widths up to 563 mm are required
- For unsupported lengths up to 8,0 m and fill weights up to 90 kg/m
- For long travels up to 450 m
- Optimized ratio of interior and exterior dimension
- If many options and accessories are desired



When to use a different igus® Series

- If an even more stable e-chain® with identical inner height is required
- **Series 800, page 7.130**



The new igus® E4 e-chain® opener reduces assembly time ► page 7.15

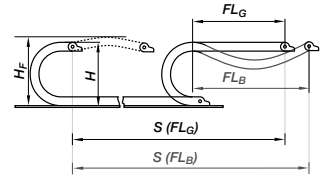
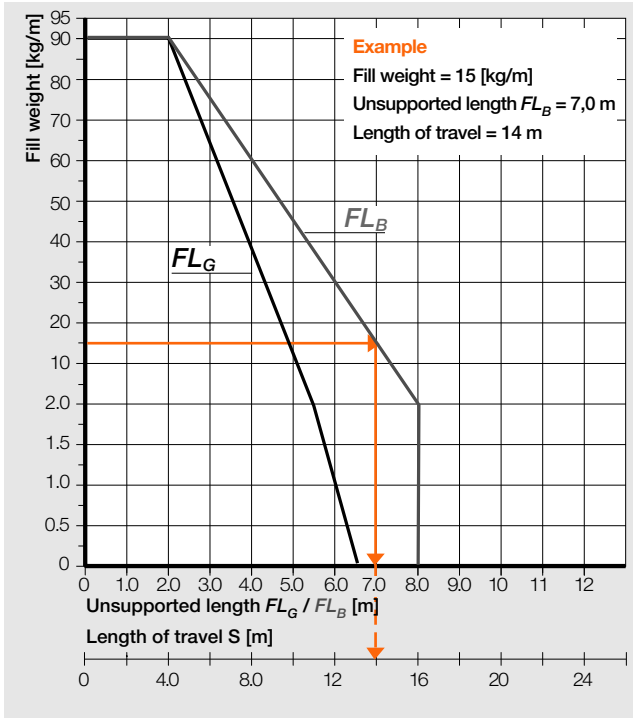


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ► www.igus.de/en/840

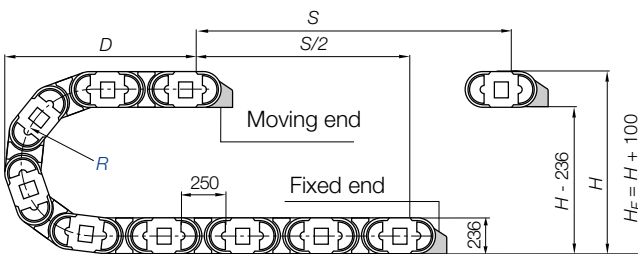


Standard **Unsupported applications**

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design**, page 1.8

Gliding applications

Travels up to 450 m.
 More information ► **page 7.146**



Technical Data

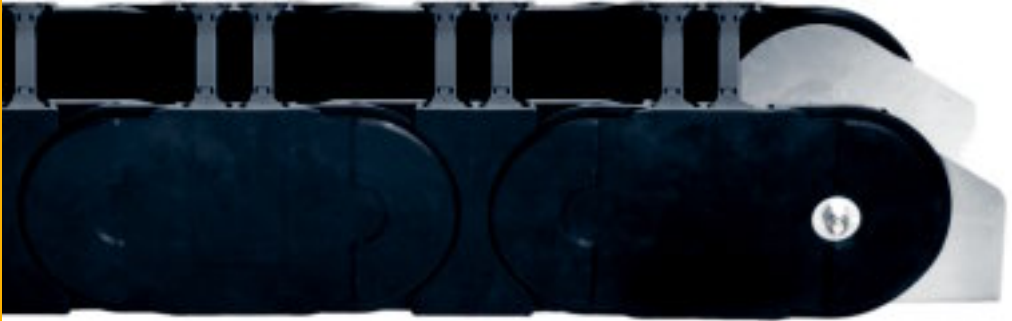
Speed, material, temperature and flammability class ► **page 7.16**

- Pitch** = 250 mm/link
- Links/m** = 4 (1000 mm)
- Chain length** = $\frac{S}{2} + K$

R	325	350	400	450	500	600	750	1000
H	886	936	1036	1136	1236	1436	1736	2236
D	725	750	800	850	900	1000	1150	1400
K	1525	1600	1760	1915	2075	2385	2860	3645

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

- i** FL_G = with straight upper run
 FL_B = with permitted sag
- S** = Length of travel
R = Bending radius
- H** = Nominal clearance height
 H_F = Required clearance height
- D** = Overlength e-chain®, radius in final position
K = $\pi \cdot R +$ "safety"



e-chains® | Series 840 with crossbars every link

Part No.	<i>Bi</i>	<i>Ba</i>	840
crossbars every link	[mm]	[mm]	[kg/m]
840. 13. <i>R.0</i>	100	160	≈ 13,84
840. 15. <i>R.0</i>	113	173	≈ 13,87
840. 16. <i>R.0</i>	125	185	≈ 13,95
840. 17. <i>R.0</i>	138	198	≈ 14,04
840. 18. <i>R.0</i>	150	210	≈ 14,13
840. 20. <i>R.0</i>	163	223	≈ 14,17
840. 21. <i>R.0</i>	175	235	≈ 14,22
840. 22. <i>R.0</i>	188	248	≈ 14,27
840. 23. <i>R.0</i>	200	260	≈ 14,35
840. 25. <i>R.0</i>	213	273	≈ 14,43
840. 26. <i>R.0</i>	225	285	≈ 14,49
840. 27. <i>R.0</i>	238	298	≈ 14,57

Part No.	<i>Bi</i>	<i>Ba</i>	840
crossbars every link	[mm]	[mm]	[kg/m]
840. 28. <i>R.0</i>	250	310	≈ 14,61
840. 30. <i>R.0</i>	263	323	≈ 14,72
840. 31. <i>R.0</i>	275	335	≈ 14,75
840. 32. <i>R.0</i>	288	348	≈ 14,82
840. 33. <i>R.0</i>	300	360	≈ 14,91
840. 35. <i>R.0</i>	313	373	≈ 15,06
840. 36. <i>R.0</i>	325	385	≈ 15,09
840. 37. <i>R.0</i>	338	398	≈ 15,11
840. 38. <i>R.0</i>	350	410	≈ 15,15
840. 40. <i>R.0</i>	363	423	≈ 15,34
840. 41. <i>R.0</i>	375	435	≈ 15,39
840. 42. <i>R.0</i>	388	448	≈ 15,50

Part No.	<i>Bi</i>	<i>Ba</i>	840
crossbars every link	[mm]	[mm]	[kg/m]
840. 43. <i>R.0</i>	400	460	≈ 15,57
840. 45. <i>R.0</i>	413	473	≈ 15,63
840. 46. <i>R.0</i>	425	485	≈ 15,69
840. 47. <i>R.0</i>	438	498	≈ 15,72
840. 48. <i>R.0</i>	450	510	≈ 15,80
840. 50. <i>R.0</i>	463	523	≈ 15,87
840. 51. <i>R.0</i>	475	535	≈ 15,91
840. 52. <i>R.0</i>	488	548	≈ 15,93
840. 53. <i>R.0</i>	500	560	≈ 16,00
840. 55. <i>R.0</i>	513	573	≈ 16,31
840. 60. <i>R.0</i>	563	623	≈ 16,47

Available bending radii *R* [mm] **325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000**

Supplement Part No. with required radius (*R*). Example: **840.40.400.0**



840.40.400.0 = e-chain® with crossbars every link, inner width *Bi* 363 mm, radius *R* 400 mm, color black

More order examples, variations and configurations ► page 7.148



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



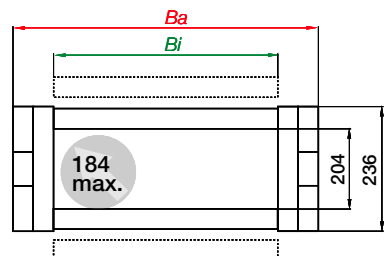
Order key

840. 40. 400. 0



- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning





NC-Version | Without pretension

Part No. crossbars every link	<i>Bi</i> [mm]	Part No. crossbars every link	<i>Bi</i> [mm]	Part No. crossbars every link	<i>Bi</i> [mm]
840. 13. <i>R.0.NC</i>	100	840. 28. <i>R.0.NC</i>	250	840. 43. <i>R.0.NC</i>	400
840. 15. <i>R.0.NC</i>	113	840. 30. <i>R.0.NC</i>	263	840. 45. <i>R.0.NC</i>	413
840. 16. <i>R.0.NC</i>	125	840. 31. <i>R.0.NC</i>	275	840. 46. <i>R.0.NC</i>	425
840. 17. <i>R.0.NC</i>	138	840. 32. <i>R.0.NC</i>	288	840. 47. <i>R.0.NC</i>	438
840. 18. <i>R.0.NC</i>	150	840. 33. <i>R.0.NC</i>	300	840. 48. <i>R.0.NC</i>	450
840. 20. <i>R.0.NC</i>	163	840. 35. <i>R.0.NC</i>	313	840. 50. <i>R.0.NC</i>	463
840. 21. <i>R.0.NC</i>	175	840. 36. <i>R.0.NC</i>	325	840. 51. <i>R.0.NC</i>	475
840. 22. <i>R.0.NC</i>	188	840. 37. <i>R.0.NC</i>	338	840. 52. <i>R.0.NC</i>	488
840. 23. <i>R.0.NC</i>	200	840. 38. <i>R.0.NC</i>	350	840. 53. <i>R.0.NC</i>	500
840. 25. <i>R.0.NC</i>	213	840. 40. <i>R.0.NC</i>	363	840. 55. <i>R.0.NC</i>	513
840. 26. <i>R.0.NC</i>	225	840. 41. <i>R.0.NC</i>	375	840. 60. <i>R.0.NC</i>	563
840. 27. <i>R.0.NC</i>	238	840. 42. <i>R.0.NC</i>	388		

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: **840.40.400.0.NC**



For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. **840.40.400.0.NC** = e-chain® (crossbars every link) without pretension

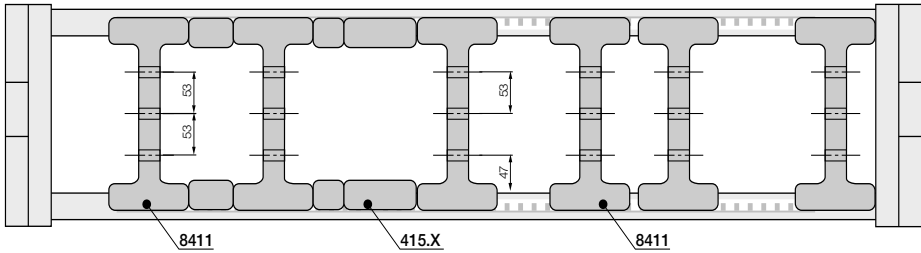


NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods



Part No. of e-chain® links as single parts ► page 7.17



Note: No lateral spacing to side links necessary!

In the standard configuration separators are assembled every 2nd e-chain® link!

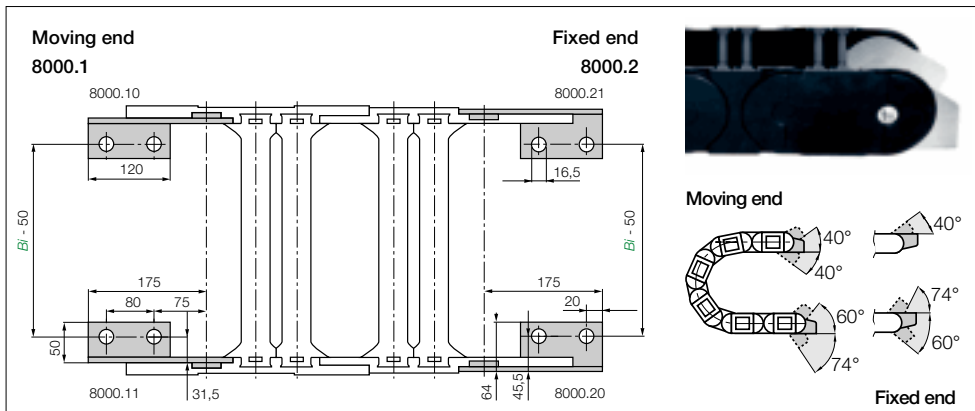
		<p>Separator for e-chains®</p> <p>unassembled 6401 assembled 6411</p>
		<p>Spacer* for e-chains®</p> <p>unassembled 405.XX assembled 415.XX</p>

Separator 8401

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

Spacer* 405.XX

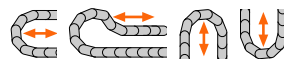
Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). **XX = width of the spacer** (please choose between 10, 15, 20, 30, 40 mm).



Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No.	Mounting bracket
8000.1.12.E	Full attachment set (both sides) for e-chain®, ending with outer side link
8000.3.12.E	Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
8000.1.E	Mounting bracket set moving end (one side) for outer side link
8000.2.E	Mounting bracket set fixed end (one side) for inner side link

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!

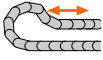


- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
(Material: stainless steel 1.4301)

Note: Depending on the e-chain® length, the carrier will end with **1** outer or **3** inner side links. For the best appearance, make sure the e-chain® ends with **1** outer side link whenever possible. (with odd number of links)

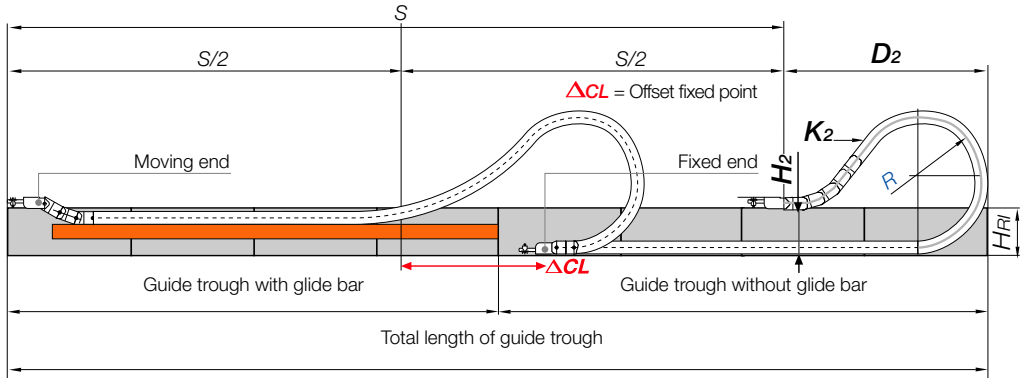


 **Strain relief**, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Gliding applications | For long travels from 15 m to max. 450 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 12 and 15 m we recommend a longer unsupported length.** More information ► **Design**, from page 1.16.



$$\text{Pitch} = 250 \text{ mm/link} \cdot \text{Links/m} = 4 (1000 \text{ mm}) \cdot \text{Chain length} = \frac{S}{2} + K$$

R	325	350	400	450	500	600	750	1000
H_2	580	580	580	580	580	580	580	580
D_2^{+25}	1030	1080	1380	1610	2000	2480	*	*
K_2	2000	2000	2500	3000	3250	4000	*	*
ΔCL	250	300	550	750	1050	1400	*	*

*upon request!



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



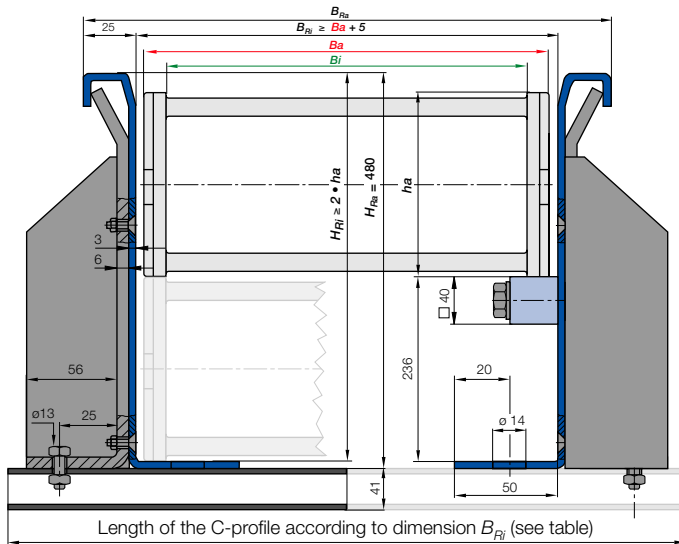
H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔCL = Offset fixed point
 H_{RI} = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Steel Guide Troughs



Installation set with C-profile for e-chains®

840.13.325.0 ▶ Order example

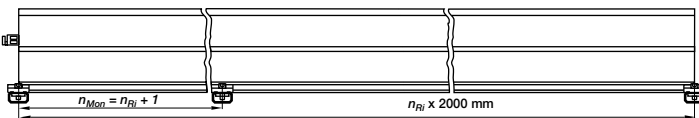
B_{Ri} [mm]	Part No. Installation set
.13	165 90.50.350
.15	178 90.50.350
.16	190 90.50.375
.17	203 90.50.375
.18	215 90.50.400
.20	228 90.50.400
.21	240 90.50.425
.22	253 90.50.425
.23	265 90.50.450
.25	278 90.50.450
.26	290 90.50.475
.27	303 90.50.475
.28	315 90.50.500
.30	328 90.50.500
.31	340 90.50.525
.32	353 90.50.525
.33	365 90.50.550
.35	378 90.50.550
.36	390 90.50.575
.37	403 90.50.575
.38	415 90.50.600
.40	428 90.50.600
.41	440 90.50.625
.42	453 90.50.625
.43	465 90.50.650
.45	478 90.50.650
.46	490 90.50.675
.47	503 90.50.675
.48	515 90.50.700
.50	528 90.50.700
.51	540 90.50.725
.52	553 90.50.725
.53	565 90.50.750
.55	578 90.50.750
.60	628 90.50.800

- Guide trough without glide bars **Part No. 90.30**
- Guide trough with glide bars **Part No. 90.31**
- Installation sets as end connectors **Part No. 90.50.XX**

.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.





Order example: Length of travel 30 m - Center mounted for Series 840.13.325.0 with $B_{Ri} = 165$

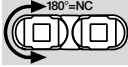
- Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 90.30**
- Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 90.31**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets **Part No. 90.50.350**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details on steel guide troughs ▶ from page 9.60

-  Trough set
-  Installation set
-  Glide bar
-  C-Profile
- Ba = Outer width e-chains®
- Bi = Inner width e-chains®
- B_{Ri} = Inner trough width
- B_{Ro} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ro} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

*Standard**Simply turn outer side link without additional work**Reverse bending radius for circular movements**Unsupported lengths +25% possible**ATEX/ESD classified e-chains® - II 2 GD***Part No. Standard e-chains****Part No. NC-Material e-chains****Part No. RBR e-chains®****Part No. XXL-Material** e-chains®****Part No. ESD-Material e-chains®****840.40.R.0**

Crossbar every link

840.40.R.0.NC

Crossbar every link

840.40.R1/R2.0

Crossbar every link

840.40.R.0.XXL**840.40.R.0.ESD**

Crossbar every link

**Delivery in 24h or today!*****Delivery in 24h or today!*****Delivery time: 10 work days**

(2-5 work days with express surcharge)

Delivery time: 1-2 weeks

**Sidebands made from XXL-Material

Delivery time: 5 work days

Combination possibilities | Examples

	NC-Version	RBR-Version	XXL-Material	ESD-Material
NC-Version		-	-	840.30.R.0.ESD.NC
RBR-Version	-		-	840.30.R1/R2.0.ESD
XXL-Material	-	-		-
ESD - Material*	840.30.R.0.ESD.NC	840.30.R1/R2.0.ESD	-	

*for gliding applications please consult igus®

E4.1 | Series 840 | Options and order key

Order example | Order key and color options



Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 12 links **840.40.400.0**

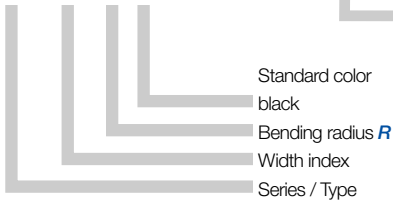
+ **Mounting brackets** Full attachment set (both sides), ending with outer side link **8000.1.12**

+ **Interior separation** with 2 separators assembled every 2nd link **2 x 8411**

Order text: 3,0 m 840.40.400.0 + 8000.1.12 + 2 x Part No. 8411



Order key
840.40.400.0



Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods

Steel mounting brackets

Highly resistant to wear, corrosion and sea water

Electrically insulating

Straight run due to the inner/outer link principle

Very high capacity due to the undercut design

Low noise operation due to integrated "brake"

Rollers for less abrasion optional

⊕ Largest all-plastic e-chain®, extreme inner height 350 mm

When to use Series E4.350:

- If the world's largest all-plastic e-chain® (issue 04/2010) with an inner height of 350 mm is required
- For a very huge interior up to a diagonal of 42" and an inner width up to 1000 mm
- For unsupported lengths up to 6,5 m and fill weights >100 kg/m
- For large, heavy and stiff cables
- Ideal for rough use on oil platforms, in steel plants, or in heavy duty machinery
- Maintenance-free - no grease or oil needed to lubricate the joints
- Less abrasion due to rollers

⚠ Please ask for additional support for this series. An optimal dimensioning is done by the igus® project team!

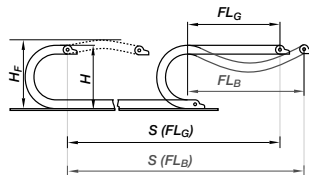
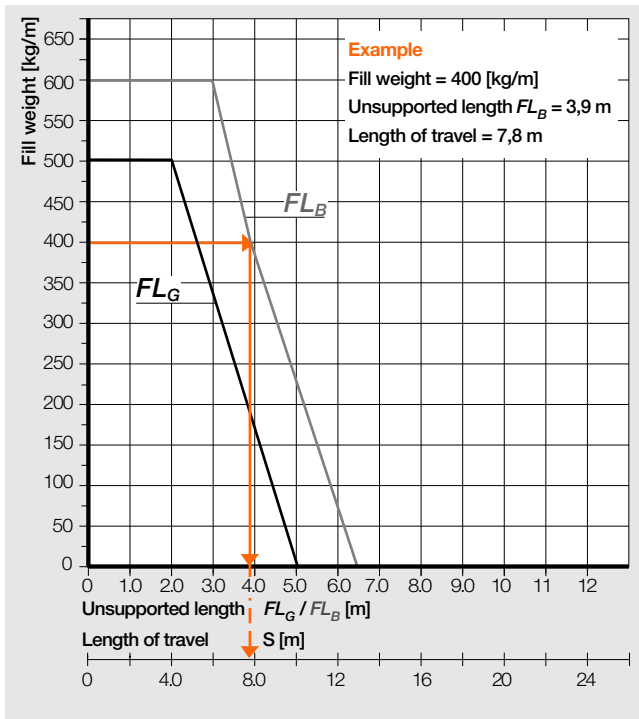


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ► www.igus.de/en/E4.350



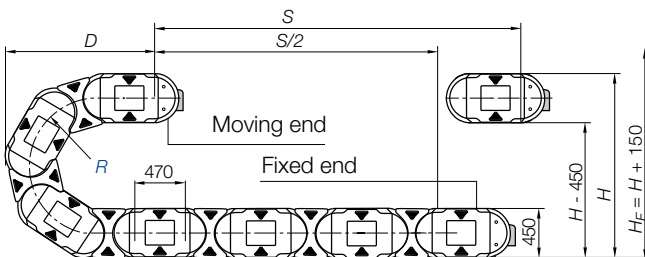
Standard Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► [Design, page 1.8](#)

Technical Data

Speed, material, temperature and flammability class ► [page 7.16](#)

- Pitch** = 470 mm/link
- Links/m** = 2 (940 mm)
- Chain length** = $S/2 + K$



	500	750	1000
H_{+25}^0	1450	1950	2450
D	1195	1445	1695
K	2515	3300	4085

The required clearance height: $H_F = H + 150$ mm

- FL_G = with straight upper run
- FL_B = with permitted sag
- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- D = Overlength e-chain, radius in final position
- $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series E4.350 with crossbars every link

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.350 [kg/m]
E4.350. 400. <i>R.0</i>	400	540	61,9
E4.350. 500. <i>R.0</i>	500	640	65,7
E4.350. 600. <i>R.0</i>	600	740	69,6

Part No. crossbars every link	<i>Bi</i> [mm]	<i>Ba</i> [mm]	E4.350 [kg/m]
E4.350. 700. <i>R.0</i>	700	840	73,4
E4.350. 800. <i>R.0</i>	800	940	77,2

Available bending radii *R* [mm] 500 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: E4.350.500.500.0



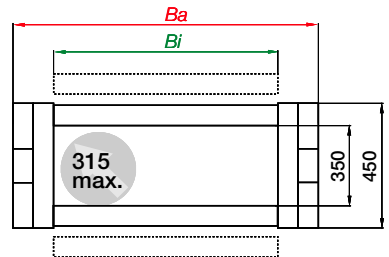
Order key

E4.350. 500. 500. 0



- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning

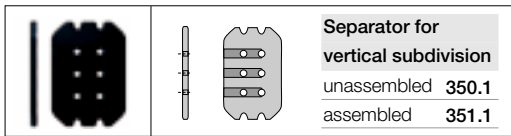
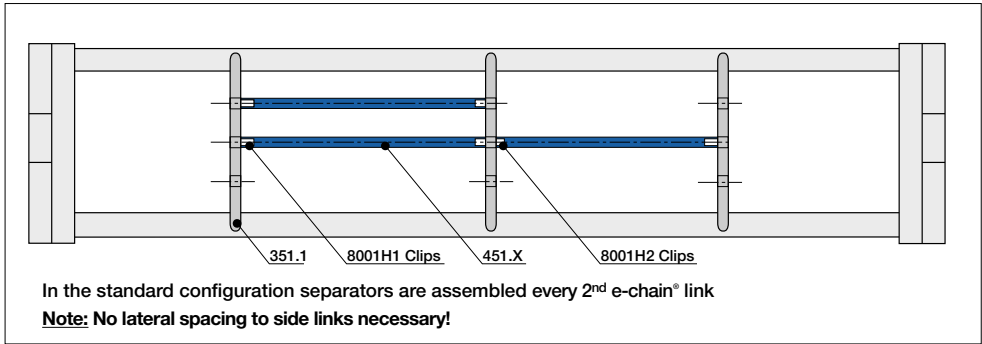


E4.350.500.500.0 = e-chain® with crossbars every link, inner width *Bi* 500 mm, radius *R* 500 mm, color black
More order examples, variations and configurations ► page 7.155



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



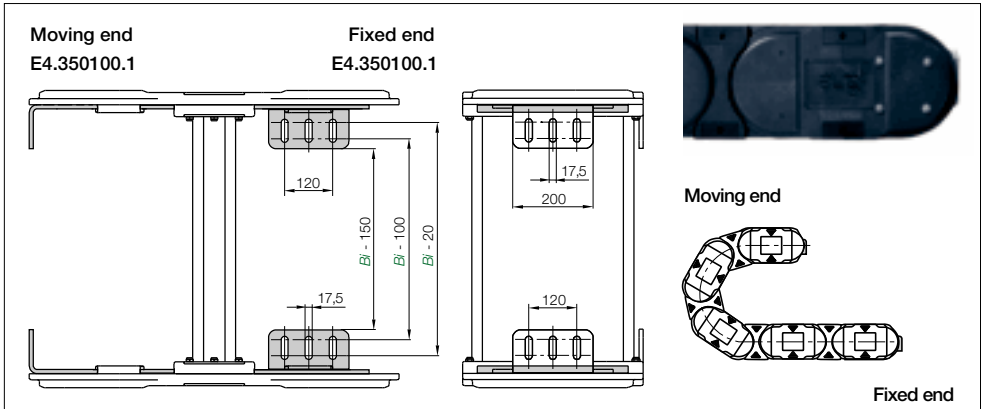
Separator for vertical subdivision 350.1
 For a vertical subdivision 450.X in 3 levels.



Shelf for horizontal subdivision 450.X
 For horizontal separation with clips separators for vertical subdivision. Horizontal shelves of various widths can be arranged at 3 different levels.

Horizontal shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
50	450.50	451.50	225	450.225	451.225	400	450.400	451.400
65	450.65	451.65	237	450.237	451.237	412	450.412	451.412
75	450.75	451.75	250	450.250	451.250	425	450.425	451.425
87	450.87	451.87	262	450.262	451.262	437	450.437	451.437
100	450.100	451.100	275	450.275	451.275	450	450.450	451.450
112	450.112	451.112	287	450.287	451.287	462	450.462	451.462
125	450.125	451.125	300	450.300	451.300	475	450.475	451.475
137	450.137	451.137	312	450.312	451.312	487	450.487	451.487
150	450.150	451.150	325	450.325	451.325	500	450.500	451.500
162	450.162	451.162	337	450.337	451.337	512	450.512	451.512
175	450.175	451.175	350	450.350	451.350	525	450.525	451.525
187	450.187	451.187	362	450.362	451.362	537	450.537	451.537
200	450.200	451.200	375	450.375	451.375	550	450.550	451.550
212	450.212	451.212	387	450.387	451.387	600	450.600	451.600



Steel mounting brackets

Part No.	Mounting bracket
----------	------------------

E4.350100.1.12.E	Full attachment set (both sides) for e-chain®, ending with outer side link
------------------	--

E4.350100.1.E	Mounting bracket set (one side) for outer side link
---------------	---

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
(Material: stainless steel 1.4301)



Robust steel mounting bracket for secure fixation and connection

E4.1 | Series E4.350 | Order key

Order example | Order key and color options



Order example for complete e-chain® (3,0 m, with crossbars every link),
color black, mounting brackets and interior separation

e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 6 links **E4.350.500.500.0**

+ Mounting brackets Full attachment set (both sides), ending with outer side link **E4.350100.1.12**

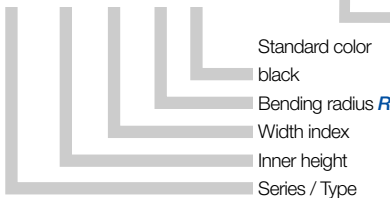
+ Interior separation with 2 separators assembled every 2nd link **2 x 350.1**

Order text: 3,0 m E4.350.500.500.0 + E4.350100.1.12 + 2 x Part No. 350.1



Order key

E4.350.500.500.0



Color options for e-chains® and e-tubes

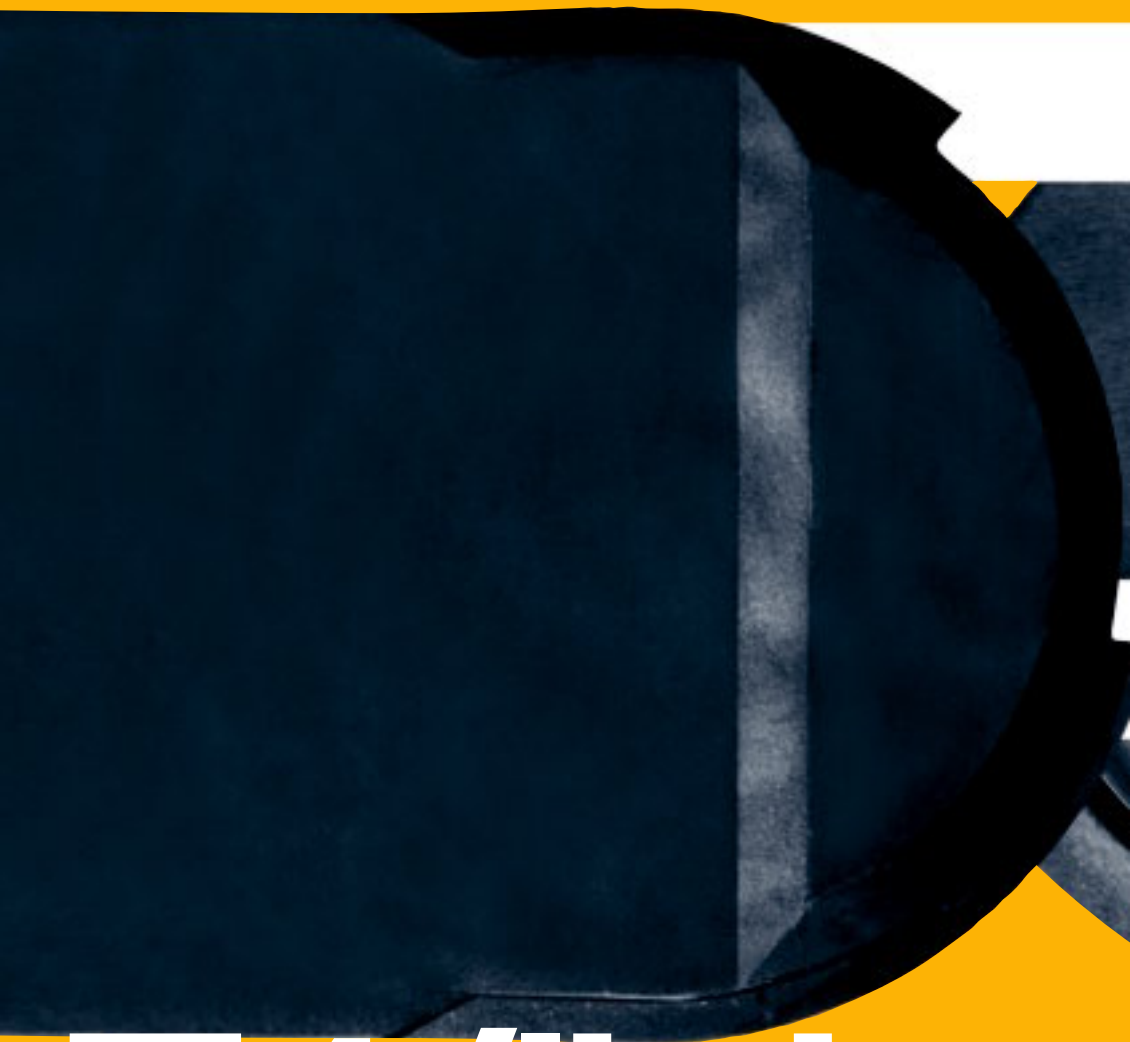
Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



E4/light

7.156



hooks.

claws.

Weight and price reduction -
"light Design" with
thinner crossbars

E4/light - light, stable and cost-effective

E4/light - Weight reduction, a large interior space and price reduction result as well as a compromise in strength. The "light" features appear in two places: A reduced thickness of the side links (for all types), and a thinner crossbar (for some types: 14240, 14340). E4/light e-chains® achieve optimum price-performance solutions for many industries. Especially for unsupported short travels, hanging and short standing designs. E4/light types are often first choice.

Typical industries and applications

- Machine tools
- Material handling
- Stone cutting machines
- Woodworking machines
- General machinery
- Vehicles
- Construction machinery
- Limited long travel applications



Special equipment: Electrically conductive ESD/ATEX version upon request



Side-mounted -
unsupported



High torsional
rigidity



System E4 -
4-piece design link





E4/light e-chains® and e-tubes are ideal in machine tools



E4/light is popular for hanging applications



With the space-saving igus® E4 e-chains® the overall dimension for the installation of this crane system was considerably reduced

E4/light | Content Overview | Selection Table

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]	Bending radius <i>R</i> [mm]	Unsupported length max. [m]	page
--------	--------------------------------	-------------------------------	-------------------------------	--------------------------------	---------------------------------	--------------------------------	------



Crossbars every link
for particularly demanding
applications

14040	56	50 - 600	76 - 626	84	135 - 500	4,0	7.164
14240	62	50 - 400	76 - 426	84	135 - 500	4,0	7.182
14550 NEW*	70	50 - 600	77 - 627	98	150 - 600	4,2	7.200
15050	80	50 - 600	80 - 630	108	150 - 600	4,6	7.216
15250 NEW*	86	50 - 400	80 - 430	108	150 - 600	4,6	7.234



Crossbars every 2nd link
for almost all
applications

14140	56	50 - 600	76 - 626	84	135 - 500	4,0	7.164
14340	62	50 - 400	76 - 426	84	135 - 500	4,0	7.182
14650 NEW*	70	50 - 600	77 - 627	98	150 - 600	4,2	7.200
15150	80	50 - 600	80 - 630	108	150 - 600	4,6	7.216
15350 NEW*	86	50 - 400	80 - 430	108	150 - 600	4,6	7.234



e-tubes
fully enclosed,
excellent cable protection

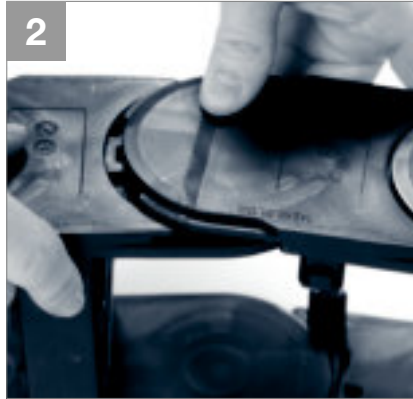
18840	56	75 - 462	101 - 489	84	150 - 500	4,0	7.164
19050 NEW*	70	75 - 462	102 - 489	98	200 - 600	4,2	7.200
19850	80	75 - 462	105 - 493	108	200 - 500	4,6	7.216

***NEW** in this catalog





1 Position side links at one side...
...and snap in



2 Position opposite side,
press together and snap in



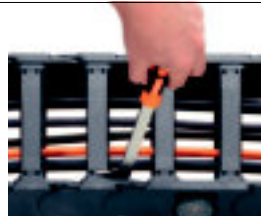
3 Assemble crossbars - push down
and snap in by using a screwdriver



4 e-tube: assemble lids/bottoms -
attach to the connector at an angle - snap in

The **NEW** E4 e-chain® opener reduces assembly time

e-chain® opener tools for convenient opening and closing of E4 series igus® e-chains® ● Especially for e-chains® with many crossbars the assembly is much easier ● Especially in areas difficult to access mounting is simplified big savings in assembly time. Please call us or ► www.igus.eu/E4savetime

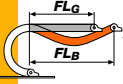


 **Technical data overview** ► next page

 **Part No. of e-chain® links as single parts** ► next page

 **Assembly video available online at** ► www.igus.de/en/E4_assembly

Technical data - E4/light

Speed / acceleration FL_G max.max. 20 [m/s] / max. 200 [m/s²]Speed / acceleration FL_B max.max. 3 [m/s] / max. 6 [m/s²]

Gliding speed / acceleration (maximum)

max. 10 [m/s] / max. 50 [m/s²]

Material - permitted temperature °C

igumid G / -40° up to +120° C











Flammability class, igumid G

VDE 0304 IIC UL94 HB

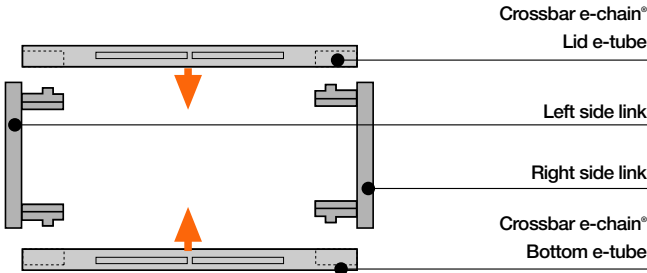
■ FL_G = unsupported with straight upper run ■ FL_B = unsupported with permitted sag

Installation methods overview, maximum travels - E4/light

Series e-chain® / e-tube	 Unsupported	 Gliding	 Vertical hanging	 Vertical standing	 Side-mounted	 Circular	 Zig-zag	 Unsupported length lower run
14040/14140/18840	≤ 4,0 m	≤ 150 m	≤ 80 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
14240/14340	≤ 4,0 m	≤ 150 m	≤ 80 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
14550/14650/19050	≤ 4,2 m	≤ 250 m	≤ 90 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
15050/15150/19850	≤ 4,6 m	≤ 250 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
15250/15350	≤ 4,6 m	≤ 250 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request



Part No. 4-piece e-chain® links as single parts - E4/light



Series	Crossbar* e-chain®	Lid* e-tube	Bottom* e-tube	Left side link**	Right side link***
14040/14140/18840	450. <i>Bi</i>	885. <i>Bi</i>	886. <i>Bi</i>	14040.01. <i>R</i>	14040.02. <i>R</i>
14240/14340	385. <i>Bi</i>	–	–	14240.01. <i>R</i>	14240.02. <i>R</i>
14550/14650/19050	450. <i>Bi</i>	885. <i>Bi</i>	886. <i>Bi</i>	14550.01. <i>R</i>	14550.02. <i>R</i>
15050/15150/19850	450. <i>Bi</i>	885. <i>Bi</i>	886. <i>Bi</i>	15050.01. <i>R</i>	15050.02. <i>R</i>
15250/15350	385. <i>Bi</i>	–	–	15250.01. <i>R</i>	15250.02. <i>R</i>

* Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 450.150

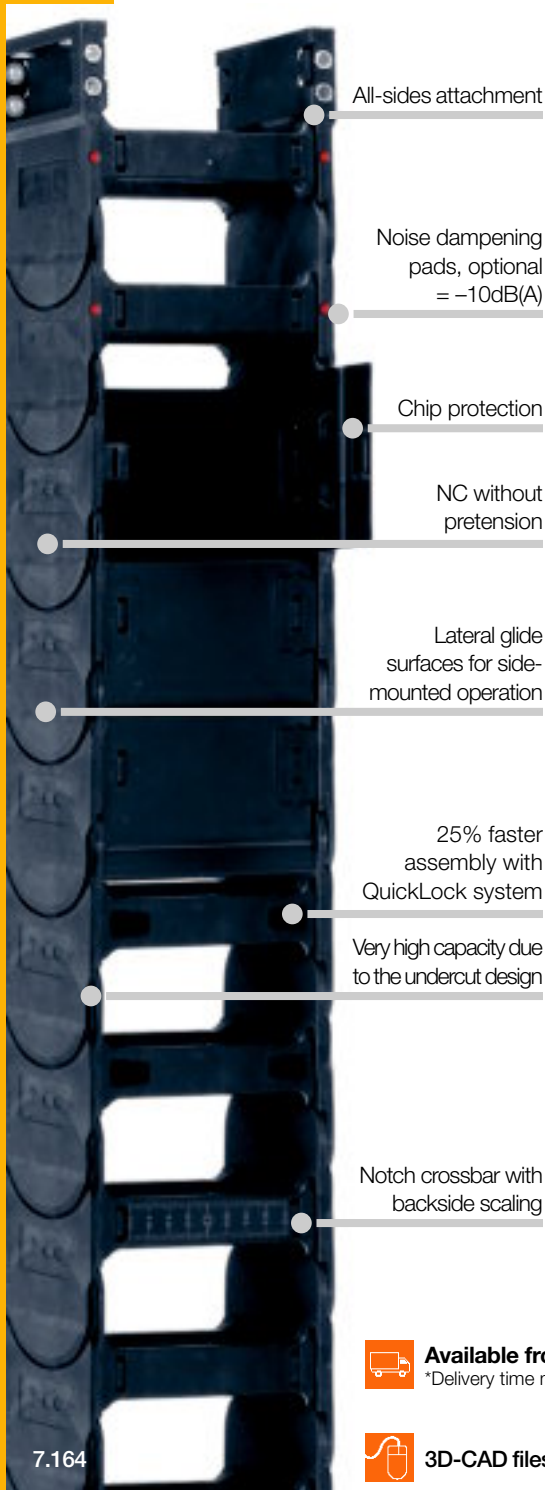
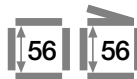
** Left side link - supplement Part No. with required radius (*R*). Example: 14040.01.100

*** Right side link - supplement Part No. with required radius (*R*). Example: 14040.02.100



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



All-sides attachment

Noise dampening pads, optional
= -10dB(A)

Chip protection

NC without pretension

Lateral glide surfaces for side-mounted operation

25% faster assembly with QuickLock system

Very high capacity due to the undercut design

Notch crossbar with backside scaling

⊕ Light Design, large inner height

When to use Series 14040-14140-18840:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 56 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 40 kg/m
- For long travels up to 150 m
- Also suitable for side-mounted, vertical standing or hanging applications



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤46 dB(A))
- ▶ **Series E6.52, page 8.66**
- If larger unsupported lengths are required in side-mounted applications
- ▶ **Series E4.56, page 7.78**
- If increased unsupported lengths and longer travels are required
- ▶ **Series E4.56, page 7.78**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.161

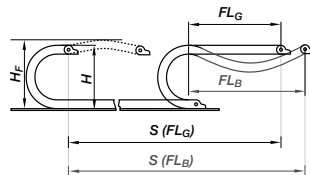
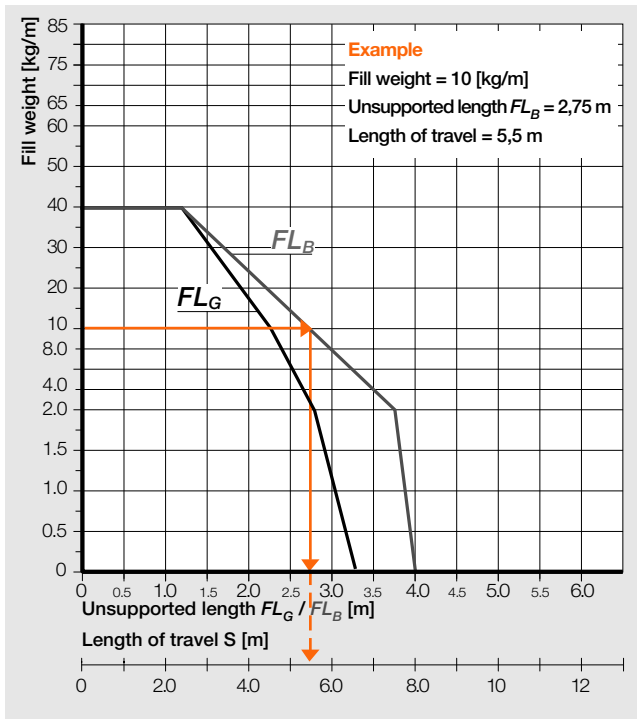


Available from stock. **Delivery in 24h or today!***

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/14040

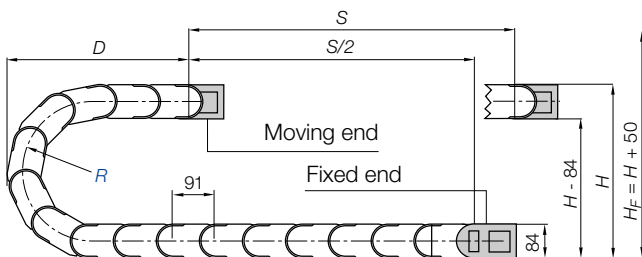


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 150 m.
 More information ► **page 7.178**



Technical Data

Speed, material, temperature and flammability class ► **page 7.162**

- Pitch** = 91 mm/link
- Links/m** = 11 (1001 mm)
- Chain length** = $S/2 + K$

R	135	150	175	200	250	300	400	500
H_{+25}^0	360	385	435	485	585	685	885	1085
D	270	285	310	335	385	435	535	635
K	650	750	825	900	1050	1225	1450	1775

The required clearance height: $H_F = H + 50$ mm (with 2,0 kg/m fill weight)

- FL_G = with straight upper run
- FL_B = with permitted sag
- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- D = Overlength e-chain*, radius in final position
- K = $\pi \cdot R +$ "safety"



e-chains® | Series 14040 crossbars every link | Series 14140 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	14040	14140
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
14040.14140.05.R.0	50	76	≈ 2,66	≈ 2,48
14040.14140.06.R.0	65	91	≈ 2,47	≈ 2,51
14040.14140.07.R.0	75	101	≈ 2,75	≈ 2,25
14040.14140.08.R.0	87	113	≈ 2,84	≈ 2,44
14040.14140.10.R.0	100	126	≈ 2,93	≈ 2,61
14040.14140.11.R.0	112	139	≈ 3,06	≈ 2,67
14040.14140.12.R.0	125	151	≈ 3,12	≈ 2,71
14040.14140.13.R.0	137	164	≈ 3,26	≈ 2,77
14040.14140.15.R.0	150	176	≈ 3,32	≈ 2,81
14040.14140.16.R.0	162	189	≈ 3,43	≈ 2,86
14040.14140.17.R.0	175	201	≈ 3,54	≈ 2,92
14040.14140.18.R.0	187	214	≈ 3,65	≈ 2,97
14040.14140.20.R.0	200	226	≈ 3,67	≈ 2,98
14040.14140.21.R.0	212	239	≈ 3,78	≈ 3,04
14040.14140.22.R.0	225	251	≈ 3,85	≈ 3,07
14040.14140.23.R.0	237	264	≈ 3,98	≈ 3,14
14040.14140.25.R.0	250	276	≈ 4,07	≈ 3,18
14040.14140.26.R.0	262	289	≈ 4,16	≈ 3,22
14040.14140.27.R.0	275	301	≈ 4,27	≈ 3,28
14040.14140.28.R.0	287	314	≈ 4,29	≈ 3,29
14040.14140.30.R.0	300	326	≈ 4,51	≈ 3,40

Part No.	<i>Bi</i>	<i>Ba</i>	14040	14140
crossbars every 2 nd link	[mm]	[mm]	[kg/m]	[kg/m]
14040.14140.31.R.0	312	339	≈ 4,57	≈ 3,42
14040.14140.32.R.0	325	351	≈ 4,60	≈ 3,44
14040.14140.33.R.0	337	364	≈ 4,77	≈ 3,53
14040.14140.35.R.0	350	376	≈ 4,93	≈ 3,61
14040.14140.36.R.0	362	389	≈ 4,94	≈ 3,61
14040.14140.37.R.0	375	401	≈ 4,95	≈ 3,62
14040.14140.38.R.0	387	414	≈ 5,04	≈ 3,66
14040.14140.40.R.0	400	426	≈ 5,24	≈ 3,76
14040.14140.41.R.0	412	439	≈ 5,39	≈ 3,84
14040.14140.42.R.0	425	451	≈ 5,54	≈ 3,92
14040.14140.43.R.0	437	464	≈ 5,61	≈ 3,95
14040.14140.45.R.0	450	476	≈ 5,68	≈ 3,98
14040.14140.46.R.0	462	489	≈ 5,70	≈ 3,99
14040.14140.47.R.0	475	501	≈ 5,83	≈ 4,06
14040.14140.48.R.0	487	514	≈ 5,86	≈ 4,08
14040.14140.50.R.0	500	526	≈ 5,96	≈ 4,13
14040.14140.51.R.0	512	539	≈ 5,98	≈ 4,14
14040.14140.52.R.0	525	551	≈ 6,03	≈ 4,16
14040.14140.53.R.0	537	564	≈ 6,18	≈ 4,24
14040.14140.55.R.0	550	576	≈ 6,67	≈ 4,48
14040.14140.60.R.0	600	626	≈ 6,98	≈ 4,58

Available bending radii R [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (R). Example: 14040.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.163



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series 18840 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	18840 [kg/m]
18840. 07. <i>R.0*</i>	75	101	≈ 3,20
18840. 10. <i>R.0</i>	100	126	≈ 3,49
18840. 12. <i>R.0</i>	125	151	≈ 3,85
18840. 15. <i>R.0</i>	150	176	≈ 4,28
18840. 17. <i>R.0</i>	175	201	≈ 4,54
18840. 20. <i>R.0</i>	200	226	≈ 4,85

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	18840 [kg/m]
18840. 25. <i>R.0</i>	250	276	≈ 5,58
18840. 27. <i>R.0</i>	275	301	≈ 5,85
18840. 30. <i>R.0</i>	300	326	≈ 6,24
18840. 35. <i>R.0</i>	350	376	≈ 6,99
18840. 40. <i>R.0</i>	400	426	≈ 7,94
18840. 46. <i>R.0</i>	462	489	≈ 8,40

Available bending radii *R* [mm] 150 | 175 | 200 | 250 | 300 | 400 | 500

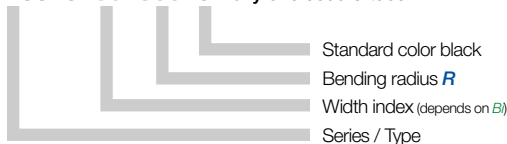
*Removable lid only, no hinged option

Supplement Part No. with required radius (*R*). Example: 18840.30.300.0

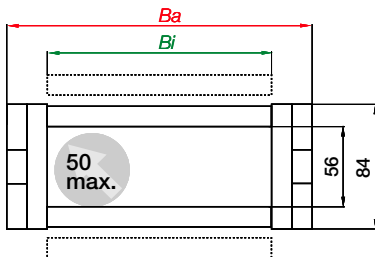
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

- 14040. 30. 300. 0 e-chain® (crossbars every link)
- 14140. 30. 300. 0 e-chain® (crossbars every 2nd link)
- 18840. 30. 300. 0 Fully enclosed e-tube



Dimensioning



-  14040.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - 14140.30.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - 18840.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.180

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods

14040
14140
18840

E4/light | 14040-14140-18840 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]
14040.14140.	15QZ.R.0	15QE.R.0	15Q.R.0	150	
14040.14140.	16QZ.R.0	16QE.R.0	16Q.R.0	162	
14040.14140.	17QZ.R.0	17QE.R.0	17Q.R.0	175	
14040.14140.	18QZ.R.0	18QE.R.0	18Q.R.0	187	
14040.14140.	20QZ.R.0	20QE.R.0	20Q.R.0	200	
14040.14140.	21QZ.R.0	21QE.R.0	21Q.R.0	212	
14040.14140.	22QZ.R.0	22QE.R.0	22Q.R.0	225	
14040.14140.	23QZ.R.0	23QE.R.0	23Q.R.0	237	
14040.14140.	25QZ.R.0	25QE.R.0	25Q.R.0	250	
14040.14140.	26QZ.R.0	26QE.R.0	26Q.R.0	262	
14040.14140.	27QZ.R.0	27QE.R.0	27Q.R.0	275	
14040.14140.	28QZ.R.0	28QE.R.0	28Q.R.0	287	
14040.14140.	30QZ.R.0	30QE.R.0	30Q.R.0	300	
14040.14140.	31QZ.R.0	31QE.R.0	31Q.R.0	312	
14040.14140.	32QZ.R.0	32QE.R.0	32Q.R.0	325	
14040.14140.	33QZ.R.0	33QE.R.0	33Q.R.0	337	
14040.14140.	35QZ.R.0	35QE.R.0	35Q.R.0	350	
14040.14140.	36QZ.R.0	36QE.R.0	36Q.R.0	362	
14040.14140.	37QZ.R.0	37QE.R.0	37Q.R.0	375	
14040.14140.	38QZ.R.0	38QE.R.0	38Q.R.0	387	
14040.14140.	40QZ.R.0	40QE.R.0	40Q.R.0	400	

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]
14040.14140.	41QZ.R.0	41QE.R.0	41Q.R.0	412	
14040.14140.	42QZ.R.0	42QE.R.0	42Q.R.0	425	
14040.14140.	43QZ.R.0	43QE.R.0	43Q.R.0	437	
14040.14140.	45QZ.R.0	45QE.R.0	45Q.R.0	450	
14040.14140.	46QZ.R.0	46QE.R.0	46Q.R.0	462	
14040.14140.	47QZ.R.0	47QE.R.0	47Q.R.0	475	
14040.14140.	48QZ.R.0	48QE.R.0	48Q.R.0	487	
14040.14140.	50QZ.R.0	50QE.R.0	50Q.R.0	500	
14040.14140.	51QZ.R.0	51QE.R.0	51Q.R.0	512	
14040.14140.	52QZ.R.0	52QE.R.0	52Q.R.0	525	
14040.14140.	53QZ.R.0	53QE.R.0	53Q.R.0	537	
14040.14140.	55QZ.R.0	55QE.R.0	55Q.R.0	550	
14040.14140.	60QZ.R.0	60QE.R.0	60Q.R.0	600	

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14040.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. 14040.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. 14040.30QE.300.0 = QuickLock crossbar for outer radius

Part No. 14040.30Q.300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods



Noise dampening | ≈ -10 dB(A)

With pads		<i>Bi</i>	With pads		<i>Bi</i>		
crossbars: every link	e-tube every 2 nd link	fully enclosed [mm]	crossbars: every link	e-tube every 2 nd link	fully enclosed [mm]		
S14040.S14140.	-	05.R.0	50	S14040.S14140.	-	31.R.0	312
S14040.S14140.	-	06.R.0	65	S14040.S14140.	-	32.R.0	325
S14040.S14140.S18840.	07.R.0	75	S14040.S14140.	-	33.R.0	337	
S14040.S14140.	-	08.R.0	87	S14040.S14140.S18840.	35.R.0	350	
S14040.S14140.S18840.	10.R.0	100	S14040.S14140.	-	36.R.0	362	
S14040.S14140.	-	11.R.0	112	S14040.S14140.	-	37.R.0	375
S14040.S14140.S18840.	12.R.0	125	S14040.S14140.	-	38.R.0	387	
S14040.S14140.	-	13.R.0	137	S14040.S14140.S18840.	40.R.0	400	
S14040.S14140.S18840.	15.R.0	150	S14040.S14140.	-	41.R.0	412	
S14040.S14140.	-	16.R.0	162	S14040.S14140.	-	42.R.0	425
S14040.S14140.S18840.	17.R.0	175	S14040.S14140.	-	43.R.0	437	
S14040.S14140.	-	18.R.0	187	S14040.S14140.	-	45.R.0	450
S14040.S14140.S18840.	20.R.0	200	S14040.S14140.S18840.	46.R.0	462		
S14040.S14140.	-	21.R.0	212	S14040.S14140.	-	47.R.0	475
S14040.S14140.	-	22.R.0	225	S14040.S14140.	-	48.R.0	487
S14040.S14140.	-	23.R.0	237	S14040.S14140.	-	50.R.0	500
S14040.S14140.S18840.	25.R.0	250	S14040.S14140.	-	51.R.0	512	
S14040.S14140.	-	26.R.0	262	S14040.S14140.	-	52.R.0	525
S14040.S14140.S18840.	27.R.0	275	S14040.S14140.	-	53.R.0	537	
S14040.S14140.	-	28.R.0	287	S14040.S14140.	-	55.R.0	550
S14040.S14140.S18840.	30.R.0	300	S14040.S14140.	-	60.R.0	600	



NC-Version | Without pretension

NC-Version		<i>Bi</i>	NC-Version		<i>Bi</i>		
crossbars: every link	e-tube every 2 nd link	fully enclosed [mm]	crossbars: every link	e-tube every 2 nd link	fully enclosed [mm]		
14040.14140.	-	05.R.0.NC	50	14040.14140.	-	31.R.0.NC	312
14040.14140.	-	06.R.0.NC	65	14040.14140.	-	32.R.0.NC	325
14040.14140.18840.	07.R.0.NC	75	14040.14140.	-	33.R.0.NC	337	
14040.14140.	-	08.R.0.NC	87	14040.14140.18840.	35.R.0.NC	350	
14040.14140.18840.	10.R.0.NC	100	14040.14140.	-	36.R.0.NC	362	
14040.14140.	-	11.R.0.NC	112	14040.14140.	-	37.R.0.NC	375
14040.14140.18840.	12.R.0.NC	125	14040.14140.	-	38.R.0.NC	387	
14040.14140.	-	13.R.0.NC	137	14040.14140.18840.	40.R.0.NC	400	
14040.14140.18840.	15.R.0.NC	150	14040.14140.	-	41.R.0.NC	412	
14040.14140.	-	16.R.0.NC	162	14040.14140.	-	42.R.0.NC	425
14040.14140.18840.	17.R.0.NC	175	14040.14140.	-	43.R.0.NC	437	
14040.14140.	-	18.R.0.NC	187	14040.14140.	-	45.R.0.NC	450
14040.14140.18840.	20.R.0.NC	200	14040.14140.18840.	46.R.0.NC	462		
14040.14140.	-	21.R.0.NC	212	14040.14140.	-	47.R.0.NC	475
14040.14140.	-	22.R.0.NC	225	14040.14140.	-	48.R.0.NC	487
14040.14140.	-	23.R.0.NC	237	14040.14140.	-	50.R.0.NC	500
14040.14140.18840.	25.R.0.NC	250	14040.14140.	-	51.R.0.NC	512	
14040.14140.	-	26.R.0.NC	262	14040.14140.	-	52.R.0.NC	525
14040.14140.18840.	27.R.0.NC	275	14040.14140.	-	53.R.0.NC	537	
14040.14140.	-	28.R.0.NC	287	14040.14140.	-	55.R.0.NC	550
14040.14140.18840.	30.R.0.NC	300	14040.14140.	-	60.R.0.NC	600	

Available bending radii *R* [mm] 135* | 150 | 175 | 200 | 250 | 300 | 400 | 500 *not available for e-tubes

Supplement Part No. with required radius (*R*). Example: S14040.30.300.0 or 14040.30.300.0.NC



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: Part No. S14040.30.300.0 = e-chain® (crossbars every link) with noise dampening

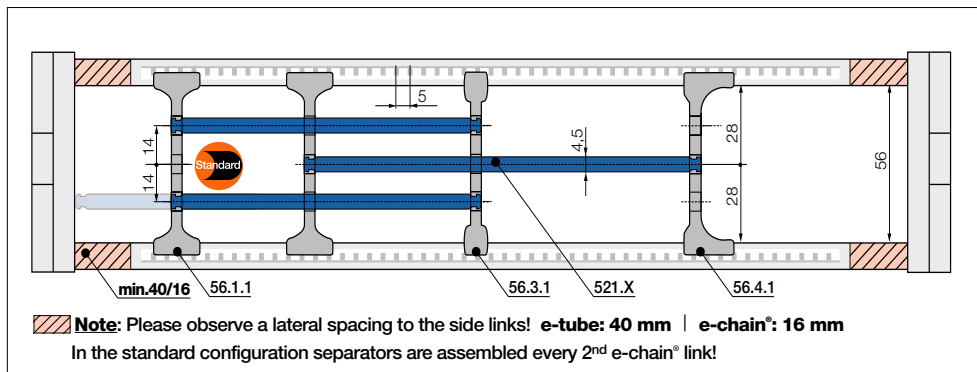
For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. 14040.30.300.0.NC = e-chain® (crossbars every link) without pretension



Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*

*Delivery time means time until shipping of goods



Standard separator, wide base
unassembled **56.1**
assembled **56.1.1**

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.

Separator, narrow base
unassembled **56.3**
assembled **56.3.1**

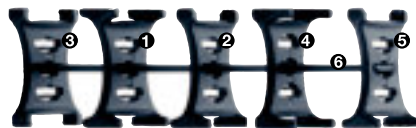
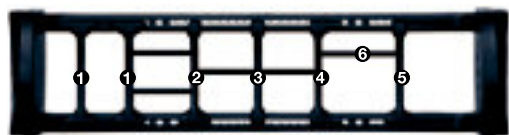
For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

Asymmetrical separator
unassembled **56.4**
assembled **56.4.1**

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



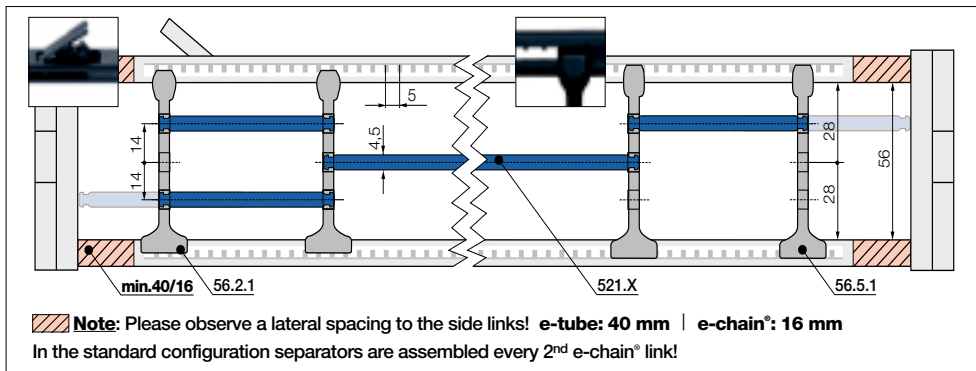
- i** ① Standard separator, wide base - Part No. 56.1 ③ Separator, narrow base - Part No. 56.3 ⑤ Notch separator - Part No. 56.5
- ② Separator for QuickLock crossbar - Part No. 56.2 ④ Separator, asymmetrical - Part No. 56.4 ⑥ Full-width self, lockable - Part No. 520.XX

Interior separation single-part order - Delivery in 24h or today!*



*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
unassembled **56.2**
assembled **56.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
unassembled **56.5**
assembled **56.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
unassembled **520.X**
assembled **521.X**

Horizontal separation

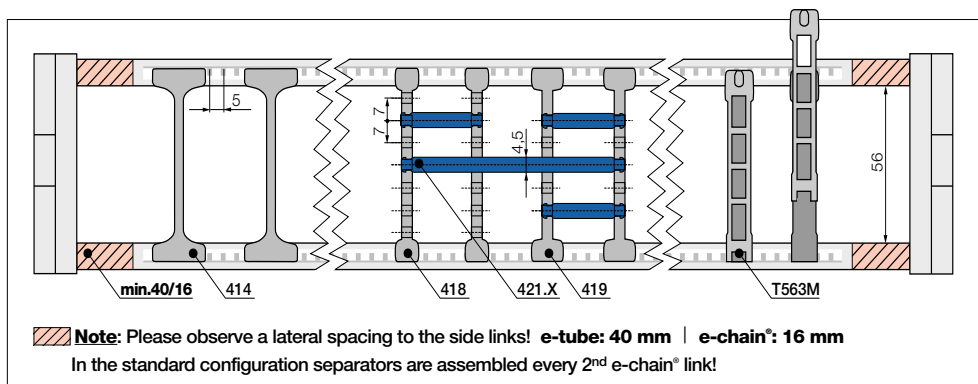


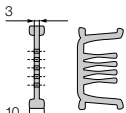
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.



Lockable full-width shelves - for the standard interior separation

Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450


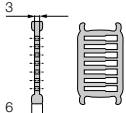
Previous interior separation All elements can still be ordered ► www.igus.de/en/14040

Open slotted separator for e-chains®/e-tubes
unassembled **409**
assembled **419**

Open, slotted separator 409 (unilateral open)



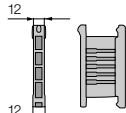
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Slotted separator for e-chains®/e-tubes
unassembled **408**
assembled **418**

Slotted separator 408


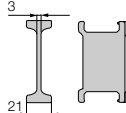
For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

Split separator for e-chains®
unassembled **T563**
assembled **T563M**

Split separator T563 (e-chains® only)


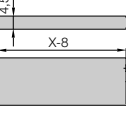
Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

Locking separator for e-chains®
unassembled **404**
assembled **414**

Locking separator 404 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

Shelf
unassembled **420.X**
assembled **421.X**

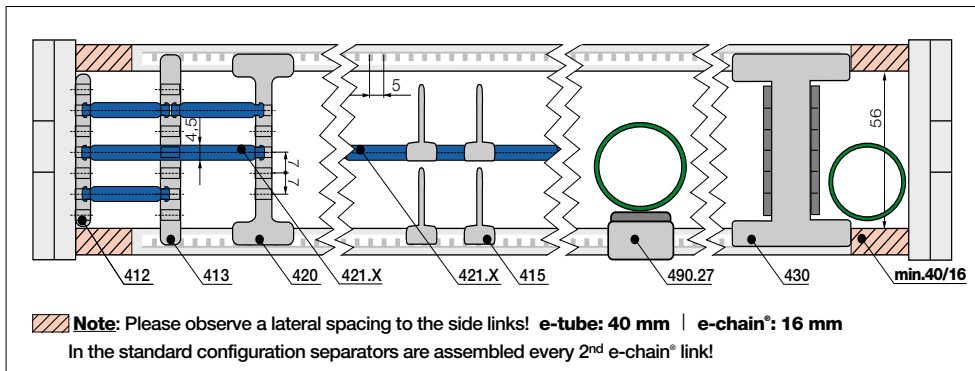
Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments). (not in combination with 404).

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

Previous interior separation All elements can still be ordered ▶ www.igus.de/ev/14040



		Middle plate for e-chains® / e-tubes unassembled 403 assembled 413
		Locking vertical separator for e-chains® unassembled 410 assembled 420
		Side plate for e-chains® / e-tubes unassembled 402 assembled 412

Middle plate 403
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).

Locking vertical separator 410 (e-chains® only)
Works like middle plate, for applications exposed to very high humidity (> 85%).

Side plate 402
Works like middle plate. Allows modular shelving close to the side links.

Additional elements for interior separation

		Center crossbar for e-chains® unassembled 405 assembled 415
		Rollclip for e-chains® unassembled 489.27 assembled 490.27
		Roller separator for e-chains® unassembled 429 assembled 430

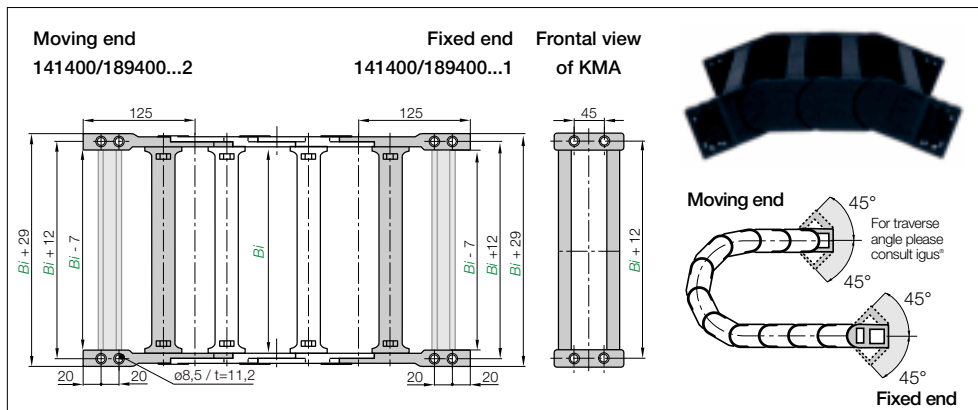
Center crossbar
For applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain® independently into upper and lower halves.

Rollclip
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Roller separator
Performs a similar function to the Rollclip, but doubles as a separator. For rigid cables and hoses.

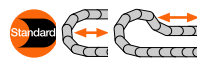
14040·14140·18840 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05. ▶	141400. –	05.12.C 50	31. ▶	141400. –	31.12.C 312
06. ▶	141400. –	06.12.C 65	32. ▶	1404001 –	32.12.C 325
07. ▶	141400. 189400.	07.12.C 75	33. ▶	41400. –	33.12.C 337
08. ▶	141400. –	08.12.C 87	35. ▶	141400. 189400.	35.12.C 350
10. ▶	141400. 189400.	10.12.C 100	36. ▶	1404001 –	36.12.C 362
11. ▶	141400. –	11.12.C 112	37. ▶	41400. –	37.12.C 375
12. ▶	141400. 189400.	12.12.C 125	38. ▶	141400. –	38.12.C 387
13. ▶	141400. –	13.12.C 137	40. ▶	141400. 189400.	40.12.C 400
15. ▶	141400. 189400.	15.12.C 150	41. ▶	141400. –	41.12.C 412
16. ▶	141400. –	16.12.C 162	42. ▶	141400. –	42.12.C 425
17. ▶	141400. 189400.	17.12.C 175	43. ▶	141400. –	43.12.C 437
18. ▶	141400. –	18.12.C 187	45. ▶	141400. –	45.12.C 450
20. ▶	141400. 189400.	20.12.C 200	46. ▶	141400. 189400.	46.12.C 462
21. ▶	141400. –	21.12.C 212	47. ▶	141400. –	47.12.C 475
22. ▶	141400. –	22.12.C 225	48. ▶	141400. –	48.12.C 487
23. ▶	141400. –	23.12.C 237	50. ▶	141400. –	50.12.C 500
25. ▶	141400. 189400.	25.12.C 250	51. ▶	141400. –	51.12.C 512
26. ▶	141400. –	26.12.C 262	52. ▶	141400. –	52.12.C 525
27. ▶	141400. 189400.	27.12.C 275	53. ▶	141400. –	53.12.C 537
28. ▶	141400. –	28.12.C 287	55. ▶	141400. –	55.12.C 550
30. ▶	141400. 189400.	30.12.C 300	60. ▶	141400. –	60.12.C 600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

141400.30.12.C



Single-part order:

Mounting bracket **Moving end**

141400.30.2.C

Mounting bracket **Fixed end**

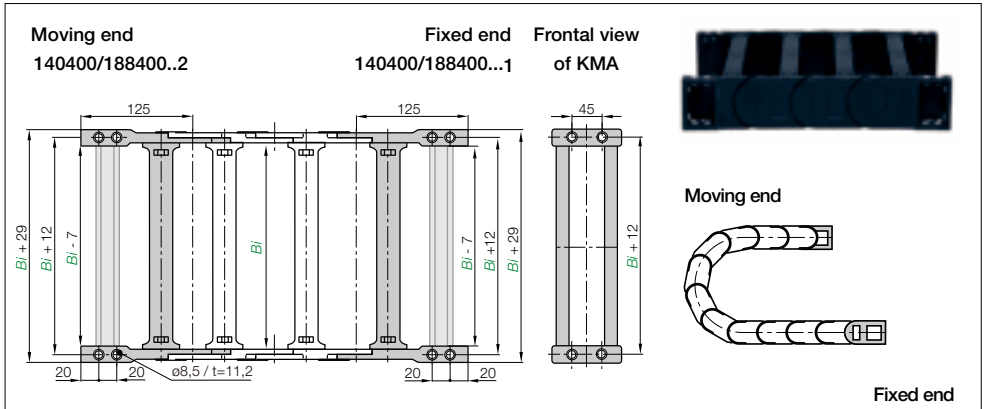
141400.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

14040·14140·18840 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	▶ 140400. -	05.12.C 50	31.	▶ 140400. -	31.12.C 312
06.	▶ 140400. -	06.12.C 65	32.	▶ 140400. -	32.12.C 325
07.	▶ 140400. 188400.	07.12.C 75	33.	▶ 140400. -	33.12.C 337
08.	▶ 140400. -	08.12.C 87	35.	▶ 140400. 188400.	35.12.C 350
10.	▶ 140400. 188400.	10.12.C 100	36.	▶ 140400. -	36.12.C 362
11.	▶ 140400. -	11.12.C 112	37.	▶ 140400. -	37.12.C 375
12.	▶ 140400. 188400.	12.12.C 125	38.	▶ 140400. -	38.12.C 387
13.	▶ 140400. -	13.12.C 137	40.	▶ 140400. 188400.	40.12.C 400
15.	▶ 140400. 188400.	15.12.C 150	41.	▶ 140400. -	41.12.C 412
16.	▶ 140400. -	16.12.C 162	42.	▶ 140400. -	42.12.C 425
17.	▶ 140400. 188400.	17.12.C 175	43.	▶ 140400. -	43.12.C 437
18.	▶ 140400. -	18.12.C 187	45.	▶ 140400. -	45.12.C 450
20.	▶ 140400. 188400.	20.12.C 200	46.	▶ 140400. 188400.	46.12.C 462
21.	▶ 140400. -	21.12.C 212	47.	▶ 140400. -	47.12.C 475
22.	▶ 140400. -	22.12.C 225	48.	▶ 140400. -	48.12.C 487
23.	▶ 140400. -	23.12.C 237	50.	▶ 140400. -	50.12.C 500
25.	▶ 140400. 188400.	25.12.C 250	51.	▶ 140400. -	51.12.C 512
26.	▶ 140400. -	26.12.C 262	52.	▶ 140400. -	52.12.C 525
27.	▶ 140400. 188400.	27.12.C 275	53.	▶ 140400. -	53.12.C 537
28.	▶ 140400. -	28.12.C 287	55.	▶ 140400. -	55.12.C 550
30.	▶ 140400. 188400.	30.12.C 300	60.	▶ 140400. -	60.12.C 600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

140400.30.12.C



Single-part order:

Mounting bracket **Moving end**

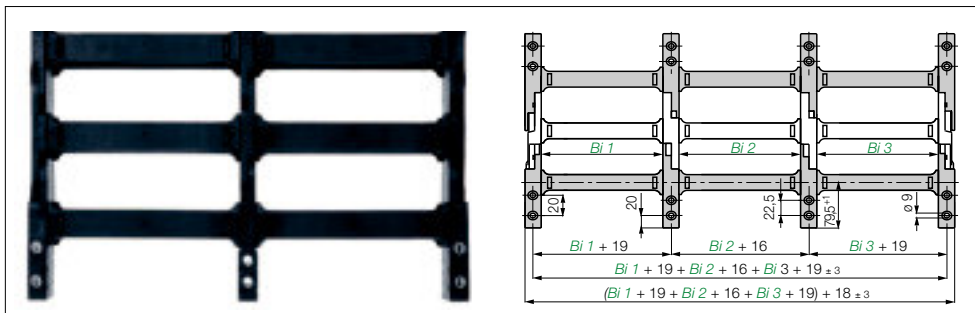
140400.30.1.C

Mounting bracket **Fixed end**

140400.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



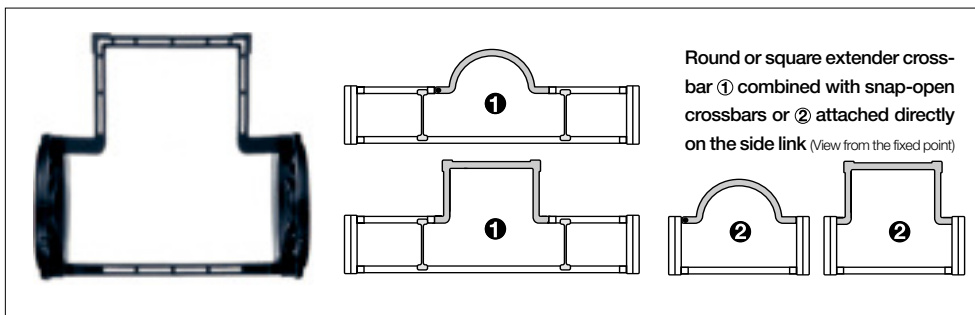
Order example - 3 chambers

14040.Bi1 / Bi2 / Bi3.R.0 =

14040.10 / 20 / 10.200.0

Extension link - single-part order

422.R. (please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

14040.10/15RHD115/10.R.0

RHD115 for inner radius "E" incl. e-chain®:

14040.10/15RHDZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

14040.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

14040.17RDZ115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	180	□ square	yes	no
450.35.D250	195	□ square	yes	no
450.40.D300	245	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	180	□ square	no	yes
450.30.HD250	195	□ square	no	yes



E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains *
- The loops can be adjusted as required
- Compatible with many E4 e-chains * • Stylish and economical
- One clip and one locking band are needed for each e-chain * link



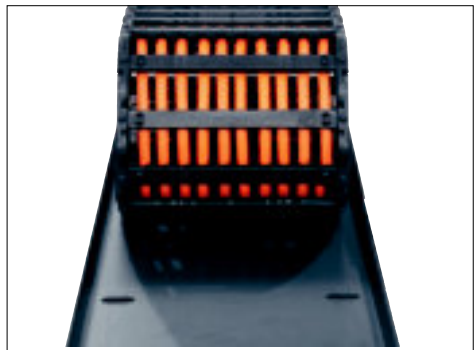
Order example (here: inner width B1 15)
 Locking clip, to open along inner radius Z: *
14040.15.B12.200Z.R.0
 Locking clip, to open along outer radius "E":
14040.15.B12.200E.R.0

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12,5mm

E4/light | 14040-14140-18840 | e-chain® accessories



Strain relief system
 Ramps, tie-wrap plates, nuggets and plug-in clips. The complete chainfixrange with many order options ► **from page 10.1**

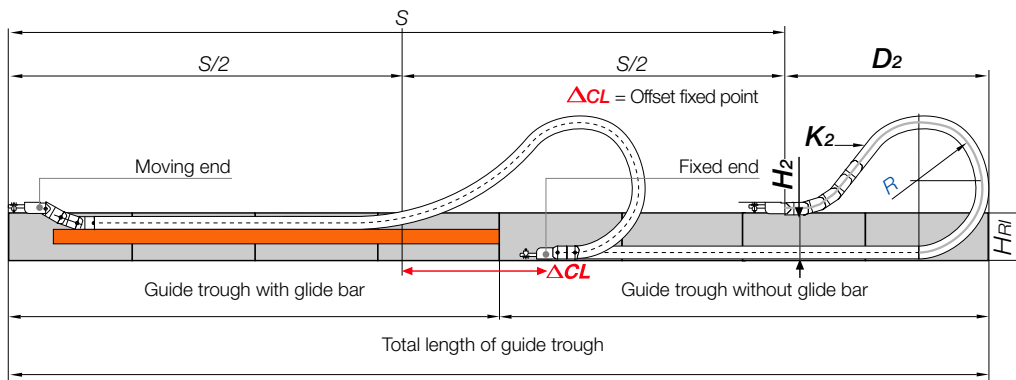


Support tray tool kit
 For support of the lower run. Single one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 12 m to max. 150 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 8 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 91 mm/link · **Links/m** = 11 (1001 mm) · **Chain length** = $\frac{S}{2} + K$

R	135	150	175	200	250	300	400	500
H_2	266	266	266	266	266	266	266	266
D_2^{+25}	390	450	530	710	920	1120	1530	1830
K_2	728	819	1001	1274	1638	1911	2548	3185
ΔACL	124	159	209	359	509	659	959	1159

More solutions | for long travels

System P4.56 - Profile rol e-chain®, low-noise

Travels up to 800 m v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.84

rol e-chain® 4040R - Rolling instead of gliding

Travels up to 800 m v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide 14040.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► upon request

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

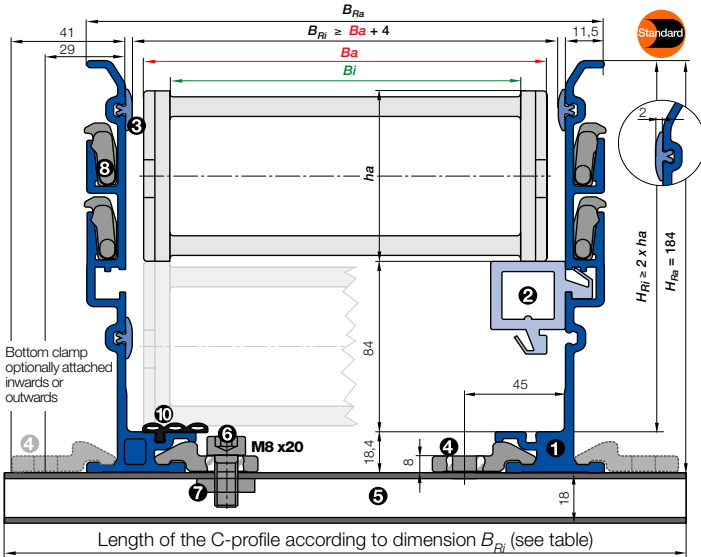
K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔACL = Offset fixed point
 H_R = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Aluminum "SuperTrough" | Basic Version

14040
14140
18840



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ► table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 14040.10.200.0 with $B_{Ri} = 130$

Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 974.31.SL**

Installation set "Basic" complete (guide trough-sets + 1)

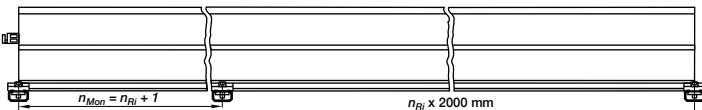
Order text: 17 installation sets **Part No. 960.50.200**

Module for the fixed end ► page 9.16

Order text: 1 set **Part No. 974.80**

Option: For an additional noise dampening

with silencer profile, please add Index A - Example: **Part No. 974.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ► from page 9.35



- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*
- B_{Ra} = Inner trough width
- B_{Ri} = Outer trough width
- H_{Ra} = Inner trough height
- H_{Ri} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

14040.10.200.0 ► Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	960.50.200
.06	95	960.50.225
.07	105	960.50.225
.08	117	960.50.175
.10	130	960.50.200
.11	143	960.50.200
.12	155	960.50.225
.13	168	960.50.225
.15	180	960.50.250
.16	193	960.50.250
.17	205	960.50.275
.18	218	960.50.275
.20	230	960.50.300
.21	243	960.50.300
.22	255	960.50.325
.23	268	960.50.325
.25	280	960.50.350
.26	293	960.50.350
.27	305	960.50.375
.28	318	960.50.375
.30	330	960.50.400
.31	343	960.50.400
.32	355	960.50.425
.33	368	960.50.425
.35	380	960.50.450
.36	393	960.50.450
.37	405	960.50.475
.38	418	960.50.475
.40	430	960.50.500
.41	443	960.50.500
.42	455	960.50.525
.43	468	960.50.525
.45	480	960.50.550
.46	493	960.50.550
.47	505	960.50.575
.48	518	960.50.575
.50	530	960.50.600
.51	543	960.50.600
.52	555	960.50.625
.53	568	960.50.625
.55	580	960.50.650
.60	630	960.50.700

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

14040-14140-18840 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 150 mm!



14040.30.R.0
Crossbar every link

S14040.30.R.0
Crossbar every link

14040.30QZ.R.0
Crossbar every link

14040.30QE.R.0
Crossbar every link

14040.30Q.R.0
Crossbar every link

14140.30.R.0
Crossbar every 2nd link

S14140.30.R.0
Crossbar every 2nd link

14140.30QZ.R.0
Crossbar every 2nd link

14140.30QE.R.0
Crossbar every 2nd link

14140.30Q.R.0
Crossbar every 2nd link

18840.30.R.0
e-tube, closed

S18840.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		S14040.30Q.R.0	S14040.30.R.0.NC	–	S14040.30.R.0.XXL	S18840.30.R.0.HT	S14040.30.R.0.ESD
QuickLock crossbar	S14040.30Q.R.0		14040.30Q.R.0.NC	14040.30Q.R1/R2.0	14040.30Q.R.0.XXL	–	14040.30Q.R.0.ESD
NC-Version	S14040.30.R.0.NC	14040.30Q.R.0.NC		–	–	18840.30.R.0.HT.NC	14040.30.R.0.ESD.NC
RBR-Version	–	14040.30Q.R1/R2.0	–		–	18840.30.R1/R2.0.HT	14040.30.R1/R2.0.ESD
XXL-Material	S14040.30.R.0.XXL	14040.30Q.R.0.XXL	–	–		–	–
HT-Material*	S18840.30.R.0.HT	–	18840.30.R.0.HT.NC	18840.30.R1/R2.0.HT	–		–
ESD-	S14040.30.R.0.ESD	14040.30Q.R.0.ESD	14040.30.R.0.ESD.NC	14040.30.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®

14040-14140-18840 | Options and order key

NC-Version -
(no camber)
without pretension

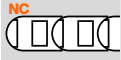
Reverse bending
radius for circular
movements

Unsupported
lengths +25%
possible

No burning-in of
hot chips up to
850°C (1562° F)

ATEX/ESD classi-
fied e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes



Part No.
RBR
e-chains®/e-tubes



Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
HT-Material
only for e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



14040.30.R.0.NC
Crossbar every link

14040.30.R1/R2.0
Crossbar every link

14040.30.R.0.XXL
Crossbar every link

18840.30.R.0.HT
Complete e-tube*

14040.30.R.0.ESD
Crossbar every link

14140.30.R.0.NC
Crossbar every 2nd link

14140.30.R1/R2.0
Crossbar every 2nd link

14140.30.R.0.XXL
Crossbar every 2nd link

18840.30.HT.R.0
Lid and bottom

14140.30.R.0.ESD
Crossbar every 2nd link

18840.30.R.0.NC
e-tube, closed

18840.30.R1/R2.0
e-tube, closed

18840.30.R.0.XXL
e-tube, closed

18840.30.HTZ.R.0
Bottom only

18840.30.R.0.ESD
e-tube, closed

18840.30.HTE.R.0
Lid only

Delivery time:
3-5 work days

Delivery time:
10 work days
(2-5 work days with
express surcharge)

Delivery time:
1-2 weeks
**Sidebands made from
XXL-Material

Delivery time:
10 work days
*for gliding applications
please consult igus®

Delivery time:
5 work days

Order example | Order key and color options

Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:

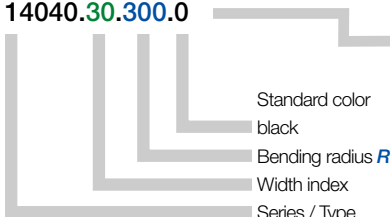
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 33 links **14040.30.300.0**

+ Mounting brackets 1 set (with integrated C-profiles) **141400.30.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 56.1.1**

Order text: 3,0 m 14040.30.300.0 + 141400.30.12.C + 2 x Part No. 56.1.1

Order key
14040.30.300.0

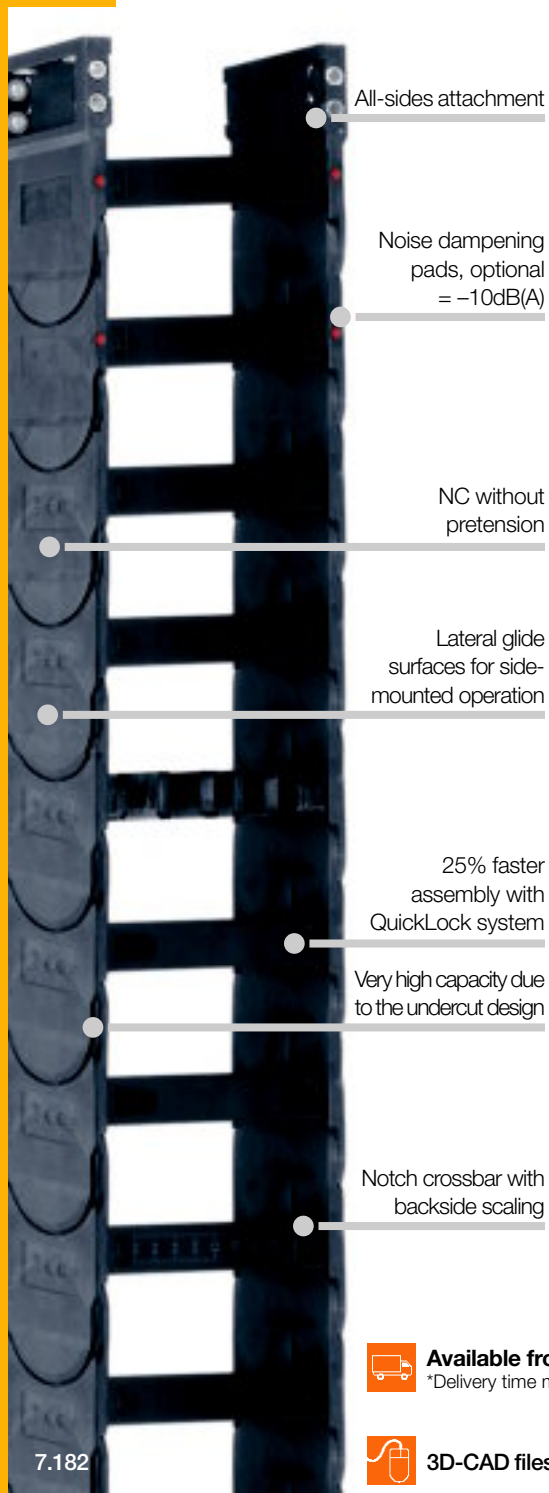


Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can be delivered in 15 work days (5 work days at an express surcharge).

Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods



All-sides attachment

Noise dampening pads, optional
= -10dB(A)

NC without pretension

Lateral glide surfaces for side-mounted operation

25% faster assembly with QuickLock system

Very high capacity due to the undercut design

Notch crossbar with backside scaling

⊕ "Light Design", large inner height

When to use Series 14240-14340:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 62 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 40 kg/m
- For long travels up to 150 m
- Also suitable for side-mounted, vertical standing or hanging applications



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
 - ▶ **Series E6.62, page 8.76**
- If larger unsupported lengths are required in side-mounted applications
 - ▶ **Series E4.56, page 7.78**
- If increased unsupported lengths and longer travels are required
 - ▶ **Series E4.56, page 7.78**
- If high fill weights and/or stiff cables and hoses are used
 - ▶ **Series 14040, page 7.164**
 - ▶ **Series 18840, page 7.164**

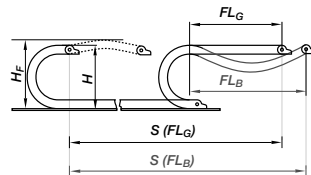
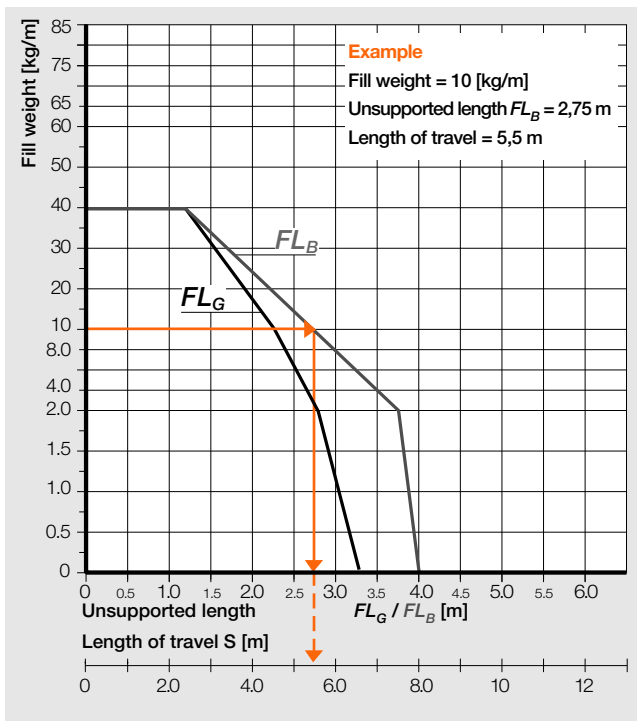


Available from stock. **Delivery in 24h or today!***

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/14240

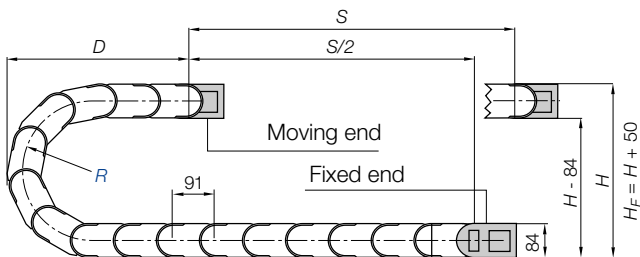


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 150 m.
 More information ► **page 7.196**



Technical Data

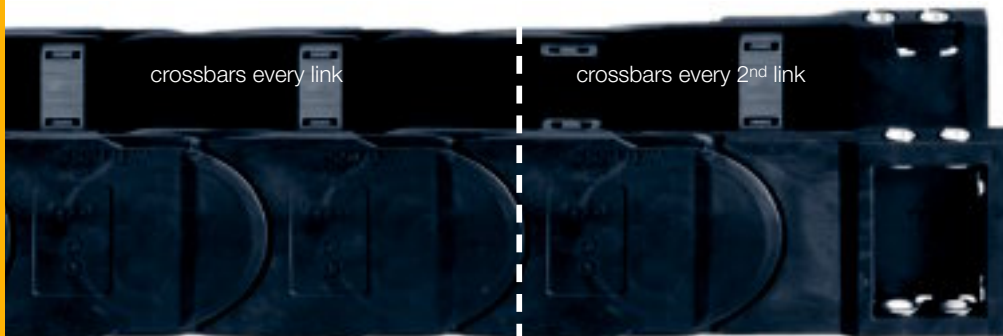
Speed, material, temperature and flammability class ► **page 7.162**

- Pitch** = 91 mm/link
- Links/m** = 11 (1001 mm)
- Chain length** = $S/2 + K$

R	135	150	175	200	250	300	400	500
H_{+25}^0	360	385	435	485	585	685	885	1085
D	270	285	310	335	385	435	535	635
K	650	750	825	900	1050	1225	1450	1775

The required clearance height: $H_F = H + 50$ mm (with 2,0 kg/m fill weight)

- i** FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain", radius in final position
 $K = \pi \cdot R + \text{"safety"}$



e-chains® | Series 14240 crossbars every link | Series 14340 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	14240	14340
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
14240. 14340. 05. R.0	50	76	≈ 2,37	≈ 2,32
14240. 14340. 06. R.0	68	94	≈ 2,40	≈ 2,33
14240. 14340. 07. R.0	75	101	≈ 2,42	≈ 2,34
14240. 14340. 087. R.0	87	114	≈ 2,47	≈ 2,36
14240. 14340. 10. R.0	100	126	≈ 2,52	≈ 2,39
14240. 14340. 11. R.0	108	134	≈ 2,55	≈ 2,40
14240. 14340. 112. R.0	112	139	≈ 2,55	≈ 2,41
14240. 14340. 12. R.0	125	151	≈ 2,62	≈ 2,44
14240. 14340. 137. R.0	137	164	≈ 2,66	≈ 2,46
14240. 14340. 15. R.0	150	176	≈ 2,72	≈ 2,49
14240. 14340. 162. R.0	162	189	≈ 2,73	≈ 2,49
14240. 14340. 17. R.0	168	194	≈ 2,79	≈ 2,52
14240. 14340. 18. R.0	175	201	≈ 2,82	≈ 2,53
14240. 14340. 187. R.0	187	214	≈ 2,84	≈ 2,55
14240. 14340. 20. R.0	200	226	≈ 2,89	≈ 2,58
14240. 14340. 212. R.0	212	239	≈ 2,95	≈ 2,60

Part No.	<i>Bi</i>	<i>Ba</i>	14240	14340
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
14240. 14340. 23. R.0	225	251	≈ 3,01	≈ 2,63
14240. 14340. 237. R.0	237	264	≈ 3,04	≈ 2,65
14240. 14340. 25. R.0	250	276	≈ 3,10	≈ 2,68
14240. 14340. 262. R.0	262	289	≈ 3,11	≈ 2,69
14240. 14340. 28. R.0	275	301	≈ 3,19	≈ 2,72
14240. 14340. 29. R.0	287	314	≈ 3,20	≈ 2,73
14240. 14340. 30. R.0	300	326	≈ 3,30	≈ 2,78
14240. 14340. 312. R.0	312	339	≈ 3,31	≈ 2,79
14240. 14340. 325. R.0	325	351	≈ 3,37	≈ 2,81
14240. 14340. 337. R.0	337	364	≈ 3,40	≈ 2,83
14240. 14340. 350. R.0	350	376	≈ 3,56	≈ 2,91
14240. 14340. 362. R.0	362	389	≈ 3,61	≈ 2,93
14240. 14340. 375. R.0	375	401	≈ 3,64	≈ 2,95
14240. 14340. 387. R.0	387	414	≈ 3,69	≈ 2,97
14240. 14340. 400. R.0	400	426	≈ 3,73	≈ 2,99

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14240.30.300.0

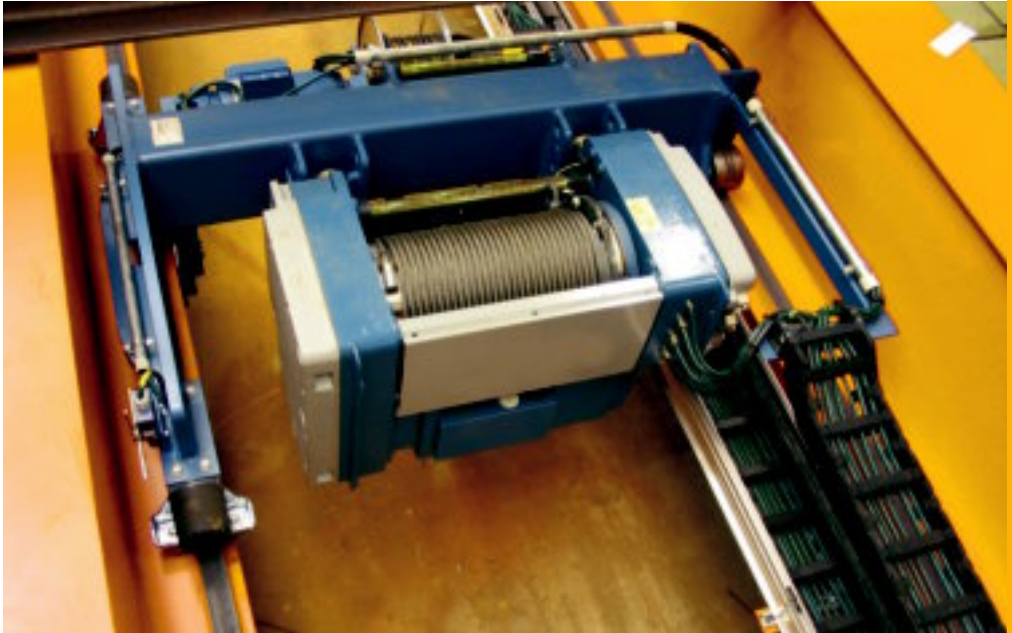
When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Standard e-chains® incl. accessories from stock. **Delivery in 24h or today.***

*Delivery time means time until shipping of goods



With the space-saving igus® E4 Polymer e-chains® the overall dimension for the installation of this crane system was considerably reduced



Part No. of e-chain® links as single parts ► page 7.163

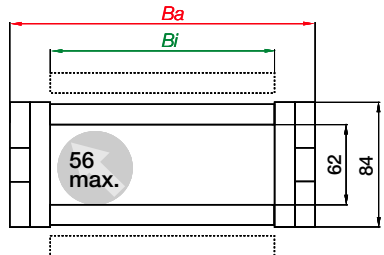


Order key for all types

14240. 30. 300. 0 e-chain® (crossbars every link)
14340. 30. 300. 0 e-chain® (crossbars every 2nd link)



Dimensioning



14240.30.300.0 = e-chain® with crossbars every link, inner width Bi 300 mm, radius R 300 mm, color black
14340.30.300.0 = e-chain® with crossbars every 2nd link, inner width Bi 300 mm, radius R 300 mm, color black
More order examples, variations and configurations ► page 7.198



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	<i>Bi</i> [mm]
14240.14340.10	QZ.R.0	10	QE.R.0	10	Q.R.0 100
14240.14340.11	QZ.R.0	11	QE.R.0	11	Q.R.0 108
14240.14340.112	QZ.R.0	112	QE.R.0	112	Q.R.0 112
14240.14340.12	QZ.R.0	12	QE.R.0	12	Q.R.0 125
14240.14340.137	QZ.R.0	137	QE.R.0	137	Q.R.0 137
14240.14340.15	QZ.R.0	15	QE.R.0	15	Q.R.0 150
14240.14340.162	QZ.R.0	162	QE.R.0	162	Q.R.0 162
14240.14340.17	QZ.R.0	17	QE.R.0	17	Q.R.0 168
14240.14340.18	QZ.R.0	18	QE.R.0	18	Q.R.0 175
14240.14340.187	QZ.R.0	187	QE.R.0	187	Q.R.0 187
14240.14340.20	QZ.R.0	20	QE.R.0	20	Q.R.0 200
14240.14340.212	QZ.R.0	212	QE.R.0	212	Q.R.0 212
14240.14340.23	QZ.R.0	23	QE.R.0	23	Q.R.0 225
14240.14340.237	QZ.R.0	237	QE.R.0	237	Q.R.0 237
14240.14340.25	QZ.R.0	25	QE.R.0	25	Q.R.0 250
14240.14340.262	QZ.R.0	262	QE.R.0	262	Q.R.0 262

Part No.	QuickLock crossbar for			<i>Bi</i>	
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	<i>Bi</i> [mm]
14240.14340.28	QZ.R.0	28	QE.R.0	28	Q.R.0 275
14240.14340.29	QZ.R.0	29	QE.R.0	29	Q.R.0 287
14240.14340.30	QZ.R.0	30	QE.R.0	30	Q.R.0 300
14240.14340.312	QZ.R.0	312	QE.R.0	312	Q.R.0 312
14240.14340.325	QZ.R.0	325	QE.R.0	325	Q.R.0 325
14240.14340.337	QZ.R.0	337	QE.R.0	337	Q.R.0 337
14240.14340.350	QZ.R.0	350	QE.R.0	350	Q.R.0 350
14240.14340.362	QZ.R.0	362	QE.R.0	362	Q.R.0 362
14240.14340.375	QZ.R.0	375	QE.R.0	375	Q.R.0 375
14240.14340.387	QZ.R.0	387	QE.R.0	387	Q.R.0 387
14240.14340.400	QZ.R.0	400	QE.R.0	400	Q.R.0 400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14240.30**QZ.300.0**



For e-chains® with QuickLock crossbar supplement Part No. with required Index **QZ / QE / Q**

Part No. 14240.30**QZ.300.0** = QuickLock crossbar for inner radius

Part No. 14240.30**QE.300.0** = QuickLock crossbar for outer radius

Part No. 14240.30**Q .300.0** = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - **Delivery time: 3-5 work days.***

*Delivery time means time until shipping of goods



Noise damping | ≈ -10 dB(A)



NC-Version | Without pretension

With pads		<i>Bi</i>	With pads		<i>Bi</i>
crossbars every link	crossbars every 2 nd link	[mm]	crossbars every link	crossbars every 2 nd link	[mm]
S14240.S14340.05.	R.0	50	S14240.S14340.23.	R.0	225
S14240.S14340.06.	R.0	68	S14240.S14340.237.R.0	237	
S14240.S14340.07.	R.0	75	S14240.S14340.25.	R.0	250
S14240.S14340.087.R.0	87		S14240.S14340.262.R.0	262	
S14240.S14340.10.	R.0	100	S14240.S14340.28.	R.0	275
S14240.S14340.11.	R.0	108	S14240.S14340.29.	R.0	287
S14240.S14340.112.R.0	112		S14240.S14340.30.	R.0	300
S14240.S14340.12.	R.0	125	S14240.S14340.312.R.0	312	
S14240.S14340.137.R.0	137		S14240.S14340.325.R.0	325	
S14240.S14340.15.	R.0	150	S14240.S14340.337.R.0	337	
S14240.S14340.162.R.0	162		S14240.S14340.350.R.0	350	
S14240.S14340.17.	R.0	168	S14240.S14340.362.R.0	362	
S14240.S14340.18.	R.0	175	S14240.S14340.375.R.0	375	
S14240.S14340.187.R.0	187		S14240.S14340.387.R.0	387	
S14240.S14340.20.	R.0	200	S14240.S14340.400.R.0	400	
S14240.S14340.212.R.0	212				

NC-Version		<i>Bi</i>	NC-Version		<i>Bi</i>
crossbars every link	crossbars every 2 nd link	[mm]	crossbars every link	crossbars every 2 nd link	[mm]
14240.14340.05.	R.0	NC 50	14240.14340.23.	R.0	NC 225
14240.14340.06.	R.0	NC 68	14240.14340.237.R.0	NC 237	
14240.14340.07.	R.0	NC 75	14240.14340.25.	R.0	NC 250
14240.14340.087.R.0	NC 87		14240.14340.262.R.0	NC 262	
14240.14340.10.	R.0	NC 100	14240.14340.28.	R.0	NC 275
14240.14340.11.	R.0	NC 108	14240.14340.29.	R.0	NC 287
14240.14340.112.R.0	NC 112		14240.14340.30.	R.0	NC 300
14240.14340.12.	R.0	NC 125	14240.14340.312.R.0	NC 312	
14240.14340.137.R.0	NC 137		14240.14340.325.R.0	NC 325	
14240.14340.15.	R.0	NC 150	14240.14340.337.R.0	NC 337	
14240.14340.162.R.0	NC 162		14240.14340.350.R.0	NC 350	
14240.14340.17.	R.0	NC 168	14240.14340.362.R.0	NC 362	
14240.14340.18.	R.0	NC 175	14240.14340.375.R.0	NC 375	
14240.14340.187.R.0	NC 187		14240.14340.387.R.0	NC 387	
14240.14340.20.	R.0	NC 200	14240.14340.400.R.0	NC 400	
14240.14340.212.R.0	NC 212				

Available bending radii *R* [mm] | 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: S14240.30.300.0 or 14240.30.300.0.NC



For e-chains® with noise damping pads supplement Part No. with required index "S"

Example: Part No. S14240.30.300.0 = e-chain® (crossbars every link) with noise damping

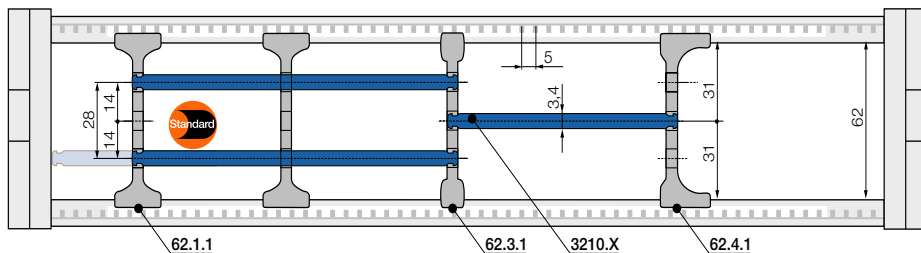
For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. 14240.30.300.0.NC = e-chain® (crossbars every link) without pretension

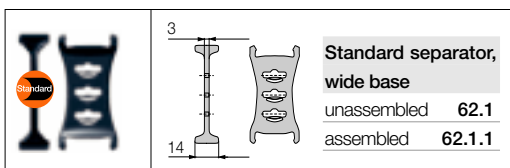


Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*

*Delivery time means time until shipping of goods

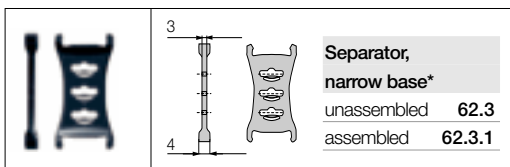


Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard - for all applications

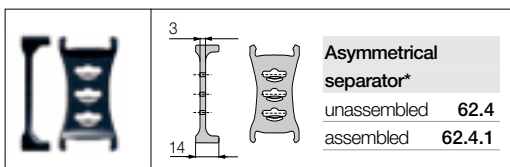
Separator with a wide base for maximum locking strength and safe standing in e-chains®.



For many thin cables

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

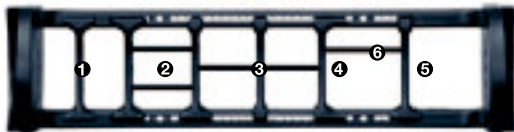
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order



For side-mounted applications

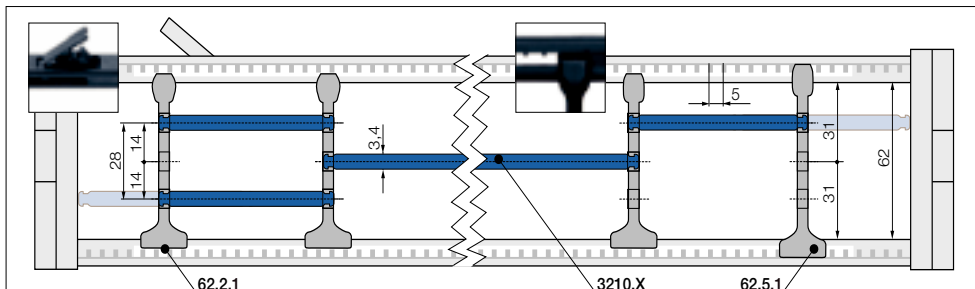
Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains®.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order



- ① Standard separator, wide base - Part No. 62.1
- ② Separator for QuickLock crossbar - Part No. 62.2
- ③ Separator, narrow base - Part No. 62.3
- ④ Separator, asymmetrical - Part No. 62.4
- ⑤ Notch separator - Part No. 62.5
- ⑥ Full-width self, lockable - Part No. 3200.XX

New generation interior separation



Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!

Separator for QuickLock crossbar*
unassembled **62.2**
assembled **62.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).

Notch separator for notch crossbar*
unassembled **62.5**
assembled **62.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®. Recommended for side-mounted applications.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Full-width shelf, lockable
unassembled **3200.X**
assembled **3210.X**

Horizontal separation

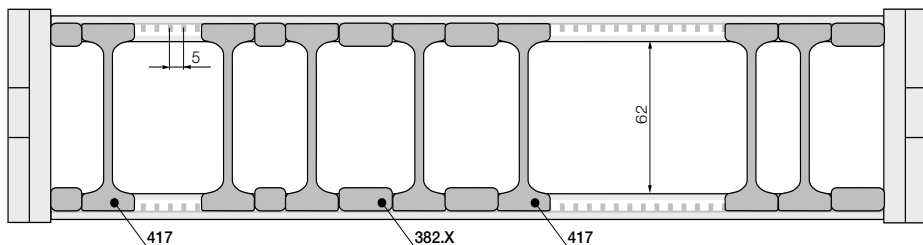
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.

Lockable full-width shelves - for the standard interior separation



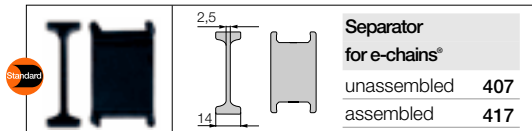
Width X (mm)	unassembled assembled		Width X (mm)	unassembled assembled		Width X (mm)	unassembled assembled	
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115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

Option 1 | Separators and spacers* (*side-mounted applications)



Note: No lateral spacing to side links necessary!

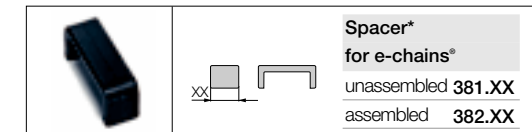
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®
unassembled **407**
assembled **417**

Separator 407

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.



Spacer* for e-chains®
unassembled **381.XX**
assembled **382.XX**

Spacer* 381.XX

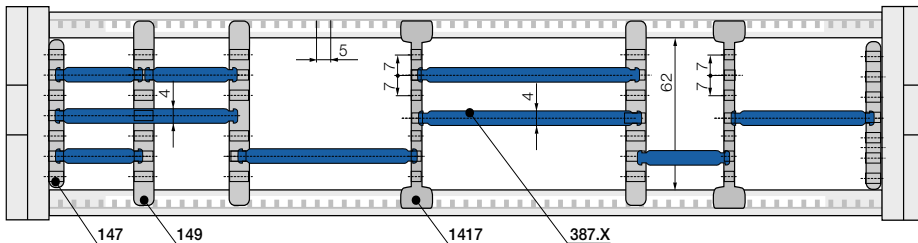
Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). **XX = width of the spacer** (please choose between 10, 15, 20 mm).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	050	386.50	387.50	108	386.108	387.108
023	386.23	387.23	054	386.54	387.54	125	386.125	387.125
025	386.25	387.25	062	386.62	387.62	150	386.150	387.150
028	386.28	387.28	075	386.75	387.75	175	386.175	387.175
033	386.33	387.33	087	386.87	387.87	200	386.200	387.200
043	386.43	387.43	100	386.100	387.100	208	386.208	387.208


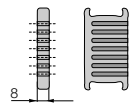
Previous interior separation All elements can still be ordered ▶ www.igus.de/ev/14540

Option 2 | Shelves




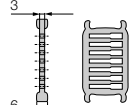
Note: No lateral spacing to side links necessary!

In the standard configuration separators are assembled every 2nd e-chain® link!

		<p>Middle plate for e-chains®</p> <p>unassembled 148</p> <p>assembled 149</p>
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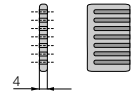
Middle plate 148

Middle plates form the basic pattern of a shelf system. Shelves 386.X (table left page) can be arranged at 7 different heights (in 7 mm increments).

		<p>Slotted separator for e-chains®</p> <p>unassembled 1407</p> <p>assembled 1417</p>
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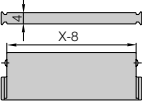
Slotted separator 1407

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

		<p>Side plate for e-chains®</p> <p>unassembled 146</p> <p>assembled 147</p>
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Side plate 146

Works like middle plate. Allows modular shelving close to the side links.

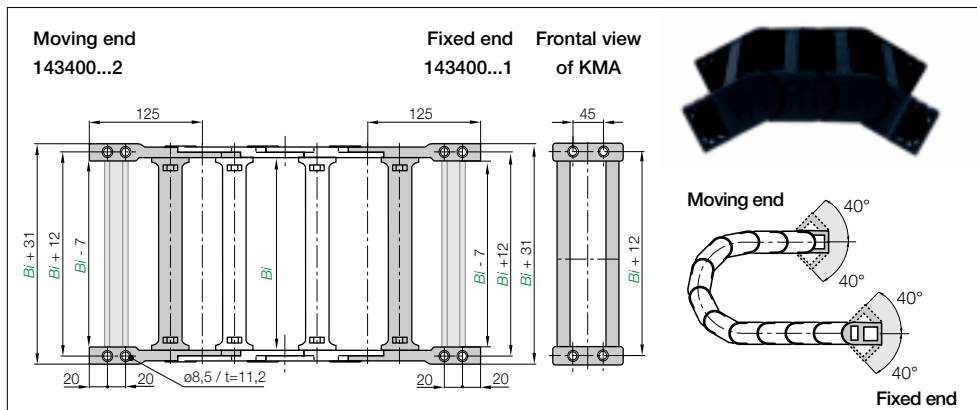
		<p>Shelf (18-149 mm)</p> <p>unassembled 386.X</p> <p>assembled 387.X</p>
---	---	---

Shelf 386.X

For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).

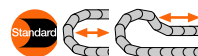
E4/light | 14240·14340 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	▶ 143400. 05. 12.C	50	23.	▶ 143400. 23. 12.C	225
06.	▶ 143400. 06. 12.C	68	237.	▶ 143400. 237. 12.C	237
07.	▶ 143400. 07. 12.C	75	25.	▶ 143400. 25. 12.C	250
087.	▶ 143400. 087. 12.C	87	262.	▶ 143400. 262. 12.C	262
10.	▶ 143400. 10. 12.C	100	28.	▶ 143400. 28. 12.C	275
11.	▶ 143400. 11. 12.C	108	29.	▶ 143400. 29. 12.C	287
112.	▶ 143400. 112. 12.C	112	30.	▶ 143400. 30. 12.C	300
12.	▶ 143400. 12. 12.C	125	312.	▶ 143400. 312. 12.C	312
137.	▶ 143400. 137. 12.C	137	325.	▶ 143400. 325. 12.C	325
15.	▶ 143400. 15. 12.C	150	337.	▶ 143400. 337. 12.C	337
162.	▶ 143400. 162. 12.C	162	350.	▶ 143400. 350. 12.C	350
17.	▶ 143400. 17. 12.C	168	362.	▶ 143400. 362. 12.C	362
18.	▶ 143400. 18. 12.C	175	375.	▶ 143400. 375. 12.C	375
187.	▶ 143400. 187. 12.C	187	387.	▶ 143400. 387. 12.C	387
20.	▶ 143400. 20. 12.C	200	400.	▶ 143400. 400. 12.C	400
212.	▶ 143400. 212. 12.C	212			



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

143400.30.12.C



Single-part order:

Mounting bracket **Moving end**

143400.30.2.C

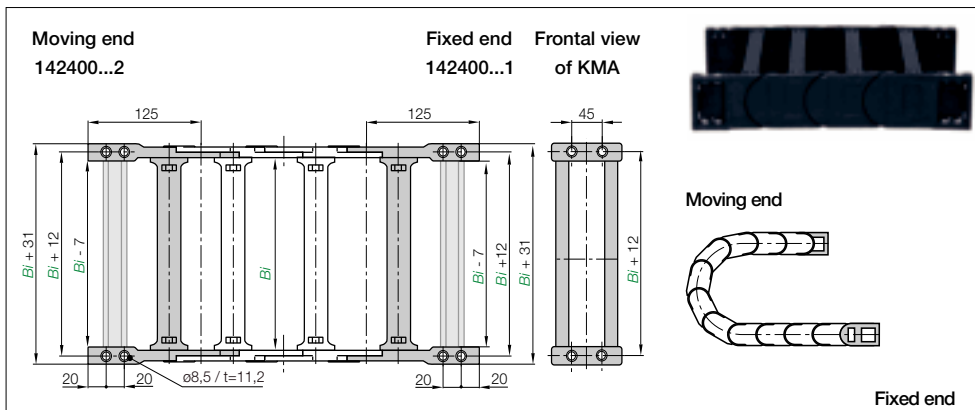
Mounting bracket **Fixed end**

143400.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	▶ 142400. 05. 12.C	50	23.	▶ 142400. 23. 12.C	225
06.	▶ 142400. 06. 12.C	68	237.	▶ 142400. 237. 12.C	237
07.	▶ 142400. 07. 12.C	75	25.	▶ 142400. 25. 12.C	250
087.	▶ 142400. 087. 12.C	87	262.	▶ 142400. 262. 12.C	262
10.	▶ 142400. 10. 12.C	100	28.	▶ 142400. 28. 12.C	275
11.	▶ 142400. 11. 12.C	108	29.	▶ 142400. 29. 12.C	287
112.	▶ 142400. 112. 12.C	112	30.	▶ 142400. 30. 12.C	300
12.	▶ 142400. 12. 12.C	125	312.	▶ 142400. 312. 12.C	312
137.	▶ 142400. 137. 12.C	137	325.	▶ 142400. 325. 12.C	325
15.	▶ 142400. 15. 12.C	150	337.	▶ 142400. 337. 12.C	337
162.	▶ 142400. 162. 12.C	162	350.	▶ 142400. 350. 12.C	350
17.	▶ 142400. 17. 12.C	168	362.	▶ 142400. 362. 12.C	362
18.	▶ 142400. 18. 12.C	175	375.	▶ 142400. 375. 12.C	375
187.	▶ 142400. 187. 12.C	187	387.	▶ 142400. 387. 12.C	387
20.	▶ 142400. 20. 12.C	200	400.	▶ 142400. 400. 12.C	400
212.	▶ 142400. 212. 12.C	212			



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

142400.30.12.C



Single-part order:

Mounting bracket **Moving end**

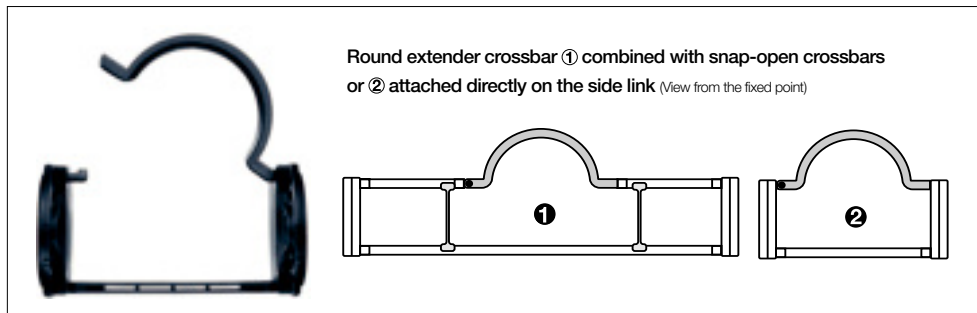
142400.30.2.C

Mounting bracket **Fixed end**

142400.30.1.C



Strain relief, e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extender crossbars | careful guide of hosesed applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	115	O round	no	yes
385.18.RD115	115	O round	yes	no



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

14240.10/15RHDE115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

14240.10/15RHDZ115/10.R.0

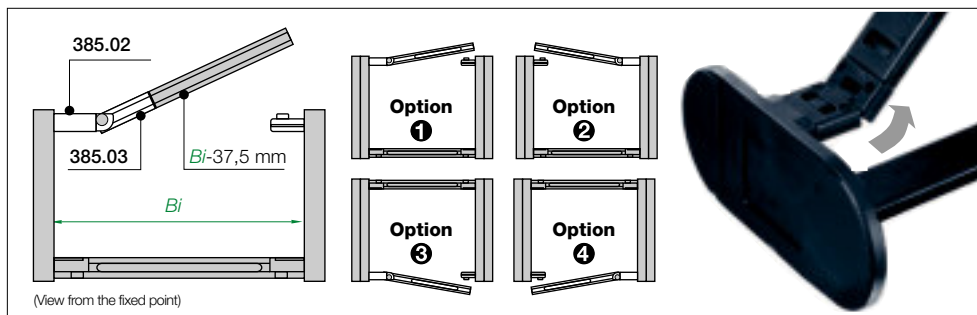
② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

14240.18RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

14240.18RDZ115.R.0



Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- **Hinged crossbar: Part No. 385.02**
Snap-open crossbar (shortened): Bi-37,5 mm Part No. 385.03
(smallest inner width Bi = 87,5)



Order example (here: inner width Bi 150)

14240.15.Z.R.0 =

14240.15.01.R.0

Supplement Index "Z" with required option number ①, ②, ③ or ④



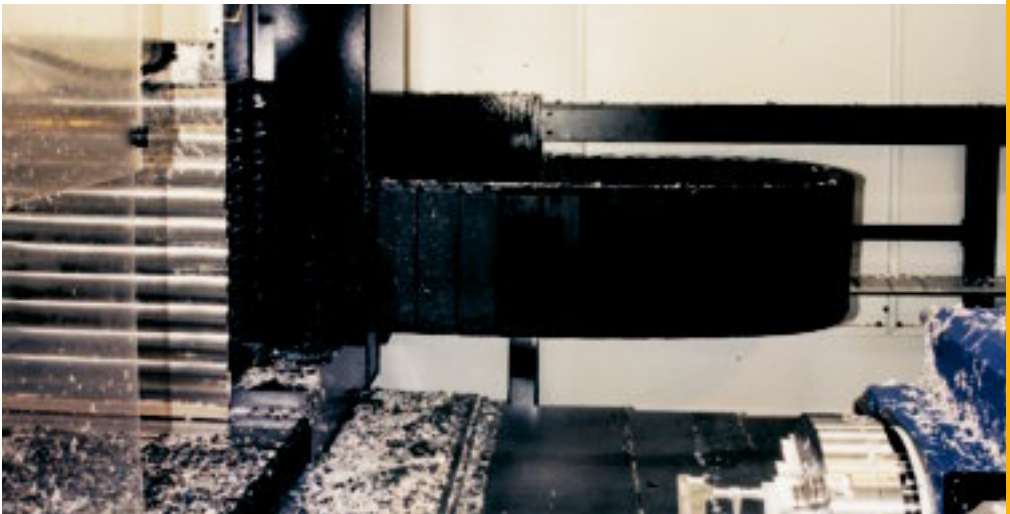
Strain relief system

Clamps, tie-wrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**

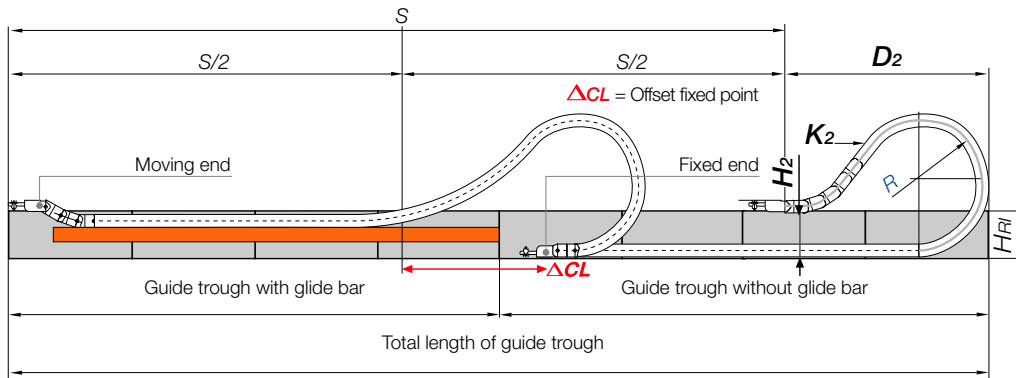


Series R188 for side-mounted applications - chip-proof e-tube from the E4 assembly kit on a machine tool here



Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 9 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 91 mm/link · **Links/m** = 11 (1001 mm) · **Chain length** = $\frac{S}{2} + K$

R	135	150	175	200	250	300	400	500
H_2	266	266	266	266	266	266	266	266
D_2^{+25}	390	450	550	710	920	1120	1530	1850
K_2	728	819	1001	1274	1638	1911	2548	3185
ΔCL	124	159	209	359	509	659	959	1159



The complete range of special solutions for long travel applications incl. order function ► from page 9.76

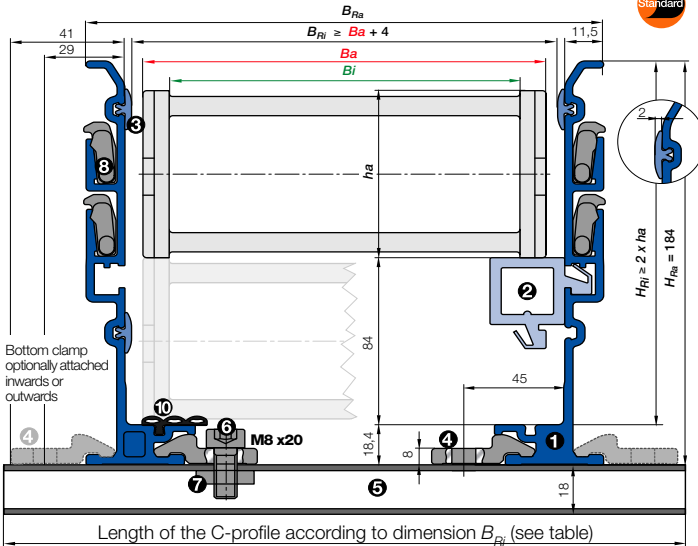


H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

K_2 = Further add-on (if the moving end is set lower)
 R = Bending radius

ΔCL = Offset fixed point
 H_{FR} = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel



Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

14240.30.300.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	-	960.50.200
.06	98	960.50.225
.07	105	960.50.225
.087	118	960.50.175
.10	130	960.50.200
.11	138	960.50.200
.112	143	960.50.200
.12	155	960.50.225
.137	168	960.50.225
.15	180	960.50.250
.162	193	960.50.250
.17	198	960.50.250
.18	205	960.50.275
.187	218	960.50.275
.20	230	960.50.300
.212	243	960.50.300
.23	255	960.50.325
.237	268	960.50.325
.25	280	960.50.350
.262	293	960.50.350
.28	305	960.50.375
.29	318	960.50.375
.30	330	960.50.400
.312	343	960.50.400
.325	355	960.50.425
.337	368	960.50.425
.350	380	960.50.450
.362	393	960.50.450
.375	405	960.50.475
.387	418	960.50.475
.400	430	960.50.500

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ▶ table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 14240.30.300.0 with $B_{Ri} = 330$

Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 974.31.SL**

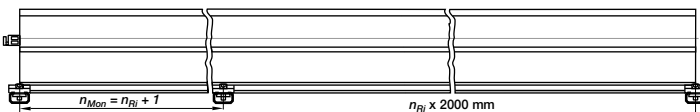
Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets **Part No. 960.50.400**

Module for the fixed end ▶ page 9.16

Order text: 1 set **Part No. 974.81**

Option: For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 974.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.34

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*
- B_{Ra} = Inner trough width
- B_{Ri} = Outer trough width
- H_{Ra} = Inner trough height
- H_{Ri} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 100 mm!



14240.30.R.0
Crossbar every link

S14240.30.R.0
Crossbar every link

14240.30.QZ.R.0
Crossbar every link

14240.30.QE.R.0
Crossbar every link

14240.30.Q.R.0
Crossbar every link

14340.30.R.0
Crossbar every 2nd link

S14340.30.R.0
Crossbar every 2nd link

14340.30.QZ.R.0
Crossbar every 2nd link

14340.30.QE.R.0
Crossbar every 2nd link

14340.30.Q.R.0
Crossbar every 2nd link



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	ESD-Material
Low-noise option		S14240.30.Q.R.0	S14240.30.R.0.NC	-	S14240.30.R.0.XXL	S14240.30.R.0.ESD
QuickLock crossbar	S14240.30.Q.R.0		14240.30.Q.R.0.NC	14240.30.Q.R1/R2.0	14240.30.Q.R.0.XXL	14240.30.Q.R.0.ESD
NC-Version	S14240.30.R.0.NC	14240.30.Q.R.0.NC		-	-	14240.30.R.0.ESD.NC
RBR-Version	-	14240.30.Q.R1/R2.0	-		-	14240.30.R1/R2.0.ESD
XXL-Material	S14240.30.R.0.XXL	14240.30.Q.R.0.XXL	-	-		-
ESD-Material	S14240.30.R.0.ESD	14240.30.Q.R.0.ESD	14240.30.R.0.ESD.NC	14240.30.R1/R2.0.ESD	-	-


for gliding applications please consult igus

E4/light | Series 14240-14340 | Options and order key

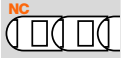
NC-Version -
(no camber)
without pretension

Reverse bending
radius for circular
movements

Unsupported
lengths +25%
possible

ATEX/ESD classi-
fied e-chains® -
 II 2 GD

Part No.
NC-Material
e-chains®/e-tubes



Part No.
RBR
e-chains®/e-tubes



Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



14240.30.R.0.NC
Crossbar every link

14240.30.R1/R2.0
Crossbar every link

14240.30.R.0.XXL
Crossbar every link

14240.30.R.0.ESD
Crossbar every link

14340.30.R.0.NC
Crossbar every 2nd link

14340.30.R1/R2.0
Crossbar every 2nd link

14340.30.R.0.XXL
Crossbar every 2nd link

14340.30.R.0.ESD
Crossbar every 2nd link

Delivery time:
3-5 work days

Delivery time:
10 work days
(2-5 work days with
express surcharge)

Delivery time:
1-2 weeks
**Slidebands made from
XXL-Material

Delivery time:
5 work days

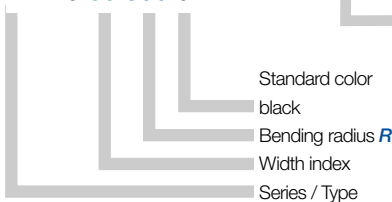
Order example | Order key and color options

 **Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:**

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 33 links	14240.30.300.0
+ Mounting brackets	1 set (with integrated C-profiles)	143400.30.12.C
+ Interior separation	with 2 separators assembled every 2 nd link	2 x 417

Order text: 3,0 m 14240.30.300.0 + 143400.30.12.C + 2 x Part No. 417

 **Order key**
14240.30.300.0

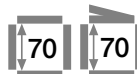


Color options for e-chains® and e-tubes

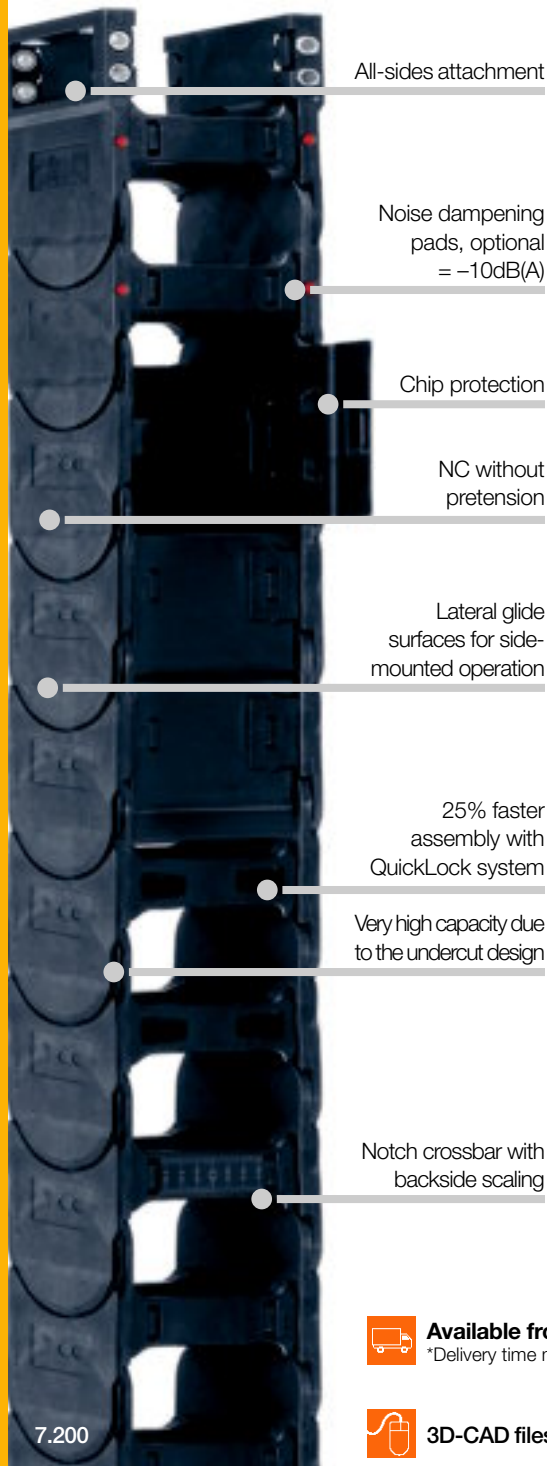
Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can delivered in 15 work days (5 work days at an express surcharge).

 **Available from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods



NEW in this catalog



All-sides attachment

Noise dampening pads, optional
= -10dB(A)

Chip protection

NC without pretension

Lateral glide surfaces for side-mounted operation

25% faster assembly with QuickLock system

Very high capacity due to the undercut design

Notch crossbar with backside scaling

+ "Light Design", large, new inner height

When to use Series 14550-14650-19050:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 70 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,2 m and fill weights up to 48 kg/m
- Also suitable for side-mounted, vertical standing or hanging applications



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))

▶ **Series E6.80, page 8.88**

- If larger unsupported lengths are required in side-mounted applications

▶ **Series 15050, page 7.216**

▶ **Series E4.80, page 7.96**

- If increased unsupported lengths and longer travels are required

▶ **Series 15050, page 7.216**

▶ **Series E4.80, page 7.96**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.161

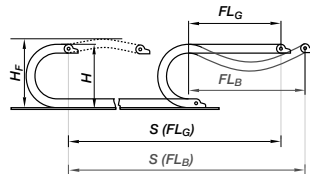
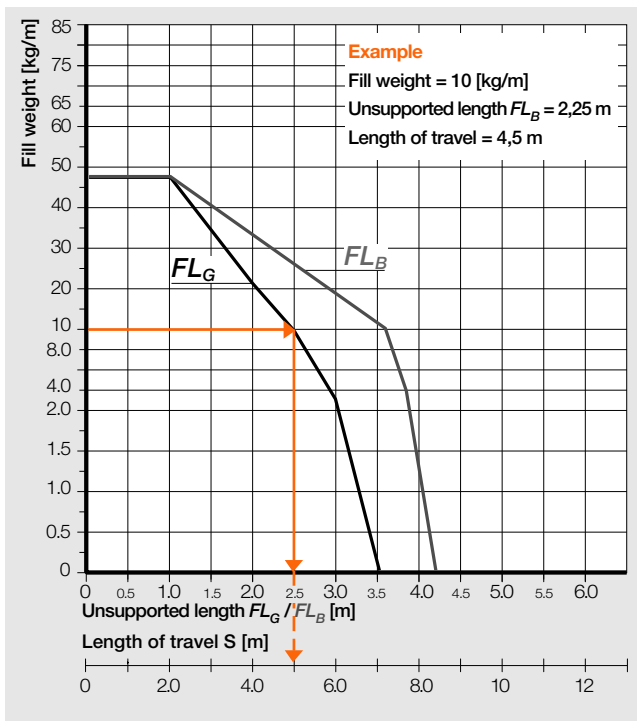


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/14550

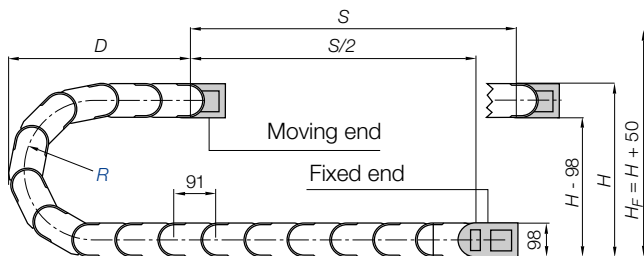


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Long travels ► upon request



Technical Data

Speed, material, temperature and flammability class ► **page 7.162**

- Pitch** = 91 mm/link
- Links/m** = 11 (1001 mm)
- Chain length** = $S/2 + K$

R	150	175	200	250	300	350	400	450	500	600
H	400	450	500	600	700	800	900	1000	1100	1300
D	290	315	340	390	440	490	540	590	640	740
K	655	735	815	970	1125	1285	1440	1600	1755	2070

The required clearance height: $H_F = H + 50$ mm (with 2,5 kg/m fill weight)

- i** FL_G = with straight upper run
 FL_B = with permitted sag
- S** = Length of travel
R = Bending radius
- H** = Nominal clearance height
H_F = Required clearance height
- D** = Overlength e-chain*, radius in final position
K = $\pi \cdot R +$ "safety"



e-chains® | Series 14550 crossbars every link | Series 14650 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	14550	14650
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
14550. 14650. 05. R.0	50	77	≈ 3,28	≈ 3,27
14550. 14650. 06. R.0	65	92	≈ 3,37	≈ 3,31
14550. 14650. 07. R.0	75	102	≈ 3,44	≈ 3,35
14550. 14650. 08. R.0	87	114	≈ 3,52	≈ 3,38
14550. 14650. 10. R.0	100	127	≈ 3,61	≈ 3,43
14550. 14650. 11. R.0	112	139	≈ 3,73	≈ 3,49
14550. 14650. 12. R.0	125	152	≈ 3,81	≈ 3,53
14550. 14650. 13. R.0	137	164	≈ 3,94	≈ 3,60
14550. 14650. 15. R.0	150	177	≈ 3,98	≈ 3,62
14550. 14650. 16. R.0	162	189	≈ 4,09	≈ 3,67
14550. 14650. 17. R.0	175	202	≈ 4,23	≈ 3,74
14550. 14650. 18. R.0	187	214	≈ 4,34	≈ 3,80
14550. 14650. 20. R.0	200	227	≈ 4,39	≈ 3,82
14550. 14650. 21. R.0	212	239	≈ 4,46	≈ 3,86
14550. 14650. 22. R.0	225	252	≈ 4,53	≈ 3,89
14550. 14650. 23. R.0	237	264	≈ 4,64	≈ 3,95
14550. 14650. 25. R.0	250	277	≈ 4,76	≈ 4,00
14550. 14650. 26. R.0	262	289	≈ 4,85	≈ 4,05
14550. 14650. 27. R.0	275	302	≈ 4,95	≈ 4,10
14550. 14650. 28. R.0	287	314	≈ 5,01	≈ 4,13
14550. 14650. 30. R.0	300	327	≈ 5,16	≈ 4,21

Part No.	<i>Bi</i>	<i>Ba</i>	14550	14650
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
14550. 14650. 31. R.0	312	339	≈ 5,20	≈ 4,23
14550. 14650. 32. R.0	325	352	≈ 5,30	≈ 4,28
14550. 14650. 33. R.0	337	364	≈ 5,42	≈ 4,34
14550. 14650. 35. R.0	350	377	≈ 5,62	≈ 4,44
14550. 14650. 36. R.0	362	389	≈ 5,53	≈ 4,39
14550. 14650. 37. R.0	375	402	≈ 5,63	≈ 4,44
14550. 14650. 38. R.0	387	414	≈ 5,74	≈ 4,50
14550. 14650. 40. R.0	400	427	≈ 6,01	≈ 4,63
14550. 14650. 41. R.0	412	439	≈ 5,94	≈ 4,60
14550. 14650. 42. R.0	425	452	≈ 6,23	≈ 4,74
14550. 14650. 43. R.0	437	464	≈ 6,07	≈ 4,66
14550. 14650. 45. R.0	450	477	≈ 6,40	≈ 4,83
14550. 14650. 46. R.0	462	489	≈ 6,35	≈ 4,80
14550. 14650. 47. R.0	475	502	≈ 6,39	≈ 4,82
14550. 14650. 48. R.0	487	514	≈ 6,64	≈ 4,95
14550. 14650. 50. R.0	500	527	≈ 6,74	≈ 5,00
14550. 14650. 51. R.0	512	539	≈ 6,65	≈ 4,95
14550. 14650. 52. R.0	525	552	≈ 6,82	≈ 5,04
14550. 14650. 53. R.0	537	564	≈ 6,92	≈ 5,09
14550. 14650. 55. R.0	550	577	≈ 7,34	≈ 5,30
14550. 14650. 60. R.0	600	627	≈ 7,57	≈ 5,41

Available bending radii R [mm] 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Supplement Part No. with required radius (R). Example: 14550.10.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.163



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series 19050 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	19050 [kg/m]
19050. 07. <i>R.0</i>	75	102	≈ 4,00
19050. 10. <i>R.0</i>	100	127	≈ 4,33
19050. 12. <i>R.0</i>	125	152	≈ 4,70
19050. 15. <i>R.0</i>	150	177	≈ 5,04
19050. 17. <i>R.0</i>	175	202	≈ 5,41
19050. 20. <i>R.0</i>	200	227	≈ 5,64

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	19050 [kg/m]
19050. 25. <i>R.0</i>	250	277	≈ 6,32
19050. 27. <i>R.0</i>	275	302	≈ 6,65
19050. 30. <i>R.0</i>	300	327	≈ 6,99
19050. 35. <i>R.0</i>	350	377	≈ 7,68
19050. 40. <i>R.0</i>	400	427	≈ 8,36
19050. 46. <i>R.0</i>	462	489	≈ 9,21

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 19050.10.300.0

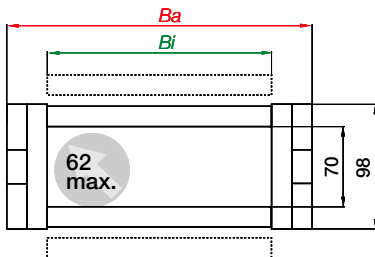
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

- 14550. 10. 300. 0 e-chain® (crossbars every link)
- 14650. 10. 300. 0 e-chain® (crossbars every 2nd link)
- 19050. 10. 300. 0 Fully enclosed e-tube



Dimensioning



-  14550.10.300.0 = e-chain® with crossbars every link, inner width *Bi* 100 mm, radius *R* 300 mm, color black
- 14650.10.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 100 mm, radius *R* 300 mm, color black
- 19050.10.300.0 = Fully enclosed e-tube, inner width *Bi* 100 mm, radius *R* 300 mm, color black

More order examples, variations and configurations ► page 7.214

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***

*Delivery time means time until shipping of goods



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.		QuickLock crossbar for			Bi [mm]
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	
14550.	14650.	15. QZ.R.0	15. QE.R.0	15. Q.R.0	150
14550.	14650.	16. QZ.R.0	16. QE.R.0	16. Q.R.0	162
14550.	14650.	17. QZ.R.0	17. QE.R.0	17. Q.R.0	175
14550.	14650.	18. QZ.R.0	18. QE.R.0	18. Q.R.0	187
14550.	14650.	20. QZ.R.0	20. QE.R.0	20. Q.R.0	200
14550.	14650.	21. QZ.R.0	21. QE.R.0	21. Q.R.0	212
14550.	14650.	22. QZ.R.0	22. QE.R.0	22. Q.R.0	225
14550.	14650.	23. QZ.R.0	23. QE.R.0	23. Q.R.0	237
14550.	14650.	25. QZ.R.0	25. QE.R.0	25. Q.R.0	250
14550.	14650.	26. QZ.R.0	26. QE.R.0	26. Q.R.0	262
14550.	14650.	27. QZ.R.0	27. QE.R.0	27. Q.R.0	275
14550.	14650.	28. QZ.R.0	28. QE.R.0	28. Q.R.0	287
14550.	14650.	30. QZ.R.0	30. QE.R.0	30. Q.R.0	300
14550.	14650.	31. QZ.R.0	31. QE.R.0	31. Q.R.0	312
14550.	14650.	32. QZ.R.0	32. QE.R.0	32. Q.R.0	325
14550.	14650.	33. QZ.R.0	33. QE.R.0	33. Q.R.0	337
14550.	14650.	35. QZ.R.0	35. QE.R.0	35. Q.R.0	350
14550.	14650.	36. QZ.R.0	36. QE.R.0	36. Q.R.0	362
14550.	14650.	37. QZ.R.0	37. QE.R.0	37. Q.R.0	375
14550.	14650.	38. QZ.R.0	38. QE.R.0	38. Q.R.0	387
14550.	14650.	40. QZ.R.0	40. QE.R.0	40. Q.R.0	400

Part No.		QuickLock crossbar for			Bi [mm]
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	
14550.	14650.	41. QZ.R.0	41. QE.R.0	41. Q.R.0	412
14550.	14650.	42. QZ.R.0	42. QE.R.0	42. Q.R.0	425
14550.	14650.	43. QZ.R.0	43. QE.R.0	43. Q.R.0	437
14550.	14650.	45. QZ.R.0	45. QE.R.0	45. Q.R.0	450
14550.	14650.	46. QZ.R.0	46. QE.R.0	46. Q.R.0	462
14550.	14650.	47. QZ.R.0	47. QE.R.0	47. Q.R.0	475
14550.	14650.	48. QZ.R.0	48. QE.R.0	48. Q.R.0	487
14550.	14650.	50. QZ.R.0	50. QE.R.0	50. Q.R.0	500
14550.	14650.	51. QZ.R.0	51. QE.R.0	51. Q.R.0	512
14550.	14650.	52. QZ.R.0	52. QE.R.0	52. Q.R.0	525
14550.	14650.	53. QZ.R.0	53. QE.R.0	53. Q.R.0	537
14550.	14650.	55. QZ.R.0	55. QE.R.0	55. Q.R.0	550
14550.	14650.	60. QZ.R.0	60. QE.R.0	60. Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii R [mm] 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Supplement Part No. with required radius (R). Example: 14550.10QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. 14550.10QZ.300.0 = QuickLock crossbar for inner radius

Part No. 14550.10QE.300.0 = QuickLock crossbar for outer radius

Part No. 14550.10Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods



Noise dampening | ≈ -10 dB(A)



NC-Version | Without pretension

With pads		<i>Bi</i>	With pads		<i>Bi</i>
crossbars: every link	e-tube fully enclosed 2 nd link	[mm]	crossbars: every link	e-tube fully enclosed 2 nd link	[mm]
S14550.S14650.	-	05. R.0 50	S14550.S14650.	-	31. R.0 312
S14550.S14650.	-	06. R.0 65	S14550.S14650.	-	32. R.0 325
S14550.S14650.S19050.07.	R.0 75		S14550.S14650.	-	33. R.0 337
S14550.S14650.	-	08. R.0 87	S14550.S14650.S19050.35.	R.0 350	
S14550.S14650.S19050.10.	R.0 100		S14550.S14650.	-	36. R.0 362
S14550.S14650.	-	11. R.0 112	S14550.S14650.	-	37. R.0 375
S14550.S14650.S19050.12.	R.0 125		S14550.S14650.	-	38. R.0 387
S14550.S14650.	-	13. R.0 137	S14550.S14650.S19050.40.	R.0 400	
S14550.S14650.S19050.15.	R.0 150		S14550.S14650.	-	41. R.0 412
S14550.S14650.	-	16. R.0 162	S14550.S14650.	-	42. R.0 425
S14550.S14650.S19050.17.	R.0 175		S14550.S14650.	-	43. R.0 437
S14550.S14650.	-	18. R.0 187	S14550.S14650.	-	45. R.0 450
S14550.S14650.S19050.20.	R.0 200		S14550.S14650.S19050.46.	R.0 462	
S14550.S14650.	-	21. R.0 212	S14550.S14650.	-	47. R.0 475
S14550.S14650.	-	22. R.0 225	S14550.S14650.	-	48. R.0 487
S14550.S14650.	-	23. R.0 237	S14550.S14650.	-	50. R.0 500
S14550.S14650.S19050.25.	R.0 250		S14550.S14650.	-	51. R.0 512
S14550.S14650.	-	26. R.0 262	S14550.S14650.	-	52. R.0 525
S14550.S14650.S19050.27.	R.0 275		S14550.S14650.	-	53. R.0 537
S14550.S14650.	-	28. R.0 287	S14550.S14650.	-	55. R.0 550
S14550.S14650.S19050.30.	R.0 300				60. R.0 600

NC-Version		<i>Bi</i>	NC-Version		<i>Bi</i>
crossbars: every link	e-tube fully enclosed 2 nd link	[mm]	crossbars: every link	e-tube fully enclosed 2 nd link	[mm]
14550.14650.	-	05. R.0.NC 50	14550.14650.	-	31. R.0.NC 312
14550.14650.	-	06. R.0.NC 65	14550.14650.	-	32. R.0.NC 325
14550.14650.19050.07.	R.0.NC 75		14550.14650.	-	33. R.0.NC 337
14550.14650.	-	08. R.0.NC 87	14550.14650.19050.35.	R.0.NC 350	
14550.14650.19050.10.	R.0.NC 100		14550.14650.	-	36. R.0.NC 362
14550.14650.	-	11. R.0.NC 112	14550.14650.	-	37. R.0.NC 375
14550.14650.19050.12.	R.0.NC 125		14550.14650.	-	38. R.0.NC 387
14550.14650.	-	13. R.0.NC 137	14550.14650.19050.40.	R.0.NC 400	
14550.14650.19050.15.	R.0.NC 150		14550.14650.	-	41. R.0.NC 412
14550.14650.	-	16. R.0.NC 162	14550.14650.	-	42. R.0.NC 425
14550.14650.19050.17.	R.0.NC 175		14550.14650.	-	43. R.0.NC 437
14550.14650.	-	18. R.0.NC 187	14550.14650.	-	45. R.0.NC 450
14550.14650.19050.20.	R.0.NC 200		14550.14650.19050.46.	R.0.NC 462	
14550.14650.	-	21. R.0.NC 212	14550.14650.	-	47. R.0.NC 475
14550.14650.	-	22. R.0.NC 225	14550.14650.	-	48. R.0.NC 487
14550.14650.	-	23. R.0.NC 237	14550.14650.	-	50. R.0.NC 500
14550.14650.19050.25.	R.0.NC 250		14550.14650.	-	51. R.0.NC 512
14550.14650.	-	26. R.0.NC 262	14550.14650.	-	52. R.0.NC 525
14550.14650.19050.27.	R.0.NC 275		14550.14650.	-	53. R.0.NC 537
14550.14650.	-	28. R.0.NC 287	14550.14650.	-	55. R.0.NC 550
14550.14650.19050.30.	R.0.NC 300				60. R.0.NC 600

Available bending radii *R* [mm] 150* | 175* | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 *not available for e-tubes

Supplement Part No. with required radius (R). Example: S14550.10.300.0 or 14550.10.300.0.NC



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: Part No. S14550.10.300.0 = e-chain® (crossbars every link) with noise dampening

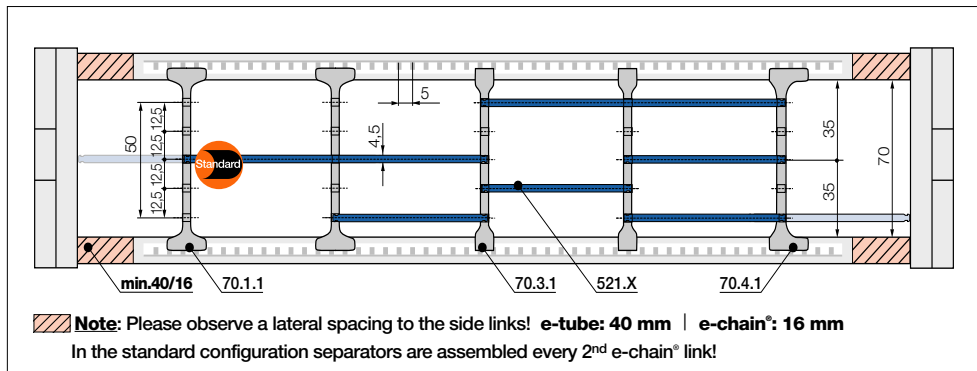
For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. 14550.10.300.0.NC = e-chain® (crossbars every link) without pretension



Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*

*Delivery time means time until shipping of goods



Standard separator, wide base
unassembled **70.1**
assembled **70.1.1**

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.

Separator, narrow base*
unassembled **70.3**
assembled **70.3.1**

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

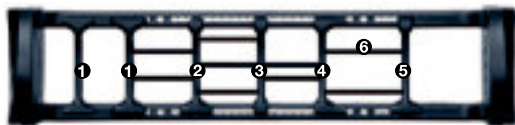
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Asymmetrical separator*
unassembled **70.4**
assembled **70.4.1**

For side-mounted applications

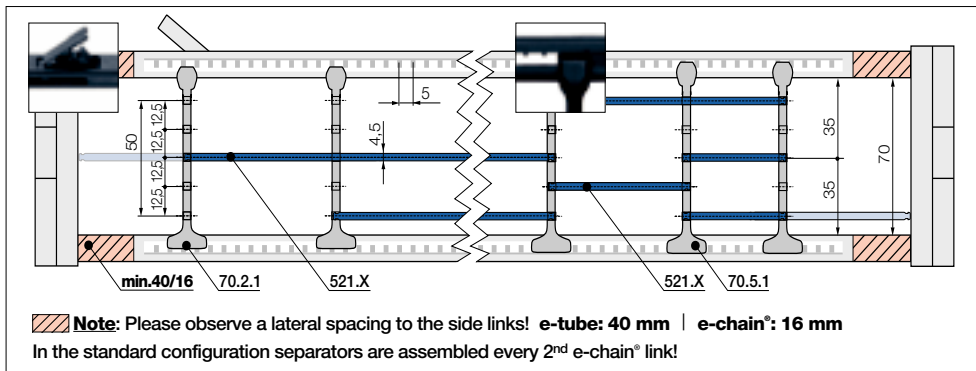
Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order



- i** ① Standard separator, wide base - Part No. 70.1 ③ Separator, narrow base - Part No. 70.3 ⑤ Notch separator - Part No. 70.5
② Separator for QuickLock crossbar - Part No. 70.2 ④ Separator, asymmetrical - Part No. 70.4 ⑥ Full-width self, lockable - Part No. 520.XX

New generation interior separation



Separator for QuickLock crossbar*
unassembled **70.2**
assembled **70.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Notch separator for notch crossbar*
unassembled **70.5**
assembled **70.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Full-width shelf, lockable
unassembled **520.X**
assembled **521.X**

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 5 levels.

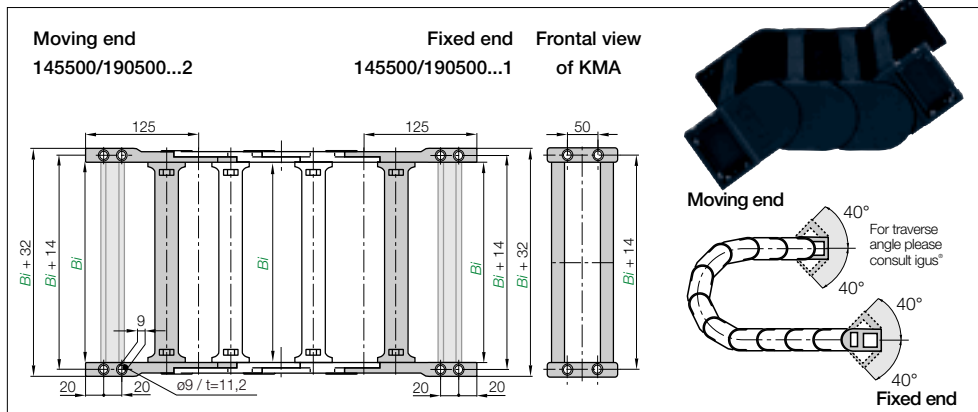
Lockable full-width shelves - for the standard interior separation



Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450

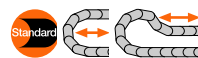
14550·14650·19050 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	▶ 145500. - 05. 12.C 50	50	31.	▶ 145500. - 31. 12.C 312	312
06.	▶ 145500. - 06. 12.C 65	65	32.	▶ 145500. - 32. 12.C 325	325
07.	▶ 145500.190500.07. 12.C 75	75	33.	▶ 145500. - 33. 12.C 337	337
08.	▶ 145500. - 08. 12.C 87	87	35.	▶ 145500.190500.35. 12.C 350	350
10.	▶ 145500.190500.10. 12.C 100	100	36.	▶ 145500. - 36. 12.C 362	362
11.	▶ 145500. - 11. 12.C 112	112	37.	▶ 145500. - 37. 12.C 375	375
12.	▶ 145500.190500.12. 12.C 125	125	38.	▶ 145500. - 38. 12.C 387	387
13.	▶ 145500. - 13. 12.C 137	137	40.	▶ 145500.190500.40. 12.C 400	400
15.	▶ 145500.190500.15. 12.C 150	150	41.	▶ 145500. - 41. 12.C 412	412
16.	▶ 145500. - 16. 12.C 162	162	42.	▶ 145500. - 42. 12.C 425	425
17.	▶ 145500.190500.17. 12.C 175	175	43.	▶ 145500. - 43. 12.C 437	437
18.	▶ 145500. - 18. 12.C 187	187	45.	▶ 145500. - 45. 12.C 450	450
20.	▶ 145500.190500.20. 12.C 200	200	46.	▶ 145500.190500.46. 12.C 462	462
21.	▶ 145500. - 21. 12.C 212	212	47.	▶ 145500. - 47. 12.C 475	475
22.	▶ 145500. - 22. 12.C 225	225	48.	▶ 145500. - 48. 12.C 487	487
23.	▶ 145500. - 23. 12.C 237	237	50.	▶ 145500. - 50. 12.C 500	500
25.	▶ 145500.190500.25. 12.C 250	250	51.	▶ 145500. - 51. 12.C 512	512
26.	▶ 145500. - 26. 12.C 262	262	52.	▶ 145500. - 52. 12.C 525	525
27.	▶ 145500.190500.27. 12.C 275	275	53.	▶ 145500. - 53. 12.C 537	537
28.	▶ 145500. - 28. 12.C 287	287	55.	▶ 145500. - 55. 12.C 550	550
30.	▶ 145500.190500.30. 12.C 300	300	60.	▶ 145500. - 60. 12.C 600	600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

145500.10.12.C



Single-part order:

Mounting bracket **Moving end**

145500.10.2.C

Mounting bracket **Fixed end**

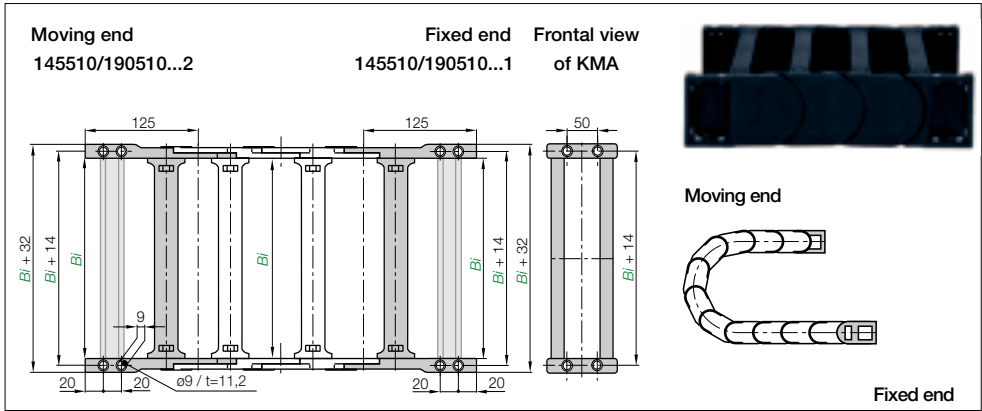
145500.10.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

14550·14650·19050 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	▶ 145510. – 05. 12.C 50	50	31.	▶ 145510. – 31. 12.C 312	312
06.	▶ 145510. – 06. 12.C 65	65	32.	▶ 145510. – 32. 12.C 325	325
07.	▶ 145510. 190510. 07. 12.C 75	75	33.	▶ 145510. – 33. 12.C 337	337
08.	▶ 145510. – 08. 12.C 87	87	35.	▶ 145510. 190510. 35. 12.C 350	350
10.	▶ 145510. 190510. 10. 12.C 100	100	36.	▶ 145510. – 36. 12.C 362	362
11.	▶ 145510. – 11. 12.C 112	112	37.	▶ 145510. – 37. 12.C 375	375
12.	▶ 145510. 190510. 12. 12.C 125	125	38.	▶ 145510. – 38. 12.C 387	387
13.	▶ 145510. – 13. 12.C 137	137	40.	▶ 145510. 190510. 40. 12.C 400	400
15.	▶ 145510. 190510. 15. 12.C 150	150	41.	▶ 145510. – 41. 12.C 412	412
16.	▶ 145510. – 16. 12.C 162	162	42.	▶ 145510. – 42. 12.C 425	425
17.	▶ 145510. 190510. 17. 12.C 175	175	43.	▶ 145510. – 43. 12.C 437	437
18.	▶ 145510. – 18. 12.C 187	187	45.	▶ 145510. – 45. 12.C 450	450
20.	▶ 145510. 190510. 20. 12.C 200	200	46.	▶ 145510. 190510. 46. 12.C 462	462
21.	▶ 145510. – 21. 12.C 212	212	47.	▶ 145510. – 47. 12.C 475	475
22.	▶ 145510. – 22. 12.C 225	225	48.	▶ 145510. – 48. 12.C 487	487
23.	▶ 145510. – 23. 12.C 237	237	50.	▶ 145510. – 50. 12.C 500	500
25.	▶ 145510. 190510. 25. 12.C 250	250	51.	▶ 145510. – 51. 12.C 512	512
26.	▶ 145510. – 26. 12.C 262	262	52.	▶ 145510. – 52. 12.C 525	525
27.	▶ 145510. 190510. 27. 12.C 275	275	53.	▶ 145510. – 53. 12.C 537	537
28.	▶ 145510. – 28. 12.C 287	287	55.	▶ 145510. – 55. 12.C 550	550
30.	▶ 145510. 190510. 30. 12.C 300	300	60.	▶ 145510. – 60. 12.C 600	600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

145510.10.12.C



Single-part order:

Mounting bracket **Moving end**

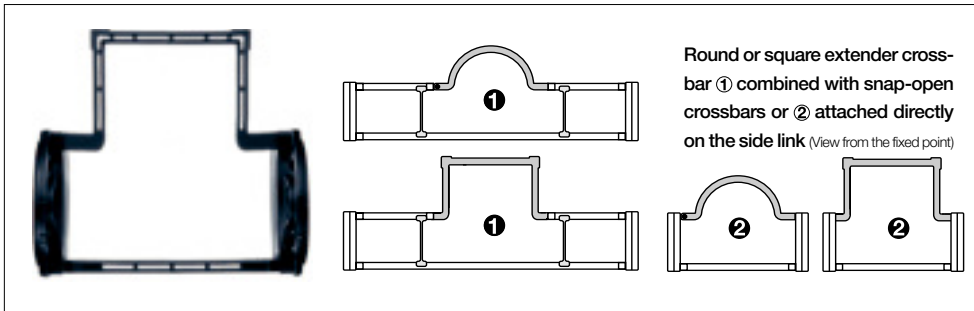
145510.10.2.C

Mounting bracket **Fixed end**

145510.10.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain*:

14550.10/15RHE115/10.R.0

RHD115 for inner radius "Z" incl. e-chain*:

14550.10/15RHZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain*:

14550.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain*:

14550.17RDZ115.R.0

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes



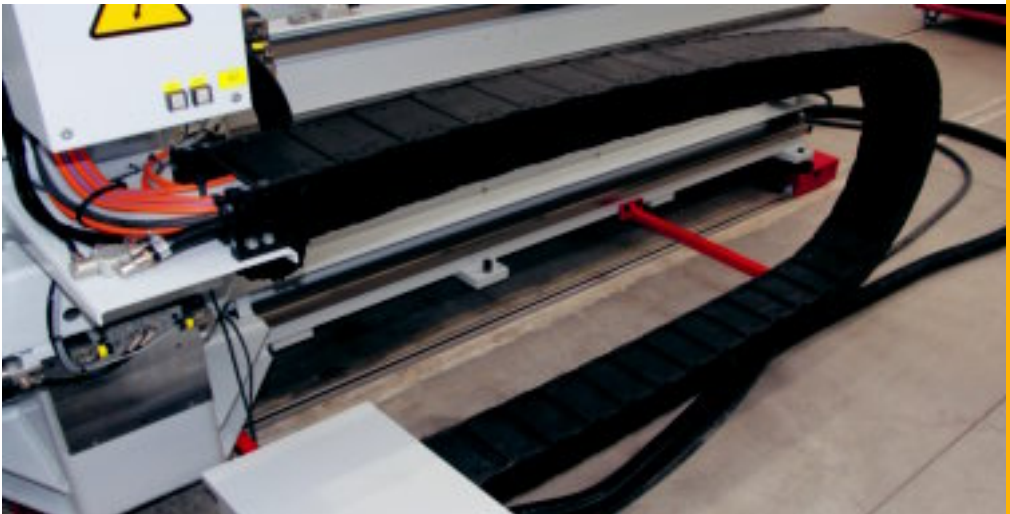
Strain relief system

Clamps, tie-wrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**

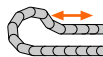


Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**



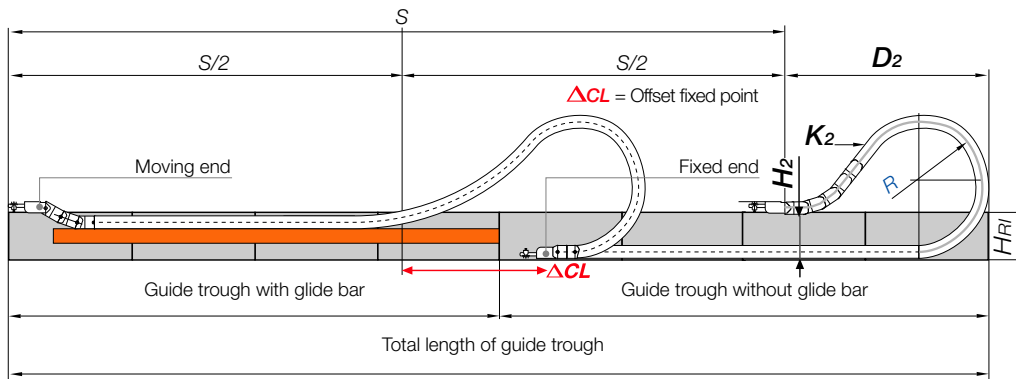
E4/light e-tubes protect tubes and hoses safely against dirt and chips



Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 8 and 12 m we recommend a longer unsupported length.** More information ► **Design**, from page 1.16.

(Guide trough available upon request. Delivery in approx. 6-8 weeks from receipt of order)



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K$

Guide trough available upon request. Delivery in approx. 6-8 weeks from receipt of order.

R	150	175	200	250	300	350	400	450	500	600*
H ₂	266	266	266	266	266	266	266	266	266	*
D ₂ ⁺²⁵	450	530	710	920	1120	1340	1530	**	1830	*
K ₂	819	1001	1274	1638	1911	2184	2548	**	3185	*
ΔCL	124	159	209	359	509	659	829	959	1159	*

Please note: For using *R 600 for long travels (gliding), please consult igus® first. **Values upon request.



The complete range of special solutions for long travel applications incl. order function ► from page 9.76

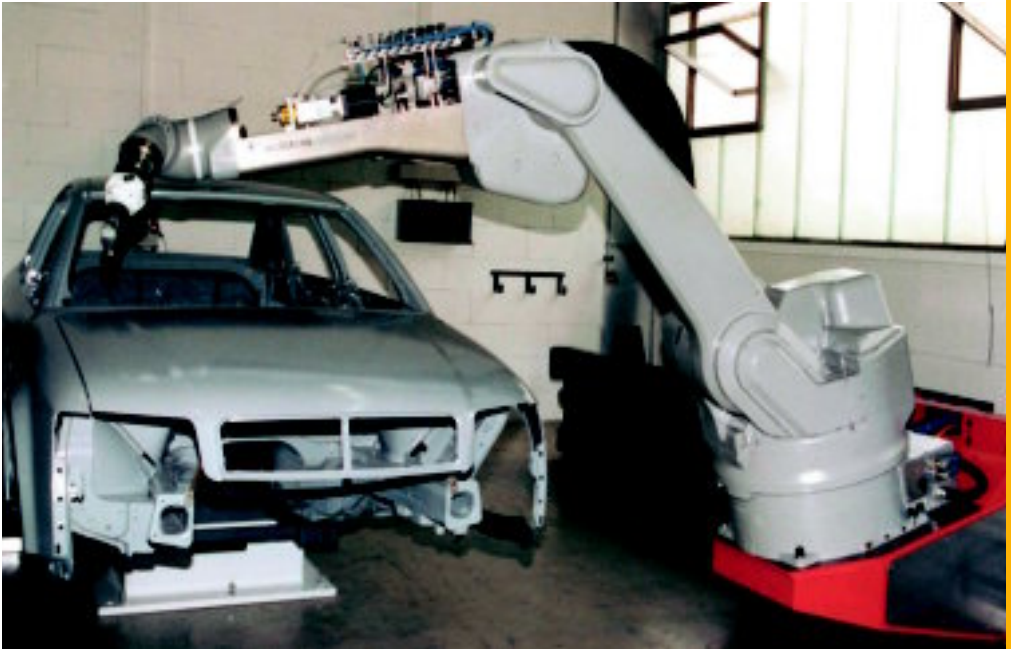


H₂ = Mounting height (if the moving end is set lower)
D₂ = Over length - long travels, gliding

K₂ = Further add-on (if the moving end is set lower)
R = Bending radius

ΔCL = Offset fixed point
H_{in} = Inner trough height

S = Length of travel
S/2 = Half length of travel



Spray-painting robot with System E4 e-chain® used in an ATEX version made of igumid ESD.
High accelerations of up to 6 m/s^2 and high braking rates with a weight of the robot of approx. one ton



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *B* 150 mm!



14550.10.R.0
Crossbar every link

S14550.10.R.0
Crossbar every link

14550.10.QZ.R.0
Crossbar every link

14550.10.QE.R.0
Crossbar every link

14550.10.Q.R.0
Crossbar every link

14650.10.R.0
Crossbar every 2nd link

S14650.10.R.0
Crossbar every 2nd link

14650.10.QZ.R.0
Crossbar every 2nd link

14650.10.QE.R.0
Crossbar every 2nd link

14650.10.Q.R.0
Crossbar every 2nd link

19050.10.R.0
e-tube, closed

S19050.10.R.0
e-tube, closed



Delivery in 24h or today!*

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		S14550.10.Q.R.0	S14550.10.R.0.NC	–	S14550.10.R.0.XXL	S14550.10.R.0.HT	S14550.10.R.0.ESD
QuickLock crossbar	S14550.10.Q.R.0		14550.10.Q.R.0.NC	14550.10.Q.R1/R2.0	14550.10.Q.R.0.XXL	–	14550.10.Q.R.0.ESD
NC-Version	S14550.10.R.0.NC	14550.10.Q.R.0.NC		–	–	19050.10.R.0.HT.NC	14550.10.R.0.ESD.NC
RBR-Version	–	14550.10.Q.R1/R2.0	–		–	19050.10.R1/R2.0.HT	14550.10.R1/R2.0.ESD
XXL-Material	S14550.10.R.0.XXL	14550.10.Q.R.0.XXL	–	–		–	–
HT-Material*	S14550.10.R.0.HT	–	19050.10.R.0.HT.NC	19050.10.R1/R2.0.HT	–		–
ESD-	S14550.10.R.0.ESD	14550.10.Q.R.0.ESD	14550.10.R.0.ESD.NC	14550.10.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®


E4/light | 14550-14650-19050 | Options and order key

NC-Version -
(no camber)
without pretension

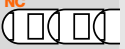
Reverse bending
radius for circular
movements

Unsupported
lengths +25%
possible


No burning-in of
hot chips up to
850°C (1562° F)

ATEX/ESD classi-
fied e-chains® -



Part No.
NC-Material
e-chains®/e-tubes




Part No.
RBR
e-chains®/e-tubes




Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
HT-Material
only for e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



14550.10.R.0.NC
Crossbar every link

14550.10.R1/R2.0
Crossbar every link

14550.10.R.0.XXL
Crossbar every link

19050.10.R.0.HT
Complete e-tube*

14550.10.R.0.ESD
Crossbar every link

14650.10.R.0.NC
Crossbar every 2nd link

14650.10.R1/R2.0
Crossbar every 2nd link

14650.10.R.0.XXL
Crossbar every 2nd link

19050.10.HT.R.0
Lid and bottom

14650.10.R.0.ESD
Crossbar every 2nd link

19050.10.R.0.NC
e-tube, closed

19050.10.R1/R2.0
e-tube, closed

19050.10.R.0.XXL
e-tube, closed

19050.10.HTZ.R.0
Bottom only

19050.10.R.0.ESD
e-tube, closed

19050.10.HTE.R.0
Lid only

Delivery time
3-5 work days

Delivery time
10 work days
(2-5 work days with
express surcharge)

Delivery time
1-2 weeks
**Sidebands made from
XXL-Material

Delivery time
10 work days
*for gliding applications
please consult igus®

Delivery time
5 work days

Order example | Order key and color options


 **Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets with C-profiles and interior separation:**

e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 33 links **14550.10.300.0**

+ Mounting brackets 1 set (with integrated C-profiles) **145500.10.12.C**















+ Interior separation with 2 separators assembled every 2nd link **2 x 70.1.1**

Order text: 3,0 m 14550.10.300.0 + 145500.10.12.C + 2 x Part No. 70.1.1

 **Order key**
14550.10.300.0

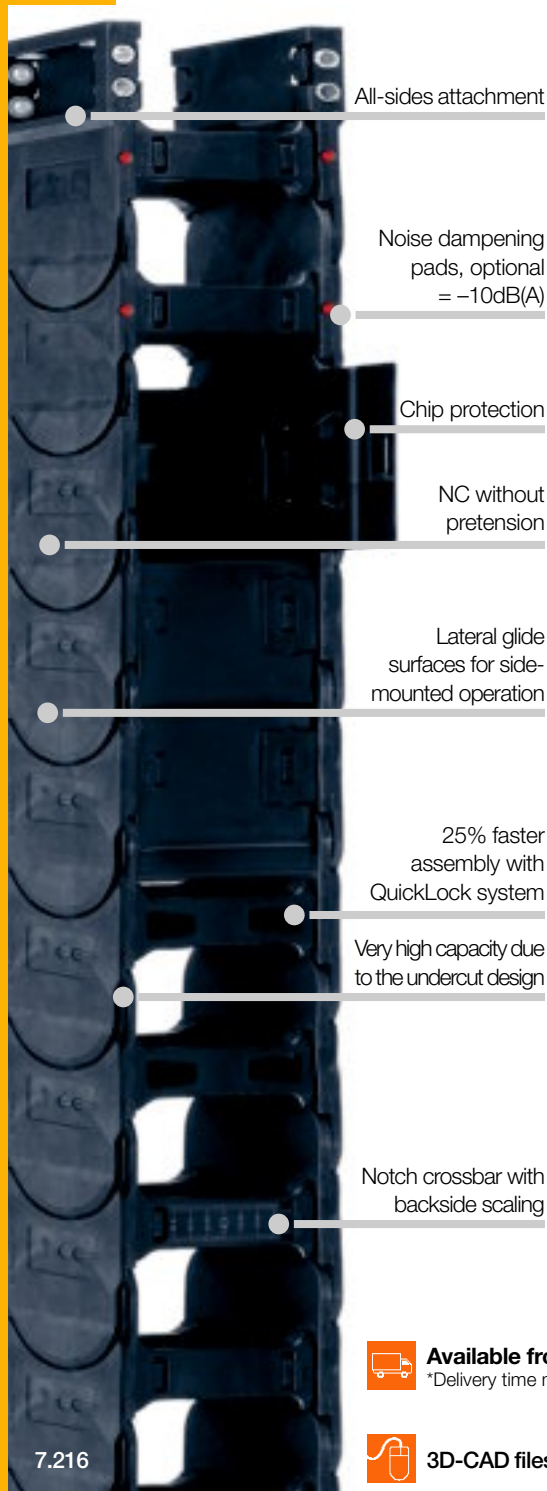


Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
 black	.0 from stock!	 green*	.7
 white*	.1	 grey*	.3 for e-chains®
 violet*	.5	 dusty grey*	.3 for e-tubes
 yellow*	.4	 agate grey*	.11
 orange*	.2	 light grey*	.14
 red*	.6	 black grey*	.13
 blue*	.8	 yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can delivered in 15 work days (5 work days at an express surcharge).

 **Available from stock. Delivery in 24h or today!***
*Delivery time means time until shipping of goods



All-sides attachment

Noise dampening pads, optional
= -10dB(A)

Chip protection

NC without pretension

Lateral glide surfaces for side-mounted operation

25% faster assembly with QuickLock system

Very high capacity due to the undercut design

Notch crossbar with backside scaling

+ "Light Design", very large inner height

When to use Series 15050-15150-19850:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 80 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,6 m and fill weights up to 54 kg/m
- For long travels up to 250 m
- Also suitable for side-mounted, vertical standing or hanging applications



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
- ▶ **Series E6.80, page 8.88**
- If larger unsupported lengths are required in side-mounted applications
- ▶ **Series E4.80, page 7.96**
- If increased unsupported lengths and longer travels are required
- ▶ **Series E4.80, page 7.96**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.161

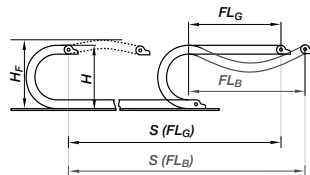
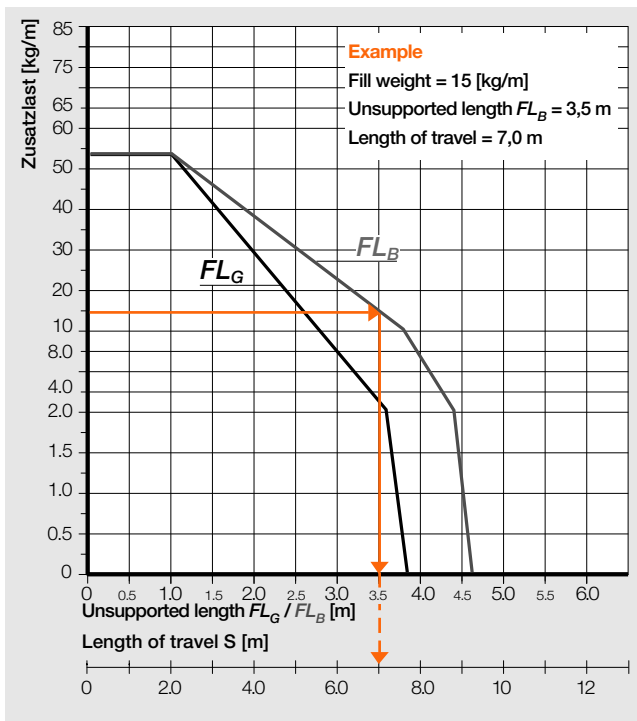


Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/15050



Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

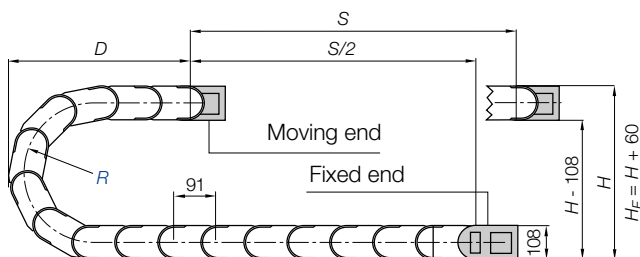
Gliding applications

Travels up to 250 m.
 More information ► **page 7.230**

Technical Data

Speed, material, temperature and flammability class ► **page 7.162**

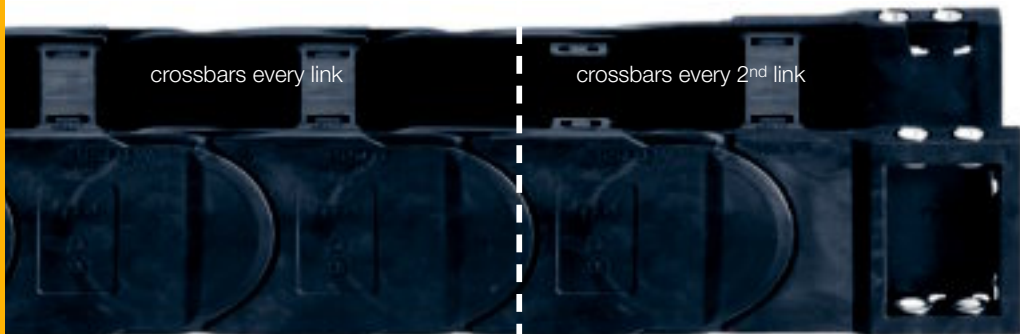
- Pitch** = 91 mm/link
- Links/m** = 11 (1001 mm)
- Chain length** = $S/2 + K$



R	150	200	250	300	350	400	500	600
H_{+25}^0	410	510	610	710	810	910	1110	1310
D	300	350	400	450	500	550	650	750
K	750	900	1050	1225	1375	1450	1755	2070

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

- i** FL_G = with straight upper run
- FL_B = with permitted sag
- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- D = Overlength e-chain*, radius in final position
- K = $\pi \cdot R +$ "safety"



e-chains® | Series 15050 crossbars every link | Series 15150 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	15050	15150
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
15050. 15150. 05. R.0	50	80	≈ 3,85	≈ 3,84
15050. 15150. 06. R.0	65	95	≈ 3,95	≈ 3,88
15050. 15150. 07. R.0	75	105	≈ 4,00	≈ 3,92
15050. 15150. 08. R.0	87	117	≈ 4,05	≈ 3,96
15050. 15150. 10. R.0	100	130	≈ 4,18	≈ 4,00
15050. 15150. 11. R.0	112	143	≈ 4,31	≈ 4,07
15050. 15150. 12. R.0	125	155	≈ 4,38	≈ 4,10
15050. 15150. 13. R.0	137	168	≈ 4,51	≈ 4,17
15050. 15150. 15. R.0	150	180	≈ 4,58	≈ 4,20
15050. 15150. 16. R.0	162	193	≈ 4,69	≈ 4,26
15050. 15150. 17. R.0	175	205	≈ 4,80	≈ 4,31
15050. 15150. 18. R.0	187	218	≈ 4,91	≈ 4,37
15050. 15150. 20. R.0	200	230	≈ 4,93	≈ 4,38
15050. 15150. 21. R.0	212	243	≈ 5,04	≈ 4,43
15050. 15150. 22. R.0	225	255	≈ 5,10	≈ 4,47
15050. 15150. 23. R.0	237	268	≈ 5,24	≈ 4,53
15050. 15150. 25. R.0	250	280	≈ 5,32	≈ 4,58
15050. 15150. 26. R.0	262	293	≈ 5,41	≈ 4,62
15050. 15150. 27. R.0	275	305	≈ 5,52	≈ 4,68
15050. 15150. 28. R.0	287	318	≈ 5,54	≈ 4,69
15050. 15150. 30. R.0	300	330	≈ 5,76	≈ 4,80

Part No.	<i>Bi</i>	<i>Ba</i>	15050	15150
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
15050. 15150. 31. R.0	312	343	≈ 5,80	≈ 4,82
15050. 15150. 32. R.0	325	355	≈ 5,85	≈ 4,84
15050. 15150. 33. R.0	337	368	≈ 6,03	≈ 4,93
15050. 15150. 35. R.0	350	380	≈ 6,18	≈ 5,01
15050. 15150. 36. R.0	362	393	≈ 6,19	≈ 5,02
15050. 15150. 37. R.0	375	405	≈ 6,20	≈ 5,02
15050. 15150. 38. R.0	387	418	≈ 6,29	≈ 5,06
15050. 15150. 40. R.0	400	430	≈ 6,49	≈ 5,16
15050. 15150. 41. R.0	412	443	≈ 6,64	≈ 5,24
15050. 15150. 42. R.0	425	455	≈ 6,80	≈ 5,31
15050. 15150. 43. R.0	437	468	≈ 6,86	≈ 5,35
15050. 15150. 45. R.0	450	480	≈ 6,93	≈ 5,38
15050. 15150. 46. R.0	462	493	≈ 6,95	≈ 5,39
15050. 15150. 47. R.0	475	505	≈ 7,08	≈ 5,46
15050. 15150. 48. R.0	487	518	≈ 7,16	≈ 5,49
15050. 15150. 50. R.0	500	530	≈ 7,22	≈ 5,52
15050. 15150. 51. R.0	512	543	≈ 7,24	≈ 5,53
15050. 15150. 52. R.0	525	555	≈ 7,28	≈ 5,56
15050. 15150. 53. R.0	537	568	≈ 7,44	≈ 5,63
15050. 15150. 55. R.0	550	580	≈ 7,92	≈ 5,87
15050. 15150. 60. R.0	600	630	≈ 8,12	≈ 5,97

Available bending radii R [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (R). Example: 15050.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.163



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



e-tubes | Series 19850 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	19850 [kg/m]
19850. 07. <i>R.0</i>	75	105	≈ 4,46
19850. 10. <i>R.0</i>	100	130	≈ 4,74
19850. 12. <i>R.0</i>	125	155	≈ 5,10
19850. 15. <i>R.0</i>	150	180	≈ 5,53
19850. 17. <i>R.0</i>	175	205	≈ 5,88
19850. 20. <i>R.0</i>	200	230	≈ 6,11

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	19850 [kg/m]
19850. 25. <i>R.0</i>	250	280	≈ 6,83
19850. 27. <i>R.0</i>	275	305	≈ 7,26
19850. 30. <i>R.0</i>	300	330	≈ 7,49
19850. 35. <i>R.0</i>	350	380	≈ 8,24
19850. 40. <i>R.0</i>	400	430	≈ 9,20
19850. 46. <i>R.0</i>	462	493	≈ 9,66

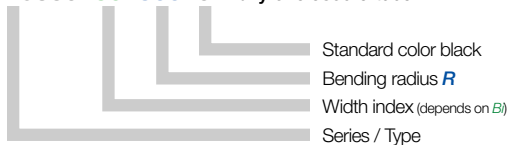
Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 19850.30.300.0

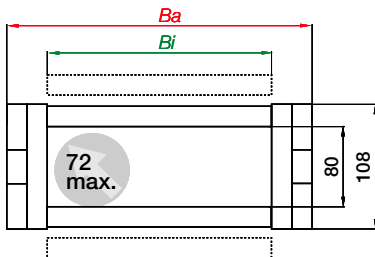
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)


 **Order key for all types**

- 15050. 30. 300. 0 e-chain® (crossbars every link)
- 15150. 30. 300. 0 e-chain® (crossbars every 2nd link)
- 19850. 30. 300. 0 Fully enclosed e-tube



Dimensioning



-  15050.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- 15150.30.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- 19850.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black

More order examples, variations and configurations ► page 7.232

 **Standard e-tubes incl. accessories from stock. Delivery in 24h or today!***

*Delivery time means time until shipping of goods

15050
15150
19850

E4/light | 15050-15150-19850 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i> [mm]
	crossbars every link	crossbars every 2 nd link		
15050. 15150.	15QZ.R.0	15QE.R.0	15Q.R.0	150
15050. 15150.	16QZ.R.0	16QE.R.0	16Q.R.0	162
15050. 15150.	17QZ.R.0	17QE.R.0	17Q.R.0	175
15050. 15150.	18QZ.R.0	18QE.R.0	18Q.R.0	187
15050. 15150.	20QZ.R.0	20QE.R.0	20Q.R.0	200
15050. 15150.	21QZ.R.0	21QE.R.0	21Q.R.0	212
15050. 15150.	22QZ.R.0	22QE.R.0	22Q.R.0	225
15050. 15150.	23QZ.R.0	23QE.R.0	23Q.R.0	237
15050. 15150.	25QZ.R.0	25QE.R.0	25Q.R.0	250
15050. 15150.	26QZ.R.0	26QE.R.0	26Q.R.0	262
15050. 15150.	27QZ.R.0	27QE.R.0	27Q.R.0	275
15050. 15150.	28QZ.R.0	28QE.R.0	28Q.R.0	287
15050. 15150.	30QZ.R.0	30QE.R.0	30Q.R.0	300
15050. 15150.	31QZ.R.0	31QE.R.0	31Q.R.0	312
15050. 15150.	32QZ.R.0	32QE.R.0	32Q.R.0	325
15050. 15150.	33QZ.R.0	33QE.R.0	33Q.R.0	337
15050. 15150.	35QZ.R.0	35QE.R.0	35Q.R.0	350
15050. 15150.	36QZ.R.0	36QE.R.0	36Q.R.0	362
15050. 15150.	37QZ.R.0	37QE.R.0	37Q.R.0	375
15050. 15150.	38QZ.R.0	38QE.R.0	38Q.R.0	387
15050. 15150.	40QZ.R.0	40QE.R.0	40Q.R.0	400

Part No.	QuickLock crossbar for			<i>Bi</i> [mm]
	crossbars every link	crossbars every 2 nd link		
15050. 15150.	41QZ.R.0	41QE.R.0	41Q.R.0	412
15050. 15150.	42QZ.R.0	42QE.R.0	42Q.R.0	425
15050. 15150.	43QZ.R.0	43QE.R.0	43Q.R.0	437
15050. 15150.	45QZ.R.0	45QE.R.0	45Q.R.0	450
15050. 15150.	46QZ.R.0	46QE.R.0	46Q.R.0	462
15050. 15150.	47QZ.R.0	47QE.R.0	47Q.R.0	475
15050. 15150.	48QZ.R.0	48QE.R.0	48Q.R.0	487
15050. 15150.	50QZ.R.0	50QE.R.0	50Q.R.0	500
15050. 15150.	51QZ.R.0	51QE.R.0	51Q.R.0	512
15050. 15150.	52QZ.R.0	52QE.R.0	52Q.R.0	525
15050. 15150.	53QZ.R.0	53QE.R.0	53Q.R.0	537
15050. 15150.	55QZ.R.0	55QE.R.0	55Q.R.0	550
15050. 15150.	60QZ.R.0	60QE.R.0	60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15050.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. 15050.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. 15050.30QE.300.0 = QuickLock crossbar for outer radius

Part No. 15050.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods



Noise dampening | ≈ -10 dB(A)

With pads		<i>Bi</i>	With pads		<i>Bi</i>		
crossbars: every link	e-tube every 2 nd link fully enclosed	[mm]	crossbars: every link	e-tube every 2 nd link fully enclosed	[mm]		
S15050.S15150.	-	05.R.0	50	S15050.S15150.	-	31.R.0	312
S15050.S15150.	-	06.R.0	65	S15050.S15150.	-	32.R.0	325
S15050.S15150.S19850.		07.R.0	75	S15050.S15150.	-	33.R.0	337
S15050.S15150.	-	08.R.0	87	S15050.S15150.S19850.		35.R.0	350
S15050.S15150.S19850.		10.R.0	100	S15050.S15150.	-	36.R.0	362
S15050.S15150.	-	11.R.0	112	S15050.S15150.	-	37.R.0	375
S15050.S15150.S19850.		12.R.0	125	S15050.S15150.	-	38.R.0	387
S15050.S15150.	-	13.R.0	137	S15050.S15150.S19850.		40.R.0	400
S15050.S15150.S19850.		15.R.0	150	S15050.S15150.	-	41.R.0	412
S15050.S15150.	-	16.R.0	162	S15050.S15150.	-	42.R.0	425
S15050.S15150.S19850.		17.R.0	175	S15050.S15150.	-	43.R.0	437
S15050.S15150.	-	18.R.0	187	S15050.S15150.	-	45.R.0	450
S15050.S15150.S19850.		20.R.0	200	S15050.S15150.S19850.		46.R.0	462
S15050.S15150.	-	21.R.0	212	S15050.S15150.	-	47.R.0	475
S15050.S15150.	-	22.R.0	225	S15050.S15150.	-	48.R.0	487
S15050.S15150.	-	23.R.0	237	S15050.S15150.	-	50.R.0	500
S15050.S15150.S19850.		25.R.0	250	S15050.S15150.	-	51.R.0	512
S15050.S15150.	-	26.R.0	262	S15050.S15150.	-	52.R.0	525
S15050.S15150.S19850.		27.R.0	275	S15050.S15150.	-	53.R.0	537
S15050.S15150.	-	28.R.0	287	S15050.S15150.	-	55.R.0	550
S15050.S15150.S19850.		30.R.0	300	S15050.S15150.	-	60.R.0	600



NC-Version | Without pretension

NC-Version		<i>Bi</i>	NC-Version		<i>Bi</i>		
crossbars: every link	e-tube every 2 nd link fully enclosed	[mm]	crossbars: every link	e-tube every 2 nd link fully enclosed	[mm]		
15050.15150.	-	05.R.0.NC	50	15050.15150.	-	31.R.0.NC	312
15050.15150.	-	06.R.0.NC	65	15050.15150.	-	32.R.0.NC	325
15050.15150.19850.		07.R.0.NC	75	15050.15150.	-	33.R.0.NC	337
15050.15150.	-	08.R.0.NC	87	15050.15150.19850.		35.R.0.NC	350
15050.15150.19850.		10.R.0.NC	100	15050.15150.	-	36.R.0.NC	362
15050.15150.	-	11.R.0.NC	112	15050.15150.	-	37.R.0.NC	375
15050.15150.19850.		12.R.0.NC	125	15050.15150.	-	38.R.0.NC	387
15050.15150.	-	13.R.0.NC	137	15050.15150.19850.		40.R.0.NC	400
15050.15150.19850.		15.R.0.NC	150	15050.15150.	-	41.R.0.NC	412
15050.15150.	-	16.R.0.NC	162	15050.15150.	-	42.R.0.NC	425
15050.15150.19850.		17.R.0.NC	175	15050.15150.	-	43.R.0.NC	437
15050.15150.	-	18.R.0.NC	187	15050.15150.	-	45.R.0.NC	450
15050.15150.19850.		20.R.0.NC	200	15050.15150.19850.		46.R.0.NC	462
15050.15150.	-	21.R.0.NC	212	15050.15150.	-	47.R.0.NC	475
15050.15150.	-	22.R.0.NC	225	15050.15150.	-	48.R.0.NC	487
15050.15150.	-	23.R.0.NC	237	15050.15150.	-	50.R.0.NC	500
15050.15150.19850.		25.R.0.NC	250	15050.15150.	-	51.R.0.NC	512
15050.15150.	-	26.R.0.NC	262	15050.15150.	-	52.R.0.NC	525
15050.15150.19850.		27.R.0.NC	275	15050.15150.	-	53.R.0.NC	537
15050.15150.	-	28.R.0.NC	287	15050.15150.	-	55.R.0.NC	550
15050.15150.19850.		30.R.0.NC	300	15050.15150.	-	60.R.0.NC	600

Available bending radii *R* [mm] 150* | 200 | 250 | 300 | 350 | 400 | 500 | 600 *not available for e-tubes

Supplement Part No. with required radius (*R*). Example: **S15050.30.300.0** or **15050.30.300.0.NC**



For e-chains® with noise dampening pads supplement Part No. with required index "S"

Example: Part No. **S15050.30.300.0** = e-chain® (crossbars every link) with noise dampening

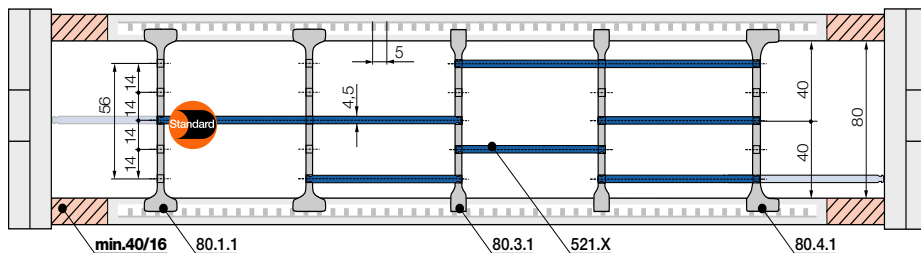
For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: Part No. **15050.30.300.0.NC** = e-chain® (crossbars every link) without pretension


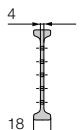


Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*

*Delivery time means time until shipping of goods


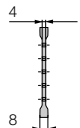


Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

		Standard separator, wide base
		unassembled 80.1 assembled 80.1.1


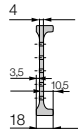
Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.

		Separator, narrow base
		unassembled 80.3 assembled 80.3.1

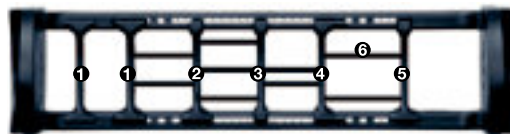
For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

		Asymmetrical separator
		unassembled 80.4 assembled 80.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



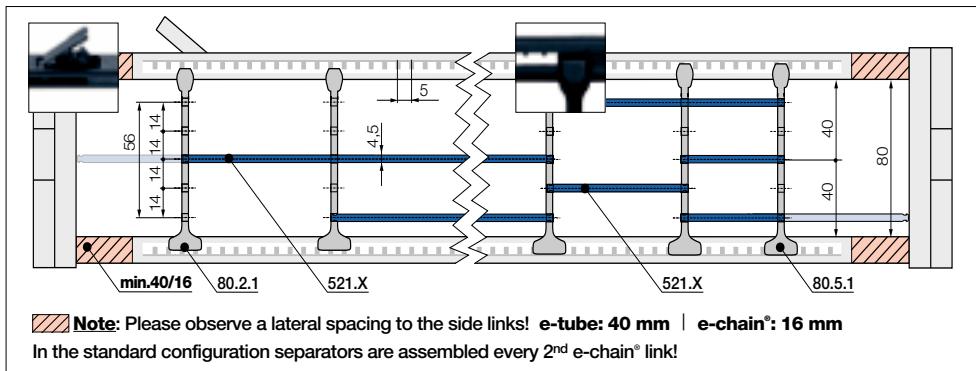
- ① Standard separator, wide base - Part No. 80.1 ③ Separator, narrow base - Part No. 80.3 ⑤ Notch separator - Part No. 80.5
 ② Separator for QuickLock crossbar - Part No. 80.2 ④ Separator, asymmetrical - Part No. 80.4 ⑥ Full-width self, lockable - Part No. 520.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
unassembled **80.2**
assembled **80.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
unassembled **80.5**
assembled **80.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
unassembled **520.X**
assembled **521.X**

Horizontal separation

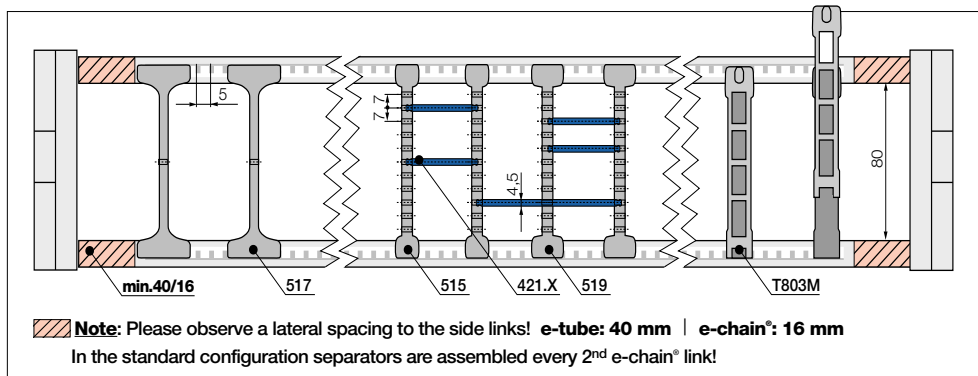


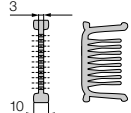
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 5 levels.

Lockable full-width shelves - for the standard interior separation



Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450


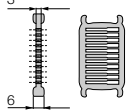
Previous interior separation All elements can still be ordered ► www.igus.de/en/15050

Open slotted separator for e-chains®/e-tubes
unassembled **509**
assembled **519**

Open, slotted separator 509 (unilateral open)



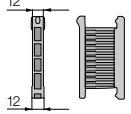
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Slotted separator for e-chains®/e-tubes
unassembled **505**
assembled **515**

Slotted separator 505


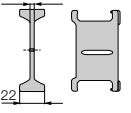
For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

Split separator for e-chains®
unassembled **T803**
assembled **T803M**

Split separator T803 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.


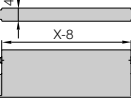



Locking separator for e-chains®
unassembled **507**
assembled **517**

Locking separator 507

For applications exposed to very high humidity (> 85%).

Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.

Shelf
unassembled **420.X**
assembled **421.X**

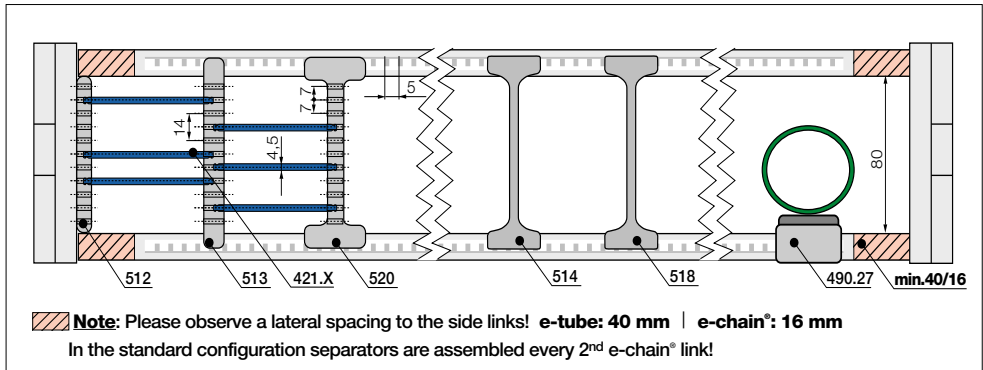
Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments). (not in combination with 504, 508).

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

Previous interior separation All elements can still be ordered ▶ www.igus.de/ev/15050



		Middle plate for e-chains® / e-tubes unassembled 503 assembled 513
--	--	---

Middle plate 503 (e-chains® only)
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).

		Locking vertical separator for e-chains® unassembled 510 assembled 520
--	--	---

Locking vertical separator 510 (e-chains® only)
Works like middle plate, for applications exposed to very high humidity (> 85%).

		Side plate for e-chains® / e-tubes unassembled 502 assembled 512
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Side plate 502
Works like middle plate. Allows modular shelving close to the side links.

		Locking separator for e-chains® unassembled 504 assembled 514
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Locking separator 504
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

		Locking separator for e-chains® unassembled 508 assembled 518
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Locking separator 508
For applications exposed to very high humidity (> 85%). **Extra retention force** by asymmetric claws. Ensure proper alignment. Tip: one Locking separator per e-chain® link for better mounting.

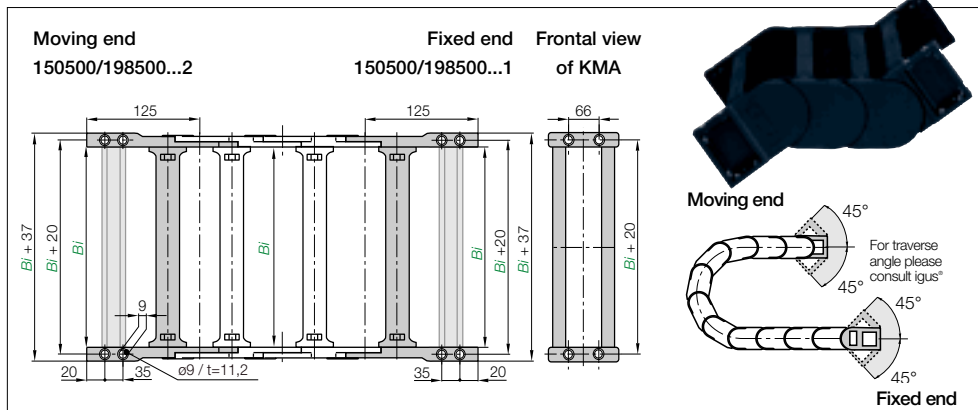
Additional elements for interior separation

		Rollclip for e-chains® unassembled 489.27 assembled 490.27
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Rollclip
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

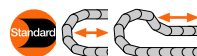
15050·15150·19850 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05. ▶	150500. -	05. 12.C 50	31. ▶	150500. -	31. 12.C 312
06. ▶	150500. -	06. 12.C 65	32. ▶	150500. -	32. 12.C 325
07. ▶	150500.198500.07. 12.C 75		33. ▶	150500. -	33. 12.C 337
08. ▶	150500. -	08. 12.C 87	35. ▶	150500.198500.35. 12.C 350	
10. ▶	150500.198500.10. 12.C 100		36. ▶	150500. -	36. 12.C 362
11. ▶	150500. -	11. 12.C 112	37. ▶	150500. -	37. 12.C 375
12. ▶	150500.198500.12. 12.C 125		38. ▶	150500. -	38. 12.C 387
13. ▶	150500. -	13. 12.C 137	40. ▶	150500.198500.40. 12.C 400	
15. ▶	150500.198500.15. 12.C 150		41. ▶	150500. -	41. 12.C 412
16. ▶	150500. -	16. 12.C 162	42. ▶	150500. -	42. 12.C 425
17. ▶	150500.198500.17. 12.C 175		43. ▶	150500. -	43. 12.C 437
18. ▶	150500. -	18. 12.C 187	45. ▶	150500. -	45. 12.C 450
20. ▶	150500.198500.20. 12.C 200		46. ▶	150500.198500.46. 12.C 462	
21. ▶	150500. -	21. 12.C 212	47. ▶	150500. -	47. 12.C 475
22. ▶	150500. -	22. 12.C 225	48. ▶	150500. -	48. 12.C 487
23. ▶	150500. -	23. 12.C 237	50. ▶	150500. -	50. 12.C 500
25. ▶	150500.198500.25. 12.C 250		51. ▶	150500. -	51. 12.C 512
26. ▶	150500. -	26. 12.C 262	52. ▶	150500. -	52. 12.C 525
27. ▶	150500.198500.27. 12.C 275		53. ▶	150500. -	53. 12.C 537
28. ▶	150500. -	28. 12.C 287	55. ▶	150500. -	55. 12.C 550
30. ▶	150500.198500.30. 12.C 300		60. ▶	150500. -	60. 12.C 600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

150500.30.12.C



Single-part order:

Mounting bracket **Moving end**

150500.30.2.C

Mounting bracket **Fixed end**

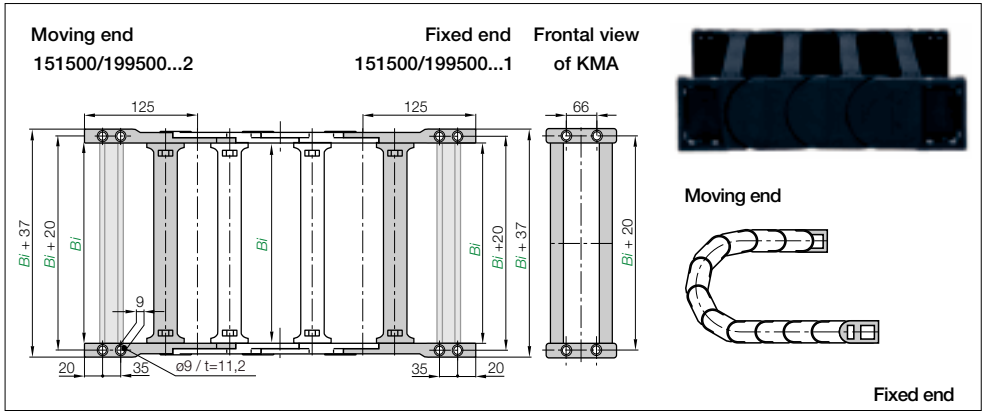
150500.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

15050·15150·19850 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	▶ 151500. – 05. 12.C 50		31.	▶ 151500. – 31. 12.C 312	
06.	▶ 151500. – 06. 12.C 65		32.	▶ 151500. – 32. 12.C 325	
07.	▶ 151500. 199500. 07. 12.C 75		33.	▶ 151500. – 33. 12.C 337	
08.	▶ 151500. – 08. 12.C 87		35.	▶ 151500. 199500. 35. 12.C 350	
10.	▶ 151500. 199500. 10. 12.C 100		36.	▶ 151500. – 36. 12.C 362	
11.	▶ 151500. – 11. 12.C 112		37.	▶ 151500. – 37. 12.C 375	
12.	▶ 151500. 199500. 12. 12.C 125		38.	▶ 151500. – 38. 12.C 387	
13.	▶ 151500. – 13. 12.C 137		40.	▶ 151500. 199500. 40. 12.C 400	
15.	▶ 151500. 199500. 15. 12.C 150		41.	▶ 151500. – 41. 12.C 412	
16.	▶ 151500. – 16. 12.C 162		42.	▶ 151500. – 42. 12.C 425	
17.	▶ 151500. 199500. 17. 12.C 175		43.	▶ 151500. – 43. 12.C 437	
18.	▶ 151500. – 18. 12.C 187		45.	▶ 151500. – 45. 12.C 450	
20.	▶ 151500. 199500. 20. 12.C 200		46.	▶ 151500. 199500. 46. 12.C 462	
21.	▶ 151500. – 21. 12.C 212		47.	▶ 151500. – 47. 12.C 475	
22.	▶ 151500. – 22. 12.C 225		48.	▶ 151500. – 48. 12.C 487	
23.	▶ 151500. – 23. 12.C 237		50.	▶ 151500. – 50. 12.C 500	
25.	▶ 151500. 199500. 25. 12.C 250		51.	▶ 151500. – 51. 12.C 512	
26.	▶ 151500. – 26. 12.C 262		52.	▶ 151500. – 52. 12.C 525	
27.	▶ 151500. 199500. 27. 12.C 275		53.	▶ 151500. – 53. 12.C 537	
28.	▶ 151500. – 28. 12.C 287		55.	▶ 151500. – 55. 12.C 550	
30.	▶ 151500. 199500. 30. 12.C 300		60.	▶ 151500. – 60. 12.C 600	



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

151500.30.12.C



Single-part order:

Mounting bracket **Moving end**

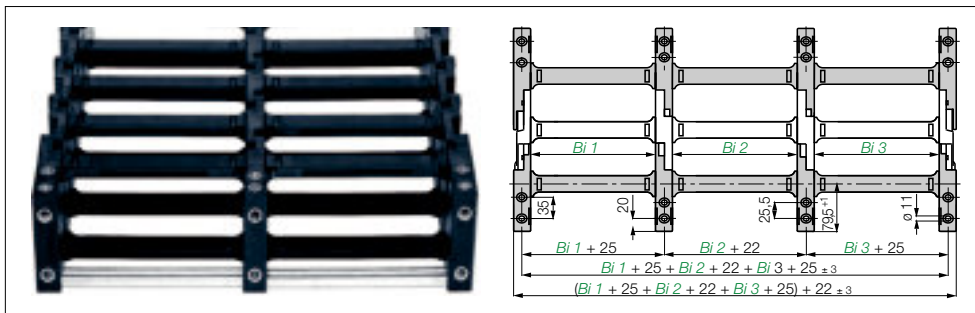
151500.30.2.C

Mounting bracket **Fixed end**

151500.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



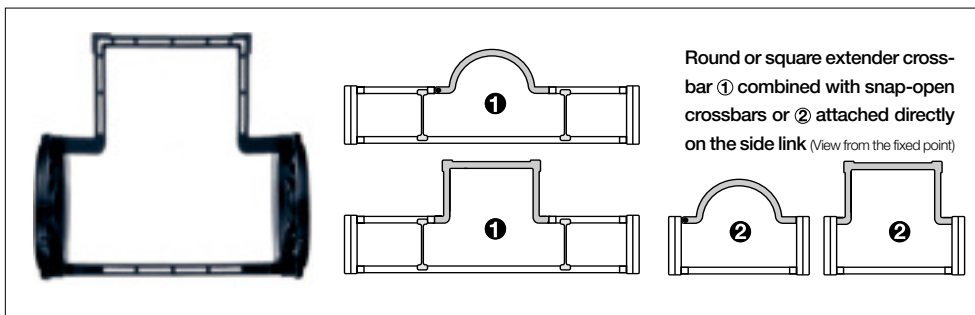
Order example - 3 chambers

15050.Bi1 / Bi2 / Bi3.R.0 =

15050.10 / 20 / 10.200.0

Extension links: single-part order:

522.R. (please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

15050.10/15RHDE115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

15050.10/15RHDZ115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

15050.17RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

15050.17RDZ115.R.0

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes



E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains *
- The loops can be adjusted as required
- Compatible with many E4 e-chains * • Stylish and economical
- One clip and one locking band are needed for each e-chain * link



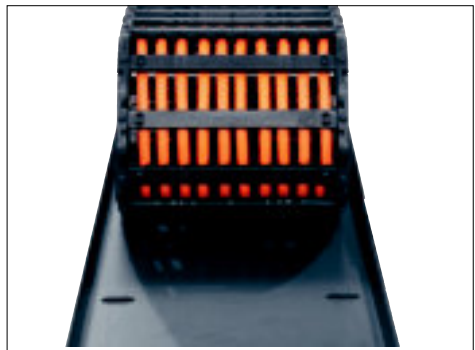
Order example (here: inner width B1/B2)
 Locking clip, to open along inner radius "Z":
15050.15.B12.200.Z.R.0
 Locking clip, to open along outer radius "E":
15050.15.B12.200.E.R.0

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12,5mm

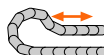
E4/light | 15050-15150-19850 | e-chain® accessories



Strain relief system
 Ramps, tie-wrap plates, nuggets and plug-in clips. The complete chainfixange with many order options ► **from page 10.1**

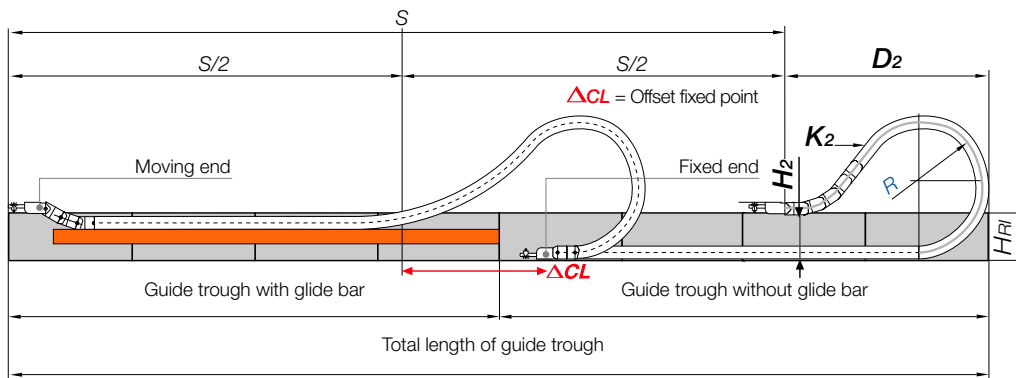


Support tray tool kit
 For support of the lower run. Single one-piece support trays according to your requirements and specification ► **from page 9.70**



Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 9 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $\frac{S}{2} + K$

R	150	200	250	300	350	400	500	600*
H ₂	242	242	242	242	242	242	242	*
D ₂ ⁺²⁵	550	800	950	1200	1550	1700	2175	*
K ₂	910	1274	1638	2002	2457	2730	3458	*
ΔACL	209	409	509	709	1009	1109	1484	*

*R600 not suitable for long travel applications. Please consult igus®

More solutions | for long travels

System P4.80 - Profile rol e-chain®, low-noise

Travels up to 800 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.85

rol e-chain® 5050R - Rolling instead of gliding

Travels up to 800 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide 15050.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► upon request

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H₂ = Mounting height (if the moving end is set lower)
D₂ = Over length - long travels, gliding

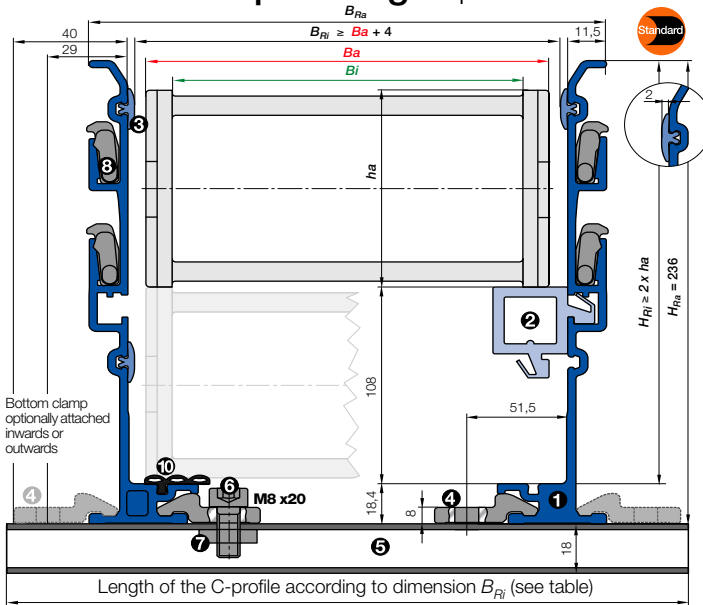
K₂ = Further add-on (if the moving end is set lower)
R = Bending radius

ΔACL = Offset fixed point
H_{RI} = Inner trough height

S = Length of travel
S/2 = Half length of travel

Aluminum "SuperTrough" | Basic Version

15050
15150
19850



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ► table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 15050.30.300.0 with $B_{Ri} = 334$

Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 975.30.SL**

Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 975.31.SL**

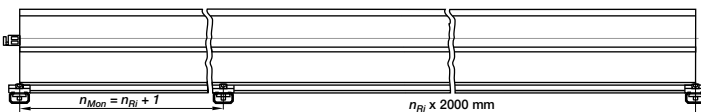
Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets **Part No. 960.50.400**

Module for the fixed end ► page 9.16

Order text: 1 set **Part No. 975.80**

Option: For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 975.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ► from page 9.38



- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*

- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height

- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

15050.30.300.0 ► Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	84	960.50.200
.06	99	960.50.225
.07	109	960.50.225
.08	121	960.50.250
.10	134	960.50.250
.11	146	960.50.200 960.50.275
.12	159	960.50.225 960.50.275
.13	171	960.50.225 960.50.300
.15	184	960.50.250 960.50.300
.16	196	960.50.250 960.50.325
.17	209	960.50.275 960.50.325
.18	221	960.50.275 960.50.350
.20	234	960.50.300 960.50.350
.21	246	960.50.300 960.50.375
.22	259	960.50.325 960.50.375
.23	271	960.50.325 960.50.400
.25	284	960.50.350 960.50.400
.26	296	960.50.350 960.50.425
.27	309	960.50.375 960.50.425
.28	321	960.50.375 960.50.450
.30	334	960.50.400 960.50.450
.31	346	960.50.400 960.50.475
.32	359	960.50.425 960.50.475
.33	371	960.50.425 960.50.500
.35	384	960.50.450 960.50.500
.36	396	960.50.450 960.50.525
.37	409	960.50.475 960.50.525
.38	421	960.50.475 960.50.550
.40	434	960.50.500 960.50.550
.41	446	960.50.500 960.50.575
.42	459	960.50.525 960.50.575
.43	471	960.50.525 960.50.600
.45	484	960.50.550 960.50.600
.46	496	960.50.550 960.50.625
.47	509	960.50.575 960.50.625
.48	521	960.50.575 960.50.650
.50	534	960.50.600 960.50.650
.51	546	960.50.600 960.50.675
.52	559	960.50.625 960.50.675
.53	571	960.50.625 960.50.700
.55	584	960.50.650 960.50.700
.60	634	960.50.700 960.50.750

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

E4/light | 15050-15150-19850 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 150 mm!



15050.30.R.0
Crossbar every link

S15050.30.R.0
Crossbar every link

15050.30QZ.R.0
Crossbar every link

15050.30QE.R.0
Crossbar every link

15050.30Q.R.0
Crossbar every link

15150.30.R.0
Crossbar every 2nd link

S15150.30.R.0
Crossbar every 2nd link

15150.30QZ.R.0
Crossbar every 2nd link

15150.30QE.R.0
Crossbar every 2nd link

15150.30Q.R.0
Crossbar every 2nd link

19850.30.R.0
e-tube, closed

S19850.30.R.0
e-tube, closed



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		S15050.30Q.R.0	S15050.30.R.0.NC	–	S15050.30.R.0.XXL	S15050.30.R.0.HT	S15050.30.R.0.ESD
QuickLock crossbar	S15050.30Q.R.0		15050.30Q.R.0.NC	15050.30Q.R1/R2.0	15050.30Q.R.0.XXL	–	15050.30Q.R.0.ESD
NC-Version	S15050.30.R.0.NC	15050.30Q.R.0.NC		–	–	19850.30.R.0.HT.NC	15050.30.R.0.ESD.NC
RBR-Version	–	15050.30Q.R1/R2.0	–		–	19850.30.R1/R2.0.HT	15050.30.R1/R2.0.ESD
XXL-Material	S15050.30.R.0.XXL	15050.30Q.R.0.XXL	–	–		–	–
HT-Material*	S15050.30.R.0.HT	–	19850.30.R.0.HT.NC	19850.30.R1/R2.0.HT	–		–
ESD-	S15050.30.R.0.ESD	15050.30Q.R.0.ESD	15050.30.R.0.ESD.NC	15050.30.R1/R2.0.ESD	–	–	

*for gliding applications please consult igus®

E4/light | 15050-15150-19850 | Options and order key

NC-Version -
(no camber)
without pretension

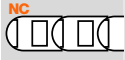
Reverse bending
radius for circular
movements

Unsupported
lengths +25%
possible

No burning-in of
hot chips up to
850°C (1562° F)

ATEX/ESD classi-
fied e-chains® -
II 2 GD

Part No.
NC-Material
e-chains®/e-tubes



Part No.
RBR
e-chains®/e-tubes



Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
HT-Material
only for e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



15050.30.R.0.NC
Crossbar every link

15050.30.R1/R2.0
Crossbar every link

15050.30.R.0.XXL
Crossbar every link

19850.30.R.0.HT
Complete e-tube*

15050.30.R.0.ESD
Crossbar every link

15150.30.R.0.NC
Crossbar every 2nd link

15150.30.R1/R2.0
Crossbar every 2nd link

15150.30.R.0.XXL
Crossbar every 2nd link

19850.30.HT.R.0
Lid and bottom

15150.30.R.0.ESD
Crossbar every 2nd link

19850.30.R.0.NC
e-tube, closed

19850.30.R1/R2.0
e-tube, closed

19850.30.R.0.XXL
e-tube, closed

19850.30.HTZ.R.0
Bottom only

19850.30.R.0.ESD
e-tube, closed

19850.30.HTE.R.0
Lid only

Delivery time:
3-5 work days

Delivery time:
10 work days
(2-5 work days with
express surcharge)

Delivery time:
1-2 weeks
**Sidebands made from
XXL-Material

Delivery time:
10 work days
*for gliding applications
please consult igus®

Delivery time:
5 work days

Order example | Order key and color options



Order example for complete e-chain® (3,0 m, with crossbars every link),
color black, mounting brackets with C-profiles and interior separation:

e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 33 links **15050.30.300.0**

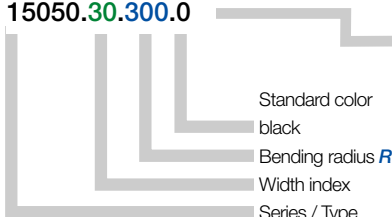
+ Mounting brackets 1 set (with integrated C-profiles) **150500.30.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 80.1.1**

Order text: 3,0 m 15050.30.300.0 + 150500.30.12.C + 2 x Part No. 80.1.1



Order key
15050.30.300.0



Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

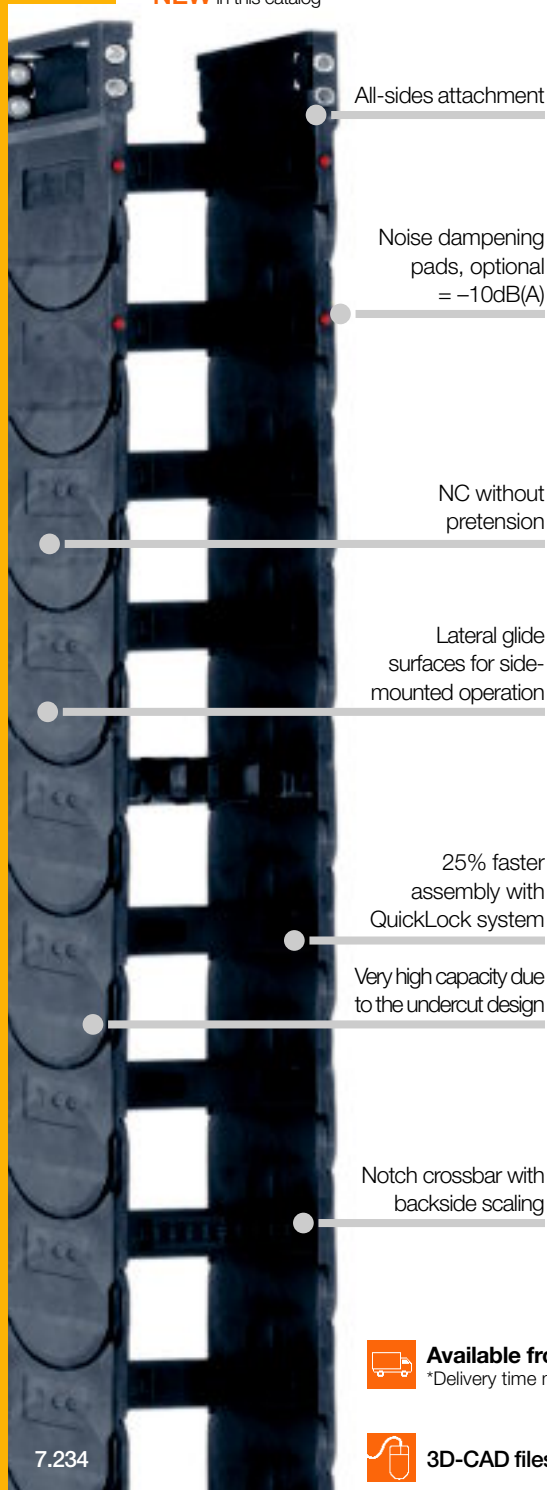
Black e-chains® from stock! *Colored e-chains® can delivered in 15 work days (5 work days at an express surcharge).



Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods

NEW in this catalog



All-sides attachment

Noise dampening
pads, optional
= -10dB(A)NC without
pretensionLateral glide
surfaces for side-
mounted operation25% faster
assembly with
QuickLock systemVery high capacity due
to the undercut designNotch crossbar with
backside scaling

⊕ "Light Design", very large, new inner height

When to use Series 15250-15350:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 86 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,6 m and fill weights up to 54 kg/m
- For long travels up to 250 m
- Also suitable for side-mounted, vertical standing or hanging applications



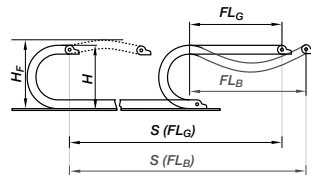
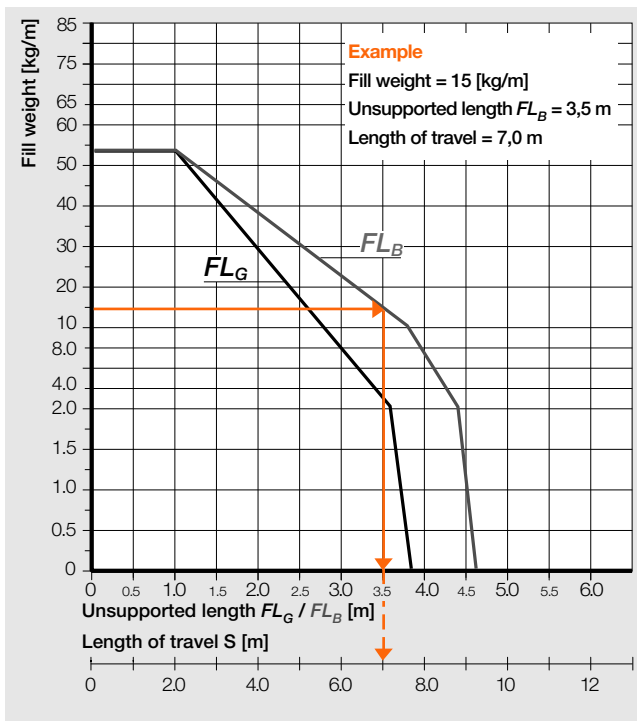
When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
 - ▶ **Series E6.80, page 8.88**
- If larger unsupported lengths are required in side-mounted applications
 - ▶ **Series E4.80, page 7.96**
- If increased unsupported lengths and longer travels are required
 - ▶ **Series E4.80, page 7.96**
- If high fill weights and/or stiff cables and hoses are used
 - ▶ **Series 15050, page 7.216**
 - ▶ **Series 19850, page 7.216**

Available from stock. **Delivery in 24h or today!***

*Delivery time means time until shipping of goods

3D-CAD files, configurators, PDF ▶ www.igus.de/en/15250

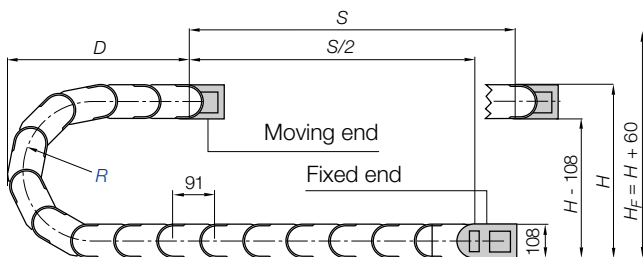


Standard **Unsupported applications**

Unsupported e-chains feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted. More information ► **Design, page 1.8**

Gliding applications

Travels up to 250 m.
 More information ► **page 7.246**



Technical Data

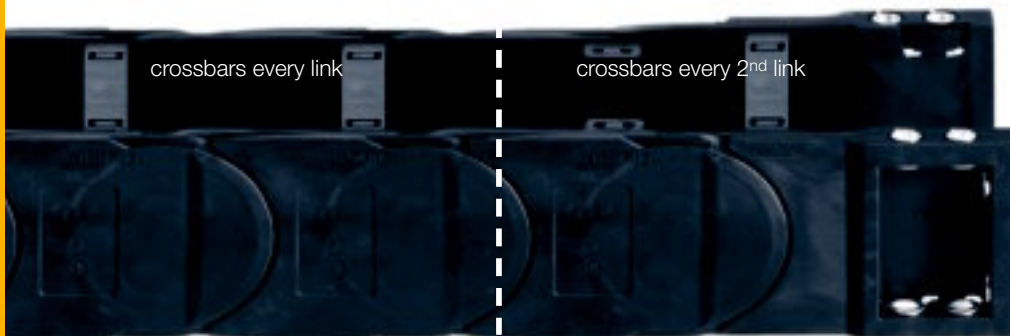
Speed, material, temperature and flammability class ► **page 7.162**

- Pitch** = 91 mm/link
- Links/m** = 11 (1001 mm)
- Chain length** = $S/2 + K$

R	150	200	250	300	350	400	500	600
H_{+25}	410	510	610	710	810	910	1110	1310
D	300	350	400	450	500	550	650	750
K	750	900	1050	1225	1375	1450	1755	2070

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

- i** FL_G = with straight upper run
 FL_B = with permitted sag
- S = Length of travel
R = Bending radius
- H = Nominal clearance height
 H_F = Required clearance height
- D = Overlength e-chain", radius in final position
K = $\pi \cdot R +$ "safety"



e-chains® | Series 15250 crossbars every link | Series 15350 crossbars every 2nd link

Part No.	<i>Bi</i>	<i>Ba</i>	15250	15350
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
15250. 15350. 05.	R.0	50	≈ 3,64	≈ 3,60
15250. 15350. 06.	R.0	68	≈ 3,72	≈ 3,60
15250. 15350. 07.	R.0	75	≈ 3,74	≈ 3,61
15250. 15350. 087.	R.0	87	≈ 3,79	≈ 3,63
15250. 15350. 10.	R.0	100	≈ 3,84	≈ 3,65
15250. 15350. 11.	R.0	108	≈ 3,87	≈ 3,67
15250. 15350. 112.	R.0	112	≈ 3,88	≈ 3,68
15250. 15350. 12.	R.0	125	≈ 3,95	≈ 3,71
15250. 15350. 137.	R.0	137	≈ 3,98	≈ 3,73
15250. 15350. 15.	R.0	150	≈ 4,04	≈ 3,75
15250. 15350. 162.	R.0	162	≈ 4,06	≈ 3,76
15250. 15350. 17.	R.0	168	≈ 4,11	≈ 3,79
15250. 15350. 18.	R.0	175	≈ 4,12	≈ 3,80
15250. 15350. 187.	R.0	187	≈ 4,15	≈ 3,81
15250. 15350. 20.	R.0	200	≈ 4,23	≈ 3,85
15250. 15350. 212.	R.0	212	≈ 4,26	≈ 3,86

Part No.	<i>Bi</i>	<i>Ba</i>	15250	15350
crossbars every link	[mm]	[mm]	[kg/m]	[kg/m]
15250. 15350. 23.	R.0	225	≈ 4,32	≈ 3,89
15250. 15350. 237.	R.0	237	≈ 4,34	≈ 3,90
15250. 15350. 25.	R.0	250	≈ 4,42	≈ 3,94
15250. 15350. 262.	R.0	262	≈ 4,47	≈ 3,97
15250. 15350. 28.	R.0	275	≈ 4,51	≈ 3,99
15250. 15350. 29.	R.0	287	≈ 4,53	≈ 4,00
15250. 15350. 30.	R.0	300	≈ 4,61	≈ 4,04
15250. 15350. 312.	R.0	312	≈ 4,63	≈ 4,05
15250. 15350. 325.	R.0	325	≈ 4,69	≈ 4,08
15250. 15350. 337.	R.0	337	≈ 4,73	≈ 4,10
15250. 15350. 350.	R.0	350	≈ 4,87	≈ 4,17
15250. 15350. 362.	R.0	362	≈ 4,92	≈ 4,20
15250. 15350. 375.	R.0	375	≈ 4,97	≈ 4,22
15250. 15350. 387.	R.0	387	≈ 5,01	≈ 4,24
15250. 15350. 400.	R.0	400	≈ 5,05	≈ 4,26 kg

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15250.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price

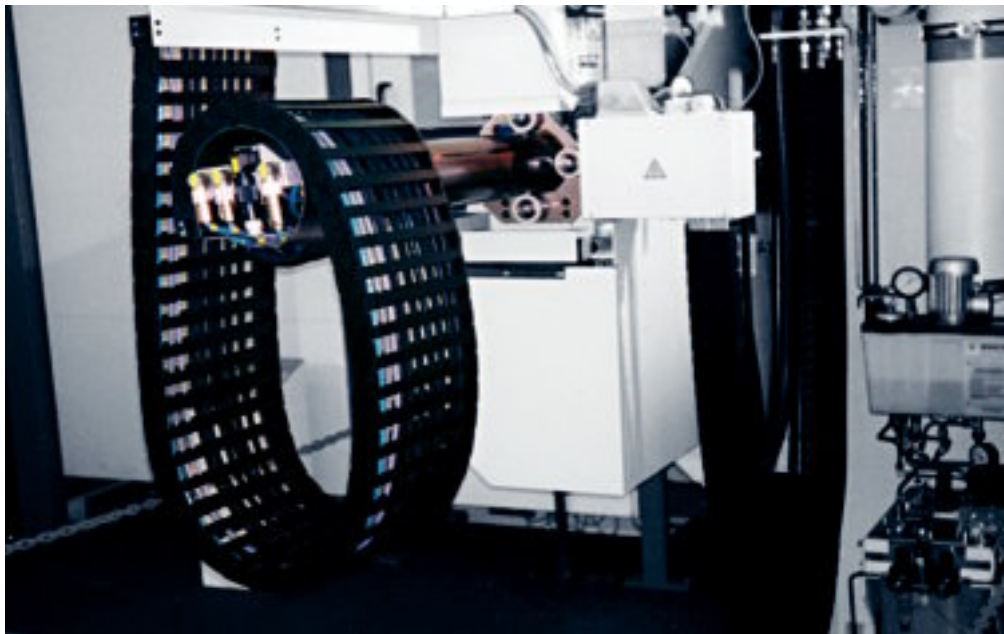


Part No. of e-chain® links as single parts ► page 7.163



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods



Circular movements (also with reverse bending radius "RBR") possible



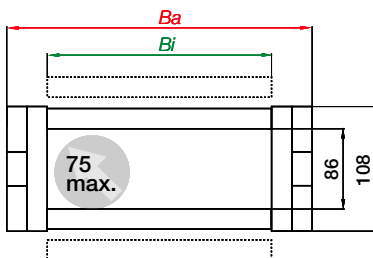
Order key for all types

15250. 30. 300. 0
15350. 30. 300. 0

e-chain® (crossbars every link)
e-chain® (crossbars every 2nd link)



Dimensioning



15250.30.300.0 = e-chain® with **crossbars every link**, inner width B_i 300 mm, radius R 300 mm, color black
 15350.30.300.0 = e-chain® with **crossbars every 2nd link**, inner width B_i 300 mm, radius R 300 mm, color black
 More order examples, variations and configurations ► page 7.248



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for			<i>Bi</i>			
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]		
15250.15350.	10.	QZ.R.0	10.	QE.R.0	10.	Q.R.0	100
15250.15350.	11.	QZ.R.0	11.	QE.R.0	11.	Q.R.0	108
15250.15350.	112.	QZ.R.0	112.	QE.R.0	112.	Q.R.0	112
15250.15350.	12.	QZ.R.0	12.	QE.R.0	12.	Q.R.0	125
15250.15350.	137.	QZ.R.0	137.	QE.R.0	137.	Q.R.0	137
15250.15350.	15.	QZ.R.0	15.	QE.R.0	15.	Q.R.0	150
15250.15350.	162.	QZ.R.0	162.	QE.R.0	162.	Q.R.0	162
15250.15350.	17.	QZ.R.0	17.	QE.R.0	17.	Q.R.0	168
15250.15350.	18.	QZ.R.0	18.	QE.R.0	18.	Q.R.0	175
15250.15350.	187.	QZ.R.0	187.	QE.R.0	187.	Q.R.0	187
15250.15350.	20.	QZ.R.0	20.	QE.R.0	20.	Q.R.0	200
15250.15350.	212.	QZ.R.0	212.	QE.R.0	212.	Q.R.0	212
15250.15350.	23.	QZ.R.0	23.	QE.R.0	23.	Q.R.0	225
15250.15350.	237.	QZ.R.0	237.	QE.R.0	237.	Q.R.0	237
15250.15350.	25.	QZ.R.0	25.	QE.R.0	25.	Q.R.0	250
15250.15350.	262.	QZ.R.0	262.	QE.R.0	262.	Q.R.0	262

Part No.	QuickLock crossbar for			<i>Bi</i>			
crossbars every link	crossbars every 2 nd link	Inner radius	Outer radius	Both radii	[mm]		
15250.15350.	28.	QZ.R.0	28.	QE.R.0	28.	Q.R.0	275
15250.15350.	29.	QZ.R.0	29.	QE.R.0	29.	Q.R.0	287
15250.15350.	30.	QZ.R.0	30.	QE.R.0	30.	Q.R.0	300
15250.15350.	312.	QZ.R.0	312.	QE.R.0	312.	Q.R.0	312
15250.15350.	325.	QZ.R.0	325.	QE.R.0	325.	Q.R.0	325
15250.15350.	337.	QZ.R.0	337.	QE.R.0	337.	Q.R.0	337
15250.15350.	350.	QZ.R.0	350.	QE.R.0	350.	Q.R.0	350
15250.15350.	362.	QZ.R.0	362.	QE.R.0	362.	Q.R.0	362
15250.15350.	375.	QZ.R.0	375.	QE.R.0	375.	Q.R.0	375
15250.15350.	387.	QZ.R.0	387.	QE.R.0	387.	Q.R.0	387
15250.15350.	400.	QZ.R.0	400.	QE.R.0	400.	Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15250.30**QZ.300.0**



For e-chains® with **QuickLock crossbar** supplement Part No. with required Index **QZ / QE / Q**

Part No. 15250.30**QZ.300.0** = QuickLock crossbar for inner radius

Part No. 15250.30**QE.300.0** = QuickLock crossbar for outer radius

Part No. 15250.30**Q .300.0** = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods



Noise damping | ≈ -10 dB(A)



NC-Version | Without pretension

With pads		<i>Bi</i>	With pads		<i>Bi</i>
crossbars every link	crossbars every 2nd link	[mm]	crossbars every link	crossbars every 2nd link	[mm]
S15250.S15350.05.R.0	R.0	50	S15250.S15350.23.R.0	R.0	225
S15250.S15350.06.R.0	R.0	68	S15250.S15350.237.R.0	R.0	237
S15250.S15350.07.R.0	R.0	75	S15250.S15350.25.R.0	R.0	250
S15250.S15350.087.R.0	R.0	87	S15250.S15350.262.R.0	R.0	262
S15250.S15350.10.R.0	R.0	100	S15250.S15350.28.R.0	R.0	275
S15250.S15350.11.R.0	R.0	108	S15250.S15350.29.R.0	R.0	287
S15250.S15350.112.R.0	R.0	112	S15250.S15350.30.R.0	R.0	300
S15250.S15350.12.R.0	R.0	125	S15250.S15350.312.R.0	R.0	312
S15250.S15350.137.R.0	R.0	137	S15250.S15350.325.R.0	R.0	325
S15250.S15350.15.R.0	R.0	150	S15250.S15350.337.R.0	R.0	337
S15250.S15350.162.R.0	R.0	162	S15250.S15350.350.R.0	R.0	350
S15250.S15350.17.R.0	R.0	168	S15250.S15350.362.R.0	R.0	362
S15250.S15350.18.R.0	R.0	175	S15250.S15350.375.R.0	R.0	375
S15250.S15350.187.R.0	R.0	187	S15250.S15350.387.R.0	R.0	387
S15250.S15350.20.R.0	R.0	200	S15250.S15350.400.R.0	R.0	400
S15250.S15350.212.R.0	R.0	212			

NC-Version		<i>Bi</i>	NC-Version		<i>Bi</i>
crossbars every link	crossbars every 2nd link	[mm]	crossbars every link	crossbars every 2nd link	[mm]
15250.15350.05.R.0	NC	50	15250.15350.23.R.0	NC	225
15250.15350.06.R.0	NC	68	15250.15350.237.R.0	NC	237
15250.15350.07.R.0	NC	75	15250.15350.25.R.0	NC	250
15250.15350.087.R.0	NC	87	15250.15350.262.R.0	NC	262
15250.15350.10.R.0	NC	100	15250.15350.28.R.0	NC	275
15250.15350.11.R.0	NC	108	15250.15350.29.R.0	NC	287
15250.15350.112.R.0	NC	112	15250.15350.30.R.0	NC	300
15250.15350.12.R.0	NC	125	15250.15350.312.R.0	NC	312
15250.15350.137.R.0	NC	137	15250.15350.325.R.0	NC	325
15250.15350.15.R.0	NC	150	15250.15350.337.R.0	NC	337
15250.15350.162.R.0	NC	162	15250.15350.350.R.0	NC	350
15250.15350.17.R.0	NC	168	15250.15350.362.R.0	NC	362
15250.15350.18.R.0	NC	175	15250.15350.375.R.0	NC	375
15250.15350.187.R.0	NC	187	15250.15350.387.R.0	NC	387
15250.15350.20.R.0	NC	200	15250.15350.400.R.0	NC	400
15250.15350.212.R.0	NC	212			

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: **S15250.30.300.0** or **15250.30.300.0.NC**



For e-chains® with noise damping pads supplement Part No. with required index "S"

Example: **Part No. S15250.30.300.0** = e-chain® (crossbars every link) with noise damping

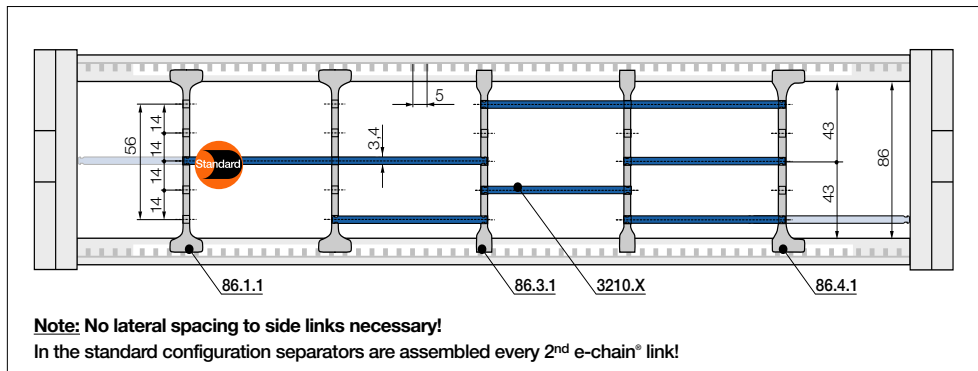
For NC-e-chains® without pretension supplement Part No. with required index "NC"

Example: **Part No. 15250.30.300.0.NC** = e-chain® (crossbars every link) without pretension



Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*

*Delivery time means time until shipping of goods



Standard separator, wide base
unassembled **86.1**
assembled **86.1.1**

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains®.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Separator, narrow base
unassembled **86.3**
assembled **86.3.1**

For many thin cables

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

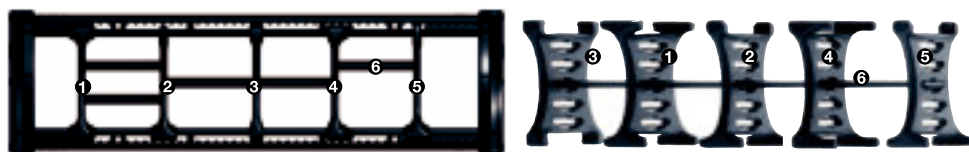
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Asymmetrical separator
unassembled **86.4**
assembled **86.4.1**

For side-mounted applications

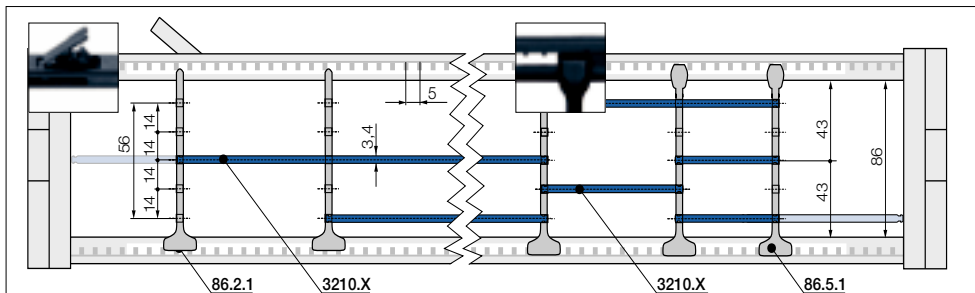
Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains®.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order




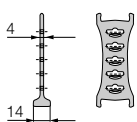
- ① Standard separator, wide base - Part No. 86.1
- ② Separator for QuickLock crossbar - Part No. 86.2
- ③ Separator, narrow base - Part No. 86.3
- ④ Separator, asymmetrical - Part No. 86.4
- ⑤ Notch separator - Part No. 86.5
- ⑥ Full-width self, lockable - Part No. 3200.XX

New generation interior separation



Note: No lateral spacing to side links necessary!


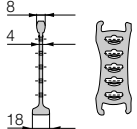
In the standard configuration separators are assembled every 2nd e-chain® link!

Separator for QuickLock crossbar
 unassembled **86.2**
 assembled **86.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).


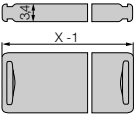



Notch separator for notch crossbar
 unassembled **86.5**
 assembled **86.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®. Recommended for side-mounted applications.

*available upon request. Delivery time: approx. 1-2 weeks after receipt of order

Full-width shelf, lockable
 unassembled **3200.X**
 assembled **3210.X**

Horizontal separation

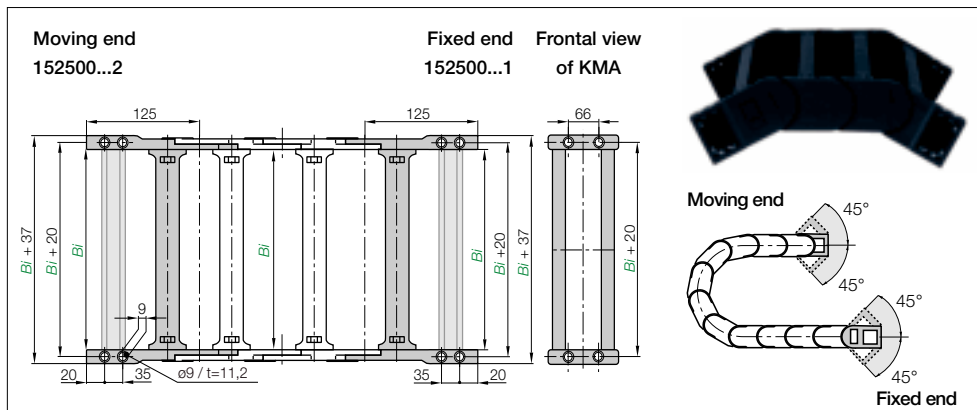
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 5 levels.

Lockable full-width shelves - for the standard interior separation



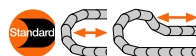
Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled	Width X (mm)	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115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

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
.05	▶ 152500. 05. 12.C	50	.23	▶ 152500. 23. 12.C	225
.06	▶ 152500. 06. 12.C	68	.237	▶ 152500. 237. 12.C	237
.07	▶ 152500. 07. 12.C	75	.25	▶ 152500. 25. 12.C	250
.087	▶ 152500. 087. 12.C	87	.262	▶ 152500. 262. 12.C	262
.10	▶ 152500. 10. 12.C	100	.28	▶ 152500. 28. 12.C	275
.11	▶ 152500. 11. 12.C	108	.29	▶ 152500. 29. 12.C	287
.112	▶ 152500. 112. 12.C	112	.30	▶ 152500. 30. 12.C	300
.12	▶ 152500. 12. 12.C	125	.312	▶ 152500. 312. 12.C	312
.137	▶ 152500. 137. 12.C	137	.325	▶ 152500. 325. 12.C	325
.15	▶ 152500. 15. 12.C	150	.337	▶ 152500. 337. 12.C	337
.162	▶ 152500. 162. 12.C	162	.350	▶ 152500. 350. 12.C	350
.17	▶ 152500. 17. 12.C	168	.362	▶ 152500. 362. 12.C	362
.18	▶ 152500. 18. 12.C	175	.375	▶ 152500. 375. 12.C	375
.187	▶ 152500. 187. 12.C	187	.387	▶ 152500. 387. 12.C	387
.20	▶ 152500. 20. 12.C	200	.400	▶ 152500. 400. 12.C	400
.212	▶ 152500. 212. 12.C	212			



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

152500.30.12.C



Single-part order:

Mounting bracket **Moving end**

152500.30.2.C

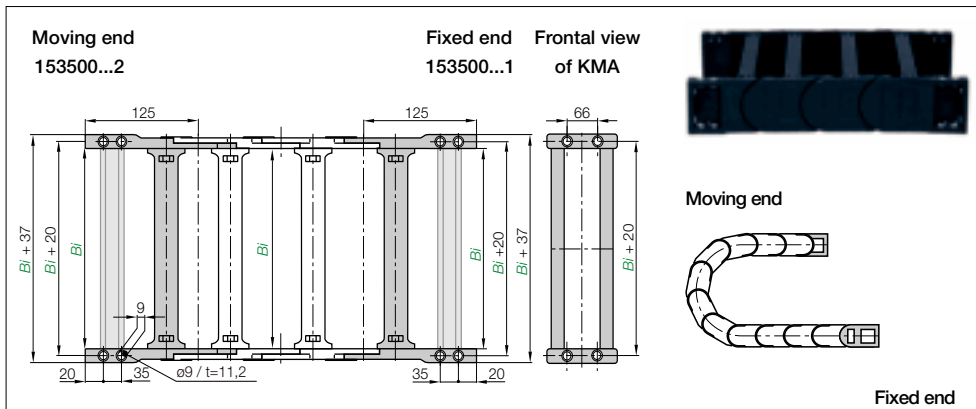
Mounting bracket **Fixed end**

152500.30.1.C



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
.05	▶ 153500. 05. 12.C	50	.23	▶ 153500. 23. 12.C	225
.06	▶ 153500. 06. 12.C	68	.237	▶ 153500. 237. 12.C	237
.07	▶ 153500. 07. 12.C	75	.25	▶ 153500. 25. 12.C	250
.087	▶ 153500. 087. 12.C	87	.262	▶ 153500. 262. 12.C	262
.10	▶ 153500. 10. 12.C	100	.28	▶ 153500. 28. 12.C	275
.11	▶ 153500. 11. 12.C	108	.29	▶ 153500. 29. 12.C	287
.112	▶ 153500. 112. 12.C	112	.30	▶ 153500. 30. 12.C	300
.12	▶ 153500. 12. 12.C	125	.312	▶ 153500. 312. 12.C	312
.137	▶ 153500. 137. 12.C	137	.325	▶ 153500. 325. 12.C	325
.15	▶ 153500. 15. 12.C	150	.337	▶ 153500. 337. 12.C	337
.162	▶ 153500. 162. 12.C	162	.350	▶ 153500. 350. 12.C	350
.17	▶ 153500. 17. 12.C	168	.362	▶ 153500. 362. 12.C	362
.18	▶ 153500. 18. 12.C	175	.375	▶ 153500. 375. 12.C	375
.187	▶ 153500. 187. 12.C	187	.387	▶ 153500. 387. 12.C	387
.20	▶ 153500. 20. 12.C	200	.400	▶ 153500. 400. 12.C	400
.212	▶ 153500. 212. 12.C	212			



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

153500.30.12.C



Single-part order:

Mounting bracket **Moving end**

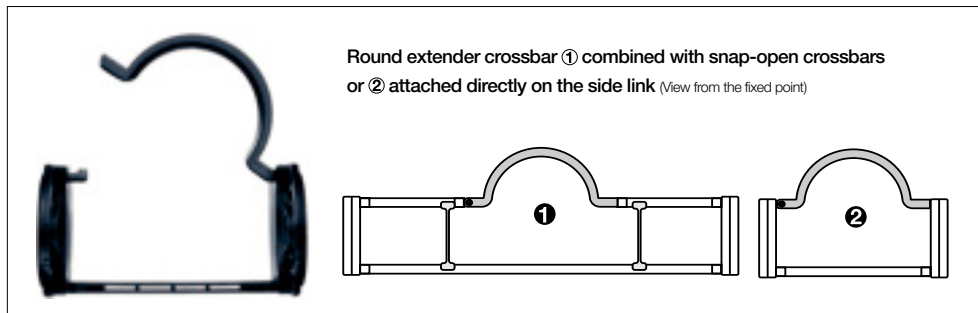
153500.30.2.C

Mounting bracket **Fixed end**

153500.30.1.C



Strain relief, e.g. clamps, tiwrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 10.1



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No.	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	115	O round	no	yes
385.18.RD115	115	O round	yes	no



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

15250.10/15RHDE115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

15250.10/15RHDZ115/10.R.0

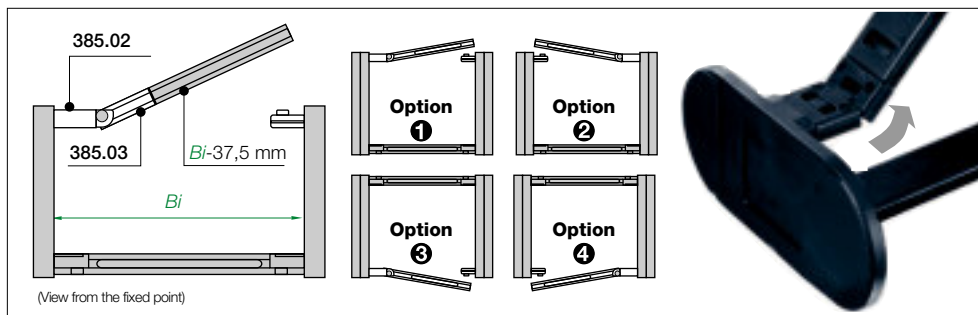
② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

15250.18RDE115.R.0

RD115 for inner radius "Z" incl. e-chain®:

15250.18RDZ115.R.0



(View from the fixed point)

Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- **Hinged crossbar: Part No. 385.02**
Snap-open crossbar (shortened): Bi-37,5 mm Part No. 385.03
(smallest inner width Bi = 87,5)



Order example (here: inner width Bi 150)

15250.15.Z.R.0 =

15250.15.01.R.0

Supplement Index "Z" with required option number ①, ②, ③ or ④



Strain relief system

Clamps, tie-wrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**

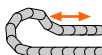


Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**

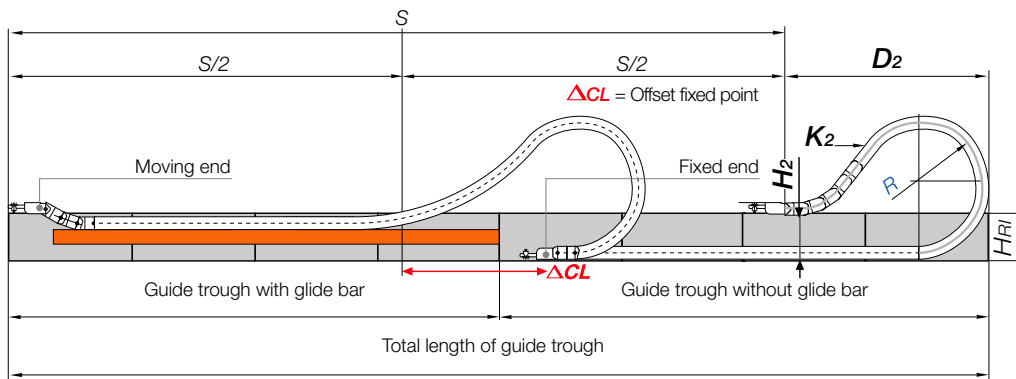


System E4 e-chain® - can be filled with cables of diameters up to 100 mm



Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 9 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $\frac{S}{2} + K$

R	150	200	250	300	350	400	500	600*
H_2	242	242	242	242	242	242	242	*
D_2^{+25}	550	800	950	1200	1550	1700	2175	*
K_2	910	1274	1638	2002	2457	2730	3458	*
ΔCL	209	409	509	709	1009	1109	1339	*

*R600 not suitable for long travel applications. Please consult igus®

More solutions | for long travels

System P4.80 - Profile rol e-chain®, low-noise

Travels up to 800 m

v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.85

rol e-chain® 5050R - Rolling instead of gliding

Travels up to 800 m

v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide 15050.Bi.R.0.AG - Self-guiding, no guide troughs

Travels ≤ 50 m

v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required! ► upon request

Specialty:

guidelok horizontal - Upper run guide, unsupported

Travels ≤ 50 m

Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



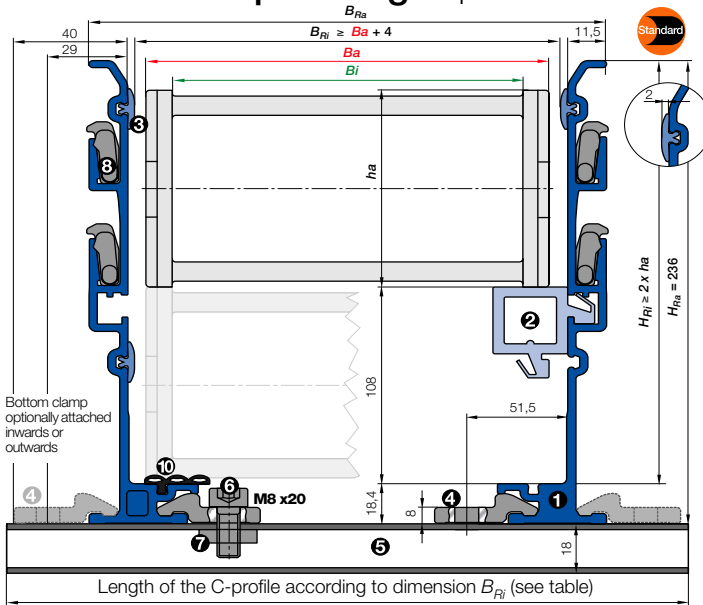
H_2 = Mounting height (if the moving end is set lower)
 D_2 = Over length - long travels, gliding

K_2 = Further add-on (if the moving end is set lower)
R = Bending radius

ΔCL = Offset fixed point
 H_{Ri} = Inner trough height

S = Length of travel
 $S/2$ = Half length of travel

Aluminum "SuperTrough" | Basic Version



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, galvanized steel ► table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 15050.30.300.0 with $B_{Ri} = 334$

Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 975.30.SL**

Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 975.31.SL**

Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets **Part No. 960.50.400**

Module for the fixed end ► page 9.16

Order text: 1 set **Part No. 975.80**

Option: For an additional noise dampening

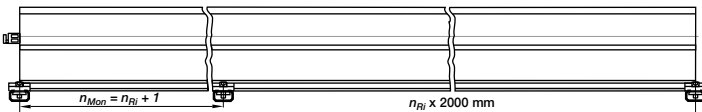
with silencer profile, please add Index A - Example: **Part No. 975.30.SLA**

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

15050.30.300.0 ► Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	960.50.200
.06	98	960.50.225
.07	105	960.50.225
.087	118	960.50.250
.10	130	960.50.250
.11	138	960.50.200 960.50.275
.112	143	960.50.200 960.50.275
.12	155	960.50.225 960.50.275
.137	168	960.50.225 960.50.300
.15	180	960.50.250 960.50.300
.162	193	960.50.250 960.50.325
.17	198	960.50.250 960.50.325
.18	205	960.50.275 960.50.325
.187	218	960.50.275 960.50.350
.20	230	960.50.300 960.50.350
.212	243	960.50.300 960.50.375
.23	255	960.50.325 960.50.375
.237	268	960.50.325 960.50.400
.25	280	960.50.350 960.50.400
.262	293	960.50.350 960.50.425
.28	305	960.50.375 960.50.425
.29	318	960.50.375 960.50.450
.30	330	960.50.400 960.50.450
.312	343	960.50.400 960.50.475
.325	355	960.50.425 960.50.475
.337	368	960.50.425 960.50.500
.350	380	960.50.450 960.50.500
.362	393	960.50.450 960.50.525
.375	405	960.50.475 960.50.525
.387	418	960.50.475 960.50.550
.400	430	960.50.500 960.50.550



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"



Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ► from page 9.38



- Trough set
- Installation set
- Glide bar
- C-Profile
- Ba = Outer width e-chains*
- Bl = Inner width e-chains*
- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes



Part No.
Low noise (with pads)
e-chains®/e-tubes



Part No.
QuickLock crossbar
for inner radius



Part No.
QuickLock crossbar
for outer radius

Part No.
QuickLock crossbar
for both radii

QuickLock crossbars: inner widths from *Bi* 100 mm!



15250.30.R.0
Crossbar every link

S15250.30.R.0
Crossbar every link

15250.30QZ.R.0
Crossbar every link

15250.30QE.R.0
Crossbar every link

15250.30Q.R.0
Crossbar every link

15350.30.R.0
Crossbar every 2nd link

S15350.30.R.0
Crossbar every 2nd link

15350.30QZ.R.0
Crossbar every 2nd link

15350.30QE.R.0
Crossbar every 2nd link

15350.30Q.R.0
Crossbar every 2nd link



Delivery in
24h or today!*

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Delivery time:
3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	ESD-Material
Low-noise option		S15250.30Q.R.0	S15250.30.R.0.NC	-	S15250.30.R.0.XXL	S15250.30.R.0.ESD
QuickLock crossbar	S15250.30Q.R.0		15250.30Q.R.0.NC	15250.30Q.R1/R2.0	15250.30Q.R.0.XXL	15250.30Q.R.0.ESD
NC-Version	S15250.30.R.0.NC	15250.30Q.R.0.NC		-	-	15250.30.R.0.ESD.NC
RBR-Version	-	15250.30Q.R1/R2.0	-		-	15250.30.R1/R2.0.ESD
XXL-Material	S15250.30.R.0.XXL	15250.30Q.R.0.XXL	-	-		-
ESD-Material	S15250.30.R.0.ESD	15250.30Q.R.0.ESD	15250.30.R.0.ESD.NC	15250.30.R1/R2.0.ESD	-	-


for gliding applications please consult igus

E4/light | Series 15250-15350 | Options and order key

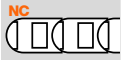
NC-Version -
(no camber)
without pretension

Reverse bending
radius for circular
movements

Unsupported
lengths +25%
possible

ATEX/ESD classi-
fied e-chains® -
 II 2 GD

Part No.
NC-Material
e-chains®/e-tubes



Part No.
RBR
e-chains®/e-tubes



Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



15250.30.R.0.NC
Crossbar every link

15250.30.R1/R2.0
Crossbar every link

15250.30.R.0.XXL
Crossbar every link

15250.30.R.0.ESD
Crossbar every link

15350.30.R.0.NC
Crossbar every 2nd link

15350.30.R1/R2.0
Crossbar every 2nd link

15350.30.R.0.XXL
Crossbar every 2nd link

15350.30.R.0.ESD
Crossbar every 2nd link

Delivery time:
3-5 work days

Delivery time:
10 work days
(2-5 Werktage mit
Expresszuschlag)

Delivery time:
1-2 weeks
**Seitenbänder aus
XXL-Material

Delivery time:
5 work days

Order example | Order key and color options



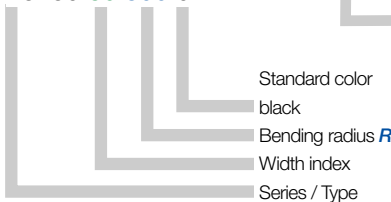
Order example for complete e-chain® (3,0 m, with crossbars every link),
color black, mounting brackets with C-profiles and interior separation:

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 33 links	15250.30.300.0
+ Mounting brackets	1 set (with integrated C-profiles)	152500.30.12.C
+ Interior separation	with 2 separators assembled every 2 nd link	2 x 86.2.1

Order text: 3,0 m 15250.30.300.0 + 153500.30.12.C + 2 x Part No. 86.2.1



Order key
15250.30.300.0



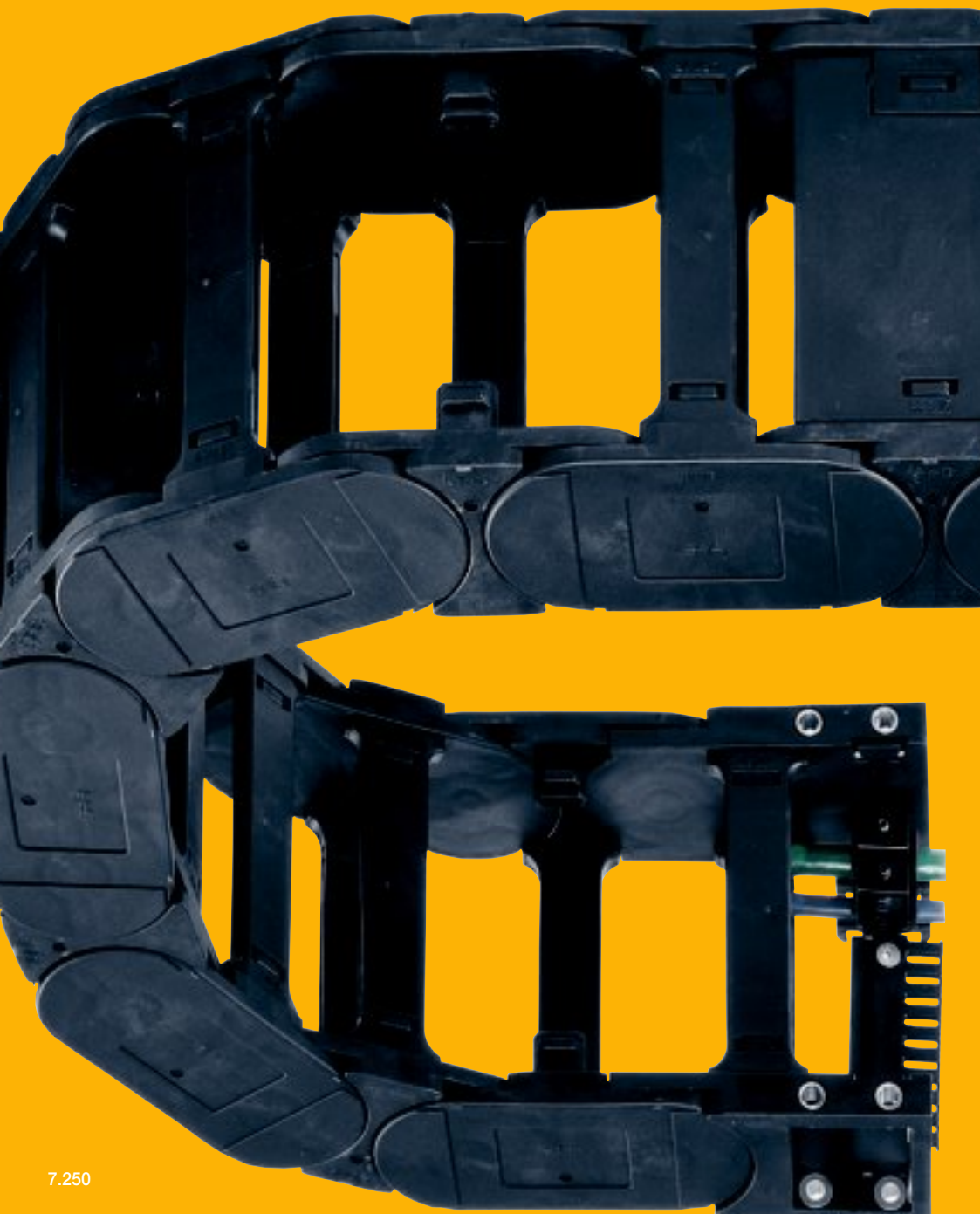
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored e-chains® can delivered in 15 work days (5 work days at an express surcharge).



Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods





E4/00

E4.1-predecessor for smooth running and easy assembly


For new constructions we recommend:
System E4.1 ► from page 7.6

E4/00 - The E4.1 - predecessor for smooth running and easy assembly


E4/00 (pronounced: E4-hundred) - Its "inner link - outer link" design makes it easy to assemble and disassemble on site. The "noise buffer" design feature reduces operating noises noticeably. The system E4/00 is furthermore available from stock


Typical industries and applications


- Robotics and handling
- Material handling
- Freezing environment
- Construction machinery
- Machine tools
- Woodworking machinery
- Machines of all kinds
- Semicon
- Cleanroom
- Welding machines
- General machinery

 IPA Certificate, Cleanroom ISO Class 3 (DIN 14644-1) at v = 1 m/s for Series 280.10.100.0 tested with igus® chainflex® cables

 ESD/ATEX upon request

 Low-noise due to special rubber pads design

 System E4/00 proved for long travels

 System E4 - 4-piece design link





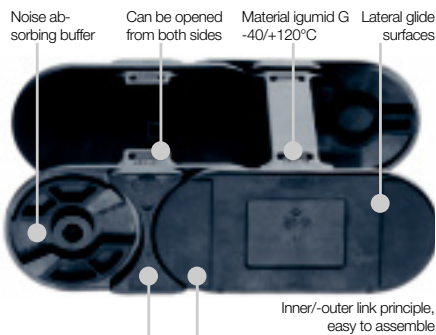
Long unsupported spans, high stability



Quiet and strong - ideal for handling applications



Sturdy design for construction machines


E4/00: e-chains® with a 4-piece design link

- Lowest noise in its class
- Further noise reduction with rubber pads (Series E4/101)
- Broad application spectrum
- Numerous interior separation possibilities
- Broad system of modular accessories
- Widths up to 3000 mm using extension links
- Maximum stability in the igus® range
- Can be opened along both radii
- Max. travel: 200 - 400 m
- You can find more technical data about the material, chemical resistance, temperatures ► **Design, from page 1.38**

Selection table

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]	Bending radius <i>R</i> [mm]	Unsupported length max. [m]	page
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Crossbars every link
for particularly demanding applications






220	28	40 - 300	60 - 320	42	55 - 250	2,00	7.256
280	32	50 - 400	73 - 423	54	63 - 300	3,00	7.264
380	42	50 - 400	76 - 426	64	75 - 350	3,80	7.274
400	56	50 - 600	84 - 634	84	135 - 500	4,50	7.284
600	108	200 - 600	252 - 652	140	200 - 1000	7,00	7.294
640	112	87 - 562	139 - 614	140	200 - 1000	7,00	7.302





Crossbars every 2nd link
for almost all applications






290	32	50 - 400	73 - 423	54	63 - 300	3,00	7.264
390	42	50 - 400	76 - 426	64	75 - 350	3,80	7.274
410	56	50 - 600	84 - 634	84	135 - 500	4,50	7.284
601	108	200 - 600	252 - 652	140	200 - 1000	7,00	7.294

e-tubes
fully enclosed,
excellent cable protection


R760	28	50 - 300	70 - 320	42	75 - 250	2,00	7.256
R770	32	50 - 300	73 - 323	54	125 - 300	3,00	7.264
R780	42	50 - 300	76 - 326	64	125 - 350	3,80	7.274
R880	56	75 - 462	109 - 497	84	150 - 500	4,50	7.284
R608	108	200 - 500	252 - 552	140	250 - 1000	7,00	7.294

System E4/00 | e-chains® | Opening		System E4/00 | e-tubes | Opening	
			
Remove crossbars - Insert screwdriver into the slot, push down, release by lever action	Remove clip - Insert screwdriver into the slot, release by lever action	Remove lids/bottoms - Insert screwdriver into the slot, release by lever action	Release only one side to swivel the lid

System E4/00 | e-chains® and e-tubes | Assembling			
			
Line up two inner side links, side by side. Attach an outer side link between	Assemble crossbars - Push down and snap in by using a screwdriver	Assemble clips (e-chains®) with crossbars every other link) - Push down and snap in	Assemble e-tube lids/bottoms - Attach to the connector at an angle - Snap in

System E4/00 | e-chains® and e-tubes | Separating			
			
Remove crossbars, clips, lids and bottoms at the outer links...	...guide the screwdriver into the slot between side links and release it by levering ...	...remove the outer links to the side...	...and separate the e-chain®



Price index



Series 220

Series R760



Low noise version E4/101
Series 221 available with
special rubber pads design



Cleanroom test
upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains*: Remove crossbars and
clips - Insert screwdriver into the slot, push
down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screw-
driver into the slot, release by lever action



When to use the Series 220/R760:

- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads



When not to use it:

- Zig-zag lift applications
 - ▶ System E4/4, from page 7.312
- For side-mounted applications
 - ▶ System E4/4, from page 7.312
- If an extrem vibration-free e-chain® is necessary
 - ▶ Series E6.29/R6.29, page 8.40/8.46

- 1 Crossbars are removable along both radii
- 2 Wide, rounded plastic crossbars - cable friendly
- 3 Stop dog with "brake" for noise reduction
- 4 Closed and open styles can be combined
- 5 Hinged snap-open removable lids
along outer radius of e-tube
- 6 Optimized glide pads
- 7 Numerous interior separation possibilities
- 8 KMA mounting brackets with
attachment points on all sides
- 9 Locking or pivoting mounting brackets available
- 10 Integrated strain relief possible
- 11 e-chains® also available with
reverse bending radius "RBR"


Also available as
E4/00-NC without
camber: 220-NC




Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 3 m or 66 links

3 m 220.300.250.0

 e-chain®

with 2 separators 2211 assembled every 2nd link

 Interior separation

1 set 220.300.1.12

 Mounting bracket

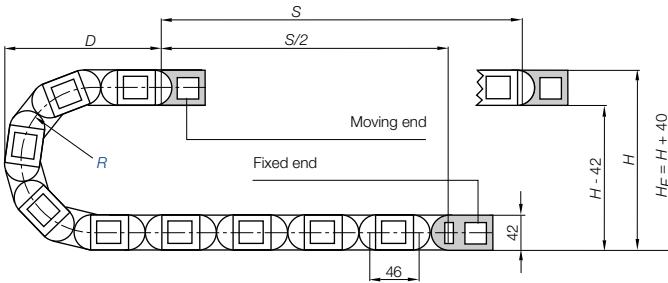
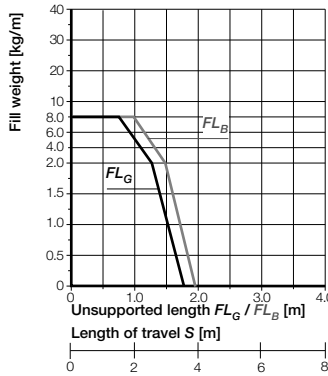
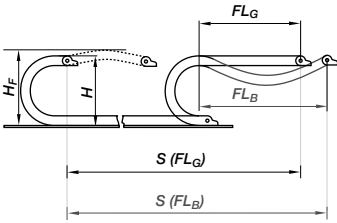


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



Pitch = 46 mm/link Links/m = 22 (1012 mm) Chain length = $S/2 + K$

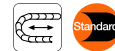
R	055*	063*	075	100	125	150	175	200	250
H	154	170	194	244	294	344	394	444	544
D	125	133	145	170	195	220	245	270	320
K	265	290	330	410	485	565	645	725	880
H ₂	112	128	152	158	158	158	158	158	158
D ₂ ⁺²⁵	125	133	145	350	490	530	655	730	935
K ₂	265	290	330	598	782	920	1104	1242	1610

*not available for R760

- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H₀₁ = Trough inner height
- D = Overlength e-chain*
radius in final position
- K = $\pi \cdot R + \text{"safety"}$
- D₂ = Overlength - long travels, gliding
- K₂ = *Further add-on
- H₂ = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 80 m
- Vertical, standing ≤ 5 m
- Side mounted, un supp. ≤ 2 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

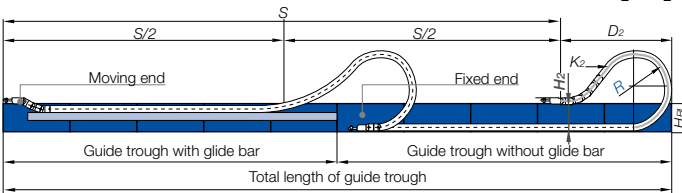


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus* if space is particularly restricted.

The required clearance height:
H_F = H + 40 mm
(with 1,0 kg/m fill weight)

Long travel lengths from 10 m to max. 200 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 200 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

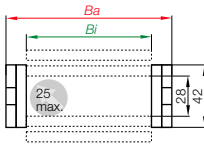
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38



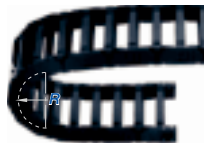


Part No. structure

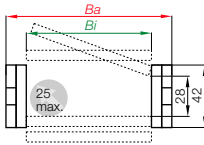
220. 300. **250.** 0



Series 220 - e-chain® with crossbars every link



- Robust solution with crossbars every link
- Can be opened from two sides
- Removable crossbars



Part No. structure

760. 300. **250.** 0



Series R760 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Low-noise! Special low-noise version with rubber pads

Series 221 - Order example 221.100.250.0

Further information:

www.igus.de or phone +49-(0) 22 03-96 49-800



Part No.	Bi [mm]	Ba [mm]	220 [kg/m]	R760 [kg/m]
220.040..... <input type="checkbox"/> .0	40	60	≈ 1,06	–
220/760.050.. <input type="checkbox"/> .0	50	70	≈ 1,10	≈ 1,25
220.062..... <input type="checkbox"/> .0	62	82	≈ 1,14	–
220.070..... <input type="checkbox"/> .0	70	90	≈ 1,18	–
220./760.075.. <input type="checkbox"/> .0	75	95	≈ 1,21	≈ 1,44
220.087..... <input type="checkbox"/> .0	87	107	≈ 1,27	–
220/760.100.. <input type="checkbox"/> .0	100	120	≈ 1,32	≈ 1,64
220/760.125.. <input type="checkbox"/> .0	125	145	≈ 1,43	≈ 1,84
220/760.150.. <input type="checkbox"/> .0	150	170	≈ 1,54	≈ 2,02
220/760.175.. <input type="checkbox"/> .0	175	195	≈ 1,65	≈ 2,26
220/760.200.. <input type="checkbox"/> .0	200	220	≈ 1,76	≈ 2,40
220/760.225.. <input type="checkbox"/> .0	225	245	≈ 1,87	≈ 2,56
220/760.250.. <input type="checkbox"/> .0	250	270	≈ 1,98	≈ 2,85
220.275..... <input type="checkbox"/> .0	275	295	≈ 2,09	–
220/760.300.. <input type="checkbox"/> .0	300	320	≈ 2,20	≈ 3,21

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT: **760.050.150.0.HT**
Lids made of HT: **760.050.HTE.150.0**
for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



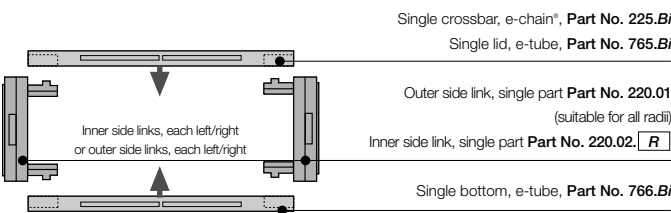
Available bending radii

R [mm] 055° 063° 075 100 125 150 175 200 250

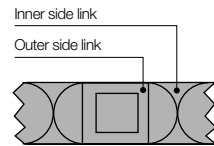
Supplement Part No. with required radius. Example: 220.300.250].0

0 = standard color, other colors ▶ page 1.39 · Pitch = 46 mm/link - Links/m = 22

*not available for R760



Part No. e-chain® links, single parts



System E4/00
Inner height: 28 mm

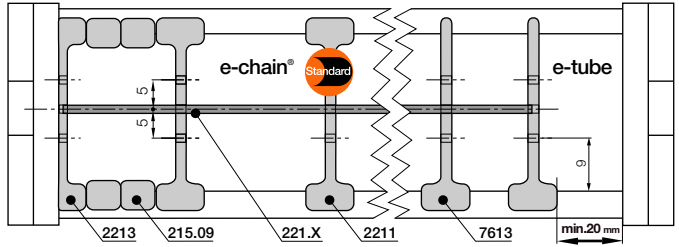
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 20 mm (e-tube)!



Vertical separator
2201



Vertical separator
7603



Spacer
205.09

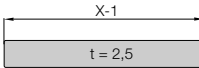


Side plate
2203



Full-width shelf 220.X

Full-width shelf



Vertical separator for e-chains*	2	
unassembled	2201	
assembled	2211	

Vertical separator for e-tubes	3	
unassembled	7603	
assembled	7613	

Spacer* for e-chains*		
unassembled	205.09	
assembled	215.09	

Side plate for e-chains*	3,5	
unassembled	2203	
assembled	2213	

*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 2201 for e-chains®** is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

● **Vertical separator 7603 for e-tubes R760.**

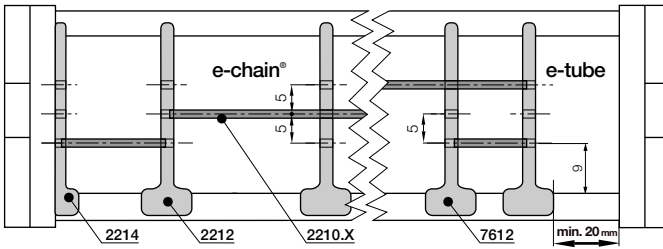
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 205.09**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels)

Additionally:

● **Side plate 2203 and full-width shelf 220.X** - this option makes sense in applications with many thin cables with similar diameters. It is based upon **vertical separator 2201 (7603)** for the Series **R760 e-tube**) is put in place and the shelf is inserted into the separator's slots. If no separators are desired, **side plate 2203** must be used with the **Series 220 e-chain®**. This solution is not available for e-tubes.

Width X [mm]	Part No. unassembled	Part No. assembled
040	220.40	221.40
050	220.50	221.50
062	220.62	221.62
070	220.70	221.70
075	220.75	221.75
087	220.87	221.87

Width X [mm]	Part No. unassembled	Part No. assembled
100	220.100	221.100
125	220.125	221.125
150	220.150	221.150
175	220.175	221.175
200	220.200	221.200



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

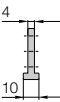
Option 2: Shelves

● Side plates 2204, middle plates 2202 and shelves 2200.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 3 different heights (in 5 mm increments).

● A middle plate 7602 is available for the e-tube. Side plates are not available for the e-tube.

	Side plate for e-chains*
	unassembled 2204 assembled 2214

	Middle plate for e-chains*
	unassembled 2202 assembled 2212

	Middle plate for e-tubes
	unassembled 7602 assembled 7612



Side plate 2204



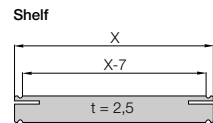
Middle plate 2202



Middle plate 7602



Shelf 2200.X



Shelf

Width X [mm]	Part No. unassembled	Part No. assembled
018	2200.18	2210.18
023	2200.23	2210.23
028	2200.28	2210.28
033	2200.33	2210.33
038	2200.38	2210.38
043	2200.43	2210.43
048	2200.48	2210.48

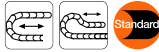
Width X [mm]	Part No. unassembled	Part No. assembled
058	2200.58	2210.58
068	2200.68	2210.68
073	2200.73	2210.73
088	2200.88	2210.88
099	2200.99	2210.99
124	2200.124	2210.124
149	2200.149	2210.149

System E4/00
Inner height: 28 mm

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▶ page 7.255



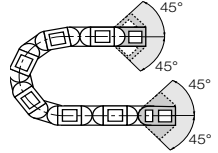
The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Universally mountable with attachment capability on all sides
- Bolted connection outside of chain cross-section
- Confined installation conditions
- Corrosion resistant

*KMA = Polymer Metal Mounting Bracket

Moving end

2200/7600...□.2

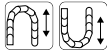


Fixed end

2200/7600...□.1



The attachment variants arising automatically by the choice of the KMA mounting bracket



Option KMA - locking

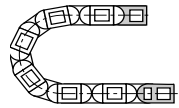
- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- Corrosion resistant
- Locked connections
- At very high acceleration

Moving end

2300/7650...□.2

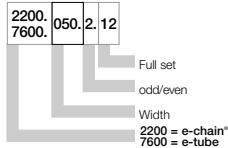


Fixed end

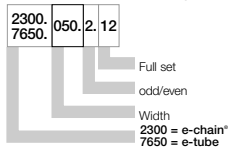
2300/7650...□.1

Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Note: The E4/00 System may end with either an inner side or an outer side link. Keep in mind that an outer side link always forms the first chain link at the moving end. The Part No. depends on an even or odd numbers of links. Please insert: **1** for odd number of links or **2** for even number of links

Full set, for both ends:

2200.040. 2. 12 (even)

Single-part order:

2200.040. 2. 2 (even)

Mounting bracket moving end

2200.040. 2. 1 (even)

Mounting bracket fixed end

Fixed end

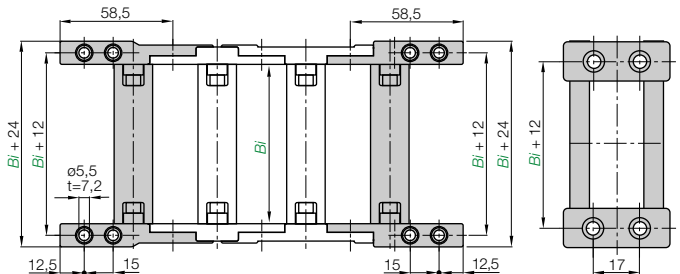
2200/7600...□.1 (pivoting)

2300/7650...□.1 (locking)

Moving end

(pivoting) 2200/7600...□.2

(locking) 2300/7650...□.2



Width index	Part No. pivoting	Part No. locking	Width [mm]	Bi [mm]	Width index	Part No. pivoting	Part No. locking	Width [mm]	Bi [mm]
.040	2200	2300	.040.□.12	40	.150	2200/7600	2300/7650	.150.□.12	150
.050	2200/7600	2300/7650	.050.□.12	50	.175	2200/7600	2300/7650	.175.□.12	175
.062	2200	2300	.062.□.12	62	.200	2200/7600	2300/7650	.200.□.12	200
.070	2200	2300	.070.□.12	70	.225	2200/7600	2300/7650	.225.□.12	225
.075	2200/7600	2300/7650	.075.□.12	75	.250	2200/7600	2300/7650	.250.□.12	250
.087	2200	2300	.087.□.12	87	.275	2200	2300	.275.□.12	275
.100	2200/7600	2300/7650	.100.□.12	100	.300	2200/7600	2300/7650	.300.□.12	300
.125	2200/7600	2300/7650	.125.□.12	125					

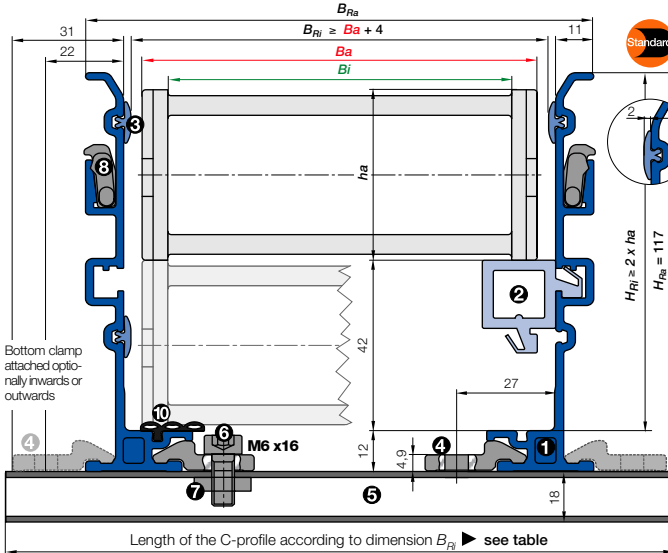
Please insert **1** for odd number of links or **2** for even number of links

E4/00 | Series 220-R760 | Accessories | Strain Relief



Strain relief tie-wrap plate Part No. 2050.Z can be fixed on the last crossbar. **Details** ▶ chapter 10

Part No.	Width [mm]	Number of teeth
2050.Z	60	6



- B_a = Outer width e-chains / e-tube
- B_i = Inner width e-chains / e-tube
- h_a = Outer height e-chains / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ► depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- ! $H_{Ri} \geq 2 \cdot h_a$
- ! $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile

Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards ►

220.070.250.0 ► Order example

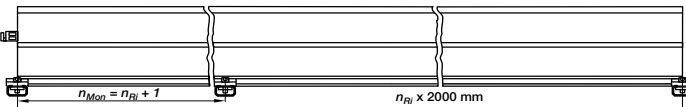
B_{Ri} [mm]	Part No.	
	attached inwards	attached outwards
.040	64	960.30.175
.050	74	960.30.125
.062	86	960.30.150
.070	94	960.30.150
.075	99	960.30.150
.087	111	960.30.175
.100	124	960.30.175
.125	149	960.30.200
.150	174	960.30.225
.175	199	960.30.250
.200	224	960.30.275
.225	249	960.30.300
.250	274	960.30.325
.275	299	960.30.350
.300	324	960.30.375
		960.30.425



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M6 x16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 220.070.250.0 with $B_{Ri} = 94$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **972.02.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **972.02.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. **960.30.150**
- Module for the fixed end
Order text: 1 set Part No. **972.82**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: Part No. **972.02.30.SLA**



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**



A quick fix for mounting the stationary end of an e-chain*
 With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of (**960.30.XXX**) on the right column "attached outwards"

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► chapter 10



► chapter 9



► page 7.255

Price index



Low noise version E4/101
Series 281 available with
special rubber pads design



IPA Certificate, Cleanroom ISO
Class 3 at v=1 m/s and ISO Class
4 at v= 2 m/s for Series 280.10.100.0



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 280/290/R770:

- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads
- Also available without camber



When not to use it:

- If long side-mounted, unsupported length is required
▶ Series E4.32, page 7.42
- If an extrem vibration-free e-chain* is necessary
▶ Series E6.35, page 8.50

- 1 Crossbars on e-chain* removable along both radii
- 2 Numerous interior separation possibilities
- 3 Closed and open styles can be combined
- 4 Stop dog with "brake" for noise reduction
- 5 Optimized glide pads
- 6 Wide, rounded plastic crossbars - cable friendly
- 7 Hinged snap-open removable lids along outer radius of e-tube
- 8 KMA mounting brackets with attachment points on all sides
- 9 Locking or pivoting mounting brackets available
- 10 Integrated strain relief with C-profile option
- 11 e-chains* also available with reverse bending radius "RBR"



Also available as
E4/00-NC without
camber: 280-NC



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 4 m or 72 links

4 m 280.30.300.0

e-chain®

with 2 separators 282 assembled every 2nd link

Interior separation

1 set 2800.30.1.12.C

Mounting bracket

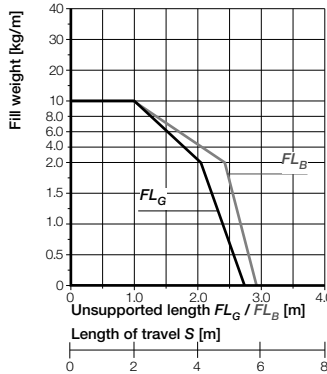
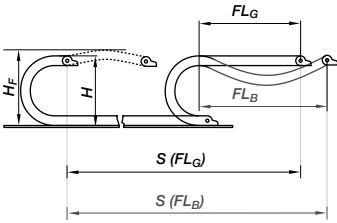


Unsupported length

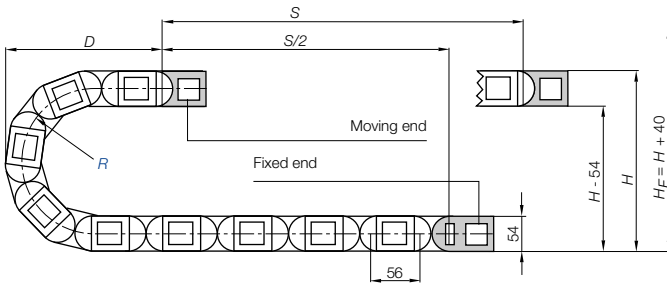
FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{in} = Trough inner height
- D = Overlength e-chain* radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Over length - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower

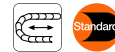


Pitch = 56 mm/link Links/m = 18 (1008 mm) Chain length = $S/2 + K$

R	063	075	100	125	150	175	200	220	250	300
$H + \Delta^0$	180	205	255	305	355	405	455	495	555	655
D	146	158	183	208	233	258	283	303	333	383
K	310	350	430	505	585	665	745	805	900	1055
H_2	126	151	166	166	166	166	166	166	166	166
D_2^{+25}	146	158	370	470	500	655	770	900	930	1100
K_2	310	350	616	784	896	1120	1288	1456	1568	1904

Other installation methods

- Vertical, hanging ≤ 80 m
- Vertical, standing ≤ 5 m
- Side mounted, un supp. $\leq 1,5$ m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

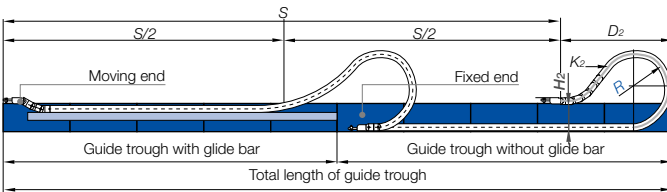


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 40$ mm
(with 2,0 kg/m fill weight)

Long travel lengths from 10 m to max. 200 m Chain length = $S/2 + K_2$



In case of travels between 6,0 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 200 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



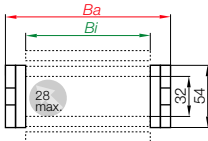
Details of material properties

► page 1.38



For support of the lower run - **Support Tray tool kit** available ► page 9.70



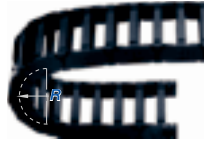


Part No. structure

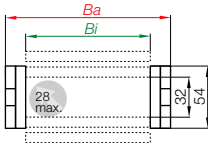
280. 30. 300. 0



Series 280 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

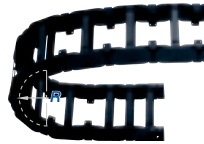


Part No. structure

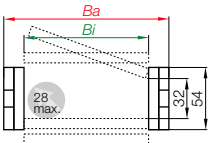
290. 20. 300. 0



Series 290 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Part No. structure

770. 30. 300. 0



Series R770 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Low-noise! Special low-noise version with rubber pads

Series 281 - Order example 281.10.250.0

Further information:

www.igus.de or phone +49-(0) 22 03-96 49-800



Part No.	<i>Bi</i>	<i>Ba</i>	280	290	R770
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]
280/290/770.05... □.0*	50	73	≈ 1,73	≈ 1,64	≈ 2,63
280/290.06..... □.0	68	91	≈ 1,79	≈ 1,67	-
280/290/770.07... □.0	75	98	≈ 1,84	≈ 1,69	≈ 2,75
280/290.087..... □.0	87	110	≈ 1,93	≈ 1,73	-
280/290/770.10... □.0	100	123	≈ 2,02	≈ 1,78	≈ 2,83
280/290/770.11... □.0	108	131	≈ 2,08	≈ 1,81	≈ 2,94
280/290.112..... □.0	112	136	≈ 2,15	≈ 1,84	-
280/290/770.12... □.0	125	148	≈ 2,20	≈ 1,87	≈ 3,03
280/290.137..... □.0	137	161	≈ 2,29	≈ 1,91	-
280/290/770.15... □.0	150	173	≈ 2,38	≈ 1,96	≈ 3,19
280/290.162..... □.0	162	186	≈ 2,44	≈ 1,99	-
280/290/770.17... □.0	168	191	≈ 2,51	≈ 2,02	≈ 3,39
280/290.18..... □.0	175	198	≈ 2,56	≈ 2,05	-
280/290.187..... □.0	187	211	≈ 2,65	≈ 2,09	-
280/290/770.20... □.0	200	223	≈ 2,74	≈ 2,14	≈ 3,59
280/290.212..... □.0	212	236	≈ 2,87	≈ 2,20	-
280/290.23..... □.0	225	248	≈ 2,92	≈ 2,22	-
280/290.237..... □.0	237	261	≈ 3,05	≈ 2,29	-
280/290/770.25... □.0	250	273	≈ 3,10	≈ 2,32	≈ 4,04
280/290.262..... □.0	262	286	≈ 3,19	≈ 2,36	-
280/290.28..... □.0	275	298	≈ 3,28	≈ 2,41	-
280/290.29..... □.0	287	311	≈ 3,37	≈ 2,45	-
280/290/770.30... □.0	300	323	≈ 3,46	≈ 2,50	≈ 4,43
280/290.312..... □.0	312	336	≈ 3,59	≈ 2,56	-
280/290.325..... □.0	325	348	≈ 3,68	≈ 2,60	-
280/290.337..... □.0	337	361	≈ 3,77	≈ 2,65	-
280/290.350..... □.0	350	373	≈ 3,86	≈ 2,69	-
280/290.362..... □.0	362	386	≈ 3,95	≈ 2,74	-
280/290.375..... □.0	375	398	≈ 4,04	≈ 2,79	-
280/290.387..... □.0	387	411	≈ 4,11	≈ 2,82	-
280/290.400..... □.0	400	423	≈ 4,18	≈ 2,86	-

Available bending radii
R [mm] 063** 075** 100** 125 150 175 200 220 250 300

Supplement Part No. with required radius. Example: 280.30.300.0
 0 = standard color, other colors ▶ page 1.39 · Pitch = 56 mm/link - Links/m = 18

*Removable lid only, no hinged option · **not available for R770

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT: **770.30.150.0.HT**
 Lids made of HT: **770.30.HTE.150.0**
for long travels upon request
 Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!

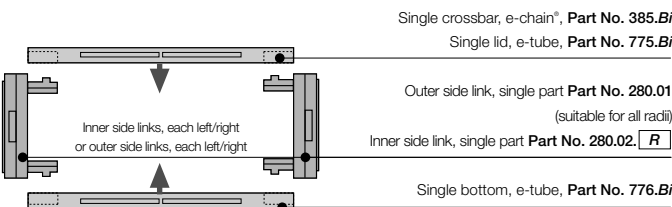


System E4/00
 Inner height: 32 mm

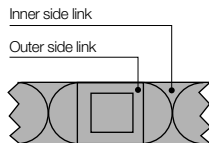
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 Fax +49- (0) 22 03-96 49-222



Extender crossbar for large diameter hoses ▶ page 7.270



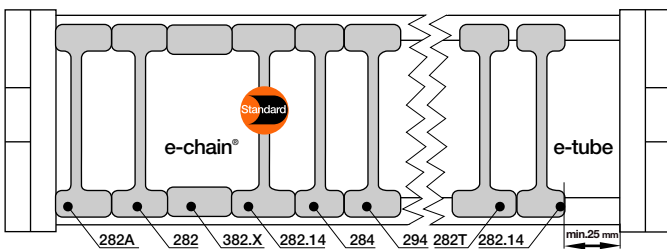
Part No. e-chain® links, single parts



▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (e-tube)!



Vertical separator
281



Vertical separator
281T



Vertical separator
281.14



Vertical separator
283



Spacer
381.XX



Locking separator
293



Asymmetric
separator 281A

Vertical separator for e-chains*

unassembled	281
assembled	282



Vertical separator for e-tubes

unassembled	281T
assembled	282T



Vertical separator for e-chains*/e-tubes

unassembled	281.14
assembled	282.14



Vertical separator for e-chains*

unassembled	283
assembled	284



Spacer* for e-chains*

unassembled	381.XX
assembled	382.XX



Locking separator for e-chains*

unassembled	293
assembled	294



Asymmetric separator for e-chains*

unassembled	281A
assembled	282A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 281 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

● The **vertical separator 281T for e-tubes** clamps to the fixed radius and remains free along the other radius to facilitate lid removal. If installing these yourself, please ensure that they are identically aligned. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

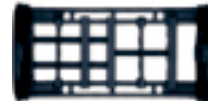
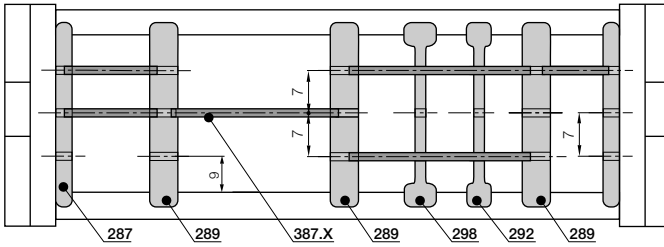
● **Vertical separator 283 with a narrow foot for e-chains®** with applications where a large number of small cables need to be individually separated.

● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15 and 20).

Additionally:

● **Locking separator 293 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment (not for e-tubes).

● **Asymmetric separator 281A for e-chains®** (not for e-tubes) with an 12-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 286, middle plates 288 und shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 3 different heights (in 7 mm increments).

● For special applications: Vertical separator with injection moulded shelf 281.S.57 (57,5 mm) or 281.S.45 (45 mm).

● Slotted separators 291 (not for e-tubes), are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open, slotted separator 297 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains*/e-tubes		
4	unassembled	286
	assembled	287

Middle plate for e-chains*/e-tubes		
8	unassembled	288
	assembled	289

Vertical separator for e-chains*/e-tubes		
8	unassembled	281.S.57
	assembled	282.S.57

Vertical separator for e-chains*/e-tubes		
8	unassembled	281.S.45
	assembled	282.S.45

Slotted separator for e-chains*		
6	unassembled	291
	assembled	292

Open slotted separator for e-chains*/e-tubes		
8	unassembled	297
	assembled	298

Width X [mm]	Part No. unassembled	Part No. assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62
075	386.75	387.75

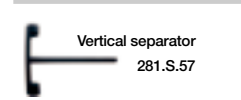
Width X [mm]	Part No. unassembled	Part No. assembled
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208
225	386.225	387.225



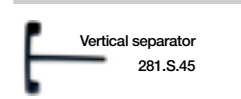
Side plate 286



Middle plate 288



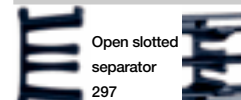
Vertical separator 281.S.57



Vertical separator 281.S.45



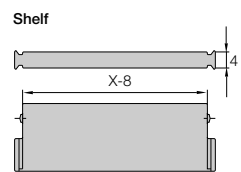
Slotted separator 291



Open slotted separator 297



Shelf 386.X



Shelf

System E4/00
Inner height: 32 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



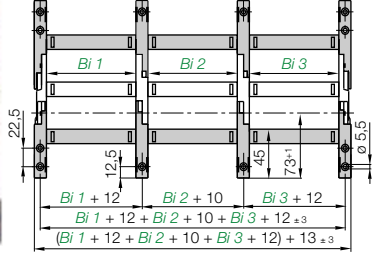
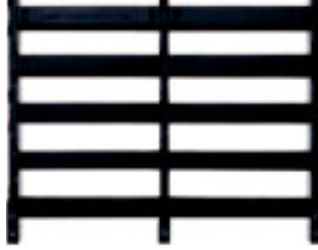


Extension links - for extremely wide e-chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



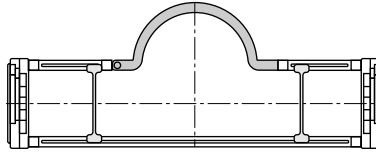
Part No. structure
280.10 /20 /10. [200].0
280.Bi1/Bi2/Bi3. [R].0



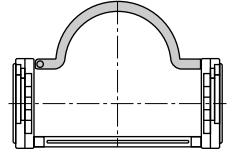
Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars

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



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap attached directly on the side link

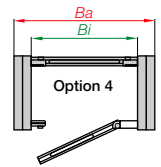
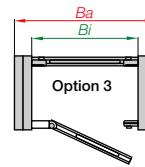
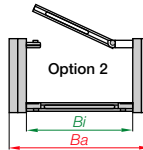
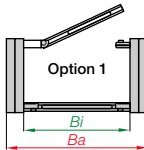
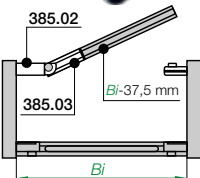
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossbar.
385.15.RHD115	105	○	-	+
385.18.RD115	105	○	+	-

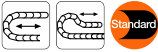
○ = round + = yes / - = no



Hinged crossbars

- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm Part No. 385.02 / snap-open crossbar (shortened): Bi-37,5 mm Part No. 385.03
- Please consult igus® for design assistance





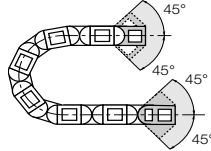
The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

Moving end

2800/7700....2

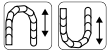
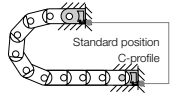


Fixed end

2800/7700....1



The attachment variants arising automatically by the choice of the KMA mounting bracket



Option KMA - locking

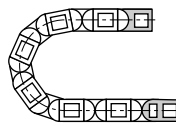
- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

Moving end

2900/7750....2

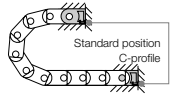


Fixed end

2900/7750....1



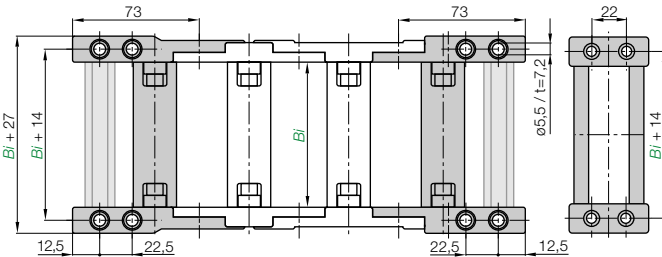
The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end

2800/7700....1 (pivoting)

2900/7750....1 (locking)



Moving end

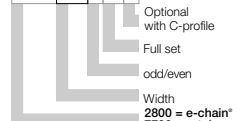
(pivoting) 2800/7700....2

(locking) 2900/7750....2

Dimensions and order configurations

Part No. structure (pivoting)

2800. 7700. 05. 2. 12. C



Part No. structure (locking)

2900. 7750. 05. 2. 12. C



Note: The E4/00 System may end with either an inner side or an outer side link. Keep in mind that an outer side link always forms the first chain link at the moving end. The Part No. depends on an even or odd numbers of links. Please insert: for odd number of links or for even number of links

Full set, for both ends:

2900. 05. 2. 12. C (even)

Single-part order:

2900. 05. 2. 12. C (even)

Mounting bracket **moving end**

2900. 05. 2. 1. C (even)

Mounting bracket **fixed end**

Width index	Part No. full set		C-profile <i>Bi</i>		Width index	Part No. full set		C-profile <i>Bi</i>	
	pivoting	locking	option	[mm]		pivoting	locking	option	[mm]
.05.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.05.	<input type="checkbox"/> .12. <input type="checkbox"/> C 50	.23.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.23.	<input type="checkbox"/> .12. <input type="checkbox"/> C 225
.06.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.06.	<input type="checkbox"/> .12. <input type="checkbox"/> C 68	.237.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.237.	<input type="checkbox"/> .12. <input type="checkbox"/> C 237
.07.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.07.	<input type="checkbox"/> .12. <input type="checkbox"/> C 75	.25.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.25.	<input type="checkbox"/> .12. <input type="checkbox"/> C 250
.087.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.087.	<input type="checkbox"/> .12. <input type="checkbox"/> C 87	.262.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.262.	<input type="checkbox"/> .12. <input type="checkbox"/> C 262
.10.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.10.	<input type="checkbox"/> .12. <input type="checkbox"/> C 100	.28.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.28.	<input type="checkbox"/> .12. <input type="checkbox"/> C 275
.11.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.11.	<input type="checkbox"/> .12. <input type="checkbox"/> C 108	.29.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.29.	<input type="checkbox"/> .12. <input type="checkbox"/> C 287
.112.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.112.	<input type="checkbox"/> .12. <input type="checkbox"/> C 112	.30.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.30.	<input type="checkbox"/> .12. <input type="checkbox"/> C 300
.12.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.12.	<input type="checkbox"/> .12. <input type="checkbox"/> C 125	.312.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.312.	<input type="checkbox"/> .12. <input type="checkbox"/> C 312
.137.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.137.	<input type="checkbox"/> .12. <input type="checkbox"/> C 137	.325.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.325.	<input type="checkbox"/> .12. <input type="checkbox"/> C 325
.15.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.15.	<input type="checkbox"/> .12. <input type="checkbox"/> C 150	.337.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.337.	<input type="checkbox"/> .12. <input type="checkbox"/> C 337
.162.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.162.	<input type="checkbox"/> .12. <input type="checkbox"/> C 162	.350.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.350.	<input type="checkbox"/> .12. <input type="checkbox"/> C 350
.17.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.17.	<input type="checkbox"/> .12. <input type="checkbox"/> C 168	.362.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.362.	<input type="checkbox"/> .12. <input type="checkbox"/> C 362
.18.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.18.	<input type="checkbox"/> .12. <input type="checkbox"/> C 175	.375.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.375.	<input type="checkbox"/> .12. <input type="checkbox"/> C 375
.187.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.187.	<input type="checkbox"/> .12. <input type="checkbox"/> C 187	.387.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.387.	<input type="checkbox"/> .12. <input type="checkbox"/> C 387
.20.	<input type="checkbox"/> 2800/7700	<input type="checkbox"/> 2900/7750	.20.	<input type="checkbox"/> .12. <input type="checkbox"/> C 200	.400.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.400.	<input type="checkbox"/> .12. <input type="checkbox"/> C 400
.212.	<input type="checkbox"/> 2800	<input type="checkbox"/> 2900	.212.	<input type="checkbox"/> .12. <input type="checkbox"/> C 212					

Please insert for odd number of links or for even number of links



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps.

Details ► chapter 10

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. Details ► chapter 10

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

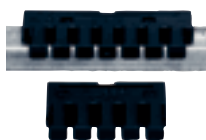


chainfix Nugget for the C-Profile

Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement.

Details ► chapter 10

Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0



chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. Details ► chapter 10

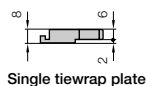
Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7



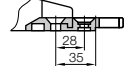
Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. Details ► chapter 10

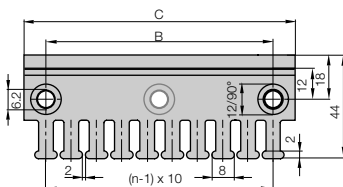
Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+



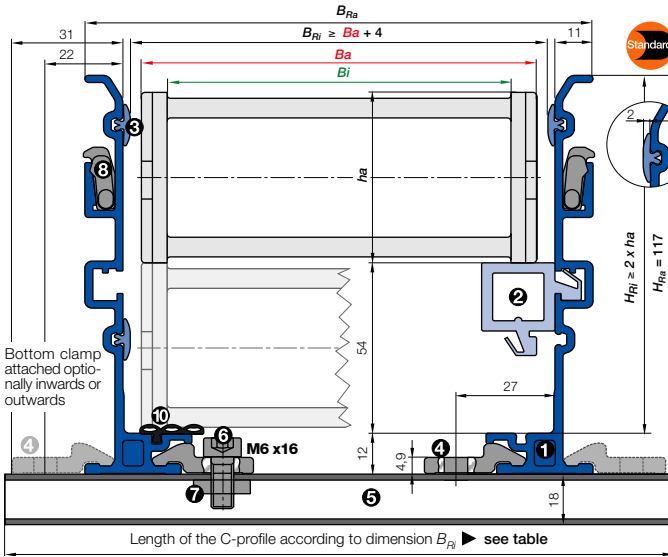
Single tiwrap plate



Shown assembled



(- = no / + = yes)



- B_a = Outer width e-chains* / e-tube
- B_i = Inner width e-chains* / e-tube
- h_a = Outer height e-chains* / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ► depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
 $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile

Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

280.05.200.0 ► Order example

B_{Ri} [mm]	Part No.	
	attached inwards	attached outwards
.05	77 960.30.125	960.30.175
.06	95 960.30.150	960.30.200
.07	102 960.30.150	960.30.200
.087	114 960.30.175	960.30.225
.10	127 960.30.175	960.30.225
.11	135 960.30.200	960.30.250
.112	140 960.30.200	960.30.250
.12	152 960.30.200	960.30.250
.137	165 960.30.225	960.30.275
.15	177 960.30.225	960.30.275
.162	190 960.30.250	960.30.300
.17	195 960.30.250	960.30.300
.18	202 960.30.250	960.30.300
.187	215 960.30.275	960.30.325
.20	227 960.30.275	960.30.325
.212	240 960.30.300	960.30.350
.23	252 960.30.300	960.30.350
.237	265 960.30.325	960.30.375
.25	277 960.30.325	960.30.375
.262	290 960.30.350	960.30.400
.28	302 960.30.350	960.30.400
.29	315 960.30.375	960.30.425
.30	327 960.30.375	960.30.425
.312	340 960.30.400	960.30.450
.325	352 960.30.400	960.30.450
.337	365 960.30.425	960.30.475
.350	377 960.30.425	960.30.475
.362	390 960.30.450	960.30.500
.375	402 960.30.450	960.30.500
.387	415 960.30.475	960.30.525
.400	427 960.30.475	960.30.525



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M6 x16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 280.30.300.0 with $B_{Ri} = 327$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **972.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **972.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. **960.30.375**
- Module for the fixed end
Order text: 1 set Part No. **972.80**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example:
 Part No. **972.30.SLA**



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**



A quick fix for mounting the stationary end of an e-chain*
 With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ► [page 9.16](#)

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of **(960.30.XXX)** on the right column "attached outwards"



Price index



Low noise version E4/101
Series 381 available with
special rubber pads design



Cleanroom test
upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains*: Remove crossbars and
clips - Insert screwdriver into the slot, push
down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screw-
driver into the slot, release by lever action



When to use the Series 380/390/R780:

- If a low-noise version is required
- At very high speed and/or acceleration
- For long travels
- For high additional loads
- Also available without camber



When not to use it:

- If long side-mounted, unsupported
length is required
▶ Series E4.42, page 7.60
- If an extrem vibration-free e-chain* is necessary
▶ Series E6.40, page 8.56
▶ Series R6.40, page 8.62

- ❶ Crossbars on e-chain* removable
along both radii
- ❷ Stop dog with "brake" for noise reduction
- ❸ Closed and open styles can be combined
- ❹ Hinged snap-open removable lids
along outer radius of e-tube
- ❺ Numerous interior separation possibilities
- ❻ Optimized glide pads
with lateral wear allowance
- ❼ Wide, rounded plastic crossbars - cable friendly
- ❽ Integrated strain relief possible
- ❾ KMA mounting brackets with
attachment points on all sides
- ❿ Locking or pivoting mounting brackets available
- ⓫ e-chains* also available with
reverse bending radius "RBR"



Also available as
E4/00-NC without
camber: 380-NC



Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 5 m or 75 links

5 m 380.20.300.0

e-chain*

with 2 separators 382 assembled every 2nd link

Interior separation

1 set 3800.20.1.12.C

Mounting bracket

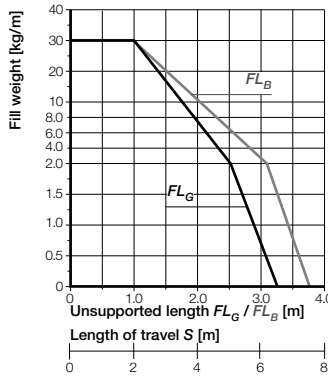
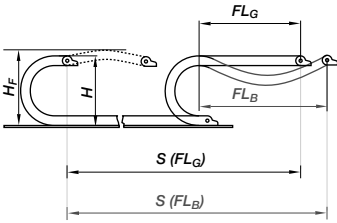


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

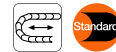
Further information ► **Design, page 1.12**



- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{in} = Trough inner height
- D = Overlength e-chain*
radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Overlength - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

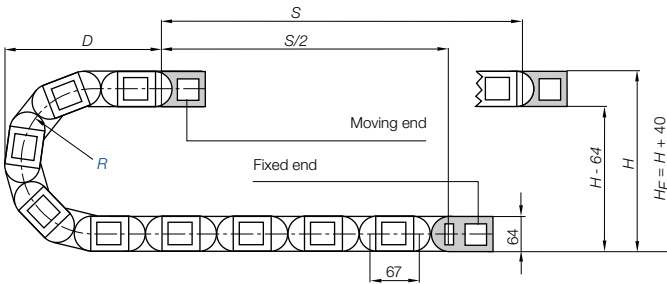
- Vertical, hanging ≤ 10 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 2 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

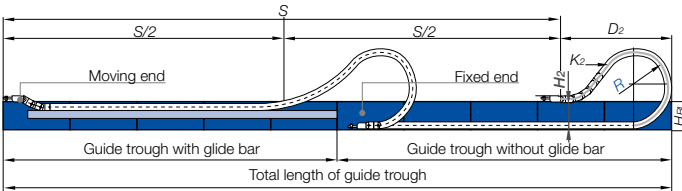
The required clearance height:
 $H_F = H + 40$ mm
(with 2,0 kg/m fill weight)



Pitch = 67 mm/link Links/m = 15 (1005 mm) Chain length = $S/2 + K$

R	075	100	115	125	150	170	200	215	250	300	350
$H_{2.5}^0$	215	265	295	315	365	405	465	495	565	665	765
D	174	199	214	224	249	269	299	314	349	399	449
K	370	450	500	530	610	670	765	810	920	1080	1235
H_2	151	201	231	186	186	186	186	186	186	186	186
D_2^{+25}	174	199	214	475	570	620	780	865	1030	1150	1500
K_2	370	450	500	804	938	1072	1340	1407	1675	1943	2412

Long travel lengths from 12 m to max. 300 m Chain length = $S/2 + K_2$



In case of travels between 8,0 and 12 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 300 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

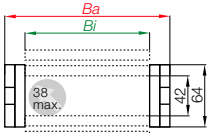
► page 1.38

System E4/00
Inner height: 42 mm

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For support of the lower run - **Support Tray tool kit** available ► page 9.70

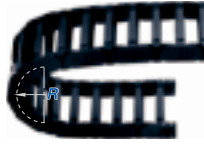


Part No. structure

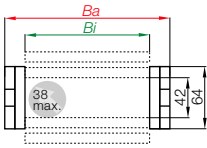
380. 400. 300. 0



Series 380 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



Part No. structure

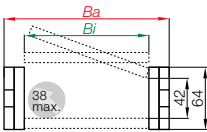
390. 400. 300. 0



Series 390 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Part No. structure

780. 25. 300. 0



Series R780 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Low-noise! Special low-noise version with rubber pads

Series 381 - Order example: 381.15.250.0

Further information:

www.igus.de or phone +49-(0) 22 03-96 49-800



Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	380 [kg/m]	390 [kg/m]	R780 [kg/m]
380/390/780.05... [] .0*	50	76	≈ 2,06	≈ 1,98	≈ 2,25
380/390.06... [] .0	68	94	≈ 2,09	≈ 1,99	-
380/390/780.07... [] .0	75	101	≈ 2,12	≈ 2,01	≈ 2,38
380/390.087... [] .0	87	114	≈ 2,18	≈ 2,04	-
380/390/780.10... [] .0	100	126	≈ 2,25	≈ 2,08	≈ 2,60
380/390/780.11... [] .0	108	134	≈ 2,30	≈ 2,10	≈ 2,65
380/390.112... [] .0	112	139	≈ 2,30	≈ 2,10	-
380/390/780.12... [] .0	125	151	≈ 2,40	≈ 2,15	≈ 2,81
380/390.137... [] .0	137	164	≈ 2,44	≈ 2,17	-
380/390/780.15... [] .0	150	176	≈ 2,53	≈ 2,21	≈ 3,07
380/390.162... [] .0	162	189	≈ 2,55	≈ 2,22	-
380/390/780.17... [] .0	168	194	≈ 2,62	≈ 2,26	≈ 3,24
380/390.18... [] .0	175	201	≈ 2,62	≈ 2,26	-
380/390.187... [] .0	187	214	≈ 2,69	≈ 2,30	-
380/390/780.20... [] .0	200	226	≈ 2,77	≈ 2,33	≈ 3,53
380/390.212... [] .0	212	239	≈ 2,84	≈ 2,37	-
380/390.23... [] .0	225	251	≈ 2,92	≈ 2,41	-
380/390.237... [] .0	237	264	≈ 2,96	≈ 2,43	-
380/390/780.25... [] .0	250	276	≈ 3,05	≈ 2,47	≈ 4,33
380/390.262... [] .0	262	289	≈ 3,06	≈ 2,48	-
380/390.28... [] .0	275	301	≈ 3,17	≈ 2,53	-
380/390.29... [] .0	287	314	≈ 3,19	≈ 2,54	-
380/390/780.30... [] .0	300	326	≈ 3,32	≈ 2,61	≈ 4,89
380/390.312... [] .0	312	339	≈ 3,34	≈ 2,62	-
380/390.325... [] .0	325	351	≈ 3,41	≈ 2,66	-
380/390.337... [] .0	337	364	≈ 3,46	≈ 2,68	-
380/390.350... [] .0	350	376	≈ 3,68	≈ 2,79	-
380/390.362... [] .0	362	389	≈ 3,74	≈ 2,82	-
380/390.375... [] .0	375	402	≈ 3,79	≈ 2,84	-
380/390.387... [] .0	387	414	≈ 3,85	≈ 2,87	-
380/390.400... [] .0	400	426	≈ 3,90	≈ 2,90	-

Available bending radii

R [mm] 075** 100** 115** 125 150 170 200 215 250 300 350

Supplement Part No. with required radius. Example: 380.400. 300 0

0 = standard color, other colors ▶ page 1.39 · Pitch = 67 mm/link - Links/m = 15

*Removable lid only, no hinged option · **not available for R780

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT: **780.30.150.0.HT**
Lids made of HT: **780.30.HTE.150.0**
for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



System E4/00
Inner height: 42 mm

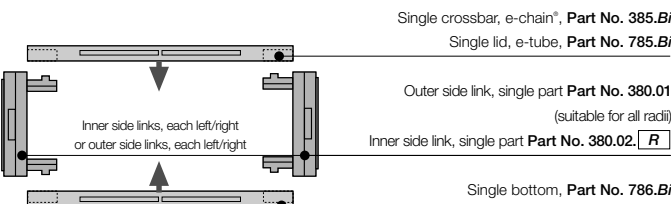
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Extender crossbar for large diameter hoses ▶ page 7.280



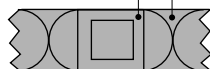
▶ page 7.255

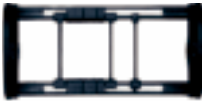


Part No. e-chain® links, single parts

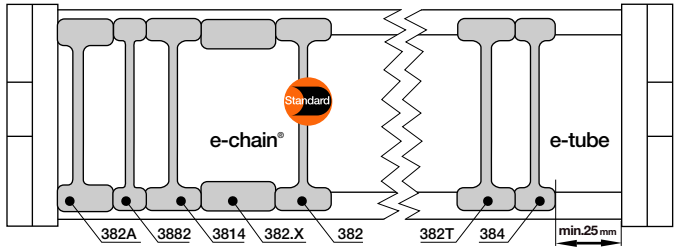
Inner side link

Outer side link





Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (e-tube)!



Vertical separator 381



Vertical separator with a narrow base 3881



Vertical separator 381T



Spacer 381.XX



Locking separator 3804

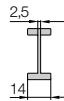


Locking separator 383

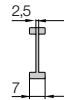


Asymmetric separator 381A

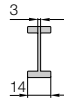
Vertical separator for e-chains*	2,5
unassembled	381
assembled	382



Vertical separator* for e-chains*	2,5
unassembled	3881
assembled	3882



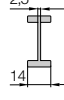
Vertical separator for e-tubes	3
unassembled	381T
assembled	382T



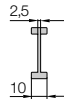
Spacer* for e-chains*	10
unassembled	381.XX
assembled	382.XX



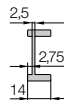
Locking separator for e-chains*	2,5
unassembled	3804
assembled	3814



Locking separator for e-tubes	2,5
unassembled	383
assembled	384



Asymmetric separator for e-chains*	2,5
unassembled	381A
assembled	382A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 381 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 3881 with a narrow foot (7 mm) for e-chains®** with applications where a large number of small cables need to be individually separated.

● The **vertical separator 381T for e-tubes** clamps to the fixed radius and remains free along the other radius to facilitate lid removal. If installing these yourself, please ensure that they are identically aligned.

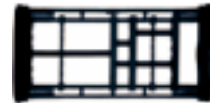
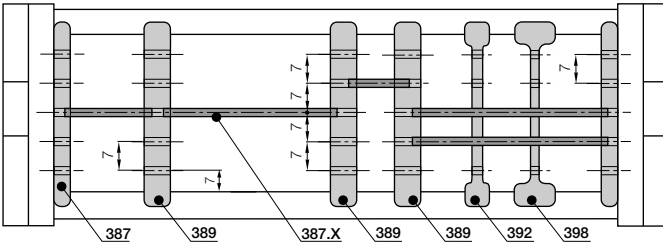
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15 and 20)

Additionally:

● **Locking separator 3804 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **Locking separator 383 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **Asymmetric separator 381A for e-chains®** (not for e-tubes) with an 14-mm base, for combinations between spacers of different widths and vertical separators in side-mounted



For use with many cables of differing diameters, e-chains[®] and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 386, middle plates 388 and shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 5 different heights (in 7 mm increments).

● Slotted separators 391, are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 397 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains/e-tubes	
unassembled	386
assembled	387

Middle plate for e-chains/e-tubes	
unassembled	388
assembled	389

Slotted separator for e-chains/e-tubes	
unassembled	391
assembled	392

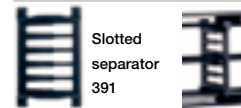
Open slotted separator for e-chains/e-tubes	
unassembled	397
assembled	398



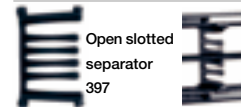
Side plate 386



Middle plate 388



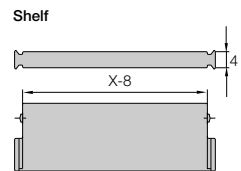
Slotted separator 391



Open slotted separator 397



Shelf 386.X



Shelf

Width X [mm]	Part No. unassembled	Part No. assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	386.75	387.75
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208

System E4/00
Inner height: 42 mm

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Fax +49- (0) 22 03-96 49-222



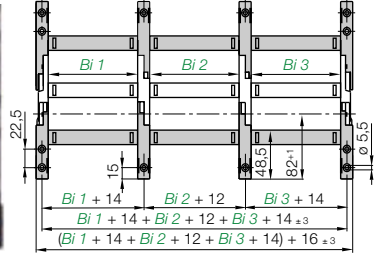
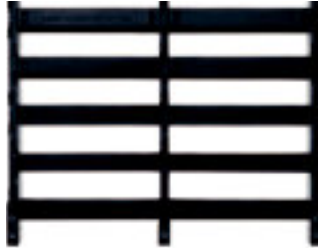


Extension links - for extremely wide e-chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



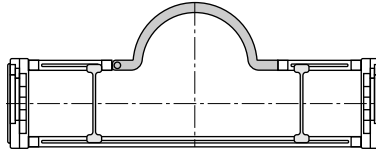
Part No. structure
380.10 /20 /10. .0
380.//. .0



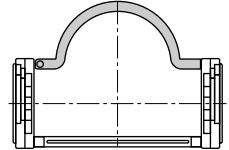
Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars

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



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap attached directly on the side link

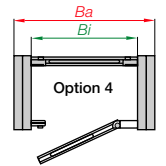
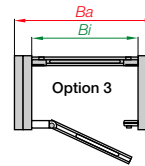
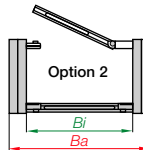
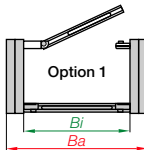
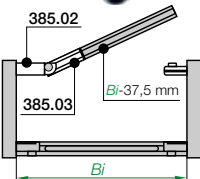
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	115	○	-	+
385.18.RD115	115	○	+	-

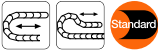
○ = round + = yes / - = no



Hinged crossbars

- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): $Bi-37,5$ mm **Part No. 385.03**
- Please consult igus® for design assistance





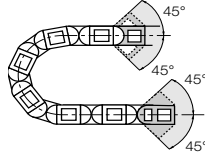
The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

Moving end

3800/7800...**1**.2

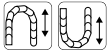
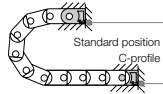


Fixed end

3800/7800...**1**.1



The attachment variants arising automatically by the choice of the KMA mounting bracket



Option KMA - locking

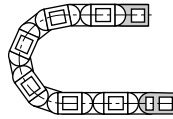
- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

Moving end

3900/7900...**1**.2

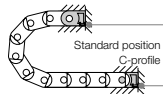


Fixed end

3900/7900...**1**.1



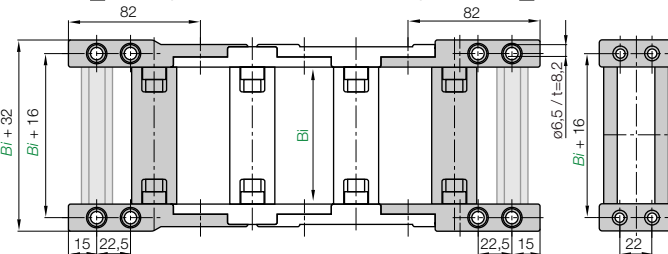
The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end

3800/7800...**1**.1 (pivoting)

3900/7900...**1**.1 (locking)



Moving end

(pivoting) 3800/7800...**1**.2

(locking) 3900/7900...**1**.2

Dimensions and order configurations

Part No. structure (pivoting)

3800.
7800. 05. 2. 12. C



Part No. structure (locking)

3900.
7900. 05. 2. 12. C



Note: The E4/00 System may end with either an inner side or an outer side link. Keep in mind that an outer side link always forms the first chain link at the moving end. The Part No. depends on an even or odd numbers of links. Please insert: **1** for odd number of links or **2** for even number of links

Full set, for both ends:

3800. 05. 1. 2. 12.C (even)

Single-part order:

3800. 05. 1. 2. 2.C (even)

Mounting bracket **moving end**

3800. 05. 1. 2. 1.C (even)

Mounting bracket **fixed end**

Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi [mm]	Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi [mm]
.05.	▶ 3800/7800	3900/7900	.05. □.12. □ 50	50	.23.	▶ 3800	3900	.23. □.12. □ 225	225
.06.	▶ 3800	3900	.06. □.12. □ 68	68	.237	▶ 3800	3900	.237. □.12. □ 237	237
.07.	▶ 3800/7800	3900/7900	.07. □.12. □ 75	75	.25.	▶ 3800/7800	3900/7900	.25. □.12. □ 250	250
.087.	▶ 3800	3900	.087. □.12. □ 87	87	.262	▶ 3800	3900	.262. □.12. □ 262	262
.10.	▶ 3800/7800	3900/7900	.10. □.12. □ 100	100	.28.	▶ 3800	3900	.28. □.12. □ 275	275
.11.	▶ 3800/7800	3900/7900	.11. □.12. □ 108	108	.29.	▶ 3800	3900	.29. □.12. □ 287	287
.112.	▶ 3800	3900	.112. □.12. □ 112	112	.30.	▶ 3800/7800	3900/7900	.30. □.12. □ 300	300
.12.	▶ 3800/7800	3900/7900	.12. □.12. □ 125	125	.312.	▶ 3800	3900	.312. □.12. □ 312	312
.137.	▶ 3800	3900	.137. □.12. □ 137	137	.325.	▶ 3800	3900	.325. □.12. □ 325	325
.15.	▶ 3800/7800	3900/7900	.15. □.12. □ 150	150	.337.	▶ 3800	3900	.337. □.12. □ 337	337
.162.	▶ 3800	3900	.162. □.12. □ 162	162	.350.	▶ 3800	3900	.350. □.12. □ 350	350
.17.	▶ 3800/7800	3900/7900	.17. □.12. □ 168	168	.362.	▶ 3800	3900	.362. □.12. □ 362	362
.18.	▶ 3800	3900	.18. □.12. □ 175	175	.375.	▶ 3800	3900	.375. □.12. □ 375	375
.187.	▶ 3800	3900	.187. □.12. □ 187	187	.387.	▶ 3800	3900	.387. □.12. □ 387	387
.20.	▶ 3800/7800	3900/7900	.20. □.12. □ 200	200	.400.	▶ 3800	3900	.400. □.12. □ 400	400
.212.	▶ 3800	3900	.212. □.12. □ 212	212					

Please insert **1** for odd number of links or **2** for even number of links



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps.

Details ► chapter 10

chainfix clamps for C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. Details ► chapter 10

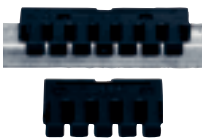
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C



chainfix Nugget for the C-Profile

Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. Details ► chapter 10

Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0



chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. Details ► chapter 10

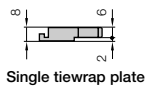
Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7



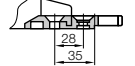
Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. Details ► chapter 10

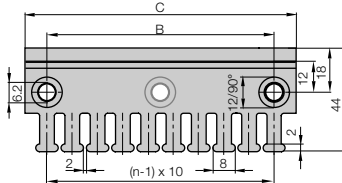
Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+



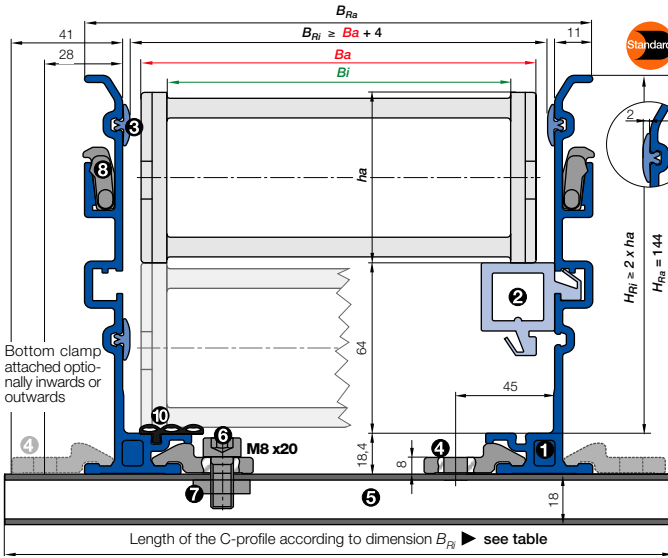
Single tiwrap plate



Shown assembled



(- = no / + = yes)



- B_a = Outer width e-chains* / e-tube
 - B_i = Inner width e-chains* / e-tube
 - h_a = Outer height e-chains* / e-tube
 - H_{Ri} = Inner trough height
 - H_{Ra} = Outer trough height
 - B_{Ri} = Inner trough width ► depends on dim. B_a
 - B_{Ra} = Outer trough width
 - n_{Mon} = Number of installation sets (left/right)
 - n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
 $B_{Ri} \geq B_a + 4$
- = Guide trough set
 - = Glide bar
 - = Installation set "Basic"
 - = C-profile

Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

380.05.300.0 ► Order example

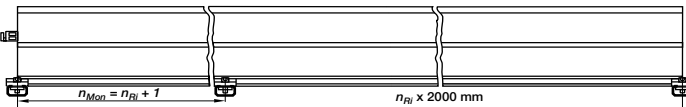
B_{Ri} [mm]	Part No.	
	attached inwards	attached outwards
.05	80	960.40.200
.06	98	960.40.225
.07	105	960.40.225
.087	118	960.40.175 960.40.250
.10	130	960.40.200 960.40.250
.11	138	960.40.200 960.40.275
.112	143	960.40.200 960.40.275
.12	155	960.40.225 960.40.275
.137	168	960.40.225 960.40.300
.15	180	960.40.250 960.40.300
.162	193	960.40.250 960.40.325
.17	198	960.40.250 960.40.325
.18	205	960.40.275 960.40.325
.187	218	960.40.275 960.40.350
.20	230	960.40.300 960.40.350
.212	243	960.40.300 960.40.375
.23	255	960.40.325 960.40.375
.237	268	960.40.325 960.40.400
.25	280	960.40.350 960.40.400
.262	293	960.40.350 960.40.425
.28	305	960.40.375 960.40.425
.29	318	960.40.375 960.40.450
.30	330	960.40.400 960.40.450
.312	343	960.40.400 960.40.475
.325	355	960.40.425 960.40.475
.337	368	960.40.425 960.40.500
.350	380	960.40.450 960.40.500
.362	393	960.40.450 960.40.525
.375	406	960.40.475 960.40.525
.387	418	960.40.475 960.40.550
.400	430	960.40.500 960.40.550



- Components, trough "Basic": ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- Components, installation set "Basic": ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 380.20.300.0 with $B_{Ri} = 230$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **973.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **973.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. **960.40.300**
- Module for the fixed end
Order text: 1 set Part No. **973.81**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: Part No. **973.30.SLA**



Prinzipzeichnung: Anzahl der zu montierenden Montagesets "Basic" = Anzahl der Rinnenstücke + 1



A quick fix for mounting the stationary end of an e-chain*
 With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ► page 9.16

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of (960.40.XXX) on the right column "attached outwards"



Price index



Low noise version E4/101
Series 401 available with
special rubber pads design



Cleanroom test
upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 400/410/R880:

- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads
- Also available without camber



When not to use it:

- If long side-mounted, unsupported length is required
▶ Series E4.56, page 7.78
- If an extrem vibration-free e-chain® is necessary
▶ Series E6.52, page 8.66

- ❶ Crossbars on e-chain* removable along both radii
- ❷ Closed and open styles can be combined
- ❸ Numerous interior separation possibilities
- ❹ Hinged snap-open removable lids along outer radius
- ❺ Stop dog with "brake" for noise reduction
- ❻ Wide, rounded plastic crossbars
- ❼ Optimized glide pads with lateral wear allowance
- ❽ KMA mounting brackets with attachment points on all sides
- ❾ Locking or pivoting mounting brackets available
- ❿ Integrated strain relief possible
- ⓫ Dirt-repellent exterior
- ⓫ e-chains* also available with reverse bending radius "RBR"



Also available as
E4/00-NC without
camber: 400-NC



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 3 m or 33 links

3 m 400.30.300.0

e-chain®

with 2 separators 411 assembled every 2nd link

Interior separation

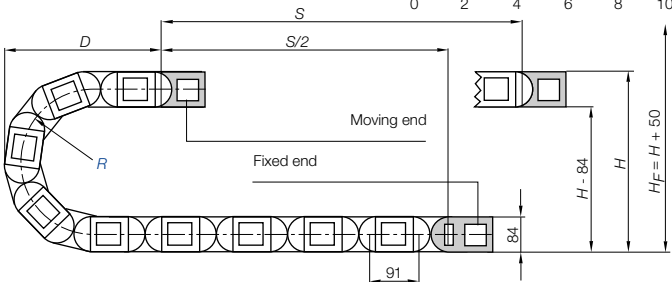
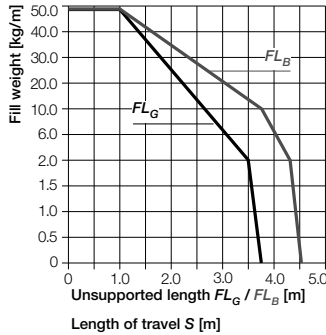
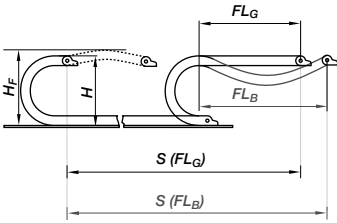
1 set 4000.30.1.12.C

Mounting bracket



Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



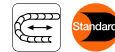
Pitch = 91 mm/link Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	135	150	175	200	240	250	300	350	400	500
$H_{25}^{0.5}$	360	385	435	485	565	585	685	785	885	1085
D	270	285	310	335	375	385	435	485	535	635
K	650	750	825	900	1020	1050	1225	1340	1450	1775
H_2	276	266	266	266	266	266	266	266	266	266
D_2^{+25}	270	480	600	730	950	920	1180	1440	1530	1900
K_2	650	819	1092	1274	1547	1547	2002	2275	2548	3276

- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{R1} = Trough inner height
- D = Overlength e-chain* radius in final position
- K = $\pi \cdot R$ + "safety"
- D_2 = Over length - long travels, gliding
- K_2 = "Further add-on"
- H_2 = "Mounting height"
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 100 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. $\leq 2,5$ m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

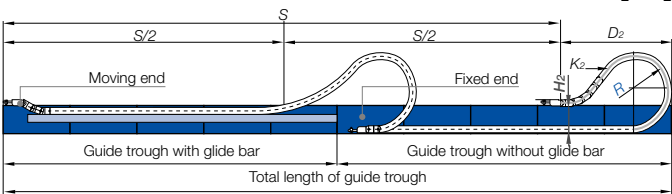


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 50$ mm
 (with 3,0 kg/m fill weight)

Long travel lengths from 12 m to max. 400 m Chain length = $S/2 + K_2$



In case of travels between 9,0 and 12 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 400 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

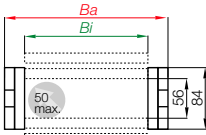
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38



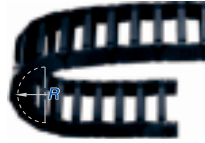


Part No. structure

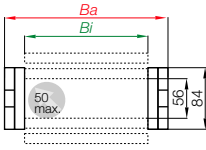
400. 13. 250. 0



Series 400 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

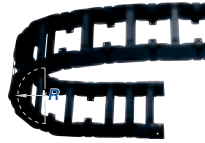


Part No. structure

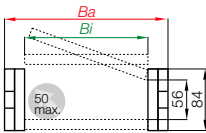
410. 13. 250. 0



Series 410 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Part No. structure

880. 25. 250. 0



Series R880 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.

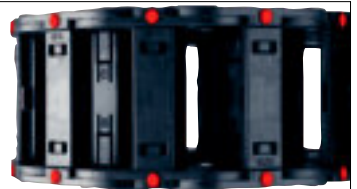


Low-noise! Special low-noise version with rubber pads

Series 401 - Order example: 401.22.250.0

Further information:

www.igus.de or phone +49-(0) 22 03-96 49-800



Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	400 [kg/m]	410 [kg/m]	R880 [kg/m]
400/410.05.....□.0	50	84	≈ 3,44	≈ 3,12	-
400/410.06.....□.0	65	99	≈ 3,50	≈ 3,20	-
400/410/880.07.....□.0*	75	109	≈ 3,53	≈ 3,44	≈ 3,98
400/410.08.....□.0	87	121	≈ 3,56	≈ 3,48	-
400/410/880.10.....□.0	100	134	≈ 3,71	≈ 3,53	≈ 4,27
400/410.11.....□.0	112	147	≈ 3,84	≈ 3,60	-
400/410/880.12.....□.0	125	159	≈ 3,91	≈ 3,63	≈ 4,63
400/410.13.....□.0	137	172	≈ 4,04	≈ 3,70	-
400/410/880.15.....□.0	150	184	≈ 4,10	≈ 3,73	≈ 5,06
400/410.16.....□.0	162	197	≈ 4,21	≈ 3,78	-
400/410/880.17.....□.0	175	209	≈ 4,32	≈ 3,84	≈ 5,37
400/410.18.....□.0	187	222	≈ 4,43	≈ 3,89	-
400/410/880.20.....□.0	200	234	≈ 4,46	≈ 3,91	≈ 5,63
400/410.21.....□.0	212	247	≈ 4,57	≈ 3,96	-
400/410.22.....□.0	225	259	≈ 4,63	≈ 3,99	-
400/410.23.....□.0	237	272	≈ 4,76	≈ 4,06	-
400/410/880.25.....□.0	250	284	≈ 4,85	≈ 4,10	≈ 6,36
400/410.26.....□.0	262	297	≈ 4,94	≈ 4,15	-
400/410/880.27.....□.0	275	309	≈ 5,05	≈ 4,20	≈ 6,72
400/410.28.....□.0	287	322	≈ 5,07	≈ 4,21	-
400/410/880.30.....□.0	300	334	≈ 5,29	≈ 4,32	≈ 7,02
400/410.31.....□.0	312	347	≈ 5,29	≈ 4,32	-
400/410.32.....□.0	325	359	≈ 5,38	≈ 4,37	-
400/410.33.....□.0	337	372	≈ 5,56	≈ 4,46	-
400/410/880.35.....□.0	350	384	≈ 5,71	≈ 4,53	≈ 7,72
400/410.36.....□.0	362	397	≈ 5,71	≈ 4,53	-
400/410.37.....□.0	375	409	≈ 5,73	≈ 4,54	-
400/410.38.....□.0	387	422	≈ 5,82	≈ 4,59	-
400/410/880.40.....□.0	400	434	≈ 6,02	≈ 4,69	≈ 8,72
400/410.41.....□.0	412	447	≈ 6,17	≈ 4,76	-
400/410.42.....□.0	425	459	≈ 6,33	≈ 4,84	-
400/410.43.....□.0	437	472	≈ 6,39	≈ 4,87	-
400/410.45.....□.0	450	484	≈ 6,46	≈ 4,91	-
400/410/880.46.....□.0	462	497	≈ 6,48	≈ 4,92	≈ 9,19
400/410.47.....□.0	475	509	≈ 6,61	≈ 4,98	-
400/410.48.....□.0	487	522	≈ 6,65	≈ 5,01	-
400/410.50.....□.0	500	534	≈ 6,74	≈ 5,05	-
400/410.51.....□.0	512	547	≈ 6,77	≈ 5,06	-
400/410.52.....□.0	525	559	≈ 6,81	≈ 5,08	-
400/410.53.....□.0	537	572	≈ 6,96	≈ 5,16	-
400/410.55.....□.0	550	584	≈ 7,45	≈ 5,40	-
400/410.60.....□.0	600	634	≈ 7,65	≈ 5,50	-

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT*: **880.40.150.0.HT**
Lids made of HT: **880.40.HTE.150.0**
*for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



System E4/00
Inner height: 56 mm

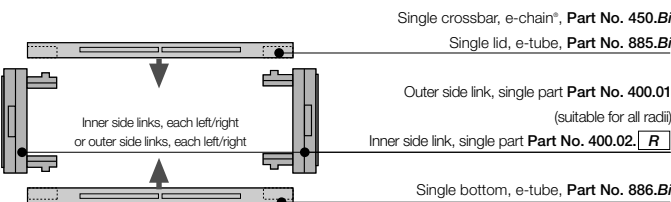
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

Available bending radii

R [mm] **135**** 150 175 200 240 250 300 350 400 500

Supplement Part No. with required radius. Example: 400.30.**300**.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link - Links/m = 11



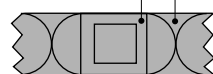
* Removable lid only, no hinged option
** not available for R880



Extender crossbar for large diameter hoses ▶ page 7.290

Part No. e-chain[®] links, single parts

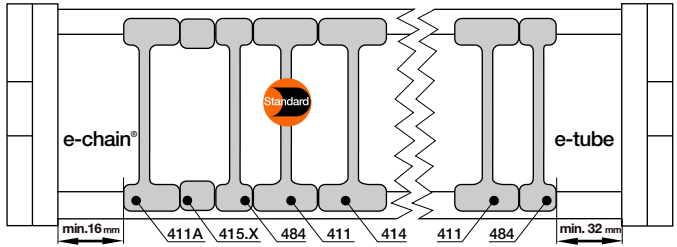
Inner side link
Outer side link



▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 32 mm (e-tube) and 16 mm (e-chain)!*



Vertical separator
401



Vertical separator
483



Spacer
405.XX



Locking separator
404



Vertical separator
406



Asymmetric
separator 401A

Vertical separator for e-chains*/e-tubes	
unassembled	401
assembled	411



Vertical separator for e-chains*/e-tubes	
unassembled	483
assembled	484



Spacer* for e-chains*	
unassembled	405.XX
assembled	415.XX



Locking separator for e-chains*	
unassembled	404
assembled	414



Vertical separator for e-tubes	
unassembled	406
assembled	416



Asymmetric separator for e-chains*	
unassembled	401A
assembled	411A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 401 for e-chains*/e-tubes** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 483 with a narrow foot for e-chains* and e-tubes** with applications where a large number of small cables need to be individually separated.

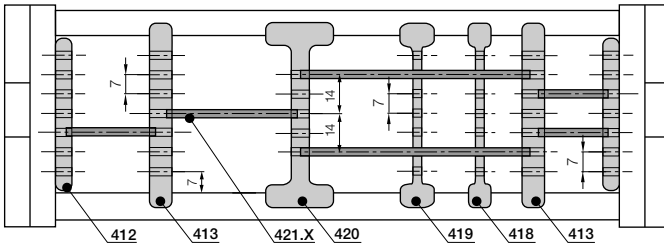
● Separators (e.g. "side mounted") for e-chains* can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for e-chains* 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment

● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width

● **Asymmetric separator 401A for e-chains*** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).

● Locking vertical separator 410, slotted combined with shelves (only for e-chains*).

● Slotted separators 408, are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 409 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains/e-tubes	
unassembled	402
assembled	412

Middle plate for e-chains/e-tubes	
unassembled	403
assembled	413

Locking vertical separator for e-chains*	
unassembled	410
assembled	420

Slotted separator for e-chains/e-tubes	
unassembled	408
assembled	418

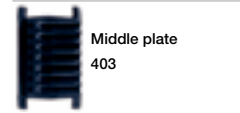
Open slotted separator for e-chains/e-tubes	
unassembled	409
assembled	419

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



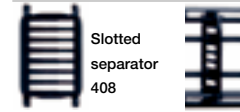
Side plate 402



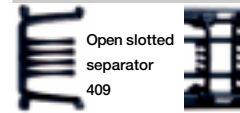
Middle plate 403



Locking vertical separator 410



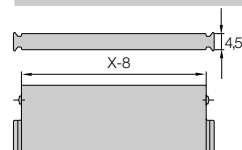
Slotted separator 408



Open slotted separator 409



Shelf 420.X



Additional elements for interior separation

Center crossbar	
unassembled	405
assembled	415

Center crossbar - was developed for applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain* independently into upper and lower halves.

Rollclip	
unassembled	489.27
assembled	490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.

Roller separator	
unassembled	429
assembled	430

Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

System E4/00
Inner height: 56 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



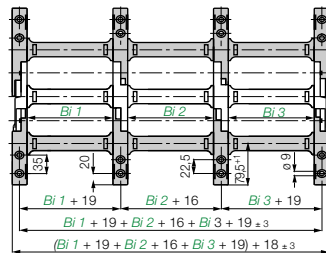


Part No. structure

400.10 /20 /10. 200.0400.B1/B2/B3. R.0

Extension links - for extremely wide e-chains® up to 3,0 m

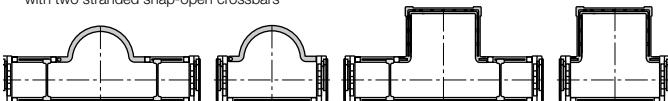
- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



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

Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



Round extender crossbar with snap-open crossbars

Attached directly to the side link

Square extender crossbar with snap-open crossbars

Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	180	□	+	-
450.35.D250	195	□	+	-
450.40.D300	245	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	180	□	-	+
450.30.HD250	195	□	-	+

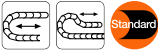
○ = round □ = square + = yes / - = no



E4 snapclip

- For side-mounted applications ● Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required ● Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each chain link ● Call us if you have any questions on project planning

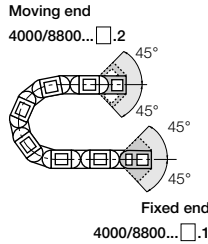
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm



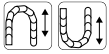
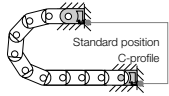
The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

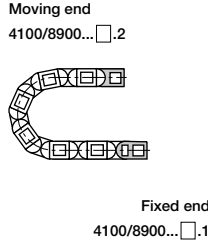


The attachment variants arising automatically by the choice of the KMA mounting bracket

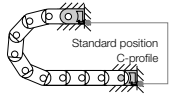


Option KMA - locking

- Recommended for vertical hanging / standing applications
- Additionally:**
- Universally mountable
 - C-profile option
 - Corrosion resistant
 - Locked connections
 - At very high acceleration

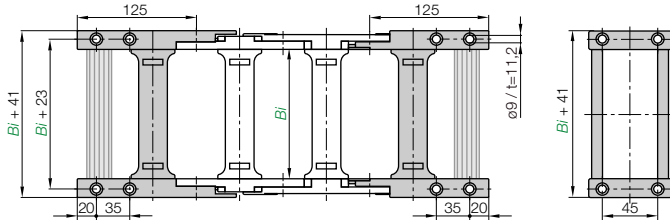


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
4000/8800...□.1 (pivoting)
4100/8900...□.1 (locking)

Moving end
(pivoting) 4000/8800...□.2
(locking) 4100/8900...□.2

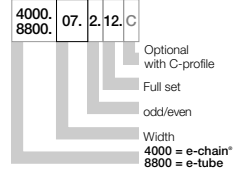


Width index	Part No. full set		C-profile option [mm]		Width index	Part No. full set		C-profile option [mm]	
	pivoting	locking	option	Bi		pivoting	locking	option	Bi
.05.	4000	4100	.05.□.12.□	50	.31.	4000	4100	.31.□.12.□	312
.06.	4000	4100	.06.□.12.□	65	.32.	4000	4100	.32.□.12.□	325
.07.	4000/8800	4100/8900	.07.□.12.□	75	.33.	4000	4100	.33.□.12.□	337
.08.	4000	4100	.08.□.12.□	87	.35.	4000/8800	4100/8900	.35.□.12.□	350
.10.	4000/8800	4100/8900	.10.□.12.□	100	.36.	4000	4100	.36.□.12.□	362
.11.	4000	4100	.11.□.12.□	112	.37.	4000	4100	.37.□.12.□	375
.12.	4000/8800	4100/8900	.12.□.12.□	125	.38.	4000	4100	.38.□.12.□	387
.13.	4000	4100	.13.□.12.□	137	.40.	4000/8800	4100/8900	.40.□.12.□	400
.15.	4000/8800	4100/8900	.15.□.12.□	150	.41.	4000	4100	.41.□.12.□	412
.16.	4000	4100	.16.□.12.□	162	.42.	4000	4100	.42.□.12.□	425
.17.	4000/8800	4100/8900	.17.□.12.□	175	.43.	4000	4100	.43.□.12.□	437
.18.	4000	4100	.18.□.12.□	187	.45.	4000	4100	.45.□.12.□	450
.20.	4000/8800	4100/8900	.20.□.12.□	200	.46.	4000/8800	4100/8900	.46.□.12.□	462
.21.	4000	4100	.21.□.12.□	212	.47.	4000	4100	.47.□.12.□	475
.22.	4000	4100	.22.□.12.□	225	.48.	4000	4100	.48.□.12.□	487
.23.	4000	4100	.23.□.12.□	237	.50.	4000	4100	.50.□.12.□	500
.25.	4000/8800	4100/8900	.25.□.12.□	250	.51.	4000	4100	.51.□.12.□	512
.26.	4000	4100	.26.□.12.□	262	.52.	4000	4100	.52.□.12.□	525
.27.	4000/8800	4100/8900	.27.□.12.□	275	.53.	4000	4100	.53.□.12.□	537
.28.	4000	4100	.28.□.12.□	287	.55.	4000	4100	.55.□.12.□	550
.30.	4000/8800	4100/8900	.30.□.12.□	300	.60.	4000	4100	.60.□.12.□	600

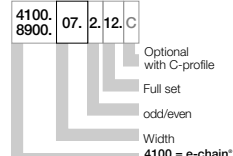
Please insert 1 for odd number of links or 2 for even number of links

Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Note: The E4/00 System may end with either an inner side or an outer side link. Keep in mind that an outer side link always forms the first chain link at the moving end. The Part No. depends on an even or odd numbers of links. Please insert: 1 for odd number of links or 2 for even number of links

Full set, for both ends:

4000.05.2.1.12.C (even)

Single-part order:

4000.05.2.2.C (even)

Mounting bracket moving end

4000.05.2.1.C (even)

Mounting bracket fixed end





igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps.

Details ► chapter 10

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. Details ► chapter 10

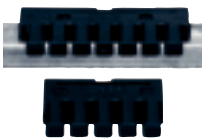
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C



chainfix Nuggel for the C-Profile

Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. Details ► chapter 10

Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0



chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. Details ► chapter 10

Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

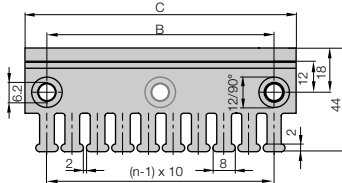
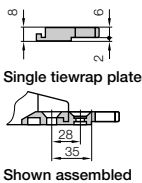


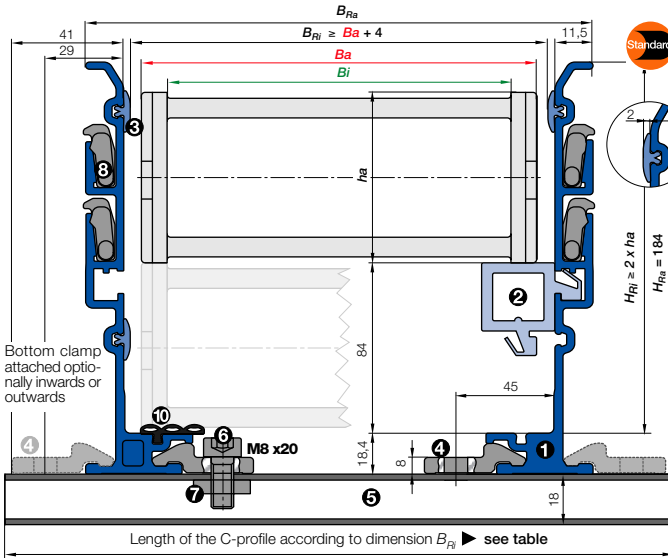
Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. Details ► chapter 10

Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)





- B_a = Outer width e-chains / e-tube
 - B_i = Inner width e-chains / e-tube
 - h_a = Outer height e-chains / e-tube
 - H_{Ri} = Inner trough height
 - H_{Ra} = Outer trough height
 - B_{Ri} = Inner trough width ► depends on dim. B_a
 - B_{Ra} = Outer trough width
 - n_{Mon} = Number of installation sets (left/right)
 - n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
 $B_{Ri} \geq B_a + 4$
- = Guide trough set
 - = Installation set "Basic"
 - = Glide bar
 - = C-profile

Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

400.05.200.0 ► Order example

B_{Ri} [mm]	Part No.	
	attached inwards	attached outwards
.05	88	960.50.225
.06	103	960.50.225
.07	113	960.50.250
.08	125	960.50.175
.10	138	960.50.200
.11	151	960.50.200
.12	163	960.50.225
.13	176	960.50.225
.15	188	960.50.250
.16	201	960.50.250
.17	213	960.50.275
.18	226	960.50.275
.20	238	960.50.300
.21	251	960.50.300
.22	263	960.50.325
.23	276	960.50.325
.25	288	960.50.350
.26	301	960.50.350
.27	313	960.50.375
.28	326	960.50.375
.30	338	960.50.400
.31	351	960.50.400
.32	363	960.50.425
.33	376	960.50.425
.35	388	960.50.450
.36	401	960.50.450
.37	413	960.50.475
.38	426	960.50.475
.40	438	960.50.500
.41	451	960.50.500
.42	463	960.50.525
.43	476	960.50.525
.45	488	960.50.550
.46	501	960.50.550
.47	513	960.50.575
.48	526	960.50.575
.50	538	960.50.600
.51	551	960.50.600
.52	563	960.50.625
.53	576	960.50.625
.55	588	960.50.650
.60	638	960.50.700



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 400.10.200.0 with $B_{Ri} = 138$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No.** 974.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No.** 974.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" **Part No.** 960.50.200
- Module for the fixed end
Order text: 1 set **Part No.** 974.80
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No.** 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an e-chain®
 With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain" by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ► page 9.16

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of (**960.50.XXX**) on the right column "attached outwards"



► chapter 10



► chapter 9



► page 7.255

Price Index



Cleanroom test
upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request

- ① Crossbars on e-chain® removable along both radii
- ② Hinged snap-open removable lids along outer radius
- ③ Stop dog with "brake" for noise reduction
- ④ Wide, rounded plastic crossbars - cable friendly
- ⑤ Optimized glide pads with lateral wear allowance
- ⑥ Numerous interior separation possibilities
- ⑦ Closed and open styles can be combined
- ⑧ Dirt-repellent exterior
- ⑨ e-chains® also available with reverse bending radius "RBR"



Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



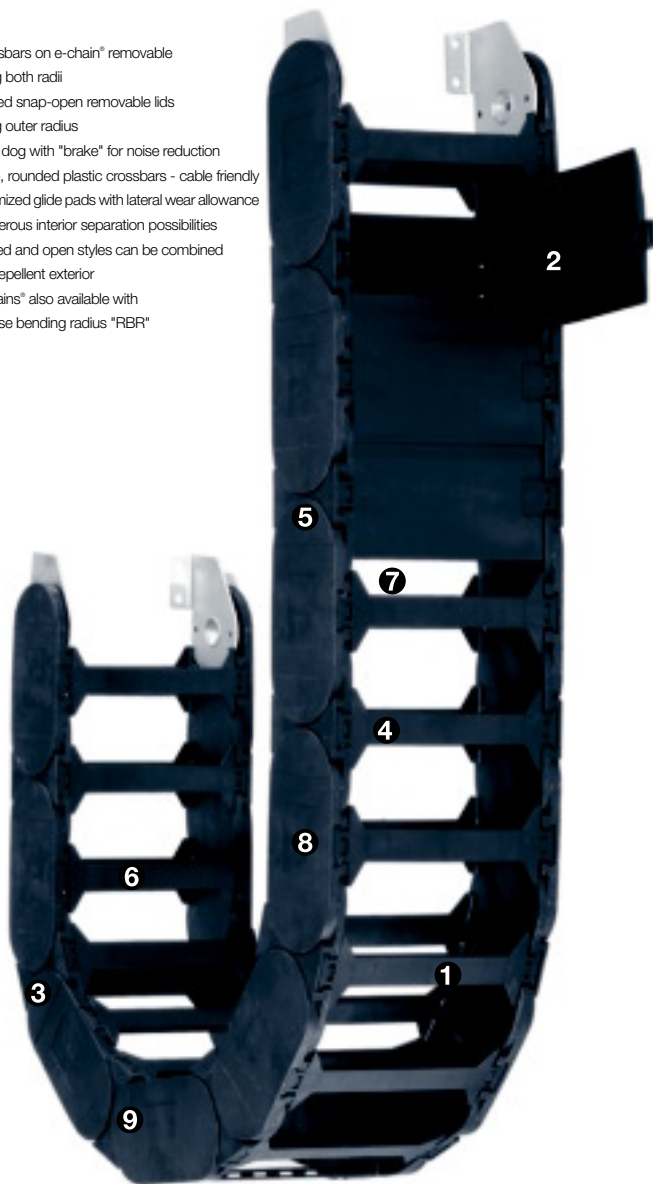
When to use the Series 600/601/R608:

- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads



When not to use it:

- If a simple and low-cost solution is required
 - ▶ Series 1640, page 7.114
- If an increased inner height is required
 - ▶ Series 640, page 7.302



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 6 m or 42 links

6 m 600.30.300.0

e-chain®

with 2 separators 6011 assembled every 2nd link

Interior separation

1 set 6000.1.12

Mounting bracket

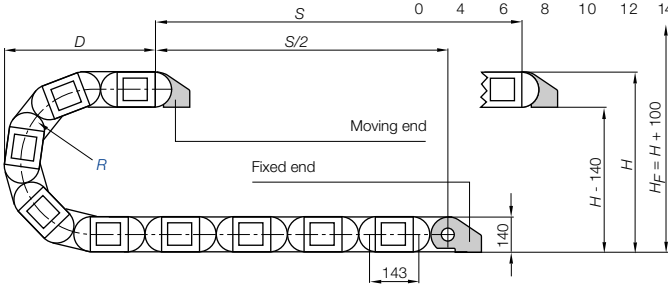
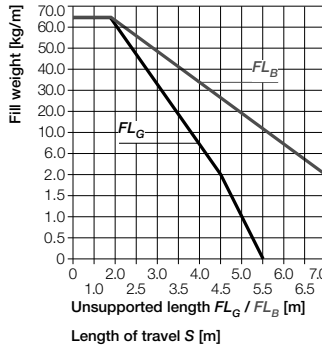
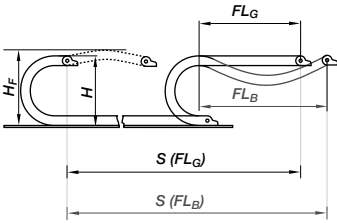


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



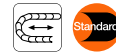
Pitch = 143 mm/link Links/m = 7 (1001 mm) Chain length = $S/2 + K$

R	200	250	300	350	400	450	500	550	600	750	1000
H	545	645	745	845	945	1045	1145	1245	1345	1645	2145
D	415	465	515	565	615	665	715	765	815	965	1215
K	920	1080	1240	1400	1560	1720	1870	2020	2175	2660	3435
H ₂	325	325	325	325	325	325	325	325	325	325	-
D ₂ ⁺²⁵	900	1000	1100	1250	1450	1600	1700	1900	2050	2850	-
K ₂	1573	1716	1859	2288	2574	2860	3146	3432	3861	5005	-

- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{in} = Trough inner height
 - D = Overlength e-chain[®] radius in final position
 - K = $\pi \cdot R$ + "safety"
 - D₂ = Overlength - long travels, gliding
 - K₂ = "Further add-on"
 - H₂ = "Mounting height"
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 6 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

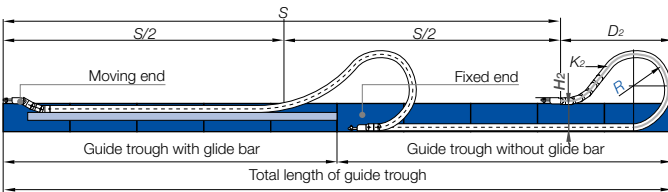


Short travels - unsupported

Unsupported e-chains[®] feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus[®] if space is particularly restricted.

The required clearance height:
H_F = H + 100 mm
(with 5,0 kg/m fill weight)

Long travel lengths from 15 m to max. 450 m Chain length = $S/2 + K_2$



In case of travels between 10 and 15 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 450 m)

In this case the e-chain[®] upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

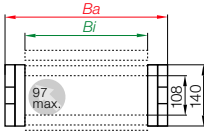
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



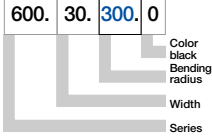
Details of material properties

► page 1.38

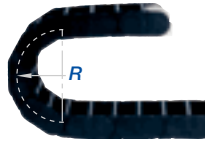




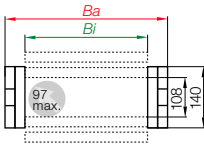
Part No. structure



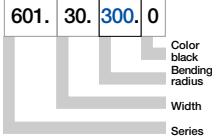
Series 600 - e-chain® with crossbars every link



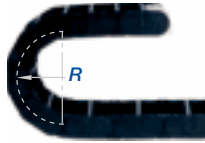
- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



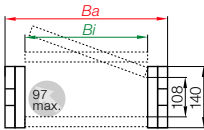
Part No. structure



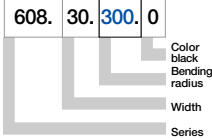
Series 601 - e-chain® with crossbars every 2nd link



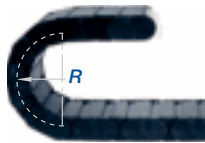
- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Part No. structure



Series R608 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	600 [kg/m]	601 [kg/m]	R608 [kg/m]
600/601/608.20... <input type="text"/> .0	200	252	≈ 8,75	≈ 7,99	**
600/601/608.25... <input type="text"/> .0	250	302	≈ 9,11	≈ 8,17	**
600/601/608.30... <input type="text"/> .0	300	352	≈ 9,45	≈ 8,34	**
600/601/608.32... <input type="text"/> .0	320	372	≈ 9,59	≈ 8,41	-
600/601/608.35... <input type="text"/> .0	350	402	≈ 9,74	≈ 8,48	**
600/601.38... <input type="text"/> .0**	380	432	≈ 10,01	≈ 8,62	-
600/601/608.40... <input type="text"/> .0	400	452	≈ 10,19	≈ 8,71	**
600/601.45... <input type="text"/> .0	450	502	≈ 10,32	≈ 8,77	-
600/601/608.50... <input type="text"/> .0**	500	552	≈ 10,63	≈ 8,93	**
600/601.55... <input type="text"/> .0	550	602	≈ 10,98	≈ 9,10	-
600/601.60... <input type="text"/> .0	600	652	≈ 11,47	≈ 9,35	-

**NEW in this catalog

Available bending radii
R [mm]

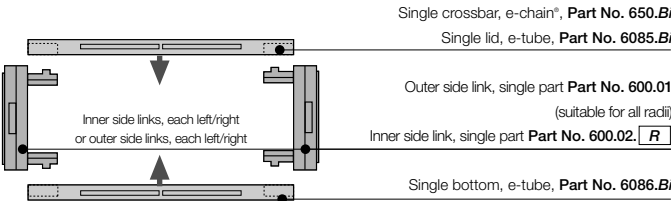
Supplement Part No. with required radius. Example: 600.30.0
 0 = standard color, other colors ▶ page 1.39 · Pitch = 143 mm/link - Links/m = 7
 *not available for R608 **upon request

Hot Chips up to 850°C

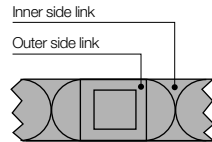
e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT: **608.40.250.0.HT**
 Lids made of HT: **608.40.HTE.250.0**
for long travels upon request
 Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



Extension links for extremely wide e-chains*
 ▶ upon request



Part No. e-chain® links, single parts



System E4/00
 Inner height: 108 mm

Phone +49- (0) 22 03-96 49-800
 Fax +49- (0) 22 03-96 49-222

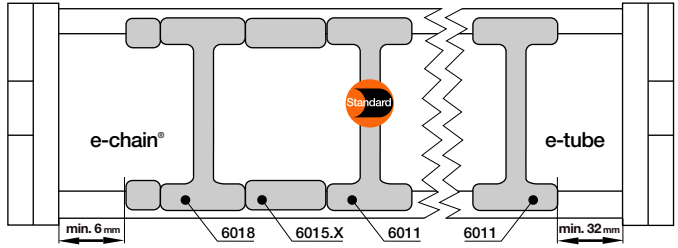


▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 32 mm (e-tube) and 6 mm (e-chain)!

Exception: Minimum spacing
Locking separator 6008 = 23 mm



Vertical separator
6001



Spacer
6005.XX

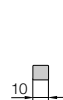


Locking separator
6008

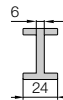
Vertical separator for e-chains/e-tubes	
unassembled	6001
assembled	6011



Spacer*, for e-chains*	
unassembled	6005.XX
assembled	6015.XX



Locking separator for e-chains*	
unassembled	6008
assembled	6018



*For side-mounted applications

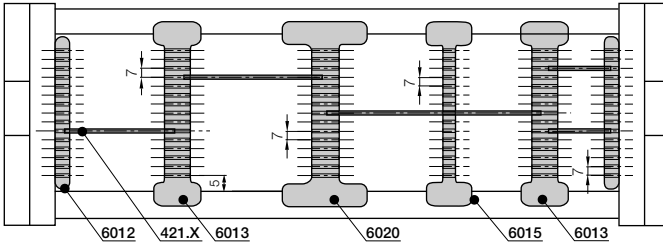
Option 1: Vertical separators and spacers

● **Standard separator 6001** for e-chains® and e-tubes offers safe stability due to its wide base design, also when used with thick cables or hoses.

● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **Spacers 6005.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20 mm)

Additionally:

● **Locking separator 6008** for e-chains® - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

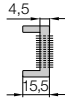
Option 2: Shelves

● Side plates 6002, middle plates 6003 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments).

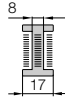
● Locking vertical separator 6010 combined with shelves. Triple slots (only for e-chains*).

● Slotted separators 6004 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

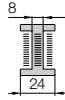
● The unilateral open slotted separator 6005 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Side plate for e-chains*/e-tubes	
unassembled	6002
assembled	6012



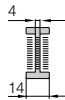
Middle plate for e-chains*/e-tubes	
unassembled	6003
assembled	6013



Locking vertical separator for e-chains*	
unassembled	6010
assembled	6020



Slotted separator for e-chains*/e-tubes	
unassembled	6004
assembled	6014



Open slotted separator for e-chains*/e-tubes	
unassembled	6005
assembled	6015



Side plate 6002



Middle plate 6003



Locking vertical separator 6010



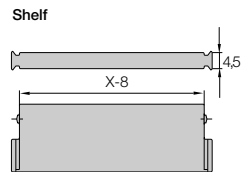
Slotted separator 6004



Open slotted separator 6005



Shelf 420.X



Shelf

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

System E4/00
Inner height: 1 08 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



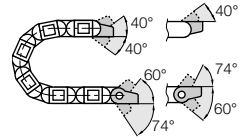
► page 7.255



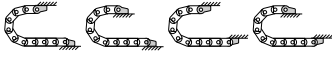
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
6000.1



Fixed end
6000.2



Possible installation conditions -

Further installation angles ► installation sketch

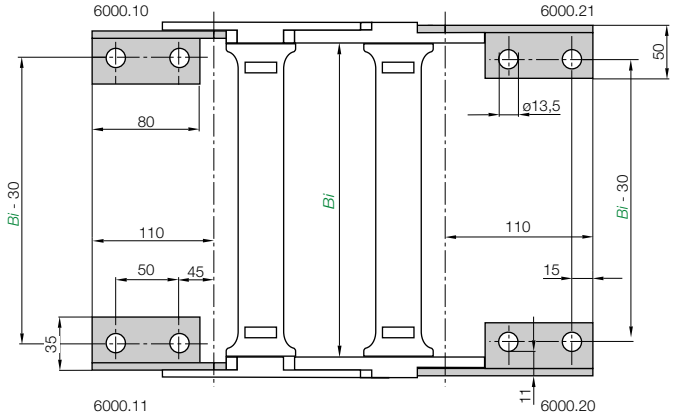
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

Dimensions and order configurations

Moving end
6000.1

Fixed end
6000.2



Note mounting brackets:

Depending on the e-chain® length, the carrier will end with outer or inner side links. For the best appearance, make sure the chain ends with outer side link whenever possible. An odd number of links will always end with outer side links.

Part No. Mounting bracket

- 6000.1, 12 Full attachment set (both sides) for e-chain®, ending with outer side link
- 6000.3, 12 Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
- 6000.1 Mounting bracket set **moving end** (one side) for outer side link
- 6000.2 Mounting bracket set **fixed end** (one side) for inner side link

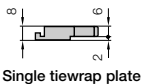
E4/00 | Series 600·601·R608 | Accessories | Strain Relief



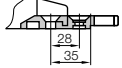
Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**

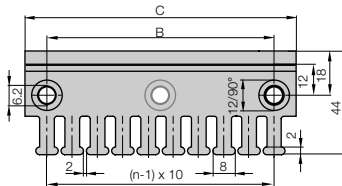
Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+



Single tiewrap plate



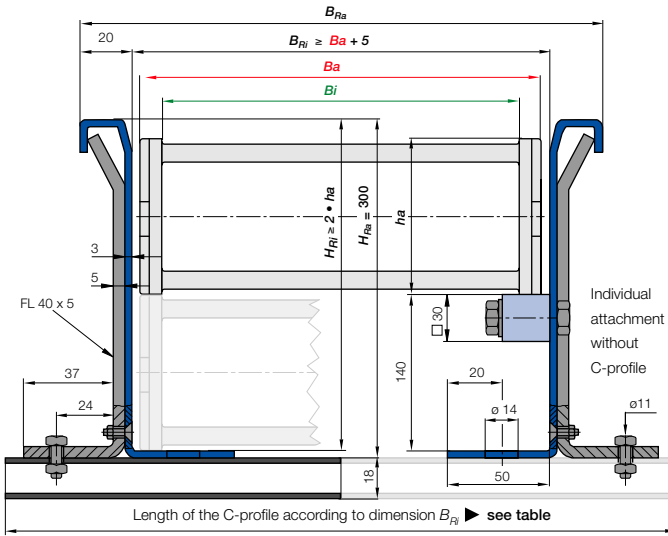
Shown assembled



(- = no / + = yes)

Internet: www.igus.eu
E-mail: info@igus.de

Steel Guide Troughs | Very stable and rugged



Guide troughs are used with applications where the upper run of the e-chain® glides on the lower run. If using igus® steel guide troughs, the following components are required:

- **Guide trough without glide bars**
Part No. 98.30
- **Guide trough with glide bars**
Part No. 98.31
- **Installation sets as end connectors**
Part No. 98.50.XX

.XX indicates the length of the C-profile on which the guide trough is mounted. The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.



Illustration top: Guide trough with and without glide bar. Illustration bottom: installation set

- B_a = Outer width e-chains® / e-tube
- B_i = Inner width e-chains® / e-tube
- h_a = Outer height e-chains® / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 5$
- = Guide trough set
- = Installation set
- = Glide bar
- = C-profile

Installation set with C-profile

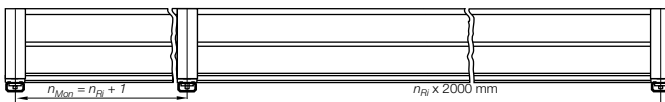
600.20.300.0 ▶ Order example

B_{Ri}	Part No.	Installation set
.20	257	98.50.375
.25	307	98.50.425
.30	357	98.50.475
.32	377	98.50.500
.35	407	98.50.525
.40	457	98.50.575
.45	507	98.50.625
.50	557	98.50.675
.55	607	98.50.725
.60	657	98.50.775

Order example: Length of travel 30 m - Center mounted for Series 600.30.300.0 with $B_{Ri} = 357$

Guide trough set (set of 2 trough side parts, incl. glide strips) without glide bar	
Order text: 16 m Guide trough without glide bar (8 x 2 m sections)	Part No. 98.30
Guide trough set (set of 2 trough side parts, incl. glide strips) with glide bar	
Order text: 16 m Guide trough with glide bar (8 x 2 m sections)	Part No. 98.31
Installation set "Basic" complete (Guide trough-sets + 1)	
Order text: 17 Installation sets (with C-profile)	Part No. 98.50.475

Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



▶ chapter 10



▶ chapter 9



▶ page 7.255



Price index

Cleanroom test
upon requestESD classification:
Electrically conductive ESD/ATEX
version upon request

Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action. Repeat action for the other side



When to use the Series 640:

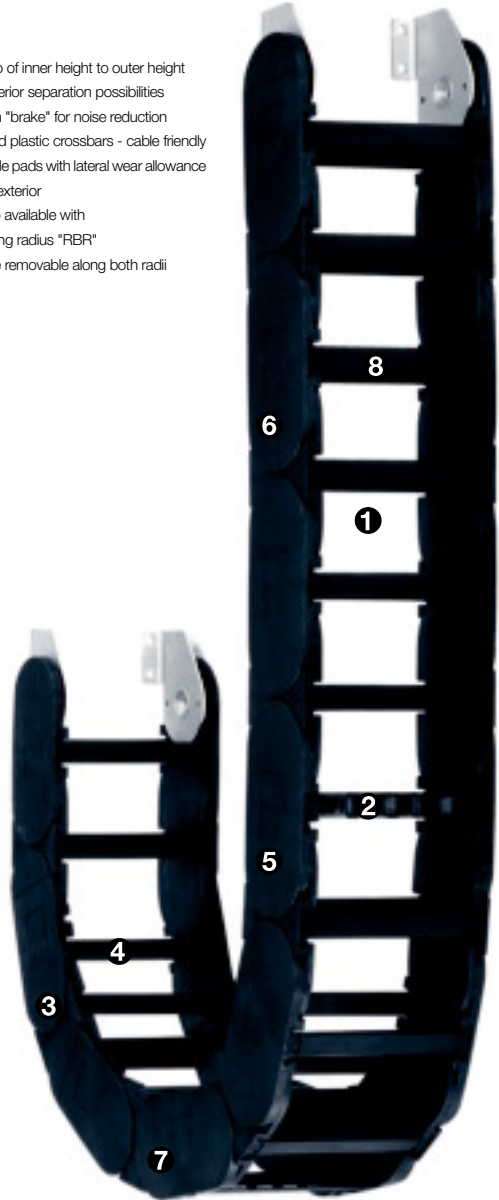
- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads



When not to use it:

- If a simple and low-cost solution is required
 - ▶ Series 1640, page 7.114
- If higher stability is required
 - ▶ Series 600/601/R608, page 7.294
- If an enclosed solution is required
 - ▶ Series R608, page 7.294

- ① Optimum ratio of inner height to outer height
- ② Numerous interior separation possibilities
- ③ Stop dog with "brake" for noise reduction
- ④ Wide, rounded plastic crossbars - cable friendly
- ⑤ Optimized glide pads with lateral wear allowance
- ⑥ Dirt-repellent exterior
- ⑦ e-chains® also available with reverse bending radius "RBR"
- ⑧ Crossbars are removable along both radii



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 4 m or 28 links

4 m 640.33.300.0

e-chain®

with 2 separators 6411 assembled every 2nd link Interior separation

1 set 6000.1.12

Mounting bracket

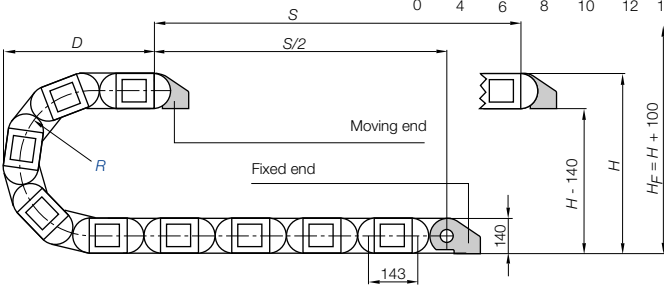
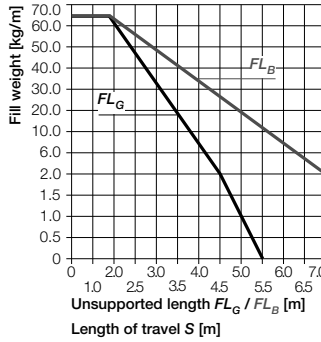
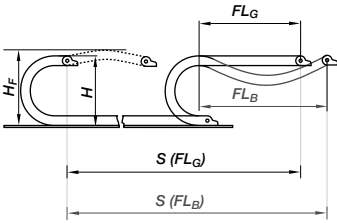


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



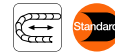
Pitch = 143 mm/link Links/m = 7 (1001 mm) Chain length = $S/2 + K$

R	200	250	300	350	400	450	500	550	600	750	1000
H	545	645	745	845	945	1045	1145	1245	1345	1645	2145
D	415	465	515	565	615	665	715	765	815	965	1215
K	920	1080	1240	1400	1560	1720	1870	2020	2175	2660	3435
H ₂	325	325	325	325	325	325	325	325	325	325	-
D ₂ ⁺²⁵	800	900	1100	1200	1430	1580	1700	1850	2050	2850	-
K ₂	1287	1430	1859	2145	2574	2860	3146	3432	3861	5005	-

- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{int} = Trough inner height
 - D = Overlength e-chain[®] radius in final position
 - K = $\pi \cdot R$ + "safety"
 - D₂ = Over length - long travels, gliding
 - K₂ = "Further add-on"
 - H₂ = "Mounting height"
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 4 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

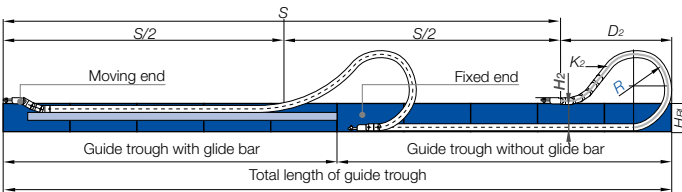


Short travels - unsupported

Unsupported e-chains[®] feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus[®] if space is particularly restricted.

The required clearance height:
H_F = H + 100 mm
 (with 5,0 kg/m fill weight)

Long travel lengths from 10 m to max. 450 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 450 m)

In this case the e-chain[®] upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38

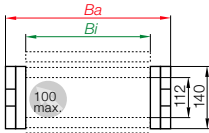
112

System E4/00
Inner height: 112 mm

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► page 7.255

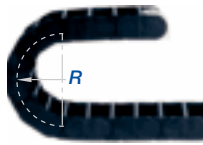


Part No. structure

640. 33. 300. 0



Series 640 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



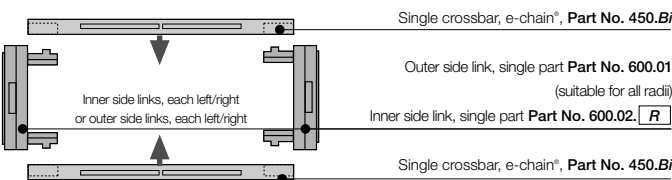
Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	Weight [kg/m]
640.12. <input type="checkbox"/> .0	87	139	≈ 7,57
640.13. <input type="checkbox"/> .0	100	152	≈ 7,66
640.15. <input type="checkbox"/> .0	112	164	≈ 7,70
640.16. <input type="checkbox"/> .0	125	177	≈ 7,77
640.17. <input type="checkbox"/> .0	137	189	≈ 7,84
640.18. <input type="checkbox"/> .0	150	202	≈ 7,91
640.20. <input type="checkbox"/> .0	162	214	≈ 7,92
640.21. <input type="checkbox"/> .0	175	227	≈ 7,99
640.22. <input type="checkbox"/> .0	187	239	≈ 8,04
640.23. <input type="checkbox"/> .0	200	252	≈ 8,12
640.25. <input type="checkbox"/> .0	212	264	≈ 8,18
640.26. <input type="checkbox"/> .0	225	277	≈ 8,23
640.27. <input type="checkbox"/> .0	237	289	≈ 8,30
640.28. <input type="checkbox"/> .0	250	302	≈ 8,32
640.30. <input type="checkbox"/> .0	262	314	≈ 8,39
640.31. <input type="checkbox"/> .0	275	327	≈ 8,46
640.32. <input type="checkbox"/> .0	287	339	≈ 8,51
640.33. <input type="checkbox"/> .0	300	352	≈ 8,62
640.35. <input type="checkbox"/> .0	312	364	≈ 8,68
640.36. <input type="checkbox"/> .0	325	377	≈ 8,72
640.37. <input type="checkbox"/> .0	337	389	≈ 8,74
640.38. <input type="checkbox"/> .0	350	402	≈ 8,79
640.40. <input type="checkbox"/> .0	362	414	≈ 8,92
640.41. <input type="checkbox"/> .0	375	427	≈ 9,02
640.42. <input type="checkbox"/> .0	387	439	≈ 9,11
640.43. <input type="checkbox"/> .0	400	452	≈ 9,16
640.45. <input type="checkbox"/> .0	412	464	≈ 9,20
640.46. <input type="checkbox"/> .0	425	477	≈ 9,21
640.47. <input type="checkbox"/> .0	437	489	≈ 9,26
640.48. <input type="checkbox"/> .0	450	502	≈ 9,30
640.50. <input type="checkbox"/> .0	462	514	≈ 9,38
640.51. <input type="checkbox"/> .0	475	527	≈ 9,39
640.52. <input type="checkbox"/> .0	487	539	≈ 9,42
640.53. <input type="checkbox"/> .0	500	552	≈ 9,52
640.55. <input type="checkbox"/> .0	512	564	≈ 9,83
640.60. <input type="checkbox"/> .0	562	614	≈ 9,95

Available bending radii

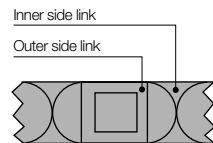
R [mm] 200 250 300 350 400 450 500 550 600 750 1000

Supplement Part No. with required radius. Example: 640.33. 300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 143 mm/link - Links/m = 7



Part No. e-chain® links, single parts



System E4/00
Inner height: 112 mm

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▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link.



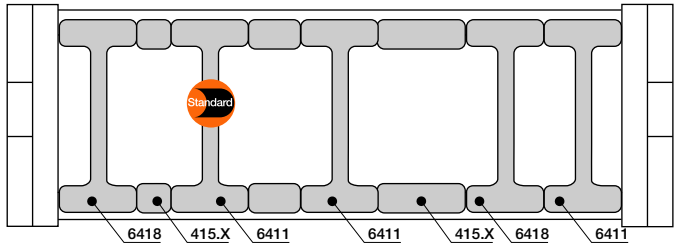
Vertical separator
6401



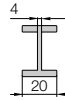
Spacer
405.XX



Locking separator
6408



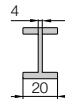
Vertical separator for e-chains*	
unassembled	6401
assembled	6411



Spacer*	
unassembled	405.XX
assembled	415.XX



Locking separator for e-chains*	
unassembled	6408
assembled	6418



*For side-mounted applications

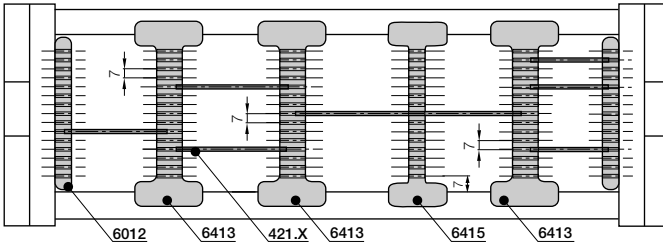
Option 1: Vertical separators and spacers

● **Standard separator 6401 for e-chains®** offers safe stability due to its wide base design, also when used with thick cables or hoses.

● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels)
XX = width of the spacer (available 10, 15, 20, 30, 40 mm)

Additionally:

● The **Locking separator for e-chains® 6408** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the e-chain®.

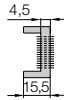


For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

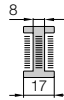
Option 2: Shelves

● Side plates 6002, middle plates 6403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments).

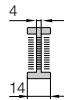
● The unilateral open slotted separator 6405 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Side plate for e-chains*	
unassembled	6002
assembled	6012



Middle plate for e-chains*	
unassembled	6403
assembled	6413



Open slotted separator for e-chains*	
unassembled	6405
assembled	6415

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

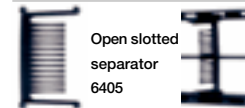
Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



Side plate 6002



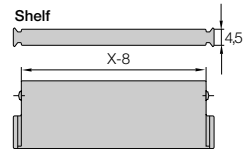
Middle plate 6403



Open slotted separator 6405



Shelf 420.X



Additional elements for interior separation



Rollclip	
unassembled	489.27
assembled	490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



System E4/00
Inner height: 112 mm

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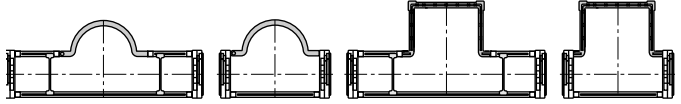




Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 300 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



Round extender crossbar with snap-open crossbars

Attached directly to the side link

Square extender crossbar with snap-open crossbars

Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	200	□	+	-
450.35.D250	250	□	+	-
450.40.D300	300	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	200	□	-	+
450.30.HD250	250	□	-	+

○ = round □ = square + = yes / - = no



E4 snapclip

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains®
- Stylish and economical
- One clip and one locking band are needed for each chain link
- Call us if you have any questions on project planning

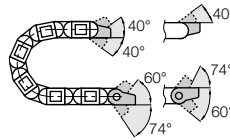
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm



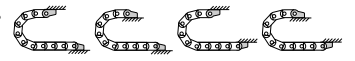
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
6000.1



Fixed end
6000.2

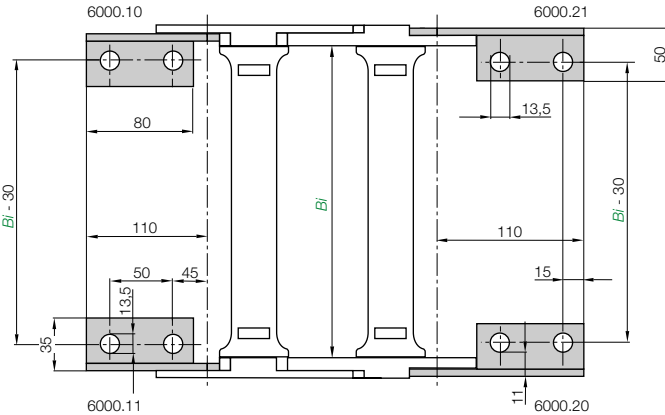


Possible installation conditions -
Further installation angles ► installation sketch

Moving end
6000.1

Fixed end
6000.2

Dimensions and order configurations



Part No. Mounting bracket

6000.1, 12	Full attachment set (both sides) for e-chain®, ending with outer side link
6000.3, 12	Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
6000.1	Mounting bracket set moving end (one side) for outer side link
6000.2	Mounting bracket set fixed end (one side) for inner side link

Note mounting brackets:

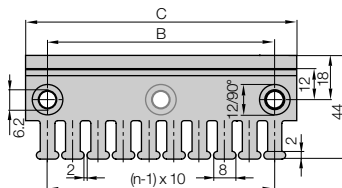
Depending on the e-chain® length, the carrier will end with outer or inner side links. For the best appearance, make sure the chain ends with outer side link whenever possible. An odd number of links will always end with outer side links.

E4/00 | Series 640 | Accessories | Strain Relief

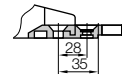
Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



Single tiewrap plate



Shown assembled

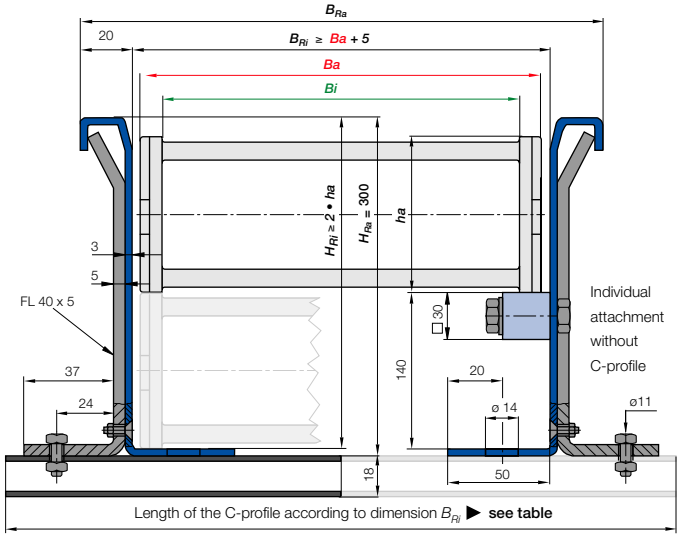


► chapter 10



► page 7.255

- Ba** = Outer width e-chains® / e-tube
 - Bi** = Inner width e-chains® / e-tube
 - ha** = Outer height e-chains® / e-tube
 - H_{Ri}** = Inner trough height
 - H_{Ra}** = Outer trough height
 - B_{Ri}** = Inner trough width ► depends on dim. Ba
 - B_{Ra}** = Outer trough width
 - n_{Mon}** = Number of installation sets (left/right)
 - n_{Ri}** = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot ha$
■ $B_{Ri} \geq Ba + 5$
- = Guide trough set
 - = Glide bar
 - = Installation set
 - = C-profile



Installation set with C-profile

640.12.300.0 ► Order example

	Part No.	Installation set
.12	144	98.50.275
.13	157	98.50.275
.15	169	98.50.300
.16	182	98.50.300
.17	194	98.50.325
.18	207	98.50.325
.20	219	98.50.350
.21	232	98.50.350
.22	244	98.50.375
.23	257	98.50.375
.25	269	98.50.400
.26	282	98.50.400
.27	294	98.50.425
.28	307	98.50.425
.30	319	98.50.450
.31	332	98.50.450
.32	344	98.50.475
.33	357	98.50.475
.35	369	98.50.500
.36	382	98.50.500
.37	394	98.50.525
.38	407	98.50.525
.40	419	98.50.550
.41	432	98.50.550
.42	444	98.50.575
.43	457	98.50.575
.45	469	98.50.600
.46	482	98.50.600
.47	494	98.50.625
.48	507	98.50.625
.50	519	98.50.650
.51	532	98.50.650
.52	544	98.50.675
.53	557	98.50.675
.55	569	98.50.700
.60	619	98.50.750

Guide troughs are used with applications where the upper run of the e-chain® glides on the lower run. If using igus® steel guide troughs, the following components are required:

- **Guide trough without glide bars**
Part No. 98.30
- **Guide trough with glide bars**
Part No. 98.31
- **Installation sets as end connectors**
Part No. 98.50.XX

.XX indicates the length of the C-profile on which the guide trough is mounted. The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m. The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

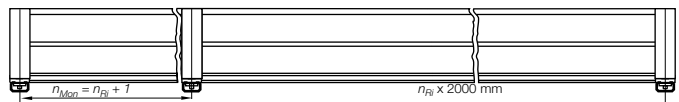


Illustration top: Guide trough with and without glide bar. Illustration bottom: installation set

Order example: Length of travel 30 m - Center mounted for Series 640.33.300.0 with B_{Ri} = 357

Guide trough set (set of 2 trough side parts, incl. glide strips) without glide bar	Part No.	98.30
Order text: 16 m Guide trough without glide bar (8 x 2 m sections)		
Guide trough set (set of 2 trough side parts, incl. glide strips) with glide bar	Part No.	98.31
Order text: 16 m Guide trough with glide bar (8 x 2 m sections)		
Installation set "Basic" complete (Guide trough-sets + 1)	Part No.	98.50.475
Order text: 17 Installation sets (with C-profile)		

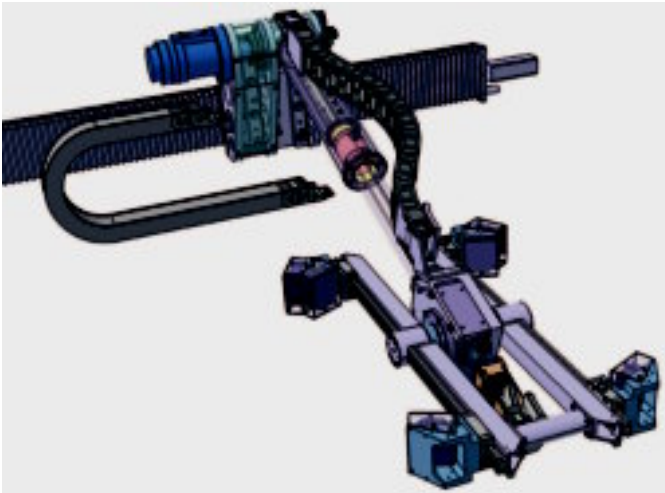
Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**



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igus® GmbH
 51147 Cologne

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 E-mail: info@igus.de



Friction welding machine - Special E4/00 version bend in two directions

System E4/00
Inner height: 112 mm

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▶ chapter 9



▶ page 7.255





E4/4

E4.1-predecessor for long travels
and side-mounted applications

For new constructions we recommend:

System E4.1 ► from page 7.6

E4/4 - The E4.1 predecessor for long travels and side-mounted applications

System E4/4 (pronounced: E-4-4) came out to solve applications in two areas: The extreme long travels and the free-hanging side mounted situations. The famous undercut between two links is one feature to make that possible. Push-forces and rigidity are increased - tolerance against dirt and debris rises. Special "Roller-links" establishes E4/4 as the true long-travel specialist. The undercut design also enables the excellent ESD/ATEX performance. The chain links are tightly linked to each other, so that electricity can flow through them when in contact with each other (Please note: This is valid only for the special conductive material igumid ESD and is not applicable for the standard series in this catalog)

Typical industries and applications

- Unsupported, side mounted applications
- Cranes: RTG, Quay cranes, many more
- Compost plants
- Construction machines
- Gypsum plants, concrete plants, chemical plants
- Agricultural plants
- ESD applications
- Heavy machinery
- Steel plants
- Shipyards
- General machinery



ATEX/ESD: Excellent performance with the special material igumid ESD (upon request) "Rear grip" achieves long-term electrical conductivity



Side-mounted - unsupported



High torsional rigidity



System E4/4 approved with long travels

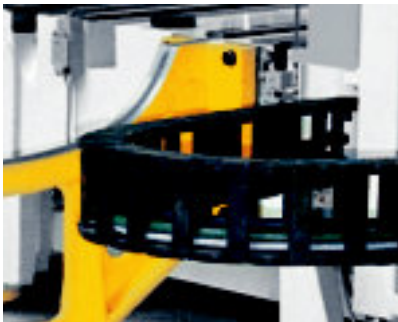


System E4 - 4-piece e-chain" links





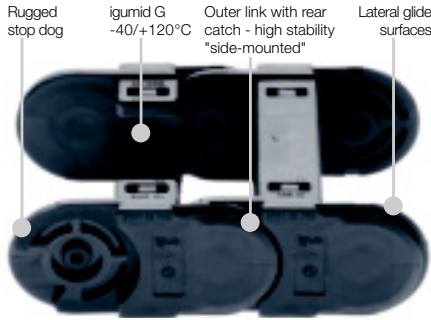
Many successful rol e-chain® applications, i.e. one of the igus® longest travels at the moment on 2 ship unloaders in Malaysia, both equipped with a rol e-chain® at 441,3 m travel length



Special case: Side-mounted, unsupported - undercut design offers stability



200 m travels and more possible



- Best unsupported lengths "side-mounted"
- rol e-chain" links available
- For very long travels up to 150 - 250 m
- High torsional rigidity
- Good for tough environments with dirt and debris
- ESD Version available
- Interior separation tool box available
- You can find more technical data about the material, chemical resistance, temperatures ► **Design, from page 1.38**

Selection table

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]	Bending radius <i>R</i> [mm]	Unsupported length max. [m]	page
--------	--------------------------------	-------------------------------	-------------------------------	--------------------------------	---------------------------------	-----------------------------	------

Crossbars every link for particularly demanding applications



2828	32	50 - 400	74 - 424	54	63 - 300	3,00	7.318
3838	42	50 - 400	77 - 427	64	75 - 350	3,80	7.330
4040	56	50 - 600	86 - 636	84	135 - 500	4,50	7.342
4040HD	56	50 - 600	104 - 654	84	135 - 300	4,50	7.354
5050	80	50 - 600	100 - 650	108	150 - 1000	6,00	7.362
5050HD	80	50 - 600	110 - 660	108	200 - 500	6,00	7.374

Crossbars every 2nd link for almost all applications



2928	32	50 - 400	74 - 424	54	63 - 300	3,00	7.318
3938	42	50 - 400	77 - 427	64	75 - 350	3,80	7.330
4140	56	50 - 600	86 - 636	84	135 - 500	4,50	7.342
5150	80	50 - 600	100 - 650	108	150 - 1000	6,00	7.362

e-tubes fully enclosed, excellent cable protection



R7728	32	50 - 300	74 - 324	54	125 - 300	3,00	7.318
R7838	42	50 - 300	77 - 327	64	125 - 350	3,80	7.330
R8840	56	75 - 462	111 - 499	84	150 - 500	4,50	7.342
R8840HD	56	75 - 462	129 - 516	84	150 - 300	4,50	7.354
R9850	80	75 - 462	125 - 513	108	200 - 1000	6,00	7.362
R9850HD	80	75 - 462	135 - 522	108	200 - 500	6,00	7.374

System E4/4 | e-chains® and e-tubes | **Assembling**



1 Remove crossbars at connection point. Slide side links into each other - Press together



2 Join the side links - join the second side link by pressing from the top



3 Join the side links together on the opposite side by applying pressure to the outer link



4 Assemble crossbars - Push down and snap in by using a screwdriver



5 Assemble clips (e-chains® with crossbars every other link) - Push down and snap in



6 Assemble e-tube lids/bottoms - Attach to the connector at an angle - Snap in

e-chains® | **Opening**



1 Remove crossbars - Insert screwdriver into the slot, push down, release by lever action

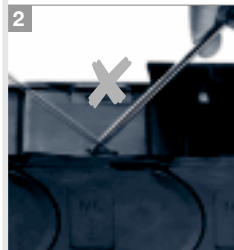


2 Remove clips - Insert screwdriver into the slot and push down, release by lever action

e-tube | **Opening**



1 Remove lids/bottoms - Insert screwdriver into the slot, release by lever action



2 Release only **one side** to swivel the lid

System E4/4 | e-chains® and e-tubes | **Separating**




1 Remove crossbars, clips, and lids on two adjacent chain links. Guide the screwdriver into the slot between side links and release it by levering it and separate the e-chain®



Price index



 Side-mounted - unsupported



High torsional rigidity



ESD classification:
Electrically conductive ESD/ATEX version upon request



Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 2828/2928/R7728:

- When high torsional or shearing forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as rol e-chain*



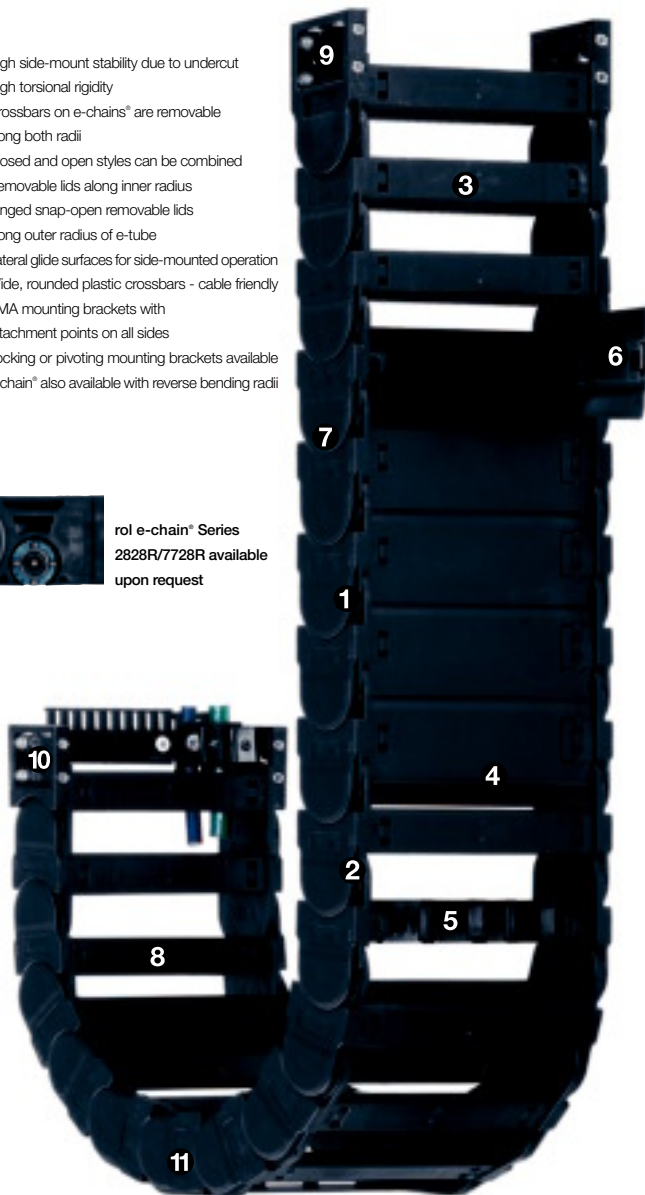
When not to use it:

- If a quieter version is required
▶ Series E4.32, page 7.42

- ① High side-mount stability due to undercut
- ② High torsional rigidity
- ③ Crossbars on e-chains* are removable along both radii
- ④ Closed and open styles can be combined
- ⑤ Removable lids along inner radius
- ⑥ Hinged snap-open removable lids along outer radius of e-tube
- ⑦ Lateral glide surfaces for side-mounted operation
- ⑧ Wide, rounded plastic crossbars - cable friendly
- ⑨ KMA mounting brackets with attachment points on all sides
- ⑩ Locking or pivoting mounting brackets available
- ⑪ e-chain* also available with reverse bending radii




rol e-chain* Series 2828R/7728R available upon request



Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 3 m or 54 links

3 m 2828.30.300.0

 e-chain*

with 2 separators 282 assembled every 2nd link

 Interior separation

1 set 28280.30.12C

 Mounting bracket

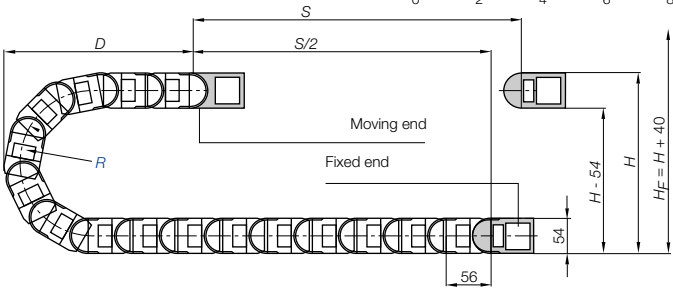
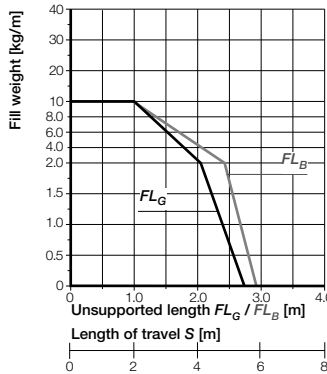
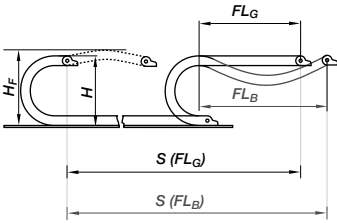


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► **Design, page 1.12**



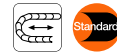
Pitch = 56 mm/link Links/m = 18 (1008 mm) Chain length = $S/2 + K$

R	063	075	100	125	150	175	200	220	250	300
H_{20}^0	180	205	255	305	355	405	455	495	555	655
D	130	150	175	200	225	250	275	295	325	375
K	340	380	465	550	620	700	780	850	940	1110
H_2	126	151	166	166	166	166	166	166	166	166
D_2^{+20}	130	150	370	445	625	655	770	870	930	1240
K_2	340	380	616	784	1008	1064	1288	1456	1568	1960

- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{R1} = Trough inner height
- D = Overlength e-chain* radius in final position
- K = $\pi \cdot R$ + "safety"
- D_2 = Over length - long travels, gliding
- K_2 = "Further add-on"
- H_2 = "Mounting height"
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 70 m
- Vertical, standing ≤ 5 m
- Side mounted, un supp. ≤ 2 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

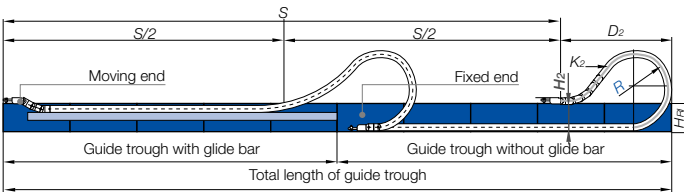


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 40$ mm
(with 2,0 kg/m fill weight)

Long travel lengths from 10 m to max. 200 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 200 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

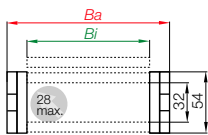
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38



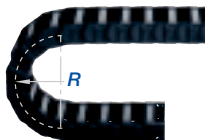


Part No. structure

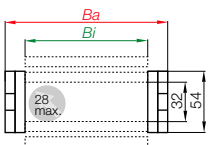
2828. 30. 300. 0



Series 2828 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

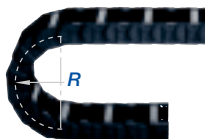


Part No. structure

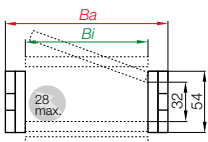
2928. 30. 300. 0



Series 2928 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

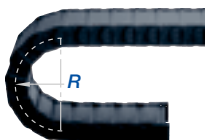


Part No. structure

7728. 30. 300. 0



Series R7728 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.

Series 2828R - Order example 2828R.30.220.0

Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



Part No.	<i>Bi</i>	<i>Ba</i>	2828	2928	R7728
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]
2828/2928/7728.05	50	74	≈ 1,73	≈ 1,64	≈ 2,63
2828/2928.06	68	92	≈ 1,79	≈ 1,67	-
2828/2928/7728.07	75	99	≈ 1,84	≈ 1,69	≈ 2,75
2828/2928.087	87	111	≈ 1,93	≈ 1,73	-
2828/2928/7728.10	100	124	≈ 2,02	≈ 1,78	≈ 2,83
2828/2928/7728.11	108	132	≈ 2,08	≈ 1,81	≈ 2,94
2828/2928.112	112	137	≈ 2,15	≈ 1,84	-
2828/2928/7728.12	125	149	≈ 2,20	≈ 1,87	≈ 3,03
2828/2928.137	137	162	≈ 2,29	≈ 1,91	-
2828/2928/7728.15	150	174	≈ 2,38	≈ 1,96	≈ 3,19
2828/2928.162	162	187	≈ 2,44	≈ 1,99	-
2828/2928/7728.17	168	192	≈ 2,51	≈ 2,02	≈ 3,39
2828/2928.18	175	199	≈ 2,56	≈ 2,05	-
2828/2928.187	187	212	≈ 2,65	≈ 2,09	-
2828/2928/7728.20	200	224	≈ 2,74	≈ 2,14	≈ 3,59
2828/2928.212	212	237	≈ 2,87	≈ 2,20	-
2828/2928.23	225	249	≈ 2,92	≈ 2,22	-
2828/2928.237	237	262	≈ 3,05	≈ 2,29	-
2828/2928/7728.25	250	274	≈ 3,10	≈ 2,32	≈ 4,04
2828/2928.262	262	286	≈ 3,19	≈ 2,36	-
2828/2928.28	275	299	≈ 3,28	≈ 2,41	-
2828/2928.29	287	312	≈ 3,37	≈ 2,45	-
2828/2928/7728.30	300	324	≈ 3,46	≈ 2,50	≈ 4,43
2828/2928.312	312	337	≈ 3,59	≈ 2,56	-
2828/2928.325	325	349	≈ 3,68	≈ 2,60	-
2828/2928.337	337	362	≈ 3,77	≈ 2,65	-
2828/2928.350	350	374	≈ 3,86	≈ 2,69	-
2828/2928.362	362	387	≈ 3,95	≈ 2,74	-
2828/2928.375	375	399	≈ 4,04	≈ 2,79	-
2828/2928.387	387	412	≈ 4,11	≈ 2,82	-
2828/2928.400	400	424	≈ 4,18	≈ 2,86	-

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT: **7728.30.HTE.150.0**

Lids made of HT: **7728.30.HTE.150.0**

for long travels upon request

Further Information: www.igus.de/en/HT

Delivery time up to 4 weeks!

System E4/4
Inner height: 32 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

Available bending radii **not available for R7728 · *Removable lid only, no hinged option

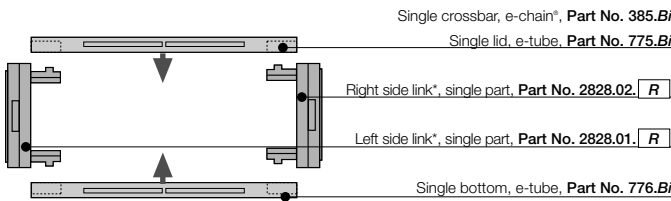
R [mm] **063**** 075** 100** 125 150 175 200 220 250 300

Supplement Part No. with required radius. Example: 2828.30. **300**.0

0 = standard color, other colors ► page 1.39 · Pitch = 56 mm/link - Links/m = 18



Extender crossbar for large diameter hoses ► page 7.324



Part No. e-chain® - links, single parts

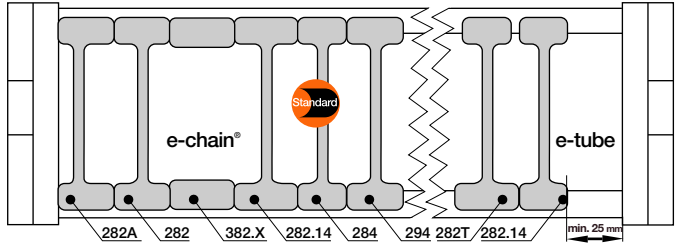
*View from the fixed point of the e-chain®/e-tube



► page 7.317



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (e-tube)



Vertical separator 281



Vertical separator 281T



Vertical separator 281.14



Vertical separator 283



Spacer 381.XX

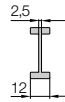


Locking separator 293

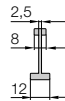


Asymmetric separator 281A

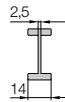
Vertical separator for e-chains*	2,5
unassembled	281
assembled	282



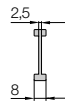
Vertical separator for e-tubes	2,5
unassembled	281T
assembled	282T



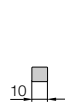
Vertical separator for e-chains*/e-tubes	2,5
unassembled	281.14
assembled	282.14



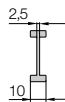
Vertical separator for e-chains*	2,5
unassembled	283
assembled	284



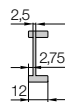
Spacer* for e-chains*	
unassembled	381.XX
assembled	382.XX



Locking separator for e-chains*	2,5
unassembled	293
assembled	294



Asymmetric separator for e-chains*	2,5
unassembled	281A
assembled	282A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 281 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

● The **vertical separator 281T for e-tubes** clamps to the fixed radius and remains free along the other radius to facilitate lid removal. If installing these yourself, please ensure that they are identically aligned. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

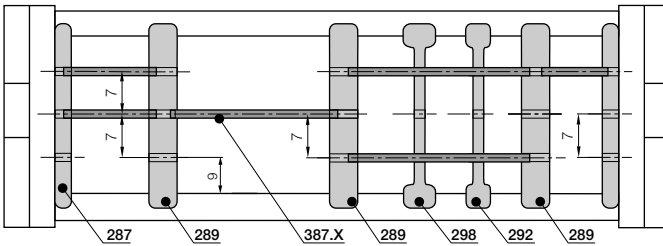
● **Vertical separator 283 with a narrow foot for e-chains®** with applications where a large number of small cables need to be individually separated.

● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20).

Additionally

● **Locking separator 293 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment (not for e-tubes).

● **Asymmetric separator 281A for e-chains®** (not for e-tubes) with an 12-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 286, middle plates 288 and shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 3 different heights (in 7 mm increments).

● For special applications: Vertical separator with injection moulded shelf 281.S.57 (57,5 mm) or 281.S.45 (45 mm)

● Slotted separators 291 (not for e-tubes), are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 297 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains*/e-tubes	
unassembled	286
assembled	287

Middle plate for e-chains*/e-tubes	
unassembled	288
assembled	289

Vertical separator for e-chains*/e-tubes	
unassembled	281.S.57
assembled	282.S.57

Vertical separator for e-chains*/e-tubes	
unassembled	281.S.45
assembled	282.S.45

Slotted separator for e-chains*	
unassembled	291
assembled	292

Open slotted separator for e-chains*/e-tubes	
unassembled	297
assembled	298

Width X [mm]	Part No.	
	unassembled	assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62
075	386.75	387.75

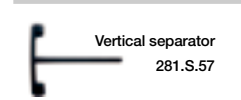
Width X [mm]	Part No.	
	unassembled	assembled
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208
225	386.225	387.225



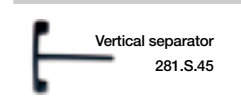
Side plate 286



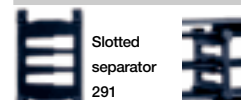
Middle plate 288



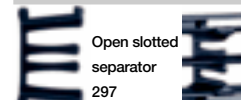
Vertical separator 281.S.57



Vertical separator 281.S.45



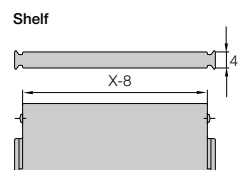
Slotted separator 291



Open slotted separator 297



Shelf 386.X



Shelf

System E4/4
Inner height: 32 mm

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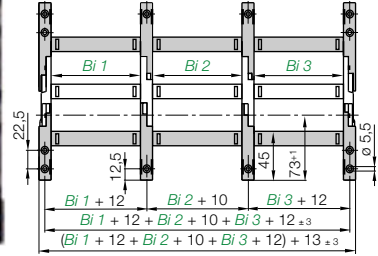
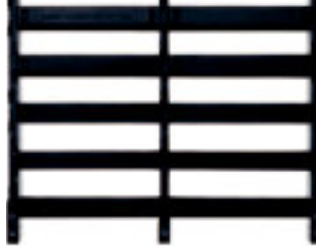


Extension links - for extremely wide e-chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



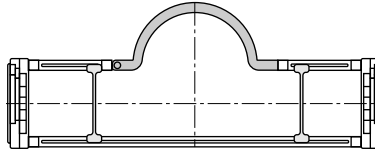
Part No. structure
2828.10 /20 /10. .0
2828.Bi1/Bi2/Bi3. .0



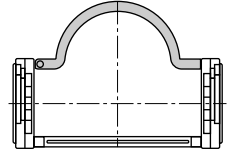
Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars

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



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap assembled directly on the side section

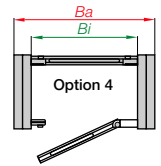
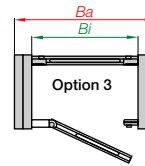
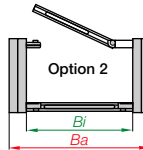
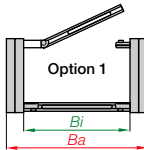
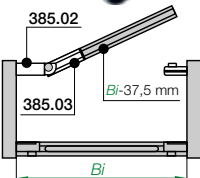
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossbar.
385.15.RHD115	105	○	-	+
385.18.RD115	105	○	+	-

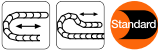
○ = round + = yes / - = no



Hinged crossbars

- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): Bi-37,5 mm **Part No. 385.03**
- Please consult igus® for design assistance



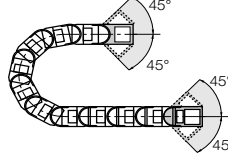


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

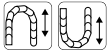
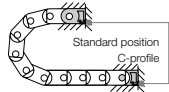
Moving end
28280/77280...1



Fixed end
28280/77280...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



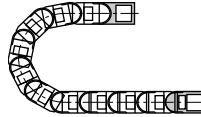
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

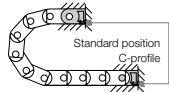
Moving end
29280/78280...1



Fixed end
29280/78280...2



The attachment variants arising automatically by the choice of the KMA mounting bracket

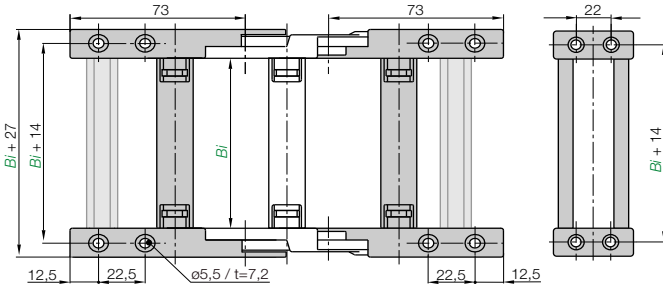


Fixed end

28280/77280...2 (pivoting)
29280/78280...2 (locking)

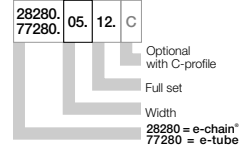
Moving end

(pivoting) 28280/77280...1
(locking) 29280/78280...1

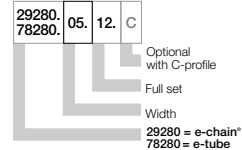


Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Width index	Part No. pivoting	Part No. locking	C-profile option [mm]	Bi [mm]	Width index	Part No. pivoting	Part No. locking	C-profile option [mm]	Bi [mm]
.05.	28280/77280	29280/78280	.05.12.C	50	.23.	28280	29280	.23.12.C	225
.06.	28280	29280	.06.12.C	68	.237.	28280	29280	.237.12.C	237
.07.	28280/77280	29280/78280	.07.12.C	75	.25.	28280/77280	29280/78280	.25.12.C	250
.087.	28280	29280	.087.12.C	87	.262.	28280	29280	.262.12.C	262
.10.	28280/77280	29280/78280	.10.12.C	100	.28.	28280	29280	.28.12.C	275
.11.	28280/77280	29280/78280	.11.12.C	108	.29.	28280	29280	.29.12.C	287
.112.	28280	29280	.112.12.C	112	.30.	28280/77280	29280/78280	.30.12.C	300
.12.	28280/77280	29280/78280	.12.12.C	125	.312.	28280	29280	.312.12.C	312
.137.	28280	29280	.137.12.C	137	.325.	28280	29280	.325.12.C	325
.15.	28280/77280	29280/78280	.15.12.C	150	.337.	28280	29280	.337.12.C	337
.162.	28280	29280	.162.12.C	162	.350.	28280	29280	.350.12.C	350
.17.	28280/77280	29280/78280	.17.12.C	168	.362.	28280	29280	.362.12.C	362
.18.	28280	29280	.18.12.C	175	.375.	28280	29280	.375.12.C	375
.187.	28280	29280	.187.12.C	187	.387.	28280	29280	.387.12.C	387
.20.	28280/77280	29280/78280	.20.12.C	200	.400.	28280	29280	.400.12.C	400
.212.	28280	29280	.212.12.C	212					

Full set, for both ends:

28280.05.12

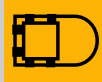
Single-part order:

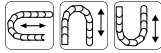
28280.05.1

Mounting bracket moving end

28280.05.2

Mounting bracket fixed end

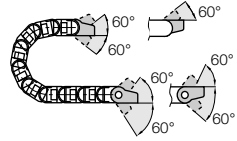




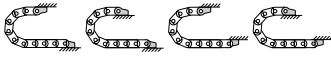
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
28280.1



Fixed end
28280.2



Possible installation conditions -

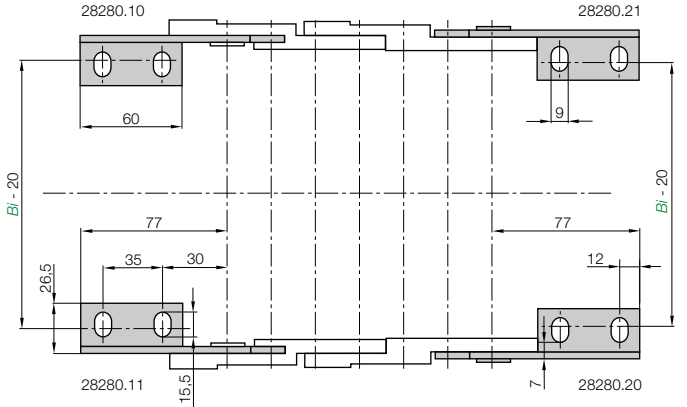
Further installation angles ► installation sketch

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Moving end 28280.1 Fixed end 28280.2



For e-chain*	Part No. full set	Bi [mm]	For e-chain*	Part No. full set	Bi [mm]
2828-2928-7728.05 ►	28280.12	50	2828-2928.23 ►	28280.12	225
2828-2928.06 ►	28280.12	68	2828-2928.237 ►	28280.12	237
2828-2928-7728.07 ►	28280.12	75	2828-2928-7728.25 ►	28280.12	250
2828-2928.087 ►	28280.12	87	2828-2928.262 ►	28280.12	262
2828-2928-7728.10 ►	28280.12	100	2828-2928.28 ►	28280.12	275
2828-2928-7728.11 ►	28280.12	108	2828-2928.29 ►	28280.12	287
2828-2928.112 ►	28280.12	112	2828-2928-7728.30 ►	28280.12	300
2828-2928-7728.12 ►	28280.12	125	2828-2928.312 ►	28280.12	312
2828-2928.137 ►	28280.12	137	2828-2928.325 ►	28280.12	325
2828-2928-7728.15 ►	28280.12	150	2828-2928.337 ►	28280.12	337
2828-2928.162 ►	28280.12	162	2828-2928.350 ►	28280.12	350
2828-2928-7728.17 ►	28280.12	168	2828-2928.362 ►	28280.12	362
2828-2928.18 ►	28280.12	175	2828-2928.375 ►	28280.12	375
2828-2928.187 ►	28280.12	187	2828-2928.387 ►	28280.12	387
2828-2928-7728.20 ►	28280.12	200	2828-2928.400 ►	28280.12	400
2828-2928.212 ►	28280.12	212			

28280.12 Full set, 4 parts

2 with pin / 2 with bore

Single-part order:

28280.1 Mounting bracket moving end, 1 part left / right

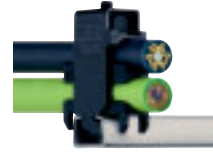
28280.2 Mounting bracket fixed end, 1 part left / right

Other strain relief elements

► chapter 10

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable ø [mm]
steel	stainless steel	steel	stainless steel	steel	stainless steel	
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 32 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0

chainfix Nugget for the C-Profile

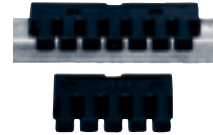
Strain relief for the fixation of cables up to a diameter of Ø30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

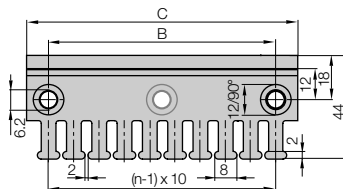


Tiwrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

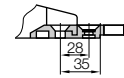
(- = no / + = yes)

Tiwrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiwrap plate



Shown assembled

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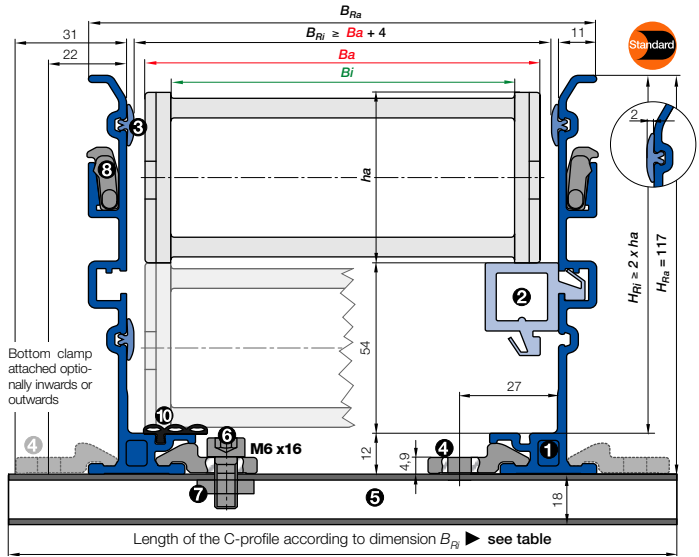


▶ Chapter 10



▶ page 7.317

- B_a = Outer width e-chains* / e-tube
- B_i = Inner width e-chains* / e-tube
- h_a = Outer height e-chains* / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

2828.05.200.0 ▶ Order example

	B_{Ri} [mm]	Part No.	
		attached inwards	attached outwards
.05	78	960.30.125	960.30.175
.06	96	960.30.150	960.30.200
.07	103	960.30.150	960.30.200
.087	115	960.30.175	960.30.225
.10	128	960.30.175	960.30.225
.11	136	960.30.200	960.30.225
.112	141	960.30.200	960.30.250
.12	153	960.30.200	960.30.250
.137	166	960.30.225	960.30.275
.15	178	960.30.225	960.30.275
.162	191	960.30.250	960.30.300
.17	196	960.30.250	960.30.300
.18	203	960.30.250	960.30.300
.187	216	960.30.275	960.30.325
.20	228	960.30.275	960.30.325
.212	241	960.30.300	960.30.350
.23	253	960.30.300	960.30.350
.237	266	960.30.325	960.30.375
.25	278	960.30.325	960.30.375
.262	291	960.30.350	960.30.400
.28	303	960.30.350	960.30.400
.29	316	960.30.375	960.30.425
.30	328	960.30.375	960.30.425
.312	341	960.30.400	960.30.450
.325	353	960.30.400	960.30.450
.337	366	960.30.425	960.30.475
.350	378	960.30.425	960.30.475
.362	391	960.30.450	960.30.500
.375	403	960.30.450	960.30.500
.387	416	960.30.475	960.30.525
.400	428	960.30.475	960.30.525

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of **960.30.XXX** on the right column "attached outwards"

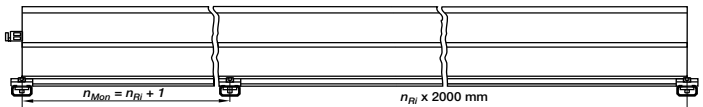


- Components, trough "Basic": ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- Components, installation set "Basic": ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M6 x16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 2828.30.300.0 with $B_{Ri} = 328$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 972.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 972.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. 960.30.375
- Module for the fixed end
Order text: 1 set Part No. 972.80
- Option: For an additional noise dampening with silencer profile, please add Index A - Example: Part No. 972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an e-chain*

With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ▶ page 9.16

Internet: www.igus.eu
E-mail: info@igus.de



High unsupported lengths and perfect suitability für circular movements (RBR-versions) are some features for the E4/4-System

System E4/4
Inner height: 32 mm

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▶ Chapter 9



▶ page 7.317

Price index



Side-mounted - unsupported



High torsional rigidity



ESD classification:
Electrically conductive ESD/ATEX version upon request



Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 3838/3938/R7838:

- When high torsional or shearing forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as rol e-chain*



When not to use it:

- If a quieter version is required
▶ Series E4.42, page 7.60

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Closed and open styles can be combined
- 4 Hinged snap-open removable lids along outer radius of e-tube
- 5 Removable lids along inner radius
- 6 Crossbars on e-chains* are removable along both radii
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Locking or pivoting mounting brackets available
- 11 e-chain* also available with reverse bending radii



rol e-chain* Series 3838R/7838R available upon request



Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 4 m or 60 links

4 m 3838.30.300.0

e-chain*

with 2 separators 382 assembled every 2nd link

Interior separation

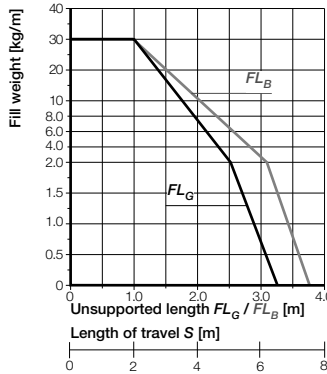
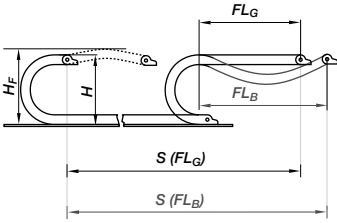
1 set 38380.30.12C

Mounting bracket



Unsupported length

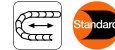
FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{in} = Trough inner height
- D = Overlength e-chain*
radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Overlength - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

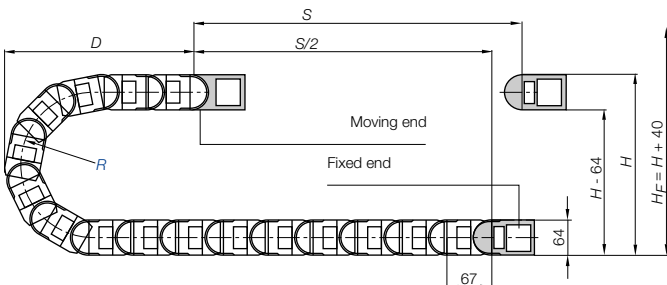
- Vertical, hanging ≤ 100 m
- Vertical, standing ≤ 6 m
- Side mounted, unupp. $\leq 2,5$ m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

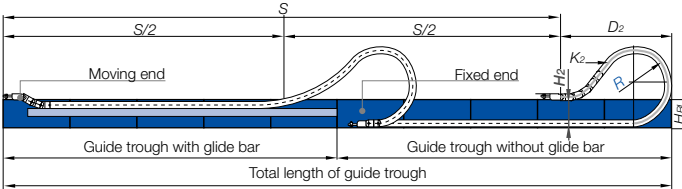
The required clearance height:
 $H_F = H + 40$ mm
 (with 2,0 kg/m fill weight)



Pitch = 67 mm/link Links/m = 15 (1005 mm) Chain length = $S/2 + K$

R	075	100	115	125	150	170	200	215	250	300	350
$H_{2.5}^{0.5}$	215	265	295	315	365	405	465	495	565	665	765
D	174	199	214	224	249	269	299	314	349	399	449
K	370	450	500	530	610	670	765	810	920	1080	1235
H_2	151	201	186	186	186	186	186	186	186	186	186
D_2^{+25}	174	199	435	475	570	690	780	865	1010	1150	1500
K_2	370	450	737	804	1005	1139	1340	1407	1675	1943	2412

Long travel lengths from 10 m to max. 280 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 280 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

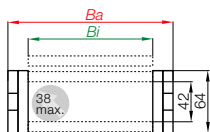
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38





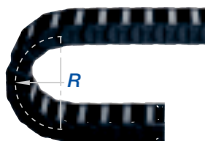
Part No. structure

3838. 400. 300. 0

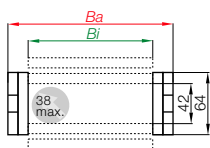


Color
black
Bending
radius
Width
Series

Series 3838 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



Part No. structure

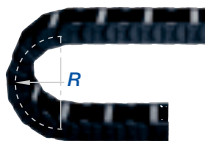
3938. 400. 300. 0



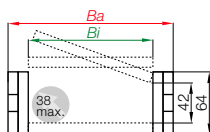
Color
black
Bending
radius
Width
Series



Series 3938 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



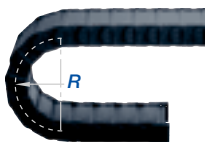
Part No. structure

7838. 25. 300. 0



Color
black
Bending
radius
Width
Series

Series R7838 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.

Series 3838R - Order example - 3838R.30.250.0

Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	3838 [kg/m]	3938 [kg/m]	R7838 [kg/m]
3838/3938/7838.05... 0*	50	77	≈ 2,06	≈ 1,98	≈ 2,25
3838/3938.06..... 0	68	95	≈ 2,09	≈ 1,99	-
3838/3938/7838.07... 0	75	102	≈ 2,12	≈ 2,01	≈ 2,38
3838/3938.087..... 0	87	115	≈ 2,18	≈ 2,04	-
3838/3938/7838.10... 0	100	127	≈ 2,25	≈ 2,08	≈ 2,60
3838/3938/7838.11... 0	108	135	≈ 2,30	≈ 2,10	≈ 2,65
3838/3938.112..... 0	112	140	≈ 2,30	≈ 2,10	-
3838/3938/7838.12... 0	125	152	≈ 2,40	≈ 2,15	≈ 2,81
3838/3938.137..... 0	137	165	≈ 2,44	≈ 2,17	-
3838/3938/7838.15... 0	150	177	≈ 2,53	≈ 2,21	≈ 3,07
3838/3938.162..... 0	162	190	≈ 2,55	≈ 2,22	-
3838/3938/7838.17... 0	168	195	≈ 2,62	≈ 2,26	≈ 3,24
3838/3938.18..... 0	175	202	≈ 2,62	≈ 2,26	-
3838/3938.187..... 0	187	215	≈ 2,69	≈ 2,30	-
3838/3938/7838.20... 0	200	227	≈ 2,77	≈ 2,33	≈ 3,53
3838/3938.212..... 0	212	240	≈ 2,84	≈ 2,37	-
3838/3938.23..... 0	225	252	≈ 2,92	≈ 2,41	-
3838/3938.237..... 0	237	265	≈ 2,96	≈ 2,43	-
3838/3938/7838.25... 0	250	277	≈ 3,05	≈ 2,47	≈ 4,33
3838/3938.262..... 0	262	290	≈ 3,06	≈ 2,48	-
3838/3938.28..... 0	275	302	≈ 3,17	≈ 2,53	-
3838/3938.29..... 0	287	315	≈ 3,19	≈ 2,54	-
3838/3938/7838.30... 0	300	327	≈ 3,32	≈ 2,61	≈ 4,89
3838/3938.312..... 0	312	340	≈ 3,34	≈ 2,62	-
3838/3938.325..... 0	325	352	≈ 3,41	≈ 2,66	-
3838/3938.337..... 0	337	365	≈ 3,46	≈ 2,68	-
3838/3938.350..... 0	350	377	≈ 3,68	≈ 2,79	-
3838/3938.362..... 0	362	390	≈ 3,74	≈ 2,82	-
3838/3938.375..... 0	375	402	≈ 3,79	≈ 2,84	-
3838/3938.387..... 0	387	415	≈ 3,85	≈ 2,87	-
3838/3938.400..... 0	400	427	≈ 3,90	≈ 2,90	-

Available bending radii

R [mm] 075** 100** 115** 125 150 170 200 215 250 300 350

Supplement Part No. with required radius. Example: 3838.400.300.0

0 = standard color, other colors ► page 1.39 · Pitch = 67 mm/link - Links/m = 15

*Removable lid only, no hinged option · **not available for R7838

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order excuse: Full e-tube made of HT: **7838.30, 150.0.HT** Lids made of HT: **7838.30.HTE, 150.0** for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



System E4/4
Inner height: 42 mm

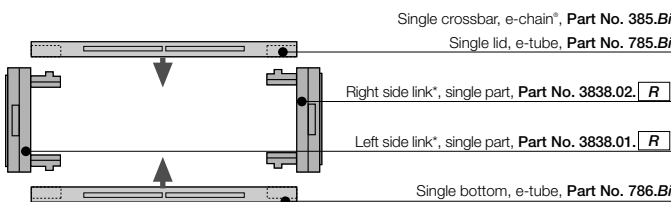
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



Extender crossbar for large diameter hoses ► page 7.336



► page 7.317

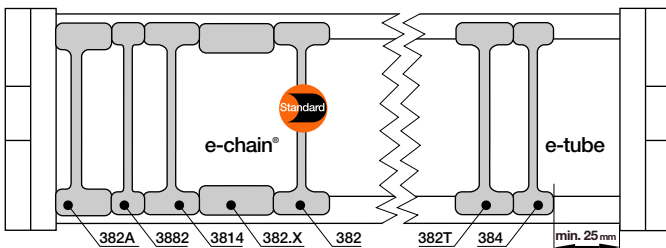


Part No. e-chain® - links, single parts

*View from the fixed point of the e-chain®/e-tube



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (e-tube)!



Vertical separator 381



Vertical separator with a narrow base 3881



Vertical separator 381T



Spacer 381.XX



Locking separator 3804

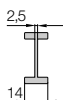


Locking separator 383

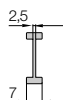


Asymmetric separator 381A

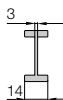
Vertical separator for e-chains*	2,5
unassembled	381
assembled	382



Vertical separator* for e-chains*	2,5
unassembled	3881
assembled	3882



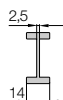
Vertical separator for e-tubes	3
unassembled	381T
assembled	382T



Spacer* for e-chains*	
unassembled	381.XX
assembled	382.XX



Locking separator for e-chains*	2,5
unassembled	3804
assembled	3814



Locking separator for e-tubes	2,5
unassembled	383
assembled	384



Asymmetric separator for e-chains*	2,5
unassembled	381A
assembled	382A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 381 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 3881 with a narrow foot (7 mm) for e-chains®** with applications where a large number of small cables need to be individually separated.

● The **vertical separator 381T for e-tubes** clamps to the fixed radius and remains free along the other radius to facilitate lid removal. If installing these yourself, please ensure that they are identically aligned.

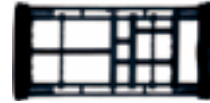
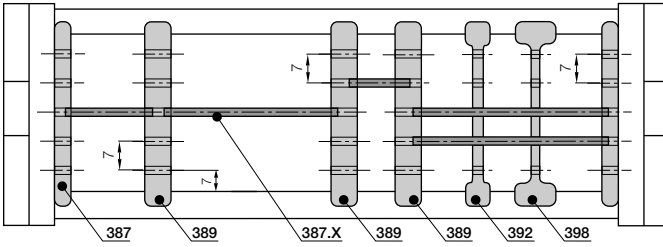
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15 and 20)

Additionally:

● **Locking separator 3804 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **Locking separator 383 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **Asymmetric separator 381A for e-chains®** (not for e-tubes) with an 14-mm base, for combinations between spacers of different widths and vertical separators in side-mounted







For use with many cables of differing diameters, e-chains[®] and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

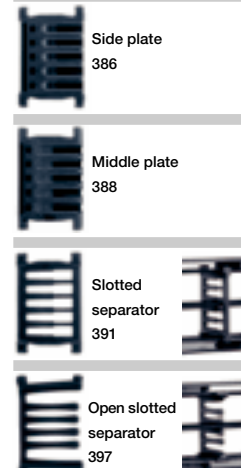
Option 2: Shelves

● Side plates 386, middle plates 388 and shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 5 different heights (in 7 mm increments).

● Slotted separators 391 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

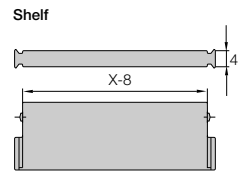
● The unilateral open slotted separator 397 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

	Side plate for e-chains/e-tubes	
	unassembled	386
	assembled	387
	Middle plate for e-chains/e-tubes	
	unassembled	388
	assembled	389
	Slotted separator for e-chains/e-tubes	
	unassembled	391
	assembled	392
	Open slotted separator for e-chains/e-tubes	
	unassembled	397
	assembled	398



Width X [mm]	Part No. unassembled	Part No. assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	386.75	387.75
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208



System E4/4
Inner height: 42 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



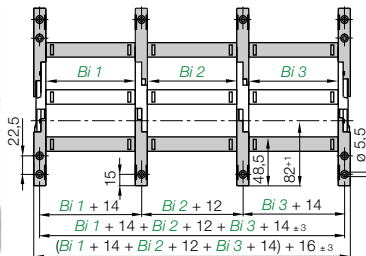


Extension links - for extremely wide e-chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



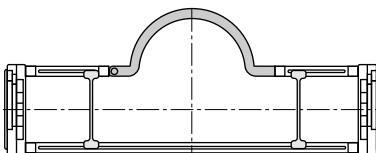
Part No. structure
3838.10 /20 /10. 200 .0
3838.Bi1/Bi2/Bi3. R .0



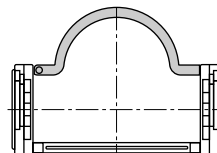
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



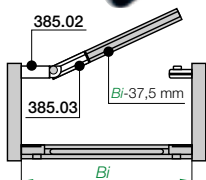
385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap assembled directly on the side section

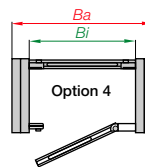
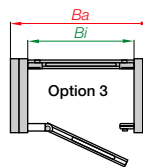
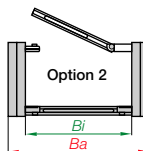
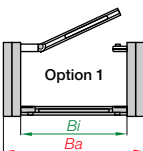
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	115	○	-	+
385.18.RD115	115	○	+	-

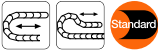
○ = round + = yes / - = no



Hinged crossbars

- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm Part No. 385.02 / snap-open crossbar (shortened): Bi-37,5 mm Part No. 385.03
- Please consult igus® for design assistance



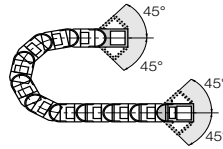


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

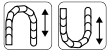
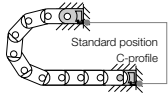
Moving end
38380/78380...1



Fixed end
38380/78380...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



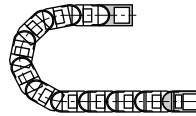
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

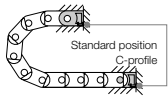
Moving end
39380/79380...1



Fixed end
39380/79380...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end

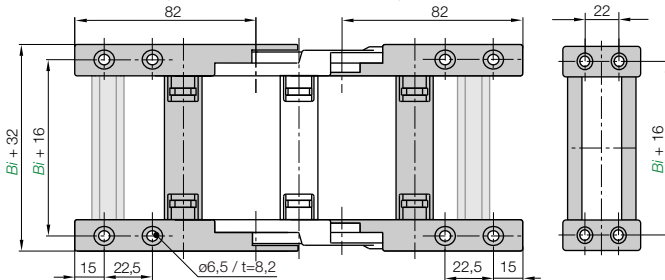
38380/78380...2 (pivoting)

39380/79380...2 (locking)

Moving end

(pivoting) 38380/78380...1

(locking) 39380/79380...1



Width index	Part No. pivoting	Part No. locking	C-profile option [mm]	Width index	Part No. pivoting	Part No. locking	C-profile option [mm]
.05.	38380/78380	39380/79380	.05.12. [C] 50	.23.	38380	39380	.23.12. [C] 225
.06.	38380	39380	.06.12. [C] 68	.237.	38380	39380	.237.12. [C] 237
.07.	38380/78380	39380/79380	.07.12. [C] 75	.25.	38380/78380	39380/79380	.25.12. [C] 250
.087.	38380	39380	.087.12. [C] 87	.262.	38380	39380	.262.12. [C] 262
.10.	38380/78380	39380/79380	.10.12. [C] 100	.28.	38380	39380	.28.12. [C] 275
.11.	38380/78380	39380/79380	.11.12. [C] 108	.29.	38380	39380	.29.12. [C] 287
.112.	38380	39380	.112.12. [C] 112	.30.	38380/78380	39380/79380	.30.12. [C] 300
.12.	38380/78380	39380/79380	.12.12. [C] 125	.312.	38380	39380	.312.12. [C] 312
.137.	38380	39380	.137.12. [C] 137	.325.	38380	39380	.325.12. [C] 325
.15.	38380/78380	39380/79380	.15.12. [C] 150	.337.	38380	39380	.337.12. [C] 337
.162.	38380	39380	.162.12. [C] 162	.350.	38380	39380	.350.12. [C] 350
.17.	38380/78380	39380/79380	.17.12. [C] 168	.362.	38380	39380	.362.12. [C] 362
.18.	38380	39380	.18.12. [C] 175	.375.	38380	39380	.375.12. [C] 375
.187.	38380	39380	.187.12. [C] 187	.387.	38380	39380	.387.12. [C] 387
.20.	38380/78380	39380/79380	.20.12. [C] 200	.400.	38380	39380	.400.12. [C] 400
.212.	38380	39380	.212.12. [C] 212				

Dimensions and order configurations

Part No. structure (pivoting)

38380. 05. 12. C
78380.



Optional with C-profile
Full set
Width
38380 = e-chain
78380 = e-tube

Part No. structure (locking)

39380. 05. 12. C
79380.



Optional with C-profile
Full set
Width
38380 = e-chain
77380 = e-tube

Full set, for both ends:

38380. 05. 12

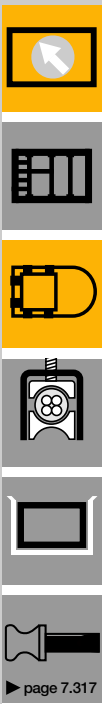
Single-part order:

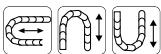
38380. 05. 1

Mounting bracket moving end

38380. 05. 2

Mounting bracket fixed end

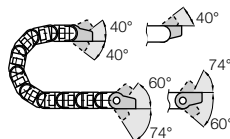




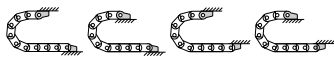
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
38380.1



Fixed end
38380.2



Possible installation conditions -

Further installation angles ► installation sketch

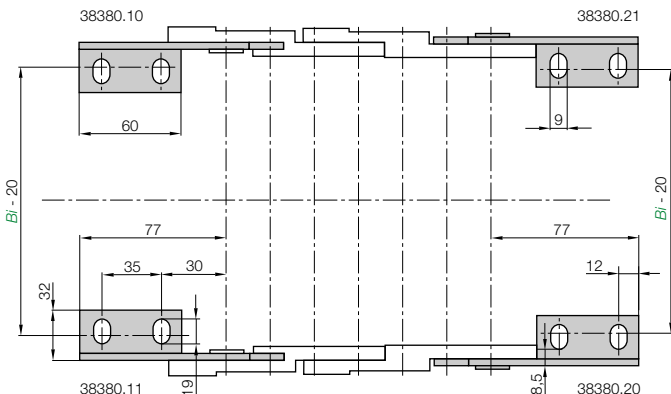
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Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

Internet: www.igus.de
E-mail: info@igus.de

Moving end
38380.1

Fixed end
38380.2



For e-chain®	Part No. full set	Bi [mm]	For e-chain®	Part No. full set	Bi [mm]
3838-3938-7838.05	► 38380.12	50	3838-3938.23	► 38380.12	225
3838-3938.06	► 38380.12	68	3838-3938.237	► 38380.12	237
3838-3938-7838.07	► 38380.12	75	3838-3938-7838.25	► 38380.12	250
3838-3938.087	► 38380.12	87	3838-3938.262	► 38380.12	262
3838-3938-7838.10	► 38380.12	100	3838-3938.28	► 38380.12	275
3838-3938-7838.11	► 38380.12	108	3838-3938.29	► 38380.12	287
3838-3938.112	► 38380.12	112	3838-3938-7838.30	► 38380.12	300
3838-3938-7838.12	► 38380.12	125	3838-3938.312	► 38380.12	312
3838-3938.137	► 38380.12	137	3838-3938.325	► 38380.12	325
3838-3938-7838.15	► 38380.12	150	3838-3938.337	► 38380.12	337
3838-3938.162	► 38380.12	162	3838-3938.350	► 38380.12	350
3838-3938-7838.17	► 38380.12	168	3838-3938.362	► 38380.12	362
3838-3938.18	► 38380.12	175	3838-3938.375	► 38380.12	375
3838-3938.187	► 38380.12	187	3838-3938.387	► 38380.12	387
3838-3938-7838.20	► 38380.12	200	3838-3938.400	► 38380.12	400
3838-3938.212	► 38380.12	212			

38380.12 Full set, 4 parts
2 with pin / 2 with bore

Single-part order:

38380.1 Mounting bracket
moving end, 1 part left / right

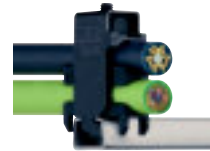
38380.2 Mounting bracket

fixed end, 1 part left / right

Other strain relief elements
► chapter 10

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable ø [mm]
steel	stainless steel	steel	stainless steel	steel	stainless steel	
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 42 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0

chainfix Nugget for the C-Profile

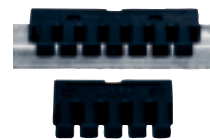
Strain relief for the fixation of cables up to a diameter of Ø30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

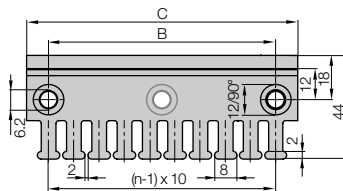


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



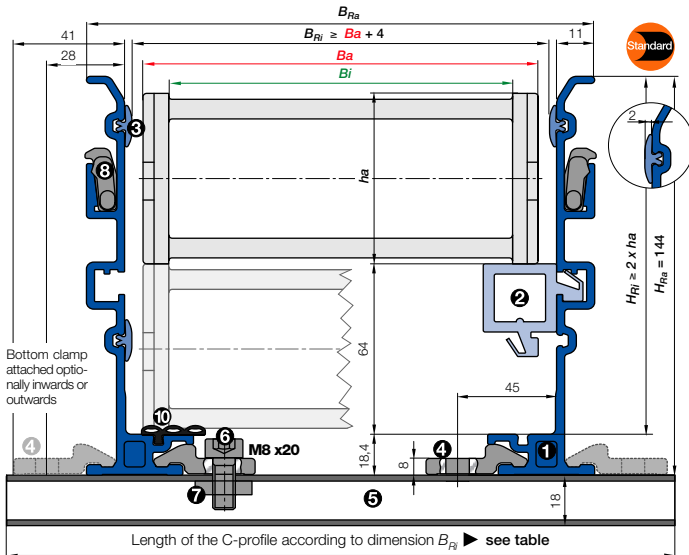
Shown assembled

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▶ page 7.317

- B_a = Outer width e-chains* / e-tube
- B_i = Inner width e-chains* / e-tube
- h_a = Outer height e-chains* / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- ρ_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
 $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

3838.05.300.0 ▶ Order example

	B_{Ri} [mm]	attached inwards	attached outwards	Part No.	Part No.
.05	81	-	960.40.200		
.06	99	-	960.40.225		
.07	106	-	960.40.225		
.087	119	960.40.175	960.40.250		
.10	131	960.40.200	960.40.250		
.11	139	960.40.200	960.40.275		
.112	144	960.40.200	960.40.275		
.12	156	960.40.225	960.40.275		
.137	169	960.40.225	960.40.300		
.15	181	960.40.250	960.40.300		
.162	194	960.40.250	960.40.325		
.17	199	960.40.250	960.40.325		
.18	206	960.40.275	960.40.325		
.187	219	960.40.275	960.40.350		
.20	231	960.40.300	960.40.350		
.212	244	960.40.300	960.40.375		
.23	256	960.40.325	960.40.375		
.237	269	960.40.325	960.40.400		
.25	281	960.40.350	960.40.400		
.262	294	960.40.350	960.40.425		
.28	306	960.40.375	960.40.425		
.29	319	960.40.375	960.40.450		
.30	331	960.40.400	960.40.450		
.312	344	960.40.400	960.40.475		
.325	356	960.40.425	960.40.475		
.337	369	960.40.425	960.40.500		
.350	381	960.40.450	960.40.500		
.362	394	960.40.450	960.40.525		
.375	406	960.40.475	960.40.525		
.387	419	960.40.475	960.40.550		
.400	431	960.40.500	960.40.550		

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of (960.40.XXX) on the right column "attached outwards"

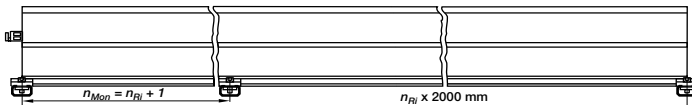


- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 3838.20.300.0 with $B_{Ri} = 231$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **973.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **973.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. **960.40.300**
- Module for the fixed end
Order text: 1 set Part No. **973.81**
- Option: For an additional noise dampening with silencer profile, please add Index A - Example:
Part No. **973.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an e-chain*

With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end ● No drilling necessary ▶ page 9.16

Internet: www.igus.eu
E-mail: info@igus.de



E4/4 as ZigZag version in this crane. The E4-Series guarantee very high availability of the facility, so that the production of new truck can be started up on an average of every seven minutes

System E4/4
Inner height: 42 mm

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Fax +49- (0) 22 03-96 49-222

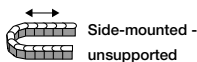


▶ Chapter 9



▶ page 7.317

Price index



High torsional rigidity



ESD classification:
Electrically conductive ESD/ATEX version upon request



Opening e-chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 4040/4140/R8840:

- When high torsional forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as rol e-chain*



When not to use it:

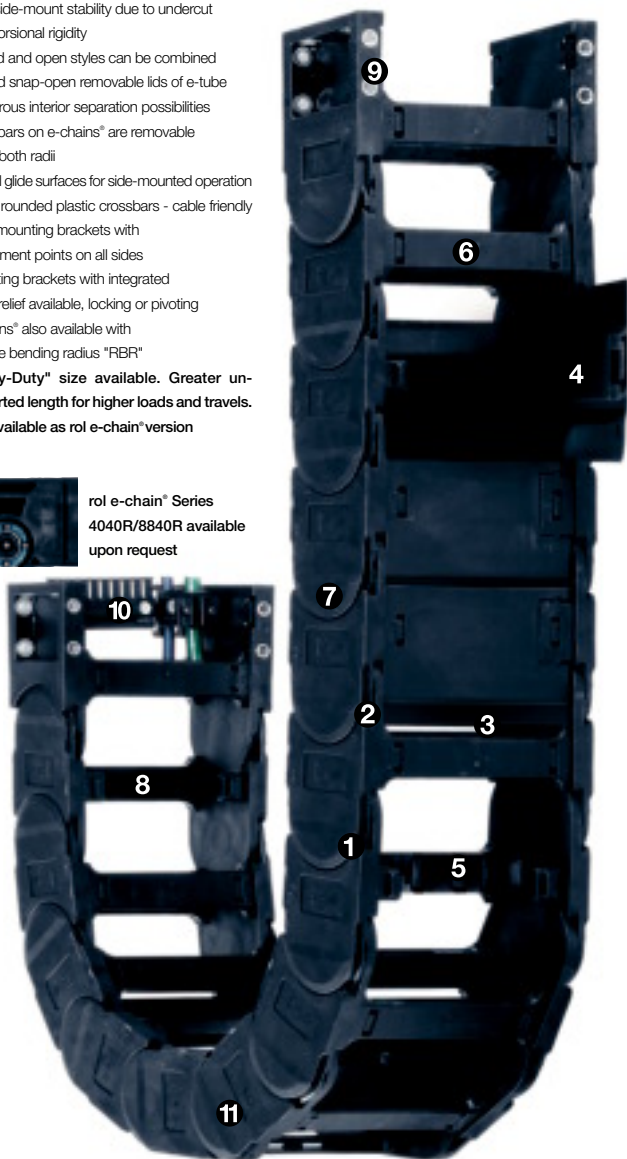
- If a quieter version is required
▶ Series E4.56, page 7.78
- If a simple and low-cost solution is required
▶ Series 14040/R18840, page 7.164
- When very long travels or high additional loads are involved
▶ Series 4040HD, page 7.354

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Closed and open styles can be combined
- 4 Hinged snap-open removable lids of e-tube
- 5 Numerous interior separation possibilities
- 6 Crossbars on e-chains* are removable along both radii
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Mounting brackets with integrated strain relief available, locking or pivoting
- 11 e-chains* also available with reverse bending radius "RBR"

! "Heavy-Duty" size available. Greater unsupported length for higher loads and travels. Also available as rol e-chain* version



rol e-chain* Series 4040R/8840R available upon request



Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 4040.30.300.0

e-chain*

with 2 separators 411 assembled every 2nd link

Interior separation

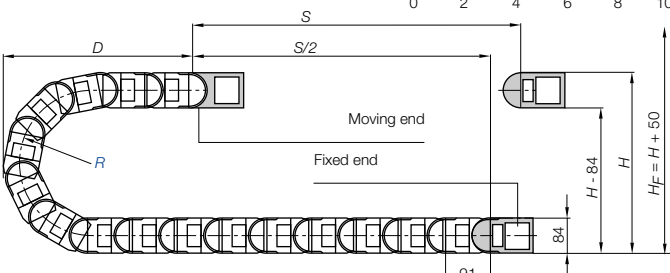
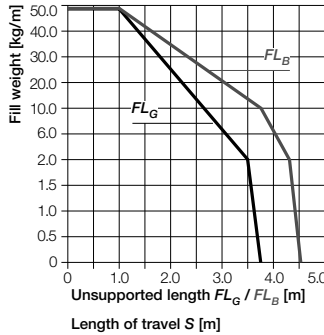
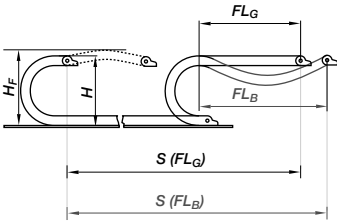
1 set 40400.30.12C

Mounting bracket



Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



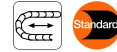
Pitch = 91 mm/link Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	135	150	175	200	240	250	300	350	400	500
$H_{25}^{0.5}$	360	385	435	485	565	585	685	785	885	1085
D	270	285	310	335	375	385	435	485	535	635
K	650	750	825	900	1020	1050	1225	1340	1450	1775
H_2	276	266	266	266	266	266	266	266	266	266
D_2^{+25}	270	480	600	730	930	940	1180	1440	1530	1850
K_2	650	819	1092	1274	1547	1547	2002	2366	2548	3185

- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{M1} = Trough inner height
- D = Overlength e-chain* radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Over length - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 10 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 3 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

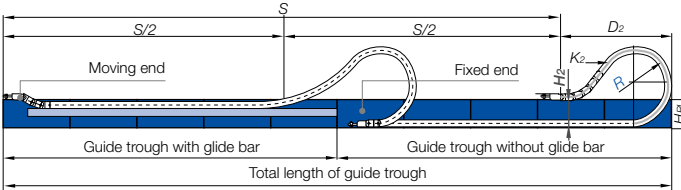


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 50$ mm
 (with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 300 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 300 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



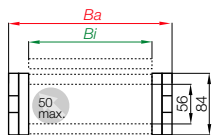
Details of material properties

► page 1.38



For support of the lower run - **Support Tray tool kit** available ► page 9.70



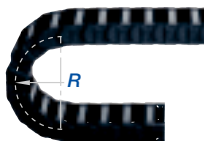


Part No. structure

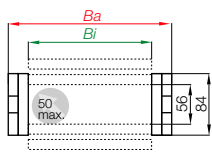
4040. 30. 250. 0



Series 4040- e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

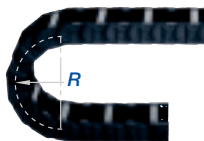


Part No. structure

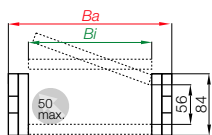
4140. 30. 250. 0



Series 4140 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

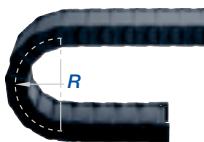


Part No. structure

8840. 30. 250. 0



Series R8840 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.

Series 4040R - Order example 4040R.30.250.0

Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



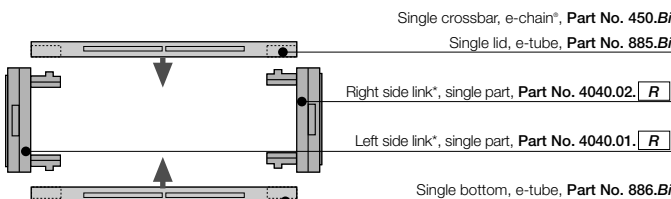
Part No.	<i>Bi</i>	<i>Ba</i>	4040	4140	R8840	
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]	
4040/4140.05. ....	.0	50	86	≈ 3,65	≈ 3,58	-
4040/4140.06. ....	.0	65	101	≈ 3,67	≈ 3,60	-
4040/4140/8840.07. ....	.0*	75	111	≈ 3,78	≈ 3,70	≈ 4,24
4040/4140.08. ....	.0	87	123	≈ 3,83	≈ 3,75	-
4040/4140/8840.10. ....	.0	100	136	≈ 3,96	≈ 3,78	≈ 4,52
4040/4140.11. ....	.0	112	149	≈ 4,09	≈ 3,85	-
4040/4140/8840.12. ....	.0	125	161	≈ 4,16	≈ 3,88	≈ 4,88
4040/4140.13. ....	.0	137	174	≈ 4,29	≈ 3,95	-
4040/4140/8840.15. ....	.0	150	186	≈ 4,36	≈ 3,98	≈ 5,31
4040/4140.16. ....	.0	162	199	≈ 4,47	≈ 4,04	-
4040/4140/8840.17. ....	.0	175	211	≈ 4,58	≈ 4,09	≈ 5,56
4040/4140.18. ....	.0	187	224	≈ 4,69	≈ 4,15	-
4040/4140/8840.20. ....	.0	200	236	≈ 4,71	≈ 4,16	≈ 5,89
4040/4140.21. ....	.0	212	249	≈ 4,82	≈ 4,21	-
4040/4140.22. ....	.0	225	261	≈ 4,88	≈ 4,25	-
4040/4140.23. ....	.0	237	274	≈ 5,02	≈ 4,31	-
4040/4140/8840.25. ....	.0	250	286	≈ 5,10	≈ 4,36	≈ 6,61
4040/4140.26. ....	.0	262	299	≈ 5,19	≈ 4,40	-
4040/4140/8840.27. ....	.0	275	311	≈ 5,30	≈ 4,46	≈ 6,89
4040/4140.28. ....	.0	287	324	≈ 5,32	≈ 4,47	-
4040/4140/8840.30. ....	.0	300	336	≈ 5,54	≈ 4,58	≈ 7,27
4040/4140.31. ....	.0	312	349	≈ 5,58	≈ 4,60	-
4040/4140.32. ....	.0	325	361	≈ 5,63	≈ 4,62	-
4040/4140.33. ....	.0	337	374	≈ 5,81	≈ 4,71	-
4040/4140/8840.35. ....	.0	350	386	≈ 5,96	≈ 4,79	≈ 8,02
4040/4140.36. ....	.0	362	399	≈ 5,96	≈ 4,79	-
4040/4140.37. ....	.0	375	411	≈ 5,98	≈ 4,80	-
4040/4140.38. ....	.0	387	424	≈ 6,07	≈ 4,84	-
4040/4140/8840.40. ....	.0	400	436	≈ 6,27	≈ 4,94	≈ 8,98
4040/4140.41. ....	.0	412	449	≈ 6,42	≈ 5,02	-
4040/4140.42. ....	.0	425	461	≈ 6,58	≈ 5,09	-
4040/4140.43. ....	.0	437	474	≈ 6,64	≈ 5,13	-
4040/4140.45. ....	.0	450	486	≈ 6,71	≈ 5,16	-
4040/4140/8840.46. ....	.0	462	499	≈ 6,73	≈ 5,19	≈ 9,44
4040/4140.47. ....	.0	475	511	≈ 6,86	≈ 5,24	-
4040/4140.48. ....	.0	487	524	≈ 6,88	≈ 5,28	-
4040/4140.50. ....	.0	500	536	≈ 7,00	≈ 5,30	-
4040/4140.51. ....	.0	512	549	≈ 7,02	≈ 5,31	-
4040/4140.52. ....	.0	525	561	≈ 7,06	≈ 5,34	-
4040/4140.53. ....	.0	537	574	≈ 7,22	≈ 5,41	-
4040/4140.55. ....	.0	550	586	≈ 7,70	≈ 5,65	-
4040/4140.60. ....	.0	600	636	≈ 7,90	≈ 5,75	-

Available bending radii

R [mm] 135** 150 175 200 240 250 300 350 400 500

Supplement Part No. with required radius. Example: 4040.30. 300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link - Links/m = 11



Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT*: **8840.40.150.0.HT**
Lids made of HT: **8840.40.HTC.150.0**
*for long travels upon request
Further information: www.igus.de/en/HT
Delivery time up to 4 weeks!

Extreme Glider...

...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!
Order example: **4040.35G.250.0**
4040.45G.250.0
Further information: phone +49-(0) 22 03-96 49-800



* Removable lid only, no hinged option
** not available for R8840



Extender crossbar for large diameter hoses ▶ page 7.348

Part No. e-chain® - links, single parts

*View from the fixed point of the e-chain®/e-tube

System E4/4
Inner height: 56 mm

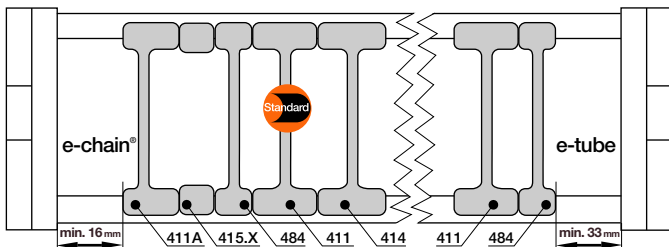
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Fax +49- (0) 22 03-96 49-222



▶ page 7.317



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (e-tube) and 16 mm (e-chain)*!



Vertical separator
401



Vertical separator for e-chains*/e-tubes	3
unassembled	401
assembled	411



Option 1: Vertical separators and spacers

● **Standard separator 401 for e-chains*/e-tubes** offers safe stability due to its broad foot design, also when used with thick cables or hoses.



Vertical separator
483



Vertical separator for e-chains*/e-tubes	3
unassembled	483
assembled	484



● **Vertical separator 483 with a narrow foot for e-chains* and e-tubes** with applications where a large number of small cables need to be individually separated.



Spacer
405.XX

Spacer* for e-chains*	
unassembled	405.XX
assembled	415.XX



● Separators (e.g. "side mounted") for e-chains* can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)



Locking separator
404

Locking separator for e-chains*	3
unassembled	404
assembled	414



Additionally:

● **Locking separator for e-chains* 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment



Vertical separator
406

Vertical separator for e-tubes	3,5
unassembled	406
assembled	416



● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width



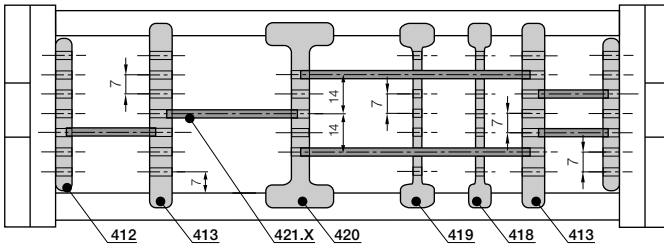
Asymmetric
separator 401A

Asymmetric separator for e-chains*	3
unassembled	401A
assembled	411A



● **Asymmetric separator 401A for e-chains*** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.

*For side-mounted applications



For use with many cables of differing diameters, e-chains and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).

● Locking vertical separator 410, slotted combined with shelves (only for e-chains*).

● Slotted separators 408 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 409 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains/e-tubes	
unassembled	402
assembled	412

Middle plate for e-chains/e-tubes	
unassembled	403
assembled	413

Locking vertical separator for e-chains*	
unassembled	410
assembled	420

Slotted separator for e-chains/e-tubes	
unassembled	408
assembled	418

Open slotted separator for e-chains/e-tubes	
unassembled	409
assembled	419

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



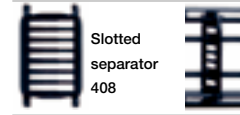
Side plate 402



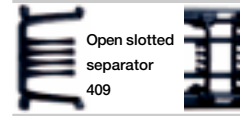
Middle plate 403



Locking vertical separator 410



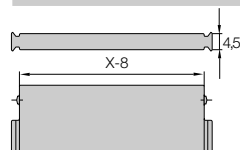
Slotted separator 408



Open slotted separator 409



Shelf 420.X



Additional elements for interior separation

Center crossbar	
unassembled	405
assembled	415

Center crossbar - was developed for applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain* independently into upper and lower halves.

Rollclip	
unassembled	489.27
assembled	490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.

Roller separator	
unassembled	429
assembled	430

Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

System E4/4
Inner height: 56 mm

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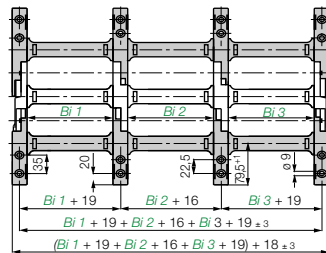




Part No. structure
4040.10 /20 /10. 200 .0
4040.B11/B12/B13. R .0

Extension links - for extremely wide e-chains® up to 3,0 m

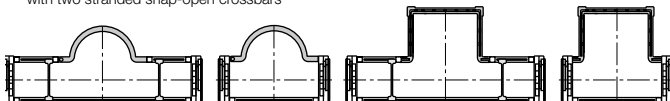
- For applications in which particularly high fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with e-chains®, e-tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- e-chains® with extension links are attached with KMA or steel mounting brackets



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

Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



Round extender crossbar with snap-open crossbars Attached directly to the side link Square extender crossbar with snap-open crossbars Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	180	□	+	-
450.35.D250	195	□	+	-
450.40.D300	245	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	180	□	-	+
450.30.HD250	195	□	-	+

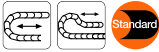
○ = round □ = square + = yes / - = no



E4 snapclip

- For side-mounted applications ● Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required ● Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each chain link ● Call us if you have any questions on project planning

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

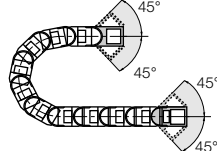


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

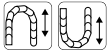
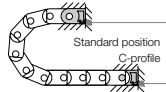
Moving end
40400/88400...1



Fixed end
40400/88400...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



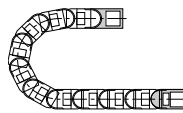
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

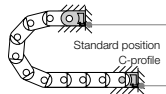
Moving end
41400/89400...1



Fixed end
41400/89400...2

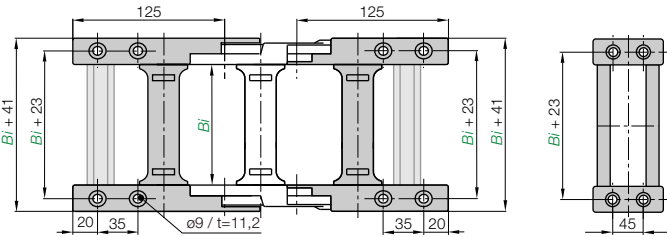


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
40400/88400...2 (pivoting)
41400/89400...2 (locking)

Moving end
(pivoting) 40400/88400...1
(locking) 41400/89400...1



Dimensions and order configurations

Part No. structure (pivoting)

40400/88400.	07.	12.	C
--------------	-----	-----	---

Optional with C-profile
Full set
Width
40400 = e-chain*
88400 = e-tube

Part No. structure (locking)

41400/89400.	07.	12.	C
--------------	-----	-----	---

Optional with C-profile
Full set
Width
41400 = e-chain*
89400 = e-tube

Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi	Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi
.05.	▶ 40400	41400	.05.12. C	50	.31.	▶ 40400	41400	.31.12. C	312
.06.	▶ 40400	41400	.06.12. C	65	.32.	▶ 40400	41400	.32.12. C	325
.07.	▶ 40400/88400	41400/89400	.07.12. C	75	.33.	▶ 40400	41400	.33.12. C	337
.08.	▶ 40400	41400	.08.12. C	87	.35.	▶ 40400/88400	41400/89400	.35.12. C	350
.10.	▶ 40400/88400	41400/89400	.10.12. C	100	.36.	▶ 40400	41400	.36.12. C	362
.11.	▶ 40400	41400	.11.12. C	112	.37.	▶ 40400	41400	.37.12. C	375
.12.	▶ 40400/88400	41400/89400	.12.12. C	125	.38.	▶ 40400	41400	.38.12. C	387
.13.	▶ 40400	41400	.13.12. C	137	.40.	▶ 40400/88400	41400/89400	.40.12. C	400
.15.	▶ 40400/88400	41400/89400	.15.12. C	150	.41.	▶ 40400	41400	.41.12. C	412
.16.	▶ 40400	41400	.16.12. C	162	.42.	▶ 40400	41400	.42.12. C	425
.17.	▶ 40400/88400	41400/89400	.17.12. C	175	.43.	▶ 40400	41400	.43.12. C	437
.18.	▶ 40400	41400	.18.12. C	187	.45.	▶ 40400	41400	.45.12. C	450
.20.	▶ 40400/88400	41400/89400	.20.12. C	200	.46.	▶ 40400/88400	41400/89400	.46.12. C	462
.21.	▶ 40400	41400	.21.12. C	212	.47.	▶ 40400	41400	.47.12. C	475
.22.	▶ 40400	41400	.22.12. C	225	.48.	▶ 40400	41400	.48.12. C	487
.23.	▶ 40400	41400	.23.12. C	237	.50.	▶ 40400	41400	.50.12. C	500
.25.	▶ 40400/88400	41400/89400	.25.12. C	250	.51.	▶ 40400	41400	.51.12. C	512
.26.	▶ 40400	41400	.26.12. C	262	.52.	▶ 40400	41400	.52.12. C	525
.27.	▶ 40400/88400	41400/89400	.27.12. C	275	.53.	▶ 40400	41400	.53.12. C	537
.28.	▶ 40400	41400	.28.12. C	287	.55.	▶ 40400	41400	.55.12. C	550
.30.	▶ 40400/88400	41400/89400	.30.12. C	300	.60.	▶ 40400	41400	.60.12. C	600

Full set, for both ends:

40400.05.12

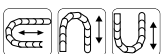
Single-part order:

40400.05.1

Mounting bracket moving end

40400.05.2

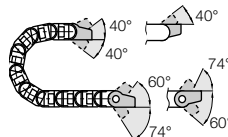
Mounting bracket fixed end



Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
40400.1



Fixed end
40400.2

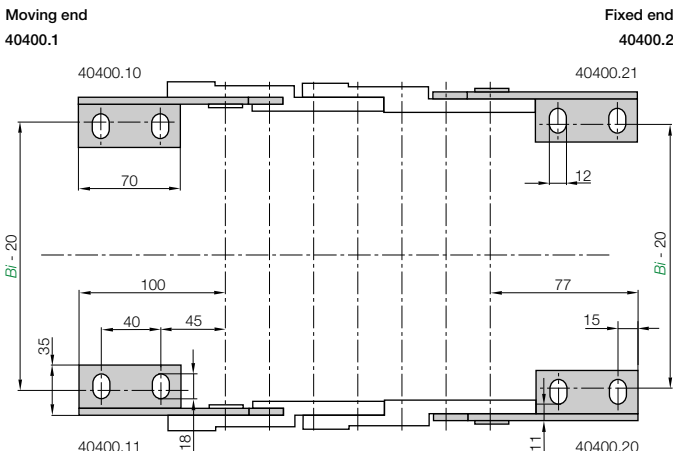
Possible installation conditions -

Further installation angles ► installation sketch

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51147 Cologne

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For e-chain®	Part No. full set	Bi [mm]	For e-chain®	Part No. full set	Bi [mm]
4040-4140.05	► 40400.12	50	4040-4140.31	► 40400.12	312
4040-4140.06	► 40400.12	65	4040-4140.32	► 40400.12	325
4040-4140-8840.07	► 40400.12	75	4040-4140.33	► 40400.12	337
4040-4140-8840.08	► 40400.12	87	4040-4140-8840.35	► 40400.12	350
4040-4140-8840.10	► 40400.12	100	4040-4140.36	► 40400.12	362
4040-4140.11	► 40400.12	112	4040-4140.37	► 40400.12	375
4040-4140-8840.12	► 40400.12	125	4040-4140.38	► 40400.12	387
4040-4140.13	► 40400.12	137	4040-4140-8840.40	► 40400.12	400
4040-4140-8840.15	► 40400.12	150	4040-4140.41	► 40400.12	412
4040-4140.16	► 40400.12	162	4040-4140.42	► 40400.12	425
4040-4140.17	► 40400.12	175	4040-4140.43	► 40400.12	437
4040-4140.18	► 40400.12	187	4040-4140.45	► 40400.12	450
4040-4140-8840.20	► 40400.12	200	4040-4140-8840.46	► 40400.12	462
4040-4140.21	► 40400.12	212	4040-4140.47	► 40400.12	475
4040-4140.22	► 40400.12	225	4040-4140.48	► 40400.12	487
4040-4140.23	► 40400.12	237	4040-4140.50	► 40400.12	500
4040-4140-8840.25	► 40400.12	250	4040-4140.51	► 40400.12	512
4040-4140.26	► 40400.12	262	4040-4140.52	► 40400.12	525
4040-4140-8840.27	► 40400.12	275	4040-4140.53	► 40400.12	537
4040-4140.28	► 40400.12	287	4040-4140.55	► 40400.12	550
4040-4140-8840.30	► 40400.12	300	4040-4140.60	► 40400.12	600

40400.12 Full set, 4 parts

2 with pin / 2 with bore

Single-part order:

40400.1 Mounting bracket moving end, 1 part left / right

40400.2 Mounting bracket fixed end, 1 part left / right

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable ø [mm]
steel	stainless steel	steel	stainless steel	steel	stainless steel	
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps.

Details ▶ chapter 10

System E4/4
Inner height: 56 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. Details ▶ chapter 10



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0

chainfix Nugget for the C-Profile

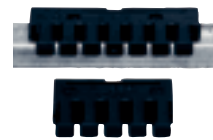
Strain relief for the fixation of cables up to a diameter of Ø30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. Details ▶ chapter 10



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. Details ▶ chapter 10

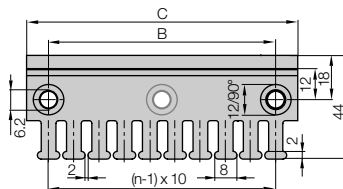


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

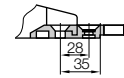
(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. Details ▶ chapter 10



Single tiewrap plate



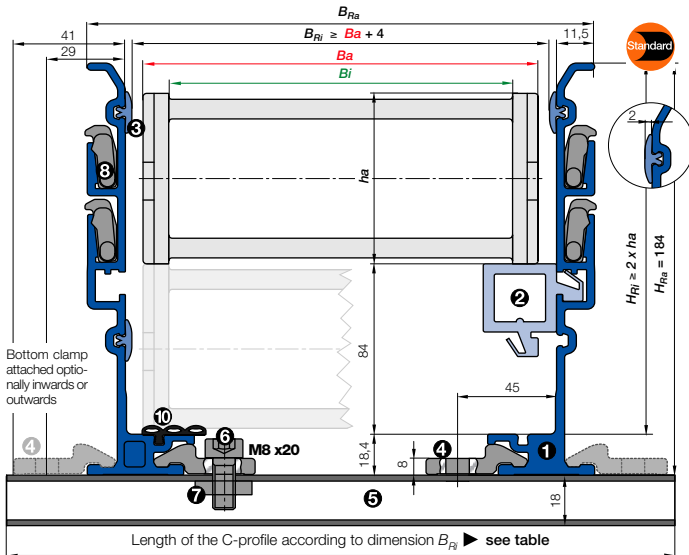
Shown assembled

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▶ page 7.317

- Ba** = Outer width e-chains* / e-tube
- Bi** = Inner width e-chains* / e-tube
- ha** = Outer height e-chains* / e-tube
- H_{Ri}** = Inner trough height
- H_{Ra}** = Outer trough height
- B_{Ri}** = Inner trough width ► depends on dim. **Ba**
- B_{Ra}** = Outer trough width
- n_{Mon}** = Number of installation sets (left/right)
- n_{Ri}** = Number of trough sets (left/right)
- H_{Ri} ≥ 2 • ha**
- B_{Ri} ≥ Ba + 4**
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

4040.05.200.0 ► Order example

B _{Ri} [mm]	Part No.		Part No.
	B _{Ri} attached inwards	B _{Ri} attached outwards	
.05 90	-	960.50.225	
.06 105	-	960.50.225	
.07 115	-	960.50.250	
.08 127	960.50.175	960.50.250	
.10 140	960.50.200	960.50.275	
.11 153	960.50.200	960.50.275	
.12 165	960.50.225	960.50.300	
.13 178	960.50.225	960.50.300	
.15 190	960.50.250	960.50.325	
.16 203	960.50.250	960.50.325	
.17 215	960.50.275	960.50.350	
.18 228	960.50.275	960.50.350	
.20 240	960.50.300	960.50.375	
.21 253	960.50.300	960.50.375	
.22 265	960.50.325	960.50.400	
.23 278	960.50.325	960.50.400	
.25 290	960.50.350	960.50.425	
.26 303	960.50.350	960.50.425	
.27 315	960.50.375	960.50.450	
.28 328	960.50.375	960.50.450	
.30 340	960.50.400	960.50.475	
.31 353	960.50.400	960.50.475	
.32 365	960.50.425	960.50.500	
.33 378	960.50.425	960.50.500	
.35 390	960.50.450	960.50.525	
.36 403	960.50.450	960.50.525	
.37 415	960.50.475	960.50.550	
.38 428	960.50.475	960.50.550	
.40 440	960.50.500	960.50.575	
.41 453	960.50.500	960.50.575	
.42 465	960.50.525	960.50.600	
.43 478	960.50.525	960.50.600	
.45 490	960.50.550	960.50.625	
.46 503	960.50.550	960.50.625	
.47 515	960.50.575	960.50.650	
.48 528	960.50.575	960.50.650	
.50 540	960.50.600	960.50.675	
.51 553	960.50.600	960.50.675	
.52 565	960.50.625	960.50.700	
.53 578	960.50.625	960.50.700	
.55 590	960.50.650	960.50.725	
.60 640	960.50.700	960.50.775	



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 4040.10.200.0 with B_{Ri} = 140

Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No.** 974.30.SL

Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No.** 974.31.SL

Installation set "Basic" complete (guide trough-sets + 1)

Order text: 17 installation sets "Basic" **Part No.** 960.50.200

Module for the fixed end

Order text: 1 set **Part No.** 974.80

Option: For an additional noise dampening with

silencer profile, please add Index A - Example: **Part No.** 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an e-chain*

With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ► page 9.16

Internet: www.igus.eu
E-mail: info@igus.de



The maintenance-free Serie 4040 protects the igus® chainflex® motor and signal cables during the lifting and lowering movements of the tidal turbine and also protects them against aggressive ambient conditions. The travel distance amounts to approx. 20 m in vertical direction above and under water



Series 4040AX

Special e-chains® for fine dust applications

For long travel applications and fine dust applications, we have developed a special e-chainsystem® with exterior, dirt-repellent stop dogs.

- Exterior stop dogs prevent the settling of dust, dirt, chips, flour, etc.
- Mounting brackets and accessories from the serie 4040

Series 4040AX - Order example: 4040AX.30.250.0

Further information: igus.de/en/4040AX or phone +49-(0) 22 03-96 49-800

System E4/4

Inner height: 56 mm

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▶ Chapter 9



▶ page 7.317

Price index



"Heavy-Duty" version
for long travel applications

Very high torsional rigidity
and and tensile force

ESD classification:
Electrically conductive ESD/ATEX
version upon request

- ① High side-mount stability due to undercut
- ② High torsional rigidity
- ③ High tensile stability (20% higher tensile force than Series 4040)
- ④ Very wide gliding surface, less wear
- ⑤ Closed and open styles can be combined
- ⑥ Hinged snap-open removable lids along outer radius of e-tube
- ⑦ Numerous interior separation possibilities
- ⑧ Crossbars are removable along both radii
- ⑨ Wide, rounded plastic crossbars - cable friendly
- ⑩ Robust Steel-Mounting Brackets



Opening e-chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



rol e-chain® Series 4040RHD and R8840RHD available upon request



When to use the Series 4040HD/R8840HD:

- For high (tensil-)charges at long travel applications
- When high torsional forces are expected
- For long-term operation in very moist environments
- Also available as rol e-chain®



When not to use them:

- If a quieter version is required
▶ Series E4.56, page 7.78
- If a simple and low-cost solution is required
▶ Series 14040/R18840, page 7.164



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 4040HD.30.300.0

e-chain®

with 2 separators 411 assembled every 2nd link

Interior separation

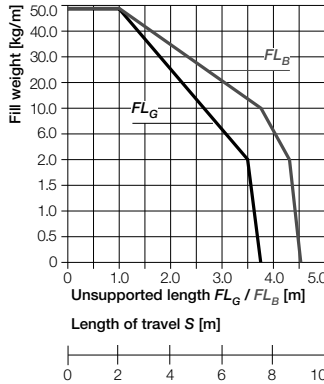
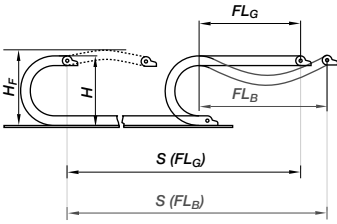
1 set 4040HD.12.E

Mounting bracket

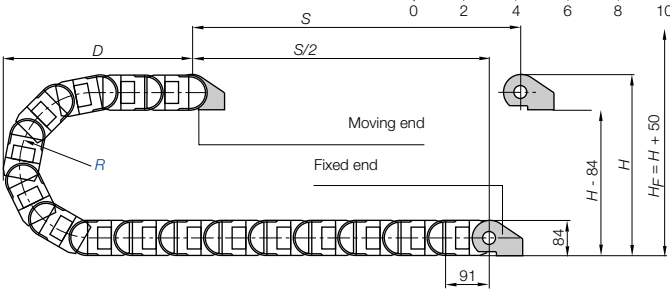


Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{R1} = Trough inner height
- D = Overlength e-chain*
radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Overlength - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower



Pitch = 91 mm/Glied Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	135	150	200**	250	300	350**	400**
H	354	384	484	584	684	784	884
D	240	255	305	355	405	455	505
K	425	475	630	790	945	1100	1260
H ₂	266	266	266	266	266	266	266
D ₂	390	450	710	920	1180	1440	1530
K ₂	728	819	1274	1638	2002	2366	2548

**NEW in this catalog

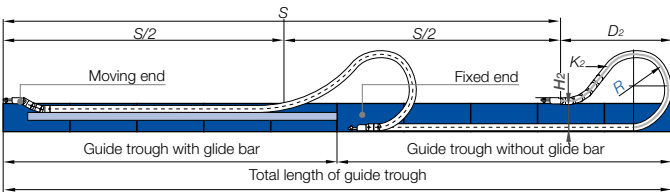


Short travels - unsupported

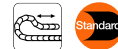
Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 50$ mm
 (with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 350 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 350 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties
 ► page 1.38

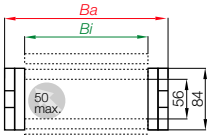
56

System E4/4
 Inner height: 56 mm

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► page 7.317

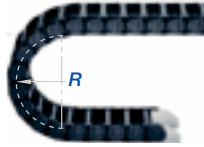


Part No. structure

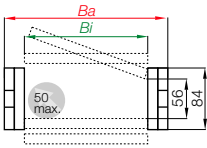
4040HD. 30. 250. 0



Series 4040HD - e-chain® with crossbars every link



- Crossbars every link
- For highest additional loads
- For applications particularly demanding
- Can be opened from two sides

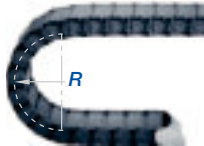


Part No. structure

8840HD. 30. 250. 0



Series R8840HD - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.
Series 4040R - Order example 4040RHD.30.250.0
Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



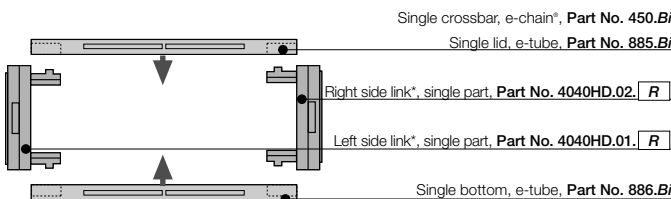
Part No.	[mm]	<i>Bi</i>	<i>Ba</i>	4040HD	R8840HD
		[mm]	[mm]	[kg/m]	[kg/m]
4040HD.05.....	<input type="checkbox"/> .0	50	104	≈ 5,03	-
4040HD.06.....	<input type="checkbox"/> .0	65	119	≈ 5,12	-
4040HD/8840HD.07.....	<input type="checkbox"/> .0*	75	129	≈ 5,19	≈ 5,64
4040HD.08.....	<input type="checkbox"/> .0	87	141	≈ 5,27	-
4040HD/8840HD.10.....	<input type="checkbox"/> .0	100	154	≈ 5,36	≈ 5,93
4040HD.11.....	<input type="checkbox"/> .0	112	166	≈ 5,48	-
4040HD/8840HD.12.....	<input type="checkbox"/> .0	125	179	≈ 5,56	≈ 6,29
4040HD.13.....	<input type="checkbox"/> .0	137	191	≈ 5,69	-
4040HD/8840HD.15.....	<input type="checkbox"/> .0	150	204	≈ 5,73	≈ 6,67
4040HD.16.....	<input type="checkbox"/> .0	162	216	≈ 5,84	-
4040HD/8840HD.17.....	<input type="checkbox"/> .0	175	229	≈ 5,97	≈ 6,98
4040HD.18.....	<input type="checkbox"/> .0	187	241	≈ 6,09	-
4040HD/8840HD.20.....	<input type="checkbox"/> .0	200	254	≈ 6,14	≈ 7,29
4040HD.21.....	<input type="checkbox"/> .0	212	266	≈ 6,21	-
4040HD.22.....	<input type="checkbox"/> .0	225	279	≈ 6,28	-
4040HD.23.....	<input type="checkbox"/> .0	237	291	≈ 6,39	-
4040HD/8840HD.25.....	<input type="checkbox"/> .0	250	304	≈ 6,50	≈ 8,02
4040HD.26.....	<input type="checkbox"/> .0	262	316	≈ 6,59	-
4040HD/8840HD.27.....	<input type="checkbox"/> .0	275	329	≈ 6,70	≈ 8,38
4040HD.28.....	<input type="checkbox"/> .0	287	341	≈ 6,75	-
4040HD/8840HD.30.....	<input type="checkbox"/> .0	300	354	≈ 6,91	≈ 8,68
4040HD.31.....	<input type="checkbox"/> .0	312	366	≈ 6,94	-
4040HD.32.....	<input type="checkbox"/> .0	325	379	≈ 7,05	-
4040HD.33.....	<input type="checkbox"/> .0	337	391	≈ 7,17	-
4040HD/8840HD.35.....	<input type="checkbox"/> .0	350	404	≈ 7,37	≈ 9,38
4040HD.36.....	<input type="checkbox"/> .0	362	416	≈ 7,28	-
4040HD.37.....	<input type="checkbox"/> .0	375	429	≈ 7,38	-
4040HD.38.....	<input type="checkbox"/> .0	387	441	≈ 7,49	-
4040HD/8840HD.40.....	<input type="checkbox"/> .0	400	454	≈ 7,76	≈ 10,38
4040HD.41.....	<input type="checkbox"/> .0	412	466	≈ 7,68	-
4040HD.42.....	<input type="checkbox"/> .0	425	479	≈ 7,98	-
4040HD.43.....	<input type="checkbox"/> .0	437	491	≈ 7,82	-
4040HD.45.....	<input type="checkbox"/> .0	450	504	≈ 8,15	-
4040HD/8840HD.46.....	<input type="checkbox"/> .0	462	516	≈ 8,10	≈ 10,85
4040HD.47.....	<input type="checkbox"/> .0	475	529	≈ 8,14	-
4040HD.48.....	<input type="checkbox"/> .0	487	541	≈ 8,39	-
4040HD.50.....	<input type="checkbox"/> .0	500	554	≈ 8,48	-
4040HD.51.....	<input type="checkbox"/> .0	512	566	≈ 8,40	-
4040HD.52.....	<input type="checkbox"/> .0	525	579	≈ 8,57	-
4040HD.53.....	<input type="checkbox"/> .0	537	591	≈ 8,66	-
4040HD.55.....	<input type="checkbox"/> .0	550	604	≈ 9,08	-
4040HD.60.....	<input type="checkbox"/> .0	600	654	≈ 9,31	-

Available bending radii

R [mm] 135** 150 200 250 300 350 400

Supplement Part No. with required radius. Example: 4040HD.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link · Links/m = 11



Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full e-tube made of HT*: **8840HD.40.150.0.HT**
Lids made of HT: **8840HD.40.HTE.150.0**
*for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!

* Removable lid only, no hinged option
** not available for R8840HD

Extender crossbar for large diameter hoses ▶ page 7.342

Part No. e-chain®-links, single parts
*View from the fixed point of the e-chain®/e-tube

System E4/4
Inner height: 56 mm

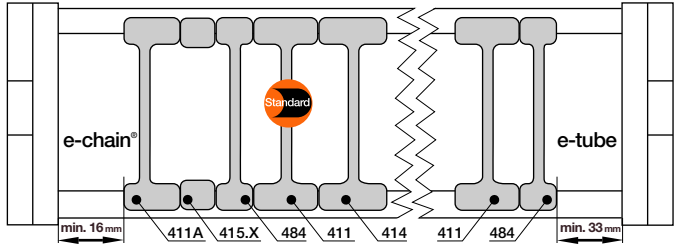
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▶ page 7.317



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (e-tube) and 16 mm (e-chain)*!



Vertical separator
401



Vertical separator
483



Spacer
405.XX



Locking separator
404



Vertical separator
406



Asymmetric
separator 401A

Vertical separator for e-chains*/e-tubes	
unassembled	401
assembled	411



Vertical separator for e-chains*/e-tubes	
unassembled	483
assembled	484



Spacer* for e-chains*	
unassembled	405.XX
assembled	415.XX



Locking separator for e-chains*	
unassembled	404
assembled	414



Vertical separator for e-tubes	
unassembled	406
assembled	416



Asymmetric separator for e-chains*	
unassembled	401A
assembled	411A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 401 for e-chains*/e-tubes** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 483 with a narrow foot for e-chains* and e-tubes** with applications where a large number of small cables need to be individually separated.

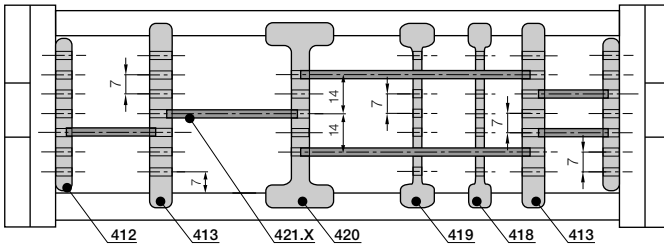
● Separators (e.g. "side mounted") for e-chains* can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for e-chains* 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment

● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width

● **Asymmetric separator 401A for e-chains*** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).

● Locking vertical separator 410, slotted combined with shelves (only for e-chains*).

● Slotted separators 408 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 409 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains/e-tubes	
unassembled	402
assembled	412

Middle plate for e-chains/e-tubes	
unassembled	403
assembled	413

Locking vertical separator for e-chains*	
unassembled	410
assembled	420

Slotted separator for e-chains/e-tubes	
unassembled	408
assembled	418

Open slotted separator for e-chains/e-tubes	
unassembled	409
assembled	419

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



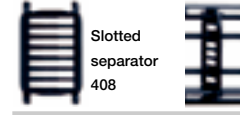
Side plate 402



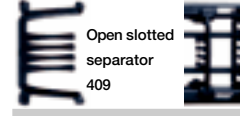
Middle plate 403



Locking vertical separator 410



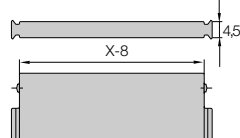
Slotted separator 408



Open slotted separator 409



Shelf 420.X



Additional elements for interior separation

Center crossbar	
unassembled	405
assembled	415

Center crossbar - was developed for applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain* independently into upper and lower halves.

Rollclip	
unassembled	489.27
assembled	490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.

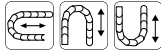
Roller separator	
unassembled	429
assembled	430

Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

System E4/4
Inner height: 56 mm

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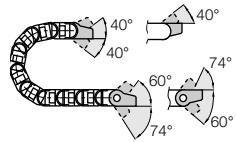




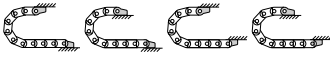
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
40400HD.1.E



Fixed end
40400HD.2.E



Possible installation conditions -

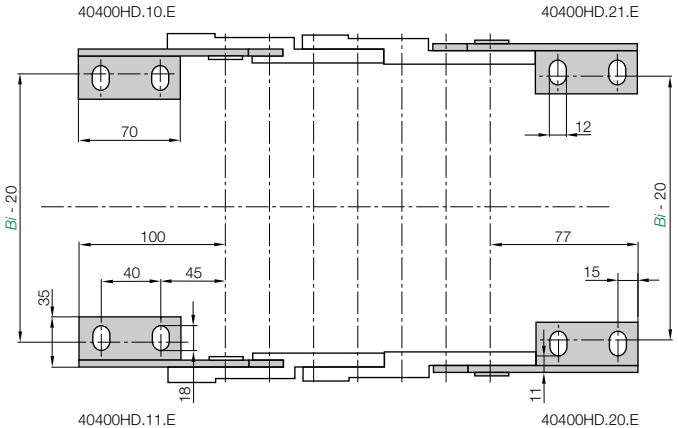
Further installation angles ► installation sketch

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51147 Cologne

Moving end
40400HD.1.E

Fixed end
40400HD.2.E



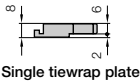
Part No.	Mounting bracket
40400HD.12.E	Full set, 4 parts, 2 with pin / 2 with bore
40400HD.1.E	Mounting bracket moving end, 1 part left / right
40400HD.2.E	Mounting bracket fixed end, 1 part left / right

E4/4 | Series 4040HD·R8840HD | Accessories | Strain Relief

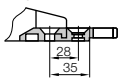


Tie-wrap plate as individual part

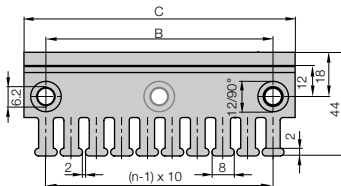
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



Single tie-wrap plate



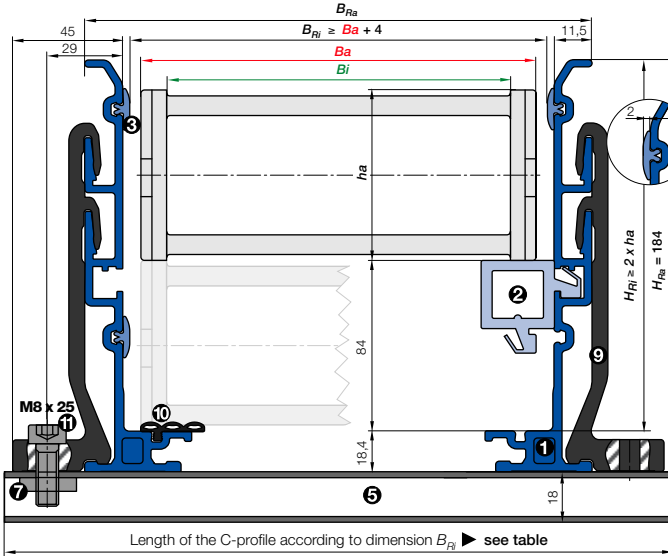
Shown assembled



Tie-wrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Internet: www.igus.eu
E-mail: info@igus.de



- B_a = Outer width e-chains* / e-tube
- B_i = Inner width e-chains* / e-tube
- h_a = Outer height e-chains* / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ► depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
 $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile

Installation set Heavy-Duty with C-profile

4040HD.05.250.0 ► Order example

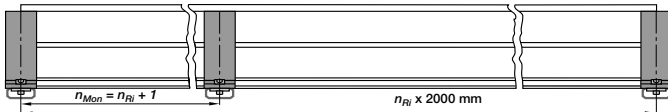
B_{Ri} [mm]	Part No. assembled
.05	108 974.50.225
.06	123 974.50.250
.07	133 974.50.250
.08	145 974.50.275
.10	158 974.50.275
.11	170 974.50.300
.12	183 974.50.300
.13	195 974.50.325
.15	208 974.50.325
.16	220 974.50.350
.17	233 974.50.350
.18	245 974.50.375
.20	258 974.50.375
.21	270 974.50.400
.22	283 974.50.400
.23	295 974.50.425
.25	308 974.50.425
.26	320 974.50.450
.27	333 974.50.450
.28	345 974.50.475
.30	358 974.50.475
.31	370 974.50.500
.32	383 974.50.500
.33	395 974.50.525
.35	408 974.50.525
.36	420 974.50.550
.37	433 974.50.550
.38	445 974.50.575
.40	458 974.50.575
.41	470 974.50.600
.42	483 974.50.600
.43	495 974.50.625
.45	508 974.50.625
.46	520 974.50.650
.47	533 974.50.650
.48	545 974.50.675
.50.^\	558 974.50.675
.51	570 974.50.700
.52	583 974.50.700
.53	595 974.50.725
.55	608 974.50.725
.60	658 974.50.775



- **Components, trough "Heavy Duty":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Heavy Duty":** ⑤ C-profile, steel galvanized ⑦ Sliding nut M8 ⑨ Installation angle bracket "Heavy Duty", Aluminium ⑪ Screw M8 x 25

Order example: Length of travel 30 m - Center mounted for Series 4040HD.10.250.0 with $B_{Ri} = 158$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 974.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 974.31.SL
- Installation set "Heavy Duty" complete (guide trough-sets + 1)
Order text: 17 installation sets "Heavy Duty" Part No. 974.50.275
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: Part No. 974.30.SLA



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**

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► Chapter 10



► Chapter 9



► page 7.317

Price index



Side-mounted - unsupported

High torsional rigidity

ESD classification:
Electrically conductive ESD/ATEX version upon request



Opening e-chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 5050/5150/R9850:

- When high torsional forces are expected
- For side-mounted applications involving large unsupported lengths
- Due to very dirt and dusty environment
- Also available as rol e-chain*



When not to use it:

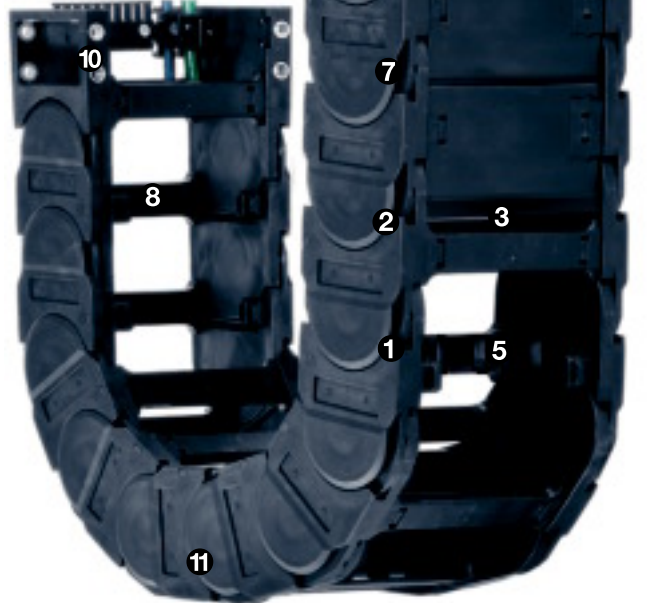
- When very long travels or high additional loads are involved
▶ Series 5050HD, page 7.374
- If a simple and low-cost solution is required
▶ Series 15050/R19850, page 7.216

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Closed and open styles can be combined
- 4 Hinged snap-open removable lids of e-tube
- 5 Numerous interior separation possibilities
- 6 Crossbars on e-chains* are removable along both radii
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Mounting brackets with integrated strain relief available, locking or pivoting
- 11 e-chains* also available with reverse bending radius "RBR"

! "Heavy-Duty" size available. Greater unsupported length for higher loads and travels. Also available as rol e-chain* version



rol e-chain* Series 5050R/9850R available upon request



Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 5050.30.300.0

e-chain*

with 2 separators 511 assembled every 2nd link

Interior separation

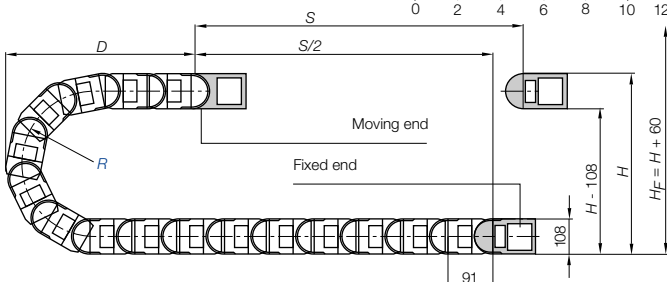
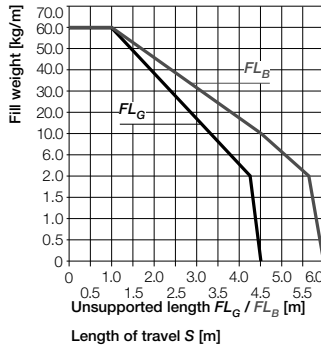
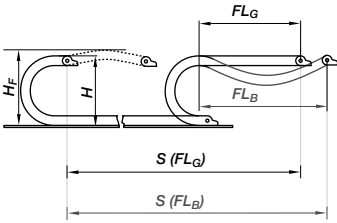
1 set 50500.30.12C

Mounting bracket



Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



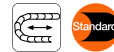
Pitch = 91 mm/link Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	150	200	250	300	350	400	500	550	600	650	1000
$H_{25}^{0.5}$	408	508	608	708	808	908	1108	1208	1308	1408	2108
D	295	345	395	445	495	545	645	695	745	795	1145
K	655	815	970	1125	1285	1440	1755	1910	2070	2225	3255
H_2	242	242	242	242	242	242	242	242	242	242	242
D_{25}^{+25}	550	800	950	1200	1550	1700	2175	2355	2580	-	-
K_2	910	1274	1638	2002	2457	2730	3458	3640	4459	-	-

- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{R1} = Trough inner height
- D = Overlength e-chain* radius in final position
- K = $\pi \cdot R + \text{"safety"}$
- D_2 = Over length - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 3 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

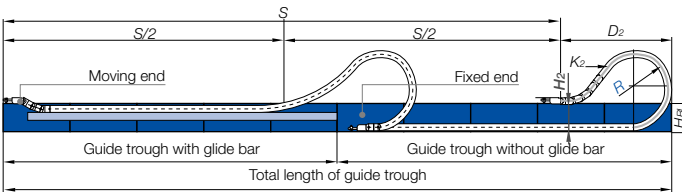


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 60$ mm
 (with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 400 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 400 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38



For support of the lower run - **Support Tray tool kit** available ► page 9.70

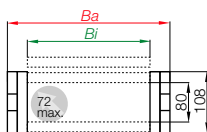
80

System E4/4
Inner height: 80 mm

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► page 7.317

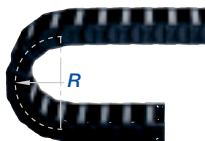


Part No. structure

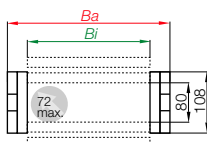
5050. 30. 300. 0



Series 5050 - e-chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

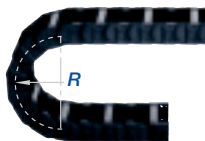


Part No. structure

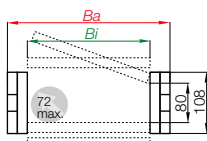
5150. 30. 300. 0



Series 5150 - e-chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

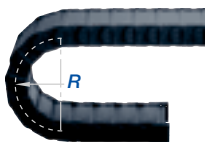


Part No. structure

9850. 30. 300. 0



Series R9850 - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.
Series 5050R and 9850R - Order example 5050R.30.300.0
Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



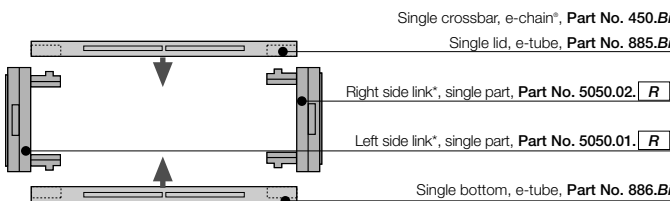
Part No.	<i>Bi</i>	<i>Ba</i>	5050	5150	R9850	
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]	
5050/5150.05.....	.0	50	100	≈ 5,63	≈ 5,62	-
5050/5150.06.....	.0	65	115	≈ 5,70	≈ 5,68	-
5050/5150/9850.07.....	.0	75	125	≈ 5,79	≈ 5,70	≈ 6,24
5050/5150.08.....	.0	87	137	≈ 5,89	≈ 5,76	-
5050/5150/9850.10.....	.0	100	150	≈ 5,96	≈ 5,79	≈ 6,52
5050/5150.11.....	.0	112	163	≈ 6,09	≈ 5,85	-
5050/5150/9850.12.....	.0	125	175	≈ 6,16	≈ 5,89	≈ 6,89
5050/5150.13.....	.0	137	188	≈ 6,29	≈ 5,95	-
5050/5150/9850.15.....	.0	150	200	≈ 6,36	≈ 5,98	≈ 7,32
5050/5150.16.....	.0	162	213	≈ 6,47	≈ 6,04	-
5050/5150/9850.17.....	.0	175	225	≈ 6,58	≈ 6,09	≈ 7,58
5050/5150.18.....	.0	187	238	≈ 6,69	≈ 6,15	-
5050/5150/9850.20.....	.0	200	250	≈ 6,71	≈ 6,16	≈ 7,89
5050/5150.21.....	.0	212	263	≈ 6,82	≈ 6,22	-
5050/5150.22.....	.0	225	275	≈ 6,89	≈ 6,25	-
5050/5150.23.....	.0	237	288	≈ 7,02	≈ 6,31	-
5050/5150/9850.25.....	.0	250	300	≈ 7,11	≈ 6,36	≈ 8,61
5050/5150.26.....	.0	262	313	≈ 7,19	≈ 6,40	-
5050/5150/9850.27.....	.0	275	325	≈ 7,30	≈ 6,46	≈ 8,82
5050/5150.28.....	.0	287	338	≈ 7,33	≈ 6,47	-
5050/5150/9850.30.....	.0	300	350	≈ 7,55	≈ 6,58	≈ 9,27
5050/5150.31.....	.0	312	363	≈ 7,58	≈ 6,60	-
5050/5150.32.....	.0	325	375	≈ 7,63	≈ 6,62	-
5050/5150.33.....	.0	337	388	≈ 7,81	≈ 6,71	-
5050/5150/9850.35.....	.0	350	400	≈ 7,96	≈ 6,79	≈ 10,02
5050/5150.36.....	.0	362	413	≈ 7,97	≈ 6,80	-
5050/5150.37.....	.0	375	425	≈ 7,99	≈ 6,80	-
5050/5150.38.....	.0	387	438	≈ 8,07	≈ 6,84	-
5050/5150/9850.40.....	.0	400	450	≈ 8,27	≈ 6,94	≈ 10,98
5050/5150.41.....	.0	412	463	≈ 8,43	≈ 7,02	-
5050/5150.42.....	.0	425	475	≈ 8,58	≈ 7,10	-
5050/5150.43.....	.0	437	488	≈ 8,65	≈ 7,13	-
5050/5150.45.....	.0	450	500	≈ 8,71	≈ 7,16	-
5050/5150/9850.46.....	.0	462	513	≈ 8,73	≈ 7,17	≈ 11,44
5050/5150.47.....	.0	475	525	≈ 8,87	≈ 7,24	-
5050/5150.48.....	.0	487	538	≈ 8,88	≈ 7,26	-
5050/5150.50.....	.0	500	550	≈ 9,00	≈ 7,30	-
5050/5150.51.....	.0	512	563	≈ 9,02	≈ 7,32	-
5050/5150.52.....	.0	525	575	≈ 9,06	≈ 7,34	-
5050/5150.53.....	.0	537	588	≈ 9,22	≈ 7,41	-
5050/5150.55.....	.0	550	600	≈ 9,70	≈ 7,66	-
5050/5150.60.....	.0	600	650	≈ 9,90	≈ 7,76	-

Available bending radii

R [mm] **150*** 200 250 300 350 400 500 550 600 650 1000

Supplement Part No. with required radius. Example: 5050.30. **300**.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link - Links/m = 11



Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "gumid HT" material. Order example: Full e-tube made of HT: **9850.40.250.0.HT**
Lids made of HT: **9850.40.HTE.250.0**
for long travels upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!

Extreme Glider...

...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!
Order example: **5050.35G.250.0**
5050.45G.250.0
Further information: phone +49-(0) 22 03-96 49-800



*not available for R9850



Extender crossbar for large diameter hoses ▶ page 7.368

Part No. e-chain® - links, single parts

*View from the fixed point of the e-chain®/e-tube

System E4/4
Inner height: 80 mm

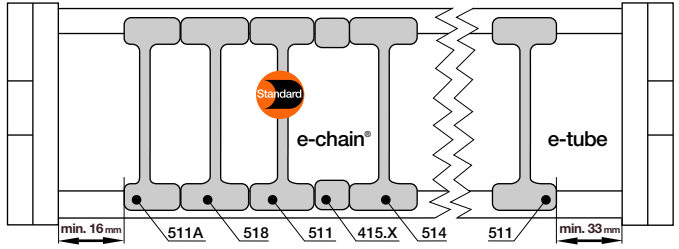
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▶ page 7.317



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (e-tube) and 16 mm (e-chain)!



Vertical separator 501



Spacer 405.XX



Locking separator 504



Locking separator 508



Asymmetric separator 501A

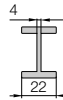
Vertical separator for e-chains*	
unassembled	501
assembled	511



Spacer* for e-chains*	
unassembled	405.XX
assembled	415.XX



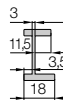
Locking separator for e-chains*	
unassembled	504
assembled	514



Locking separator for e-chains*	
unassembled	508
assembled	518



Asymmetric separator for e-chains*	
unassembled	501A
assembled	511A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 501 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

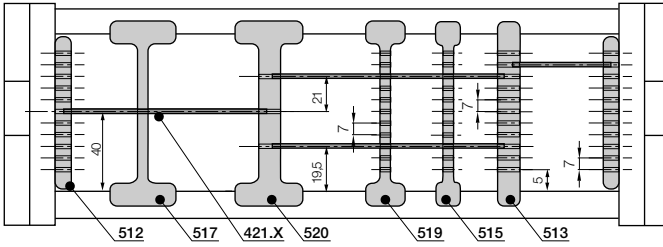
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for e-chains® 504-** with increased retention force for applications exposed to very high humidity or extreme loads. If locking separators are used, the e-chain® is more difficult to open

● The **locking separator for e-chains® 508** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the e-chain®.

● **Asymmetric separator 501A for e-chains®** (not for e-tubes) with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 502, middle plates 503 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments).

● Locking vertical separator 510 combined with shelves. Triple slots (only for e-chains*).

● Locking separator 507 slotted - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● Slotted separators 505 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 509 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains*/e-tubes	
unassembled	502
assembled	512

Middle plate for e-chains*/e-tubes	
unassembled	503
assembled	513

Locking vertical separator for e-chains*	
unassembled	510
assembled	520

Locking separator for e-chains*	
unassembled	507
assembled	517

Slotted separator for e-chains*/e-tubes	
unassembled	505
assembled	515

Open slotted separator for e-chains*/e-tubes	
unassembled	509
assembled	519



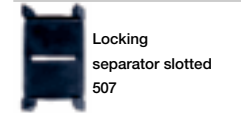
Side plate 502



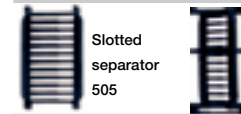
Middle plate 503



Locking vertical separator 510



Locking separator slotted 507



Slotted separator 505



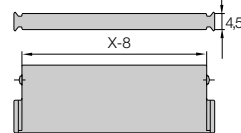
Open slotted separator 509

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



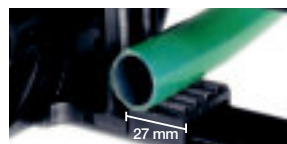
Shelf 420.X



Additional elements for interior separation

Rollclip	
unassembled	489.27
assembled	490.27

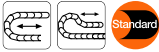
Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



System E4/4
Inner height: 80 mm

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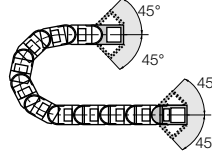


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with chainfix clip or strain relief tiewrap plates
- Corrosion resistant
- Universally mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

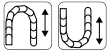
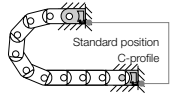
Moving end
50500/98500...1



Fixed end
50500/98500...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



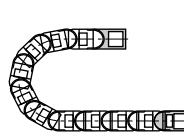
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

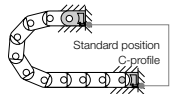
Moving end
51500/99500...1



Fixed end
51500/99500...2



The attachment variants arising automatically by the choice of the KMA mounting bracket

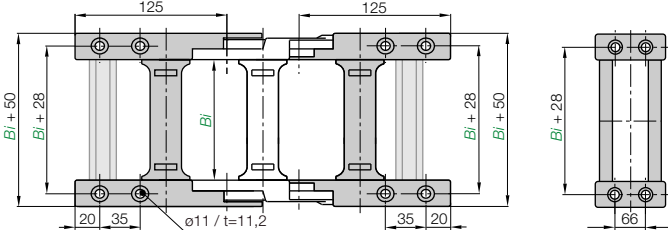


Fixed end

50500/98500...2 (pivoting)
51500/99500...2 (locking)

Moving end

(pivoting) 50500/98500...1
(locking) 51500/99500...1



Width index	Part No. full set		C-profile option [mm]	Bi	Width index	Part No. full set		C-profile option [mm]	Bi
	pivoting	locking				pivoting	locking		
.05.	50500	51500	.05.12. C	50	.31.	50500	51500	.31.12. C	312
.06.	50500	51500	.06.12. C	65	.32.	50500	51500	.32.12. C	325
.07.	50500/98500	51500/99500	.07.12. C	75	.33.	50500	51500	.33.12. C	337
.08.	50500	51500	.08.12. C	87	.35.	50500/98500	51500/99500	.35.12. C	350
.10.	50500/98500	51500/99500	.10.12. C	100	.36.	50500	51500	.36.12. C	362
.11.	50500	51500	.11.12. C	112	.37.	50500	51500	.37.12. C	375
.12.	50500/98500	51500/99500	.12.12. C	125	.38.	50500	51500	.38.12. C	387
.13.	50500	51500	.13.12. C	137	.40.	50500/98500	51500/99500	.40.12. C	400
.15.	50500/98500	51500/99500	.15.12. C	150	.41.	50500	51500	.41.12. C	412
.16.	50500	51500	.16.12. C	162	.42.	50500	51500	.42.12. C	425
.17.	50500/98500	51500/99500	.17.12. C	175	.43.	50500	51500	.43.12. C	437
.18.	50500	51500	.18.12. C	187	.45.	50500	51500	.45.12. C	450
.20.	50500/98500	51500/99500	.20.12. C	200	.46.	50500/98500	51500/99500	.46.12. C	462
.21.	50500	51500	.21.12. C	212	.47.	50500	51500	.47.12. C	475
.22.	50500	51500	.22.12. C	225	.48.	50500	51500	.48.12. C	487
.23.	50500	51500	.23.12. C	237	.50.	50500	51500	.50.12. C	500
.25.	50500/98500	51500/99500	.25.12. C	250	.51.	50500	51500	.51.12. C	512
.26.	50500	51500	.26.12. C	262	.52.	50500	51500	.52.12. C	525
.27.	50500	51500	.27.12. C	275	.53.	50500	51500	.53.12. C	537
.28.	50500	51500	.28.12. C	287	.55.	50500	51500	.55.12. C	550
.30.	50500/98500	51500/99500	.30.12. C	300	.60.	50500	51500	.60.12. C	600

Dimensions and order configurations

Part No. structure (pivoting)

50500/98500.	07.	12.	C
--------------	-----	-----	---

Optional with C-profile
Full set
Width
50500 = e-chain*
98500 = e-tube

Part No. structure (locking)

51500/99500.	07.	12.	C
--------------	-----	-----	---

Optional with C-profile
Full set
Width
51500 = e-chain*
99500 = e-tube

Full set, for both ends:

50500.07.12

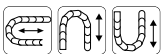
Single-part order:

50500.07.1

Mounting bracket moving end

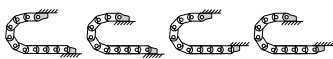
50500.07.2

Mounting bracket fixed end



Option steel - pivoting

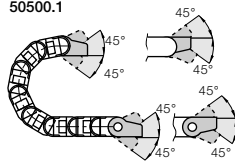
- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive



Possible installation conditions -

Further installation angles ▶ installation sketch

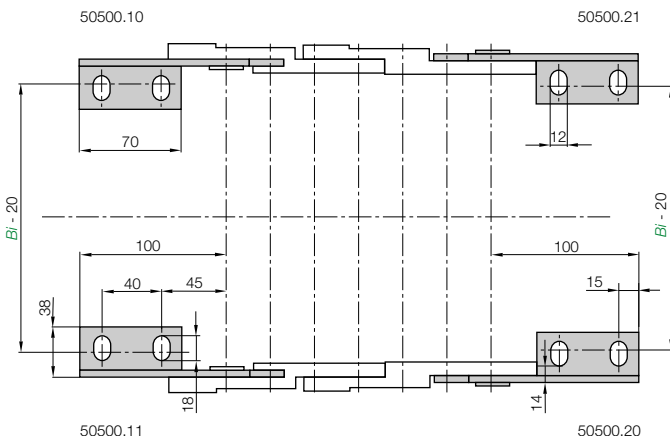
Moving end
50500.1



Fixed end
50500.2

Moving end
50500.1

Fixed end
50500.2



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50500.12 Full set, 4 parts

2 with pin / 2 with bore

Single-part order:

50500.1 Mounting bracket

moving end, 1 part left / right

50500.2 Mounting bracket

fixed end, 1 part left / right

For e-chain*	Part No. full set	Bi [mm]	For e-chain*	Part No. full set	Bi [mm]
5050-5150.05	▶ 50500.12	50	5050-5150.31	▶ 50500.12	312
5050-5150.06	▶ 50500.12	65	5050-5150.32	▶ 50500.12	325
5050-5150-9850.07	▶ 50500.12	75	5050-5150.33	▶ 50500.12	337
5050-5150.08	▶ 50500.12	87	5050-5150-9850.35	▶ 50500.12	350
5050-5150-9850.10	▶ 50500.12	100	5050-5150.36	▶ 50500.12	362
5050-5150.11	▶ 50500.12	112	5050-5150.37	▶ 50500.12	375
5050-5150-9850.12	▶ 50500.12	125	5050-5150.38	▶ 50500.12	387
5050-5150.13	▶ 50500.12	137	5050-5150-9850.40	▶ 50500.12	400
5050-5150-9850.15	▶ 50500.12	150	5050-5150.41	▶ 50500.12	412
5050-5150.16	▶ 50500.12	162	5050-5150.42	▶ 50500.12	425
5050-5150.17	▶ 50500.12	175	5050-5150.43	▶ 50500.12	437
5050-5150.18	▶ 50500.12	187	5050-5150.45	▶ 50500.12	450
5050-5150-9850.20	▶ 50500.12	200	5050-5150-9850.46	▶ 50500.12	462
5050-5150.21	▶ 50500.12	212	5050-5150.47	▶ 50500.12	475
5050-5150.22	▶ 50500.12	225	5050-5150.48	▶ 50500.12	487
5050-5150.23	▶ 50500.12	237	5050-5150.50	▶ 50500.12	500
5050-5150-9850.25	▶ 50500.12	250	5050-5150.51	▶ 50500.12	512
5050-5150.26	▶ 50500.12	262	5050-5150.52	▶ 50500.12	525
5050-5150.27	▶ 50500.12	275	5050-5150.53	▶ 50500.12	537
5050-5150.28	▶ 50500.12	287	5050-5150.55	▶ 50500.12	550
5050-5150-9850.30	▶ 50500.12	300	5050-5150.60	▶ 50500.12	600

chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable ø [mm]
steel	stainless steel	steel	stainless steel	steel	stainless steel	
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® chainfix steel clamps and chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 80 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® e-chainsystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52*	30	16,4
CFN.20.N35*	20	20,0

chainfix Nugget for the C-Profile

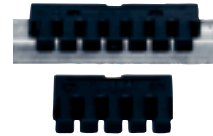
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

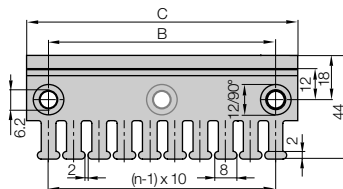


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

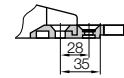
(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



Shown assembled

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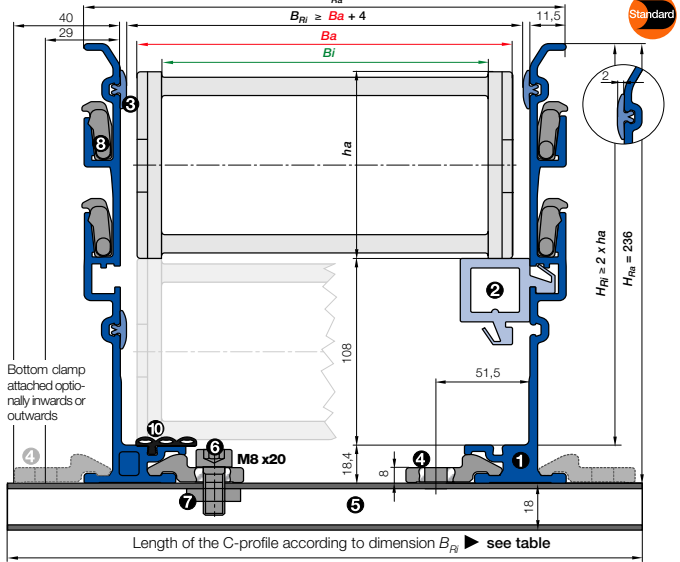


▶ Chapter 10



▶ page 7.317

- Ba** = Outer width e-chains* / e-tube
- Bi** = Inner width e-chains* / e-tube
- ha** = Outer height e-chains* / e-tube
- H_{Ri}** = Inner trough height
- H_{Ra}** = Outer trough height
- B_{Ri}** = Inner trough width ► depends on dim. Ba
- B_{Ra}** = Outer trough width
- n_{Mon}** = Number of installation sets (left/right)
- n_{Ri}** = Number of trough sets (left/right)
- H_{Ri} ≥ 2 • ha**
- B_{Ri} ≥ Ba + 4**
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

5050.30.300.0 ► Order example

B _{Ri} attached [mm]	Part No.	
	inwards	outwards
.05 104	-	960.50.225
.06 119	-	960.50.250
.07 129	-	960.50.250
.08 141	960.50.200	960.50.275
.10 154	960.50.225	960.50.275
.11 167	960.50.225	960.50.300
.12 179	960.50.250	960.50.300
.13 192	960.50.250	960.50.325
.15 204	960.50.275	960.50.325
.16 217	960.50.275	960.50.350
.17 229	960.50.300	960.50.350
.18 242	960.50.300	960.50.375
.20 254	960.50.325	960.50.375
.21 267	960.50.325	960.50.400
.22 279	960.50.350	960.50.400
.23 292	960.50.350	960.50.425
.25 304	960.50.375	960.50.425
.26 317	960.50.375	960.50.450
.27 329	960.50.400	960.50.450
.28 342	960.50.400	960.50.475
.30 354	960.50.425	960.50.475
.31 367	960.50.425	960.50.500
.32 379	960.50.450	960.50.500
.33 392	960.50.450	960.50.525
.35 404	960.50.475	960.50.525
.36 417	960.50.475	960.50.550
.37 429	960.50.500	960.50.550
.38 442	960.50.500	960.50.575
.40 454	960.50.525	960.50.575
.41 467	960.50.525	960.50.600
.42 479	960.50.550	960.50.600
.43 492	960.50.550	960.50.625
.45 504	960.50.575	960.50.625
.46 517	960.50.575	960.50.650
.47 529	960.50.600	960.50.650
.48 542	960.50.600	960.50.675
.50 554	960.50.625	960.50.675
.51 567	960.50.625	960.50.700
.52 579	960.50.650	960.50.700
.53 592	960.50.650	960.50.725
.55 604	960.50.675	960.50.725
.60 654	960.50.725	960.50.775

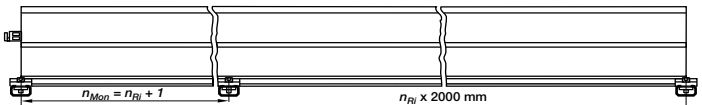


- Components, trough "Basic": ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- Components, installation set "Basic": ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 5050.30.300.0 with B_{Ri} = 345

Guide trough set (set of 2 trough side parts, incl. glide strips) without glide bar	Part No.	975.30.SL
Order text: 16 m guide trough without glide bar (8 x 2 m sections)		
Guide trough set (set of 2 trough side parts, incl. glide strips) with glide bar	Part No.	975.31.SL
Order text: 16 m guide trough with glide bar (8 x 2 m sections)		
Installation set "Basic" complete (guide trough-sets + 1)	Part No.	960.50.425
Order text: 17 installation sets "Basic"		
Module for the fixed end	Part No.	975.80
Order text: 1 set		
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No.	975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an e-chain*

With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the e-chain* by clamping onto the aluminum trough

- Quick relocation of the stationary end
- No drilling necessary ► page 9.16

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E-mail: info@igus.de



Very robust E4/4 e-chain® serie 5050 with middle strap in a steel factory. Heat and dust are no problem for the maintenance-free igus® polymer e-chain® for almost 3 years

System E4/4
Inner height: 80 mm

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5050AX and 5050HDAX

Special e-chains® for fine dust applications

Long travel of 300 m and more are for instance often found in coal conveyors. For these travel lengths, types of loads and dirt accumulations, we have developed a special e-chainsystem® with exterior, dirt-repellent stop dogs.

- Exterior stop dogs prevent the settling of dust, dirt, chips, flour, etc.
- Mounting brackets and accessories from the E4/4 series
- Also available as heavy-duty-version - Series 5050HDAX

Series 5050AX - Order example 5050AX.30.250.0 / Series 5050HDAX - Order example 5050HDAX.30.250.0
Further information: igus.de/en/5050AX or phone +49-(0) 22 03-96 49-800



► Chapter 9



► page 7.317

Price index



Series 5050HD Series R9850HD



"Heavy-Duty" version
for long travel applications



Very high
torsional rigidity



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains*: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 5050HD/R9850HD:

- For high (tensile)-charges at long travel applications
- When high torsional forces are expected
- For long-term operation in very moist environments
- Also available as rol e-chain*



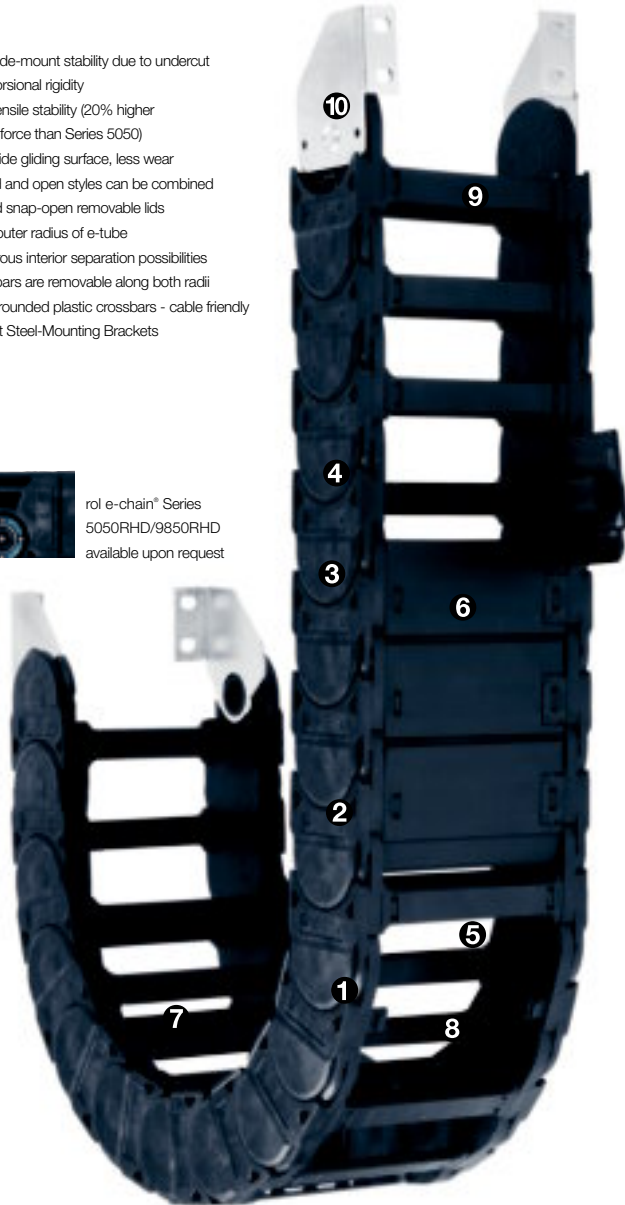
When not to use them:

- At short travels or medium additional loads
 - ▶ Series E4.80, page 7.96
- If a simple and low-cost solution is required
 - ▶ Series 15050/15150/R19850, page 7.216

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 High tensile stability (20% higher tensile force than Series 5050)
- 4 Very wide gliding surface, less wear
- 5 Closed and open styles can be combined
- 6 Hinged snap-open removable lids along outer radius of e-tube
- 7 Numerous interior separation possibilities
- 8 Crossbars are removable along both radii
- 9 Wide, rounded plastic crossbars - cable friendly
- 10 Robust Steel-Mounting Brackets




rol e-chain* Series
5050RHD/9850RHD
available upon request




Order example complete e-chain*

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 5050HD.30.300.0

 e-chain*

with 2 separators 511 assembled every 2nd link

 Interior separation

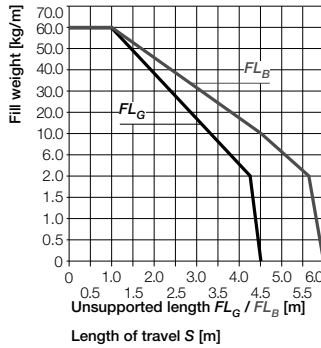
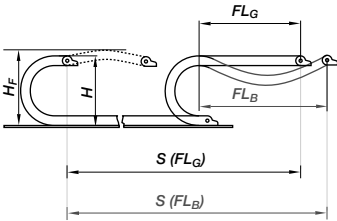
1 set 5050HD.12.E

 Mounting bracket

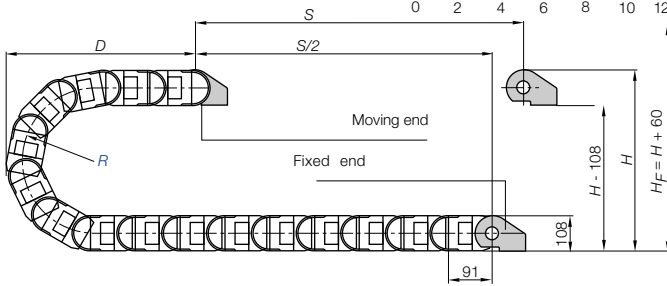


Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



- S = Length of travel
- R = Bending radius
- H = Nominal clearance height
- H_F = Required clearance height
- H_{R1} = Trough inner height
- D = Overlength e-chain* radius in final position
- $K = \pi \cdot R + \text{"safety"}$
- D_2 = Overlength - long travels, gliding
- K_2 = *Further add-on
- H_2 = *Mounting height
- *if the mounting bracket location is set lower



Pitch = 91 mm/Glided Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	200	300	350	500
H	508	708	808	1108
D	345	445	495	645
K	815	1125	1285	1755
H_2	242	242	242	242
D_2	800	1200	1550	2175
K_2	1274	2002	2457	3458

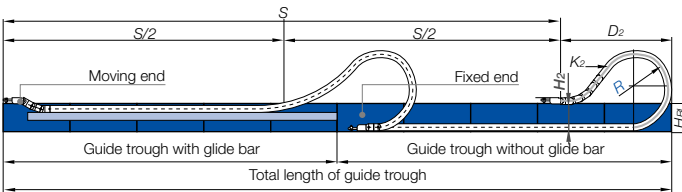


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus* if space is particularly restricted.

The required clearance height:
 $H_F = H + 60 \text{ mm}$
 (with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 500 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 500 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



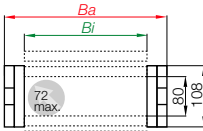
Details of material properties
 ► **page 1.38**

80
 System E4/4
 Inner height: 80 mm

Phone +49- (0) 22 03-96 49-800
 Fax +49- (0) 22 03-96 49-222



► **page 7.317**

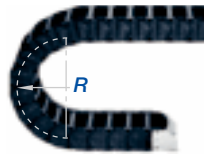


Part No. structure

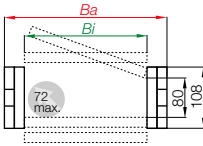
5050HD. 30. 300. 0



Serie 5050HD - e-chain® with crossbars every link



- Crossbars every link
- For highest additional loads
- For applications particularly demanding
- Can be opened from two sides

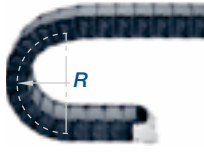


Part No. structure

9850HD. 30. 300. 0



Serie R9850HD - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable



Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®, Series 5050RHD and 9850RHD - Order example 5050RHD.30.300.0
Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



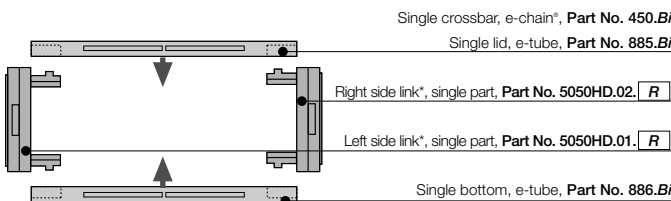
Part No.	[mm]	<i>Bi</i>	<i>Ba</i>	5050HD	R9850HD
		[mm]	[mm]	[kg/m]	[kg/m]
5050HD.05.....	<input type="checkbox"/> .0	50	110	≈ 6,65	-
5050HD.06.....	<input type="checkbox"/> .0	65	125	≈ 6,74	-
5050HD/9850HD.07...	<input type="checkbox"/> .0	75	135	≈ 6,81	≈ 7,25
5050HD.08.....	<input type="checkbox"/> .0	87	147	≈ 6,89	-
5050HD/9850HD.10...	<input type="checkbox"/> .0	100	160	≈ 6,99	≈ 7,55
5050HD.11.....	<input type="checkbox"/> .0	112	172	≈ 7,10	-
5050HD/9850HD.12...	<input type="checkbox"/> .0	125	185	≈ 7,18	≈ 7,91
5050HD.13.....	<input type="checkbox"/> .0	137	197	≈ 7,32	-
5050HD/9850HD.15...	<input type="checkbox"/> .0	150	210	≈ 7,35	≈ 8,29
5050HD.16.....	<input type="checkbox"/> .0	162	222	≈ 7,47	-
5050HD/9850HD.17...	<input type="checkbox"/> .0	175	235	≈ 7,60	≈ 8,60
5050HD.18.....	<input type="checkbox"/> .0	187	247	≈ 7,71	-
5050HD/9850HD.20...	<input type="checkbox"/> .0	200	260	≈ 7,77	≈ 8,91
5050HD.21.....	<input type="checkbox"/> .0	212	272	≈ 7,84	-
5050HD.22.....	<input type="checkbox"/> .0	225	285	≈ 7,91	-
5050HD.23.....	<input type="checkbox"/> .0	237	297	≈ 8,02	-
5050HD/9850HD.25...	<input type="checkbox"/> .0	250	310	≈ 8,13	≈ 9,64
5050HD.26.....	<input type="checkbox"/> .0	262	322	≈ 8,22	-
5050HD/9850HD.27...	<input type="checkbox"/> .0	275	335	≈ 8,32	≈ 10,00
5050HD.28.....	<input type="checkbox"/> .0	287	347	≈ 8,38	-
5050HD/9850HD.30...	<input type="checkbox"/> .0	300	360	≈ 8,53	≈ 10,30
5050HD.31.....	<input type="checkbox"/> .0	312	372	≈ 8,57	-
5050HD.32.....	<input type="checkbox"/> .0	325	385	≈ 8,67	-
5050HD.33.....	<input type="checkbox"/> .0	337	397	≈ 8,79	-
5050HD/9850HD.35...	<input type="checkbox"/> .0	350	410	≈ 8,99	≈ 11,00
5050HD.36.....	<input type="checkbox"/> .0	362	422	≈ 8,90	-
5050HD.37.....	<input type="checkbox"/> .0	375	435	≈ 9,00	-
5050HD.38.....	<input type="checkbox"/> .0	387	447	≈ 9,11	-
5050HD/9850HD.40...	<input type="checkbox"/> .0	400	460	≈ 9,38	≈ 12,00
5050HD.41.....	<input type="checkbox"/> .0	412	472	≈ 9,31	-
5050HD.42.....	<input type="checkbox"/> .0	425	485	≈ 9,60	-
5050HD.43.....	<input type="checkbox"/> .0	437	497	≈ 9,44	-
5050HD.45.....	<input type="checkbox"/> .0	450	510	≈ 9,55	-
5050HD/9850HD.46...	<input type="checkbox"/> .0	462	522	≈ 9,72	≈ 12,47
5050HD.47.....	<input type="checkbox"/> .0	475	535	≈ 9,76	-
5050HD.48.....	<input type="checkbox"/> .0	487	547	≈ 10,01	-
5050HD.50.....	<input type="checkbox"/> .0	500	560	≈ 10,11	-
5050HD.51.....	<input type="checkbox"/> .0	512	572	≈ 10,02	-
5050HD.52.....	<input type="checkbox"/> .0	525	585	≈ 10,19	-
5050HD.53.....	<input type="checkbox"/> .0	537	597	≈ 10,29	-
5050HD.55.....	<input type="checkbox"/> .0	550	610	≈ 10,71	-
5050HD.60.....	<input type="checkbox"/> .0	600	660	≈ 10,94	-

Available bending radii

R [mm] 200 300 350 500

Supplement Part No. with required radius. Example: 5050HD.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link · Links/m = 11



Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order exponent: Full e-tube made of HT*:

9850HD.40.350.0.HT

Lids made of HT: **9850HD.40.HTE.350.0**

*for long travels upon request

Further Information:
www.igus.de/en/HT

Delivery time
up to 4 weeks!

System E4/4
Inner height: 80 mm

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Extension links for extremely wide e-chains*
▶ upon request



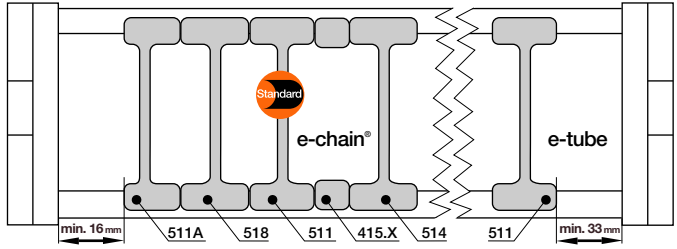
Extender crossbar for large diameter hoses ▶ page 7.362

Part No. e-chain* - links, single parts

View from the fixed point of the e-chain/e-tube



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (e-tube) and 16 mm (e-chain)!



Vertical separator 501



Spacer 405.XX



Locking separator 504



Locking separator 508



Asymmetric separator 501A

Vertical separator for e-chains*

unassembled	501
assembled	511



Spacer*

unassembled	405.XX
assembled	415.XX



Locking separator for e-chains*

unassembled	504
assembled	514



Locking separator for e-chains*

unassembled	508
assembled	518



Asymmetric separator for e-chains*

unassembled	501A
assembled	511A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 501 for e-chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

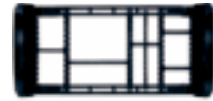
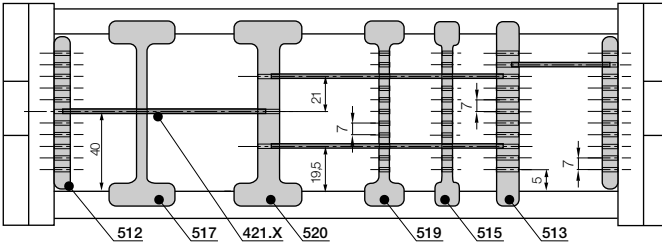
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for e-chains® 504-** with increased retention force for applications exposed to very high humidity or extreme loads. If locking separators are used, the e-chain® is more difficult to open

● The **locking separator for e-chains® 508** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the e-chain®.

● **Asymmetric separator 501A for e-chains®** (not for e-tubes) with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters, e-chains* and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 502, middle plates 503 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments).

● Locking vertical separator 510 combined with shelves. Triple slots (only for e-chains*).

● Locking separator 507 slotted - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● Slotted separators 505 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 509 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for e-chains*/e-tubes	
unassembled	502
assembled	512

Middle plate for e-chains*/e-tubes	
unassembled	503
assembled	513

Locking vertical separator for e-chains*	
unassembled	510
assembled	520

Locking separator for e-chains*	
unassembled	507
assembled	517

Slotted separator for e-chains*/e-tubes	
unassembled	505
assembled	515

Open slotted separator for e-chains*/e-tubes	
unassembled	509
assembled	519

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



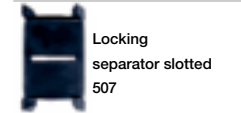
Side plate 502



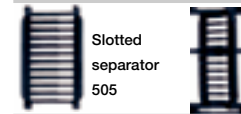
Middle plate 503



Locking vertical separator 510



Locking separator slotted 507



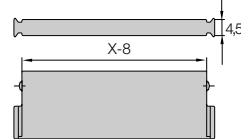
Slotted separator 505



Open slotted separator 509



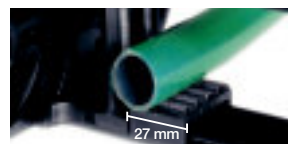
Shelf 420.X



Additional elements for interior separation

Rollclip	
unassembled	489.27
assembled	490.27

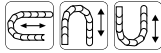
Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



System E4/4
Inner height: 80 mm

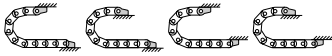
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Fax +49- (0) 22 03-96 49-222





Option steel - pivoting

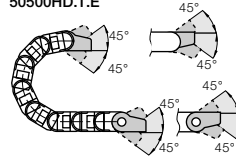
- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive



Possible installation conditions -

Further installation angles ► installation sketch

Moving end
50500HD.1.E



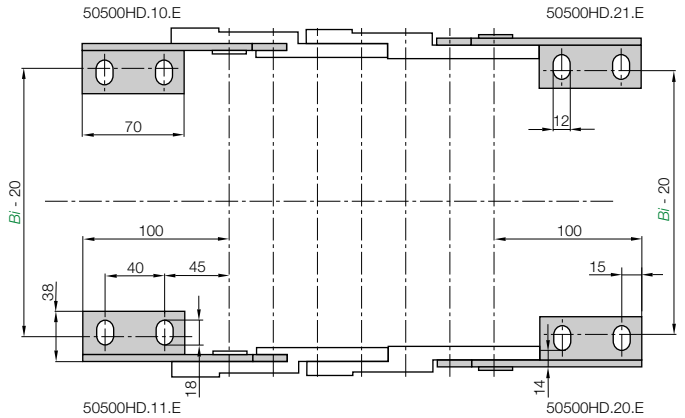
Fixed end
50500HD.2.E

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igus® GmbH
51147 Cologne

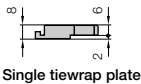
Moving end
50500HD.1.E

Fixed end
50500HD.2.E



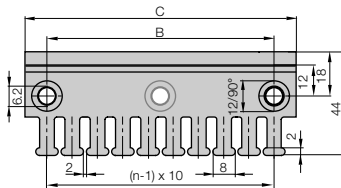
Part No.	Mounting bracket
50500HD.12.E	Full set, 4 parts, 2 with pin / 2 with bore
50500HD.1.E	Mounting bracket moving end, 1 part left / right
50500HD.2.E	Mounting bracket fixed end, 1 part left / right

E4/4 | Series 5050HD-R9850HD | Accessories | Strain Relief



Single tie-wrap plate

Shown assembled



Tie-wrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**

Tie-wrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

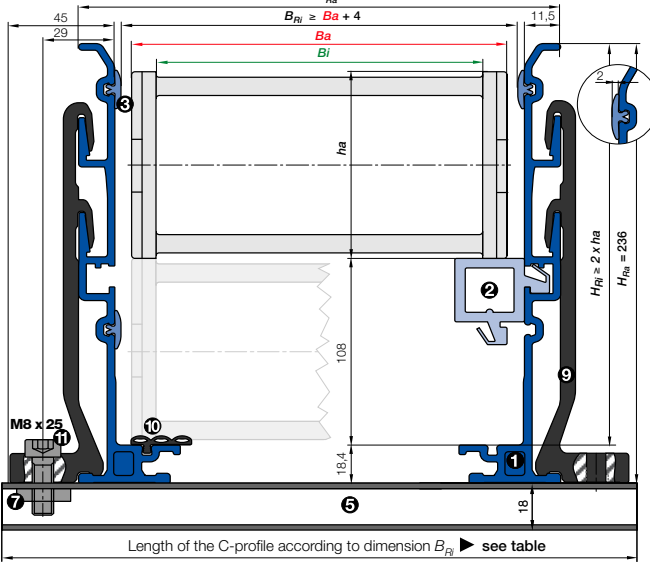
(- = no / + = yes)

Internet: www.igus.eu
E-mail: info@igus.de

Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm
 Aluminum "SuperTrough" | "Heavy-Duty" Version



5050HD
 R9850HD



- B_a = Outer width e-chains / e-tube
 B_i = Inner width e-chains / e-tube
 h_a = Outer height e-chains / e-tube
 H_{Ri} = Inner trough height
 H_{Ra} = Outer trough height
 B_{Ri} = Inner trough width ▶ depends on dim. B_a
 B_{Ra} = Outer trough width
 n_{Mon} = Number of installation sets (left/right)
 n_{Ri} = Number of troughs sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$**
 $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
 - = Installation set "Basic" ● = C-profile

Installation set Heavy-Duty with C-profile

5050HD.30.300.0 ▶ Order example

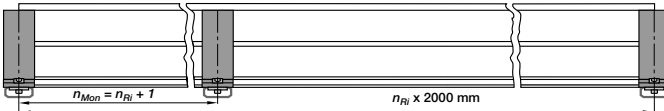
B_{Ri} [mm]	Part No. assembled
.05	114 975.50.250
.06	129 975.50.250
.07	139 975.50.275
.08	151 975.50.275
.10	164 975.50.300
.11	176 975.50.300
.12	189 975.50.325
.13	201 975.50.325
.15	214 975.50.350
.16	226 975.50.350
.17	239 975.50.375
.18	251 975.50.375
.20	264 975.50.400
.21	276 975.50.400
.22	289 975.50.425
.23	301 975.50.425
.25	314 975.50.450
.26	326 975.50.450
.27	339 975.50.475
.28	351 975.50.475
.30	364 975.50.500
.31	376 975.50.500
.32	389 975.50.525
.33	401 975.50.525
.35	414 975.50.550
.36	426 975.50.550
.37	439 975.50.575
.38	451 975.50.575
.40	464 975.50.600
.41	476 975.50.600
.42	489 975.50.625
.43	501 975.50.625
.45	514 975.50.650
.46	526 975.50.650
.47	539 975.50.675
.48	551 975.50.675
.50	564 975.50.700
.51	576 975.50.700
.52	589 975.50.725
.53	601 975.50.725
.55	614 975.50.750
.60	664 975.50.800



- Components, trough "Heavy Duty":** 1 Trough side parts, aluminum, 2 m 2 Glide bar, plastic, 2 m 3 Glide strips, plastic, 2 m (without glide strips on request) 10 Optional: Silencer profile, rubber
- Components, installation set "Heavy Duty":** 5 C-profile, steel galvanized 7 Sliding nut M6 9 Installation angle bracket "Heavy Duty", Aluminium 11 Screw M8 x 25

Order example: Length of travel 30 m - Center mounted for Series 5050HD.30.300.0 with $B_{Ri} = 364$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **975.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **975.31.SL**
- Installation set "Heavy Duty" complete (guide trough-sets + 1)
Order text: 17 installation sets "Heavy Duty" Part No. **975.50.500**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: Part No. **975.30.SLA**



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**

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▶ Chapter 10



▶ Chapter 9



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