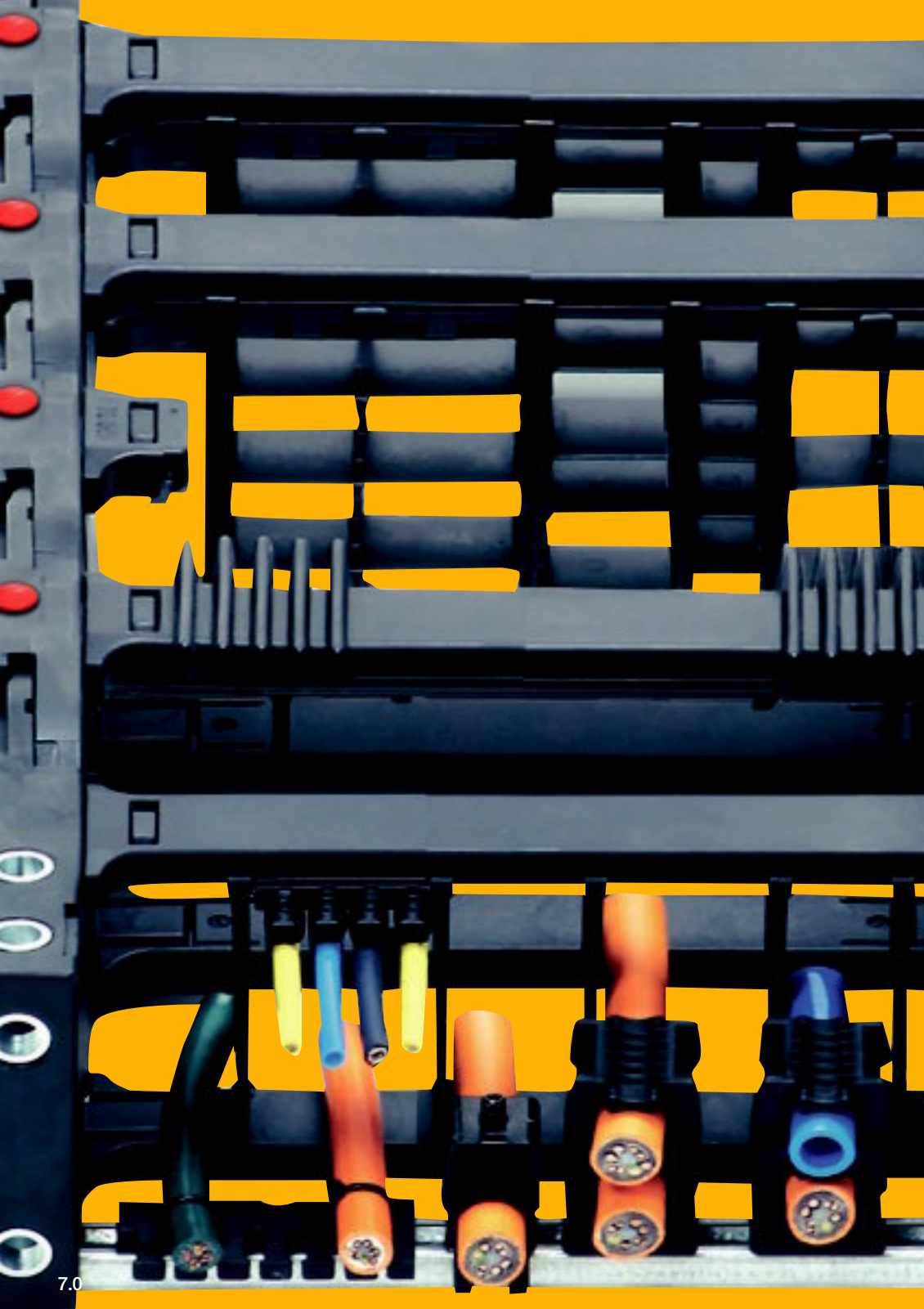




E4

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

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



from page 7.6

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


from page 7.156

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!


from page 7.250

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.


from page 7.312

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

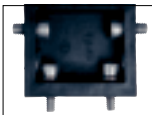
New generation interior separation - Standard for new designs

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

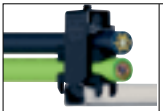
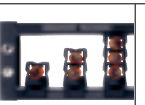
Previous interior separation - still available

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

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

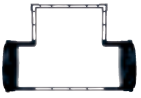
chainfix strain relief elements

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

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

Additional features ► use product link on each page for details

 QuickLock crossbar	 Extension links - for extremely wide e-chains®	 Extender crossbars for hosed applications	 Hinged crossbars	 snapclip	 autoglide crossbars

Application Profile

E4 System	E4.1	E4/light	E4/00	E4/4
Application	Standard			
High tensile forces	++	o	+	+
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

++ very well-suited
+ well-suited
o conditionally suitable
– not suitable





E4.1

The Standard of the E4 program!

igus® e-chains® and e-tubes
for allmost all applications

E4.1 - ONE e-chain® series for allmost 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 repellant, 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

Clean-Room — Cleanroom test upon request

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

EX — 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





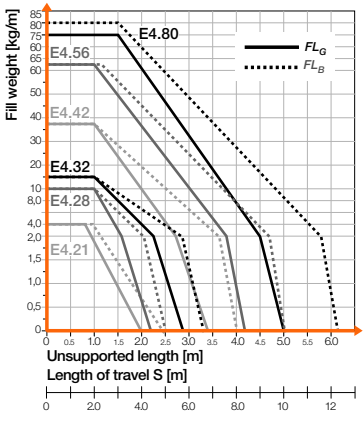
The E4.42 Series in a machine tool, completely assembled with igus® chainflex® cables

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



Content overview, selection table and assembly instructions ▶ page 7.14

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®

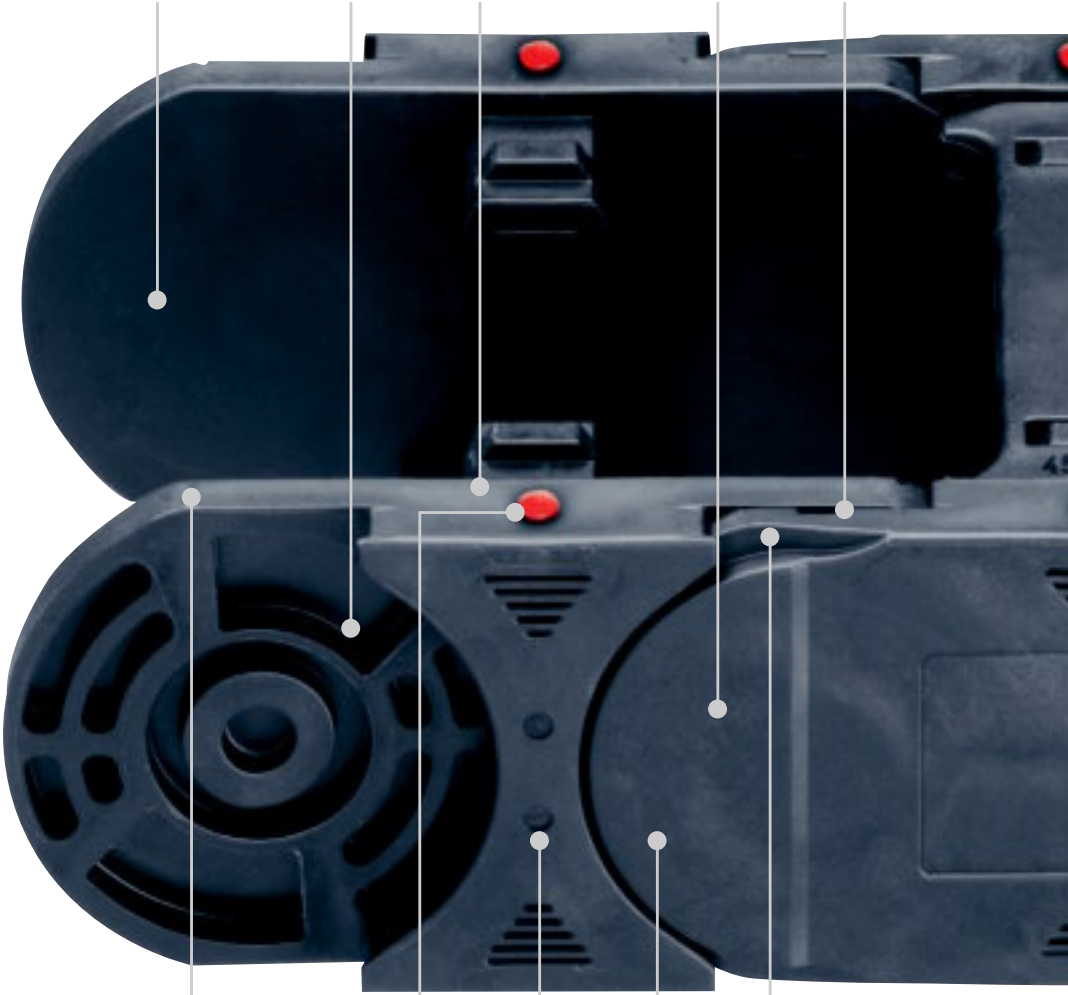
Smooth, cable-friendly inner surfaces

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

Stable crossbars with double locking

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

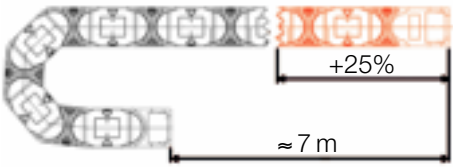


Cable-friendly, rounded crossbar

Vertical stop dog system for larger unsupported lengths

Still more unsupported length with the igus® XXL plastic*



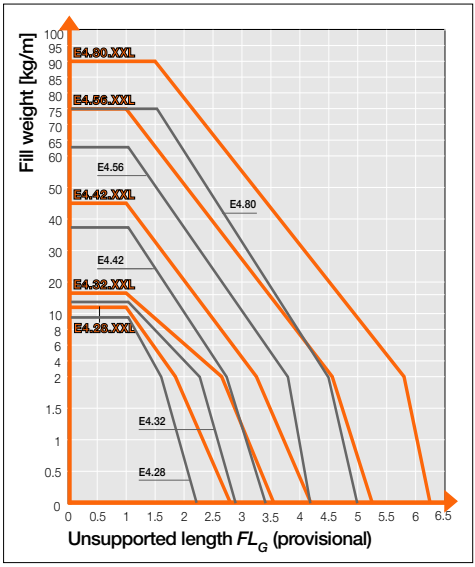


Up to 25% more unsupported length

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.

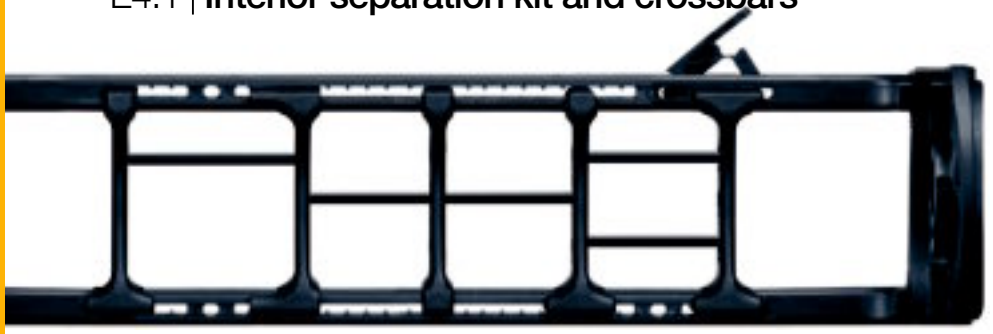
- Larger unsupported lengths
- Higher fill weights
- Eliminates guide troughs and supports
- Less space requirement

*optional upon request



For detailed information:
www.igus.de/en/XXL-Material

E4.1 | Interior separation kit and crossbars

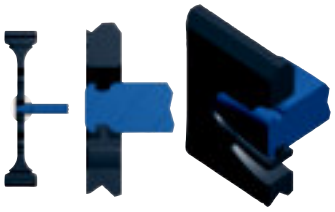




Realize a better separation, with fewer, standardized parts

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 continous 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**



Cables last up to 4 times longer

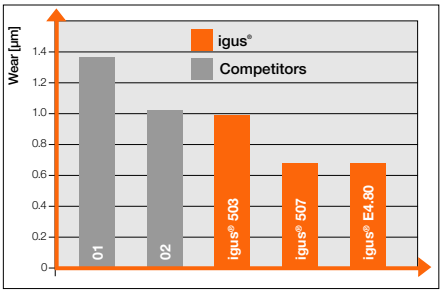
The new separators can increase cycle life of cables by a factor of 4 - their rounded base ensures a smooth junction to the crossbar and avoids edges, which could increase cable wear. A strong force closure fit for e-chains® and e-tubes. Tests in the igus® lab have shown the lowest cable wear in e-chains®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



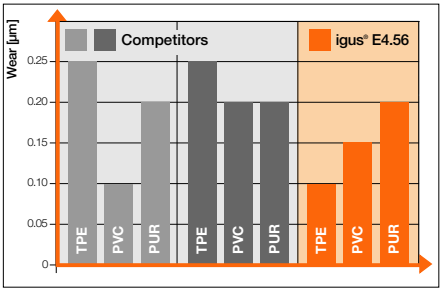
Longer life with Polymer Crossbars

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.

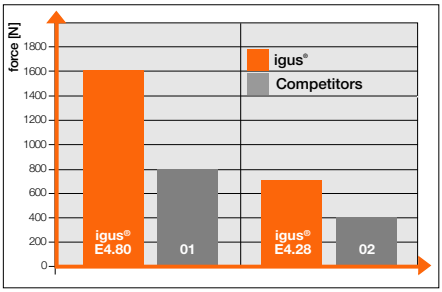
Cable wear tests at igus® lab



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



Crossbars every link
for particulary demanding applications

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
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

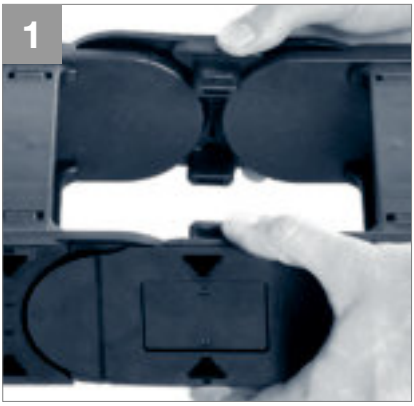
H4.32	32	50 - 400	73 - 423	54	63 - 300	3,30	**7.42**
H4.42	42	50 - 400	76 - 426	64	75 - 350	4,00	**7.60**
H4.56	56	50 - 600	84 - 634	84	135 - 500	5,00	**7.78**
H4.80	80	50 - 600	100 - 650	108	150 - 1000	6,20	**7.96**



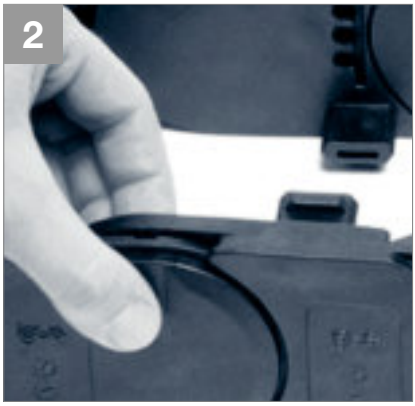
e-tubes
fully enclosed, excellent cable protection

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**

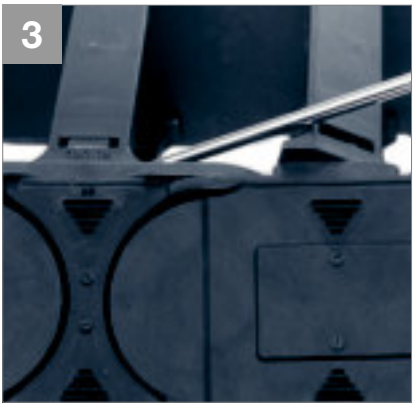
Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods



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



...attach an outer side link between



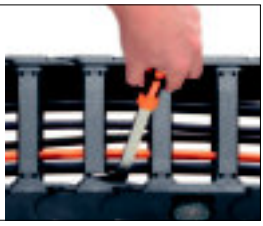
Assemble crossbars - push down and snap in by using a screwdriver



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**

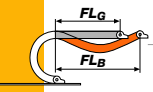


Technical data overview ▶next page

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



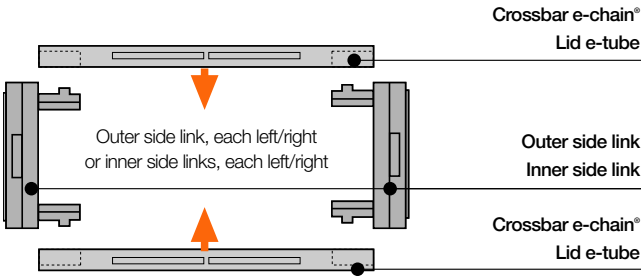
Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

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

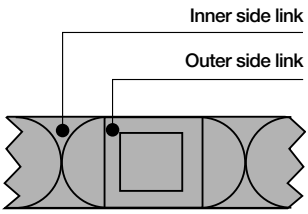
Installation methods overview, maximum travels - E4.1

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



Inner-/outer-link design



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

* 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



Stable due to undercut design, small inner height

When to use Series E4.21:

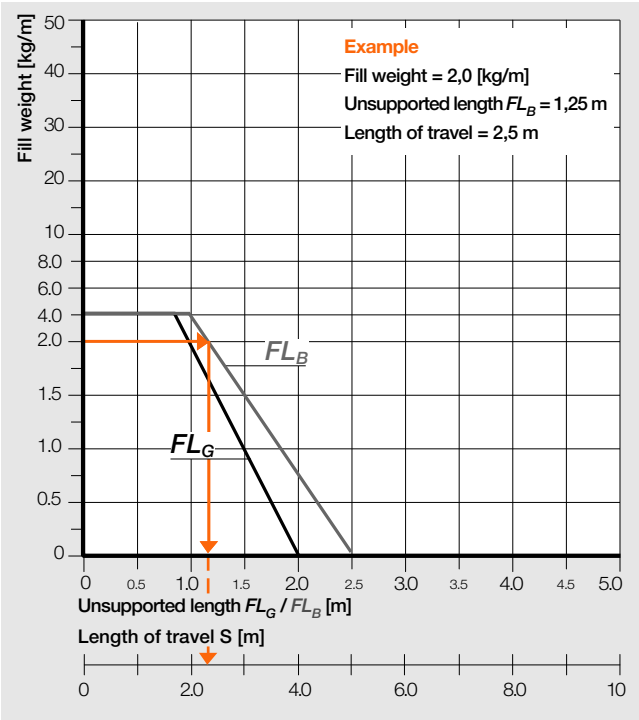
- If a robust e-chain® with an inner height of 21 mm is required
- If inner widths up to 120 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 4,0 kg/m
- For long travels up to 120 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options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

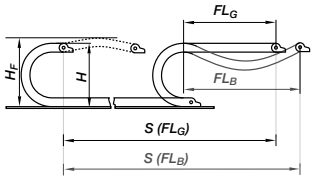
When to use a different igus® Series

- 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





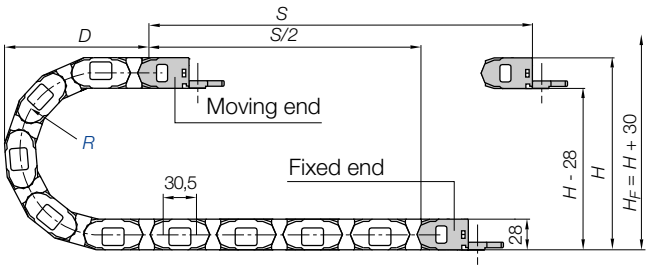
Unsupported applications

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
$K = \pi \bullet R +$ "safety"



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

Part No. crossbars every link	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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

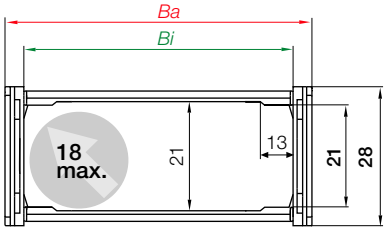
Supplement Part No. with required radius *(R)*. Example: **E4.21.120.100.0**

Order key

E4 .21. 120. 100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



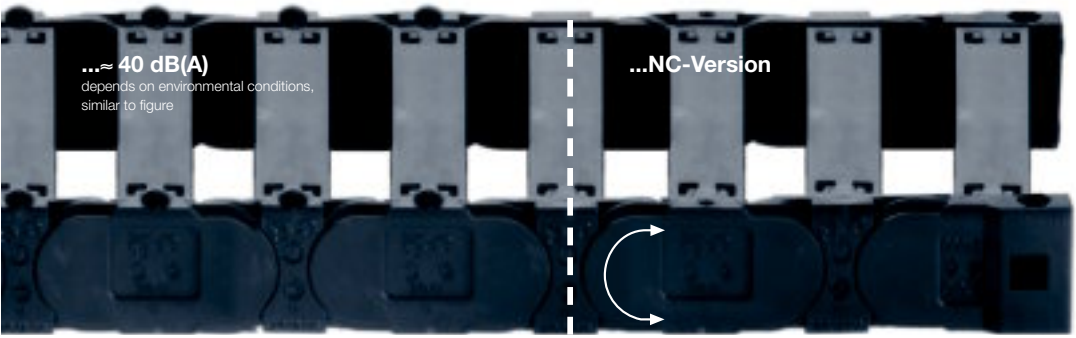
E4.21.120.100.0 = e-chain® with **crossbars every link**, inner width ***Bi*** 120 mm, radius ***R*** 100 mm, color black

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)

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 | Without pretension

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

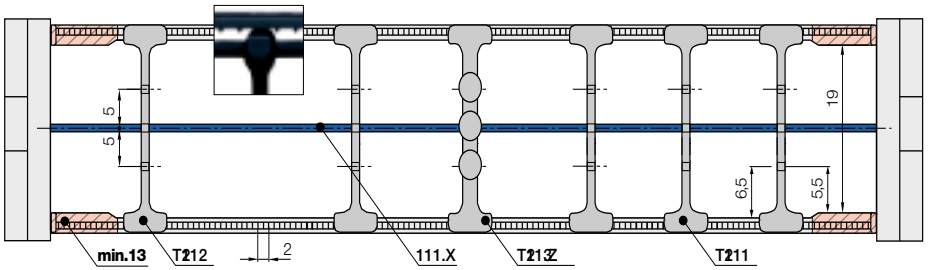
Available bending radii ***R*** [mm] 038 | 048 | 063 | 075 | 100 | 150 | 200

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

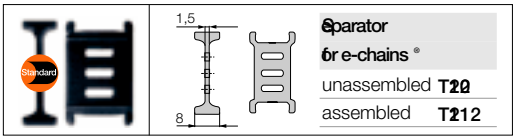
For e-chains® with noise dampening pads supplement Part No. with required index "S"
Example: **Part No. ES4.21.120.100.0** = e-chain® (crossbars every link) with noise dampening
For NC-e-chains® without pretension supplement Part No. with required index "NC"
Example: **Part No. E4.21.120.100.0.NC** =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

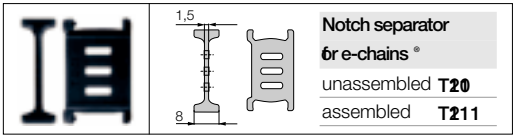
e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

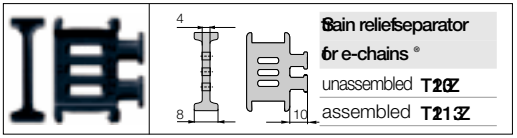
Full and half e-tubes with an inner height of 21 mm:
E2/000 Series 1450/1480 ▶ from page 5.142

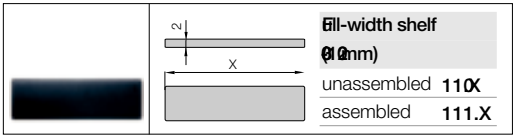


Note e-chain®: Please observe a lateral spacing of **13 mm** to the side links!
In the standard configuration separators are assembled every 2 nd e-chain® link









Standard separator T210

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

Notch separator T200

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

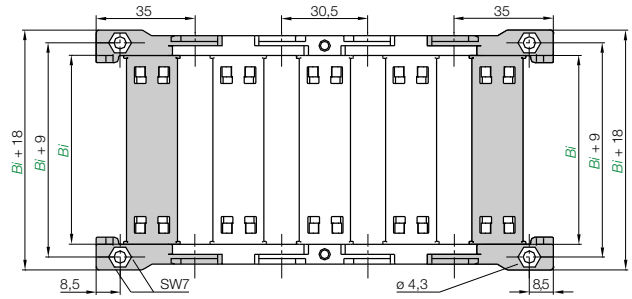
Width X [mm]	unassembled	assembled
030	110.30	111.30
040	110.40	111.40
050	110.50	111.50
060	110.60	111.60
070	110.70	111.70
080	110.80	111.80
090	110.90	111.90
100	110.10	111.10
110	110.110	111.110
120	110.120	111.120

E4.1 | **Series E4.21** | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment

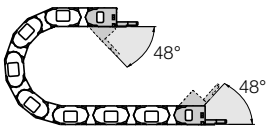
Fixed end
E4.210...1.1

Moving end
E4.210...1.2





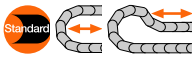
Moving end



Fixed end

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)

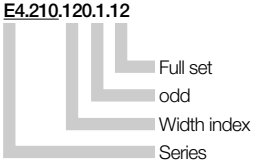
Special feature mounting brackets: Series E4.21

- 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 srew (M4), is consequently possible





Part No. structure (pivoting)
E4.210.120.1.12

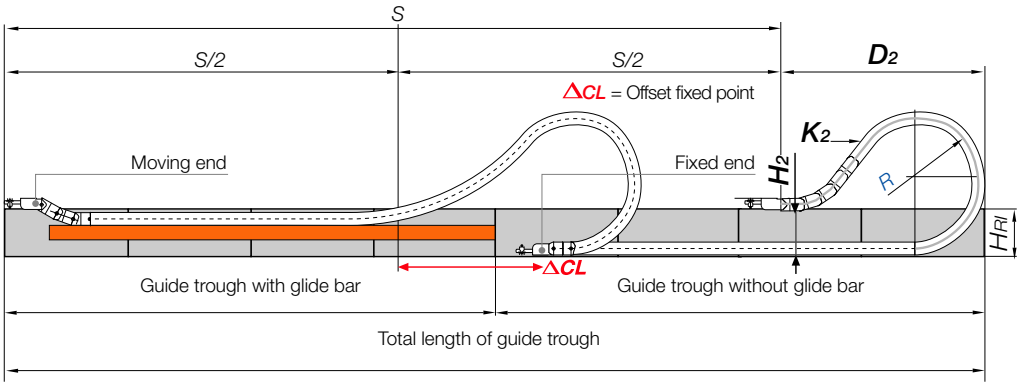


Single-part order:
Mounting bracket **Moving end**
E4.210.120.1.2 (odd number of links)
Mounting bracket **Fixed end**
E4.210.120.1.1 (odd number of links)

Strain relief, e.g. clamps, 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. 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** = $S/2 + K$

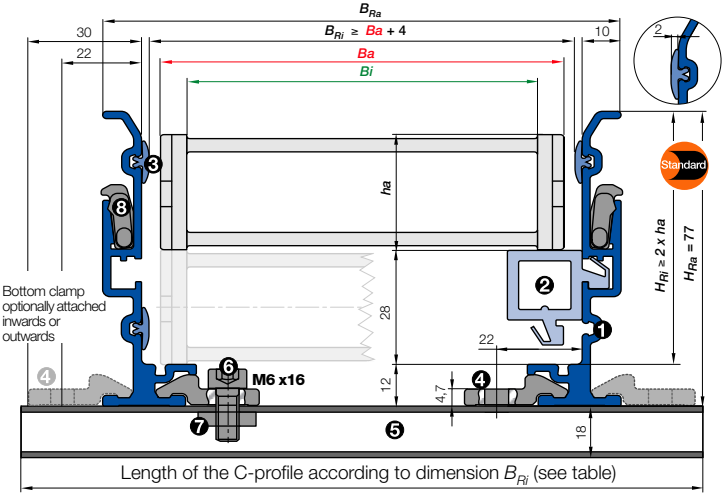
R	038	048	063	075	100	150	200
H_2	76	96	126	152	135	135	135
D_2^{+25}	085	095	110	120	490	530	665
K_2	185	215	260	300	782	920	1104
ΔCL	–	–	–	–	270	370	470

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) 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

Part No. 972.30.SL | **972.31.SL** | Trough height: 117 mm

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	48	–	**960.30.150**
.040	58	**960.30.125**	**960.30.150**
.050	68	**960.30.125**	**960.30.175**
.060	78	**960.30.125**	**960.30.175**
.070	88	**960.30.150**	**960.30.175**
.080	98	**960.30.150**	**960.30.200**
.090	108	**960.30.175**	**960.30.200**
.100	118	**960.30.175**	**960.30.225**
.110	128	**960.30.175**	**960.30.225**
.120	138	**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**

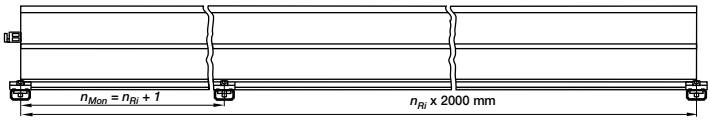
Guide trough set with glide bar (set of 2 trough side parts, incl. glide strips)

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

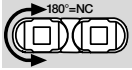


Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

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 classified 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 2nd 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

- Standard color black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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)

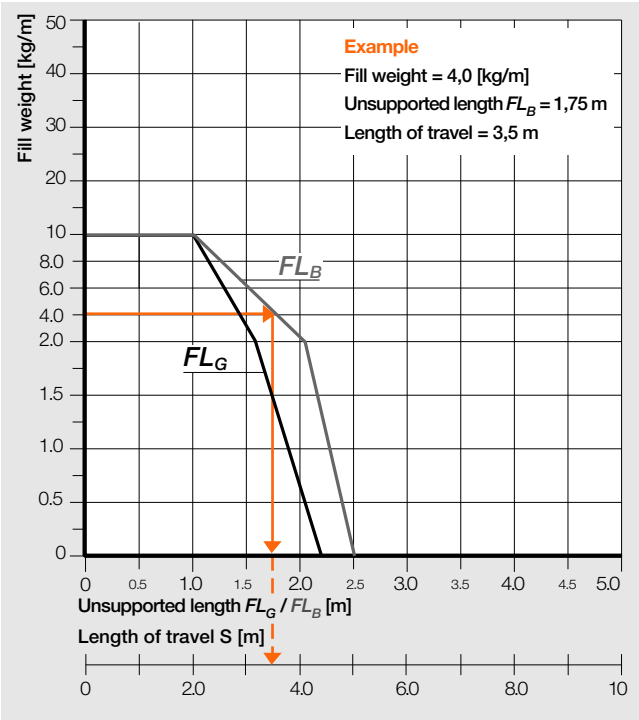
►**Series E6.29, page 8.40**

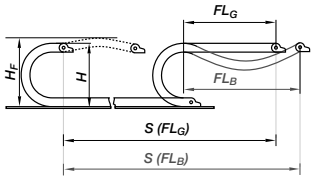
- If a less stable e-chain® can be used for economical reasons

►**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





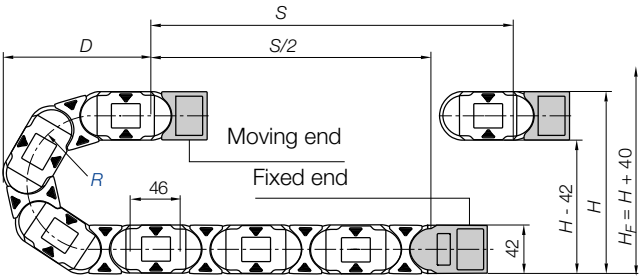
Unsupported applications

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 7.16**

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 = $\pi \bullet R +$ "safety"



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

Part No. crossbars every link	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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)

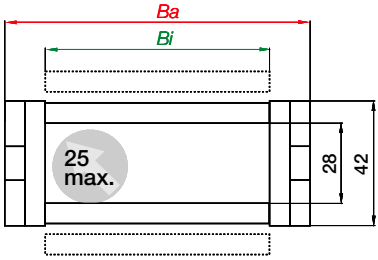
Order key for all types

E4 .28. 100. 100. 0 e-chain® **(crossbars every link)**

R4 .28. 100. 100. 0 e-chain® **(crossbars every 2nd link)**

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



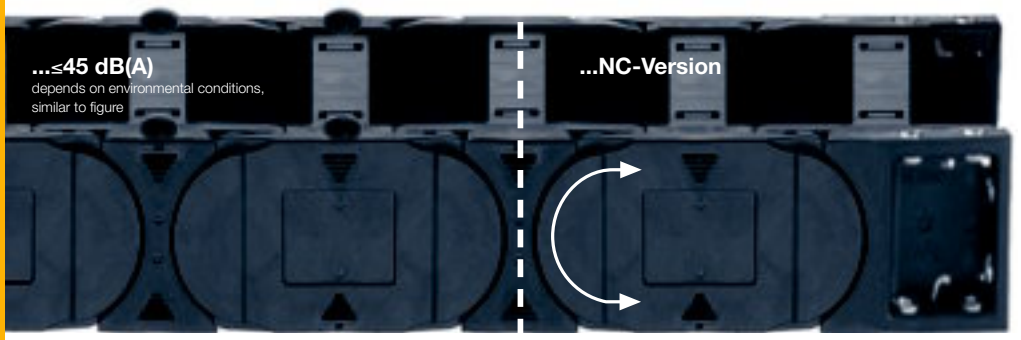
E4.28.100.100.0 = e-chain® with **crossbars every link**, inner width ***Bi*** 100 mm, radius ***R*** 100 mm, color black

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



Noise dampening | ≤45 dB(A)

With pads Crossb. e-tube every: link	fully enclosed	Bi [mm]
ES4 –	.28.040.R.0	40
ES4 RS4	.28.050.R.0	50
ES4 –	.28.062.R.0	62
ES4 –	.28.070.R.0	70
ES4 RS4	.28.075.R.0	75
ES4 –	.28.087.R.0	87
ES4 RS4	.28.100.R.0	100
ES4 RS4	.28.125.R.0	125

With pads Crossb. e-tube every: link	fully enclosed	Bi [mm]
ES4 RS4	.28.150.R.0	150
ES4 RS4	.28.175.R.0	175
ES4 RS4	.28.200.R.0	200
ES4 RS4	.28.225.R.0	225
ES4 RS4	.28.250.R.0	250
ES4 –	.28.275.R.0	275
ES4 RS4	.28.300.R.0	300

NC-Version | Without pretension

NC-Version crossb. e-tube every: link	fully enclosed	Bi [mm]
E4 –	.28.040.R.0.NC	40
E4 R4	.28.050.R.0.NC	50
E4 –	.28.062.R.0.NC	62
E4 –	.28.070.R.0.NC	70
E4 R4	.28.075.R.0.NC	75
E4 –	.28.087.R.0.NC	87
E4 R4	.28.100.R.0.NC	100
E4 R4	.28.125.R.0.NC	125

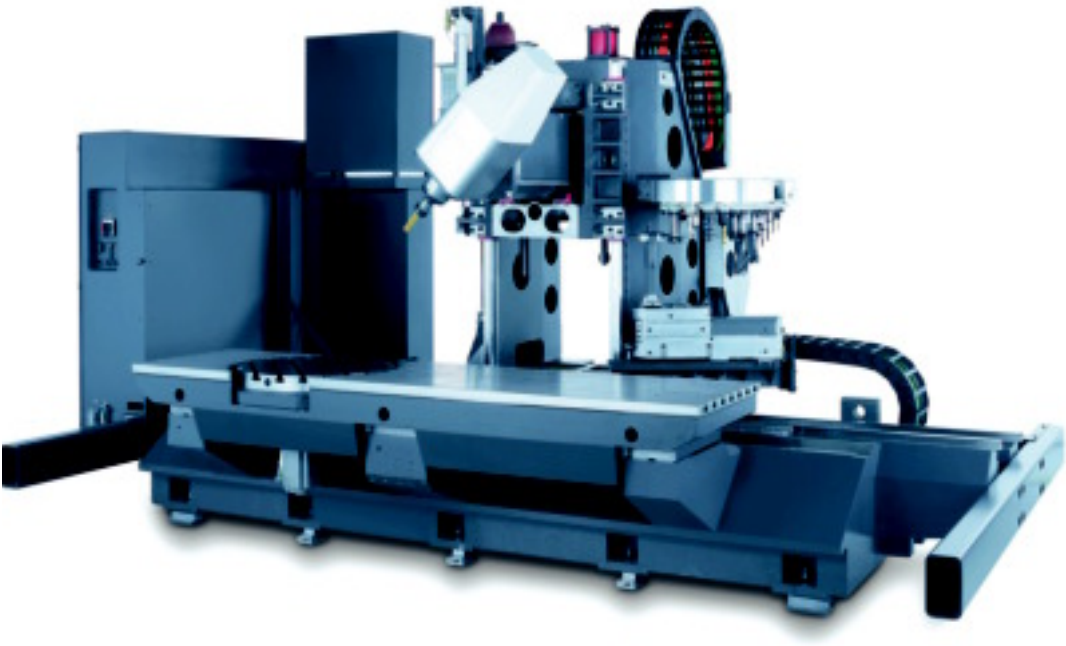
NC-Version crossb. e-tube every: link	fully enclosed	Bi [mm]
E4 R4	.28.150.R.0.NC	150
E4 R4	.28.175.R.0.NC	175
E4 R4	.28.200.R.0.NC	200
E4 R4	.28.225.R.0.NC	225
E4 R4	.28.250.R.0.NC	250
E4 –	.28.275.R.0.NC	275
E4 R4	.28.300.R.0.NC	300

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**

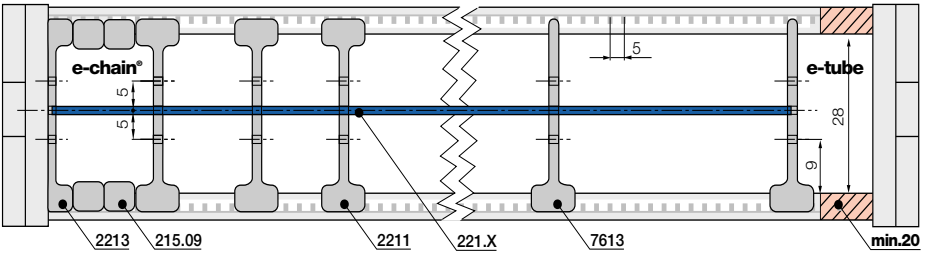
For e-chains® with noise dampening pads supplement Part No. with required index "S"
Example: **Part No. ES4.28.100.100.0** = e-chain® (crossbars every link) with noise dampening
For NC-e-chains® without pretension supplement Part No. with required index "NC"
Example: **Part No. E4.28.100.100.0.NC** = 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



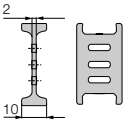
Due to the "undercut design" igus® E4.1 series feature high lateral stability.
High lateral accelerations of up to 8m/s² can be managed on this milling maschine for bicycles

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



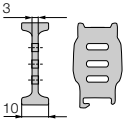
Note e-tube: Please observe a lateral spacing of **20 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!





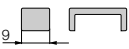
Separator for e-chains®	
unassembled	**2201**
assembled	**2211**





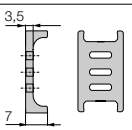
Separator for e-tubes	
unassembled	**7603**
assembled	**7613**





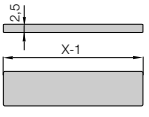
Spacer* for e-chains®	
unassembled	**205.09**
assembled	**215.09**





Side plate for e-chains®	
unassembled	**2203**
assembled	**2213**





Full-width shelf (40-200 mm)	
unassembled	**220.X**
assembled	**221.X**

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 7603 (e-tubes only)

For e-tubes R4.28.

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 2203 (e-chains® only)

Works like separator.
Allows modular shelving close to the side links.

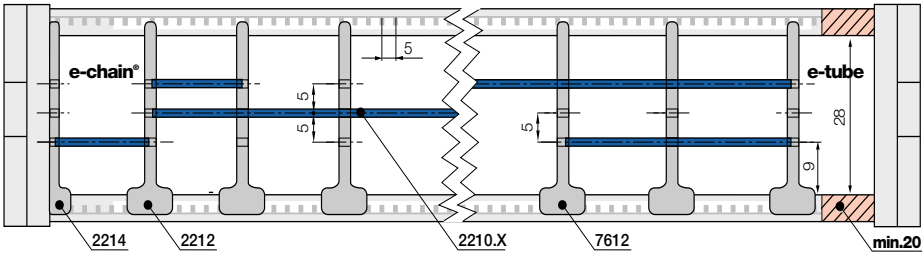
Full-width shelf 220.X

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).

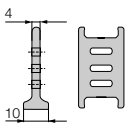
Full-width shelf

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**			

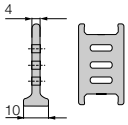
Option 2 | Shelves



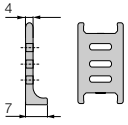
Note e-tube: Please observe a lateral spacing of **20 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!

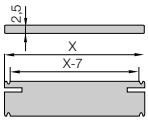
Middle plate for e-chains®	
unassembled	**2202**
assembled	**2212**

Middle plate for e-tubes	
unassembled	**7602**
assembled	**7612**

Side plate for e-chains®	
unassembled	**2204**
assembled	**2214**

Shelf (18-149 mm)	
unassembled	**2220.X**
assembled	**2210.X**

Middle plate 2202 (e-chains® only)

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

Middle plate 7602 (e-tubes only)

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

Side plate 2204 (e-chains® only)

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

Shelf 2220.X

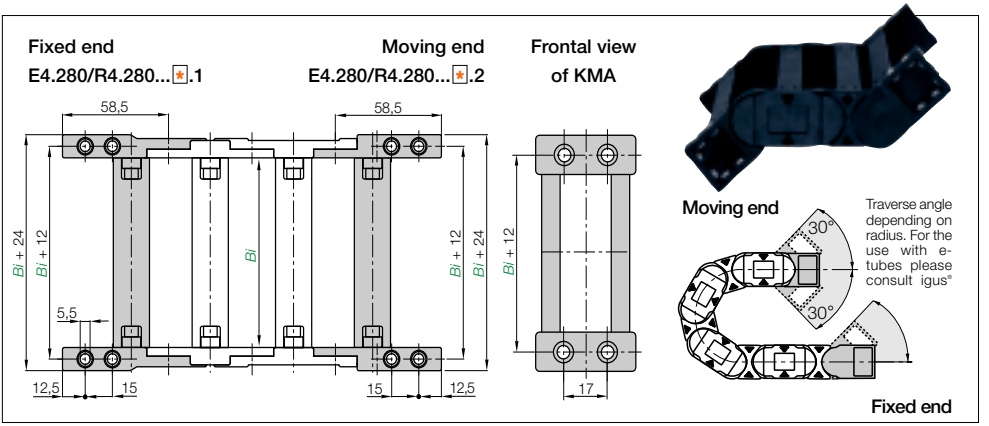
For horizontal separation. Shelves of various widths can be arranged at 3 different heights (in 5 mm increments).

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**	**2210.088**
023	**2200.23**	**2210.23**	048	**2200.48**	**2210.48**	099	**2200.99**	**2210.099**
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**

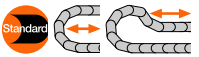
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set pivoting			*Bi* [mm]
040. ▶	E4.280. –	040.*.12		40
050. ▶	E4.280. R4.280.	050.*.12		50
062. ▶	E4.280. –	062.*.12		62
070. ▶	E4.280. –	070.*.12		70
075. ▶	E4.280. R4.280.	075.*.12		75
087. ▶	E4.280. –	087.*.12		87
100. ▶	E4.280. R4.280.	100.*.12		100
125. ▶	E4.280. R4.280.	125.*.12		125

Width index	Part No. full set pivoting			*Bi* [mm]
150. ▶	E4.280. R4.280.	150.*.12		150
175. ▶	E4.280. R4.280.	175.*.12		175
200. ▶	E4.280. R4.280.	200.*.12		200
225. ▶	E4.280. R4.280.	225.*.12		225
250. ▶	E4.280. R4.280.	250.*.12		250
275. ▶	E4.280. –	275.*.12		275
300. ▶	E4.280. R4.280.	300.*.12		300



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

Part No. structure (pivoting)

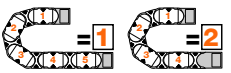
E4.280.100.2.12

- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket **Moving end**
E4.280.100.2.2 (even number of links)
Mounting bracket **Fixed end**
E4.280.100.2.1 (even number of links)

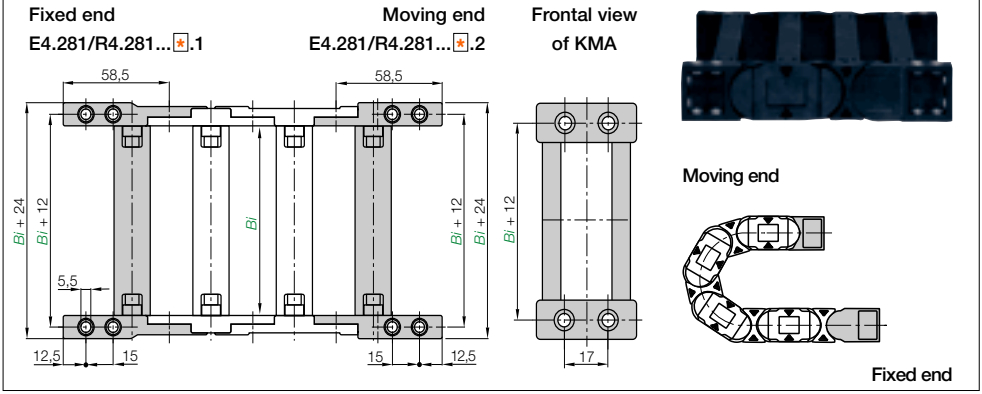
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



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

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]
040. ▶	E4.281. – 040.*.12	40
050. ▶	E4.281. R4.281. 050.*.12	50
062. ▶	E4.281. – 062.*.12	62
070. ▶	E4.281. – 070.*.12	70
075. ▶	E4.281. R4.281. 075.*.12	75
087. ▶	E4.281. – 087.*.12	87
100. ▶	E4.281. R4.281. 100.*.12	100
125. ▶	E4.281. R4.281. 125.*.12	125

Width index	Part No. full set locking	Bi [mm]
150. ▶	E4.281. R4.281. 150.*.12	150
175. ▶	E4.281. R4.281. 175.*.12	175
200. ▶	E4.281. R4.281. 200.*.12	200
225. ▶	E4.281. R4.281. 225.*.12	225
250. ▶	E4.281. R4.281. 250.*.12	250
275. ▶	E4.281. – 275.*.12	275
300. ▶	E4.281. R4.281. 300.*.12	300

- 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

- Full set
- even
- Width index
- Series

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)

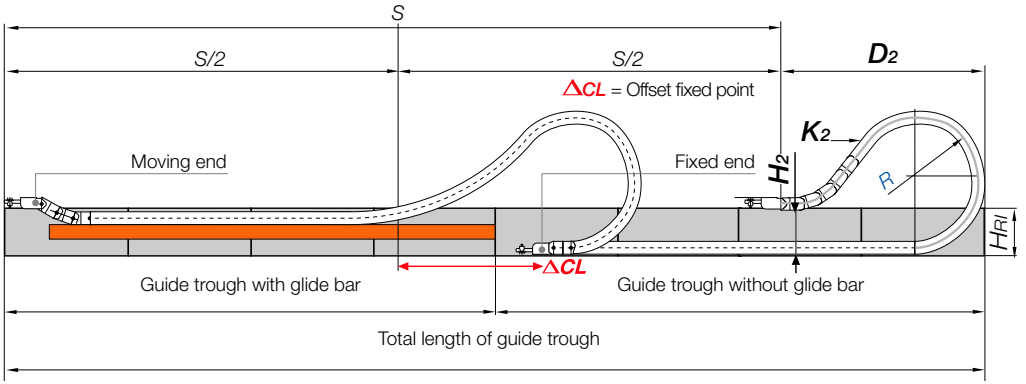
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



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** = $^{S}/_{2} + K$

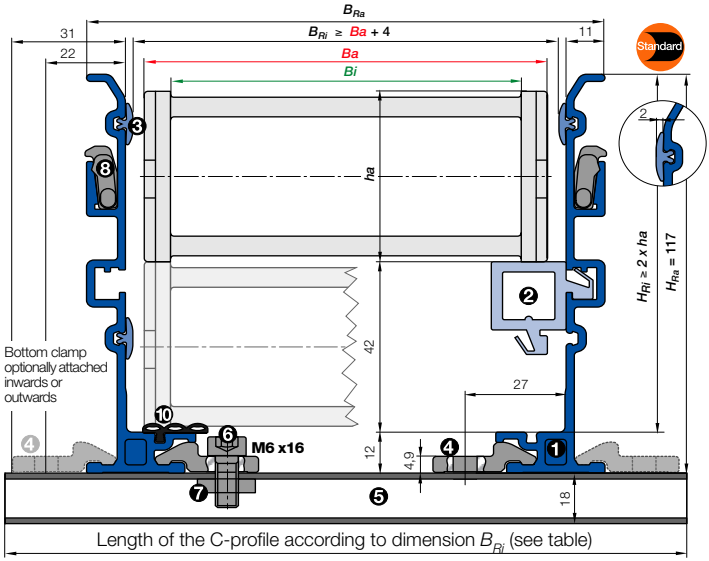
R	055	063	075	100	125	150	175	200	250
H_2	110	126	150	158	158	158	158	158	158
D_2^{+25}	122	130	142	350	490	530	665	730	935
K_2	265	290	330	598	782	920	1104	1242	1610
ΔCL	–	–	–	150	270	300	400	450	600

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

Part No. 972.02.30.SL | 972.02.31.SL | Trough height: 117 mm

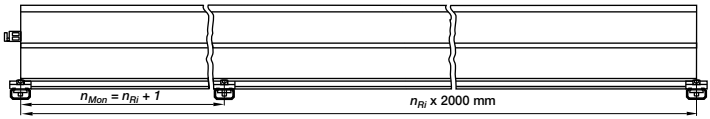
Aluminum "SuperTrough" | Basic Version



● **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 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
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

Installation set "Basic" with C-Profile

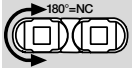
Bottom clamp optionally attached **inwards** or **outwards**

E4.28.**070**.250.0 ▶ Order example

B_{Ri} [mm]		Part No. attached inwards	Part No. attached outwards
.040	64	–	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	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"

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)

Part No.
HT-Material
only for e-tubes



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

R4.28.100HT.*R*.0
Lid and bottom

R4.28.100HTZ.*R*.0
Bottom only

R4.28.100HTE.*R*.0
Lid only

Delivery time:
10 work days

*for gliding applications please consult igus®

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

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



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

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

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 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

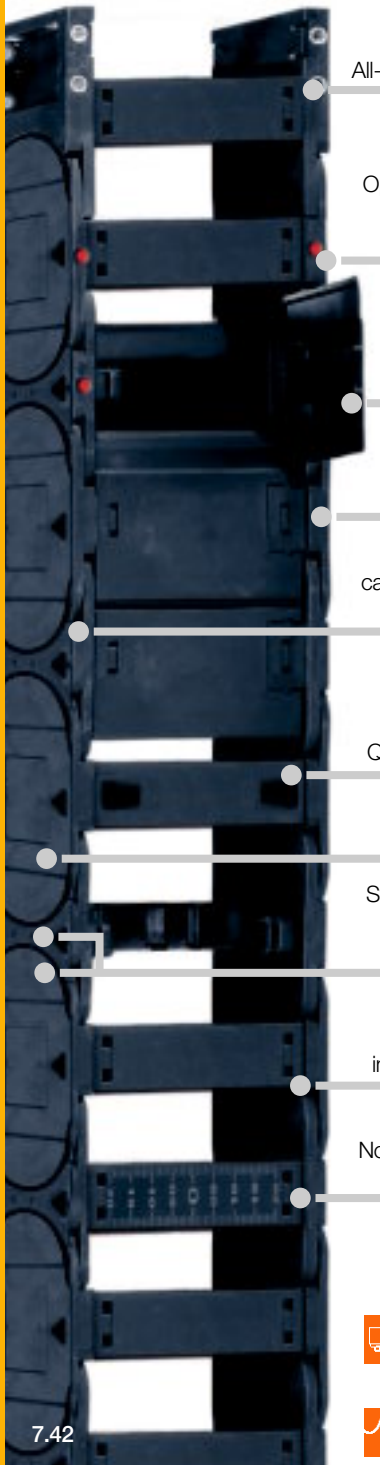
- Standard color
- black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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)

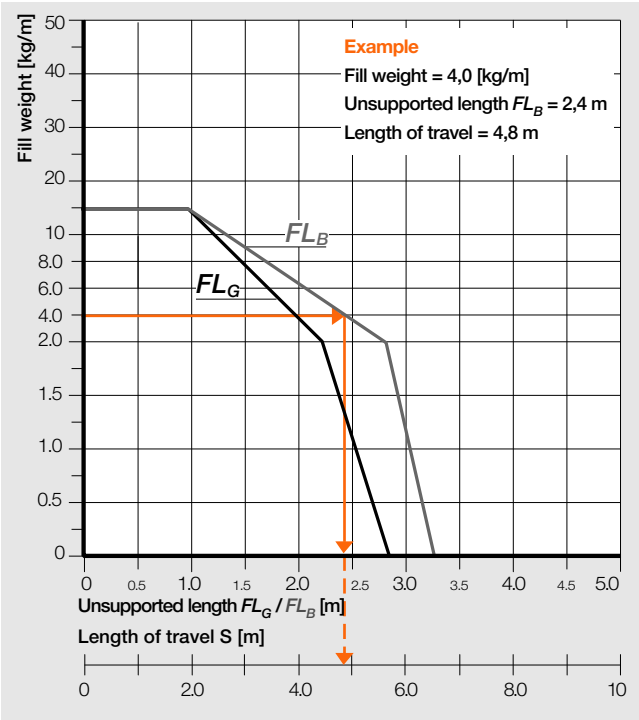
►**Series E6.35, page 8.50**

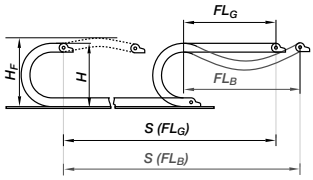
- If a less stable e-chain® can be used for economical reasons

►**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



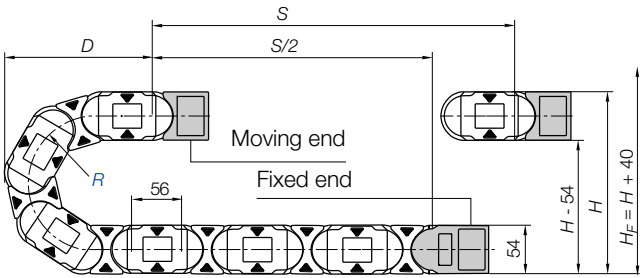


Unsupported applications

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

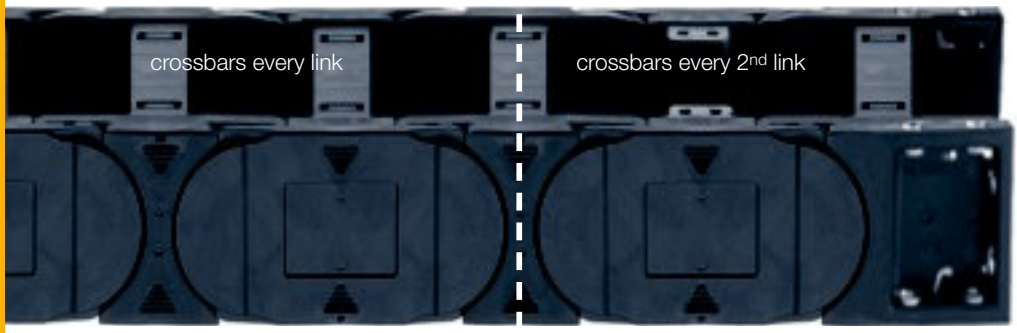
Speed, material, temperature and flammability class ▶ **page 7.16**

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
$H\ ^{+20}_{0}$	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 = $\pi \bullet R +$ "safety"



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

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

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

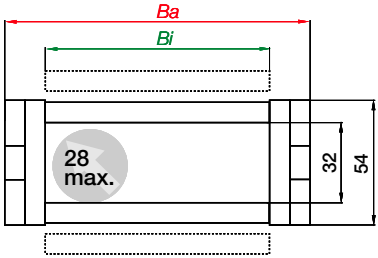
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

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. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	QuickLock crossbar for Outer radius	QuickLock crossbar for Both radii	*Bi* [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
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**

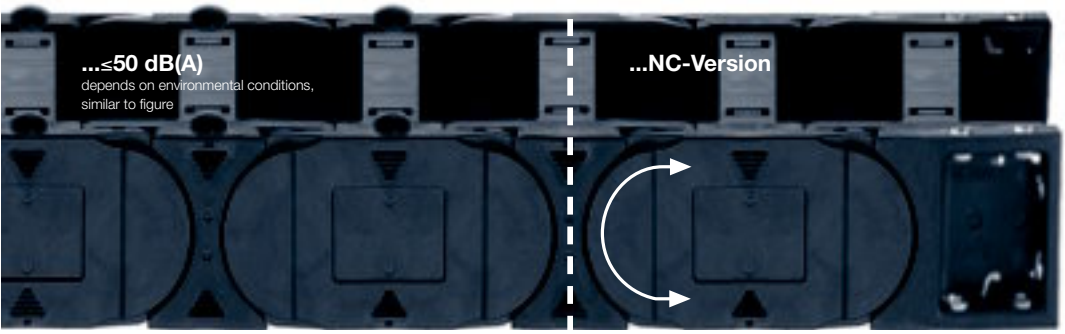
Part No. E4.32.30QZ.300.0 = QuickLock crossbar for inner radius

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



Noise dampening | ≤50 dB(A)

With pads crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 RS4	.32.05. R.0	50
ES4 HS4 –	.32.06. R.0	68
ES4 HS4 RS4	.32.07. R.0	75
ES4 HS4 RS4	.32.087.R.0	87
ES4 HS4 –	.32.09. R.0	97
ES4 HS4 RS4	.32.10. R.0	100
ES4 HS4 RS4	.32.11. R.0	108
ES4 HS4 –	.32.112.R.0	112
ES4 HS4 RS4	.32.12. R.0	125
ES4 HS4 –	.32.137.R.0	137
ES4 HS4 –	.32.15. R.0	150
ES4 HS4 RS4	.32.162.R.0	162
ES4 HS4 RS4	.32.17. R.0	168
ES4 HS4 –	.32.18. R.0	175
ES4 HS4 –	.32.187.R.0	187
ES4 HS4 RS4	.32.20. R.0	200

With pads crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 –	.32.212.R.0	212
ES4 HS4 –	.32.23. R.0	225
ES4 HS4 –	.32.237.R.0	237
ES4 HS4 RS4	.32.25. R.0	250
ES4 HS4 –	.32.262.R.0	262
ES4 HS4 –	.32.28. R.0	275
ES4 HS4 –	.32.29. R.0	287
ES4 HS4 RS4	.32.30. R.0	300
ES4 HS4 –	.32.312.R.0	312
ES4 HS4 –	.32.325.R.0	325
ES4 HS4 –	.32.337.R.0	337
ES4 HS4 –	.32.350.R.0	350
ES4 HS4 –	.32.362.R.0	362
ES4 HS4 –	.32.375.R.0	375
ES4 HS4 –	.32.387.R.0	387
ES4 HS4 –	.32.400.R.0	400

NC-Version | Without pretension

NC-Version crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
E4 H4 R4	.32..05. R.0.NC	50
E4 H4 –	.32.06. R.0.NC	68
E4 H4 R4	.32.07. R.0.NC	75
E4 H4 R4	.32.087.R.0.NC	87
E4 H4 –	.32.09. R.0.NC	97
E4 H4 R4	.32.10. R.0.NC	100
E4 H4 R4	.32.11. R.0.NC	108
E4 H4 –	.32.112.R.0.NC	112
E4 H4 R4	.32.12. R.0.NC	125
E4 H4 –	.32.137.R.0.NC	137
E4 H4 –	.32.15. R.0.NC	150
E4 H4 R4	.32.162.R.0.NC	162
E4 H4 R4	.32.17. R.0.NC	168
E4 H4 –	.32.18. R.0.NC	175
E4 H4 –	.32.187.R.0.NC	187
E4 H4 R4	.32.20. R.0.NC	200

NC-Version crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
E4 H4 –	.32.212.R.0.NC	212
E4 H4 –	.32.23. R.0.NC	225
E4 H4 –	.32.237.R.0.NC	237
E4 H4 R4	.32.25. R.0.NC	250
E4 H4 –	.32.262.R.0.NC	262
E4 H4 –	.32.28. R.0.NC	275
E4 H4 –	.32.29. R.0.NC	287
E4 H4 R4	.32.30. R.0.NC	300
E4 H4 –	.32.312.R.0.NC	312
E4 H4 –	.32.325.R.0.NC	325
E4 H4 –	.32.337.R.0.NC	337
E4 H4 –	.32.350.R.0.NC	350
E4 H4 –	.32.362.R.0.NC	362
E4 H4 –	.32.375.R.0.NC	375
E4 H4 –	.32.387.R.0.NC	387
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

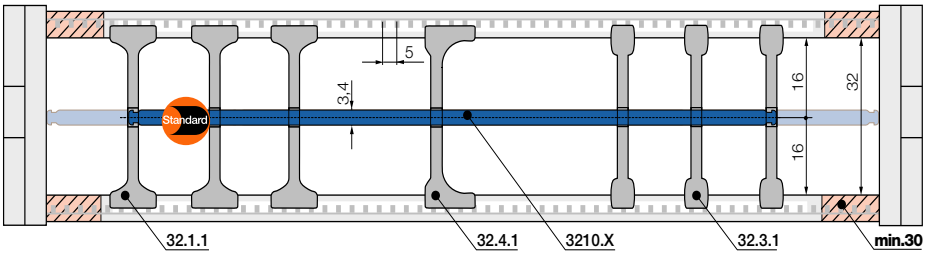
Supplement Part No. with required radius *(R)*. Example: **ES4.32.30.300.0 or E4.32.30.300.0.NC**

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

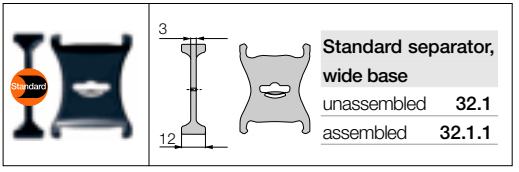
e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

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

New generation interior separation



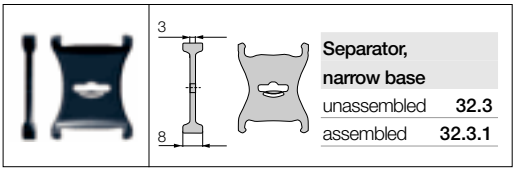
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**32.1**
assembled	**32.1.1**

Standard - for all applications

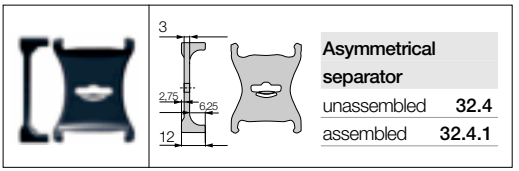
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	**32.3**
assembled	**32.3.1**

For many thin cables

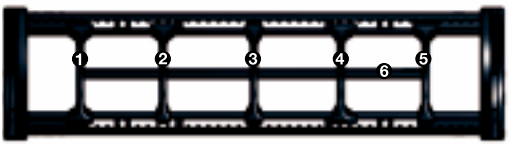
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

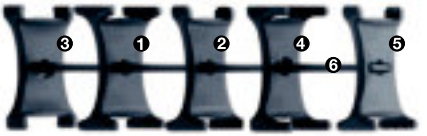


Asymmetrical separator	
unassembled	**32.4**
assembled	**32.4.1**

For side-mounted applications

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



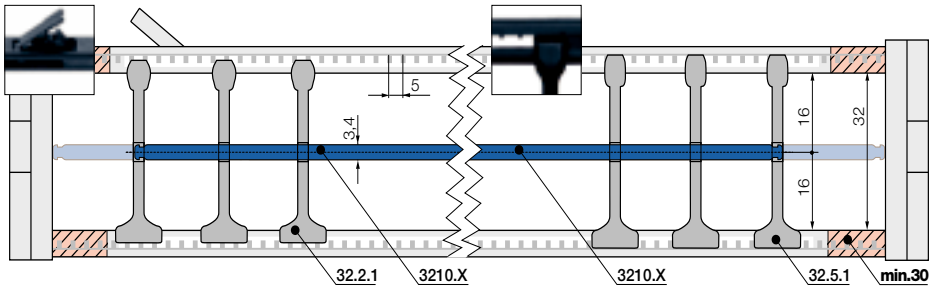


① Standard separator, wide base - Part No. 32.1 ③ Separator, narrow base - Part No. 32.3 ⑤ Notch separator - Part No. 32.5
② Separator for QuickLock crossbar - Part No. 32.2 ④ Separator, asymmetrical - Part No. 32.4 ⑥ Full-width self, lockable - Part No. 3200.XX

Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

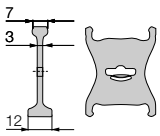
E4.1 | **Series E4.32** | Interior separation | **Standard**

New generation interior separation



Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



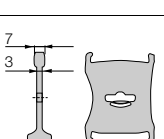


Separator for QuickLock crossbar	
unassembled	**32.2**
assembled	**32.2.1**

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.



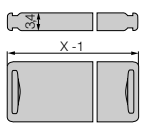


Notch separator for notch crossbar	
unassembled	**32.5**
assembled	**32.5.1**

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.



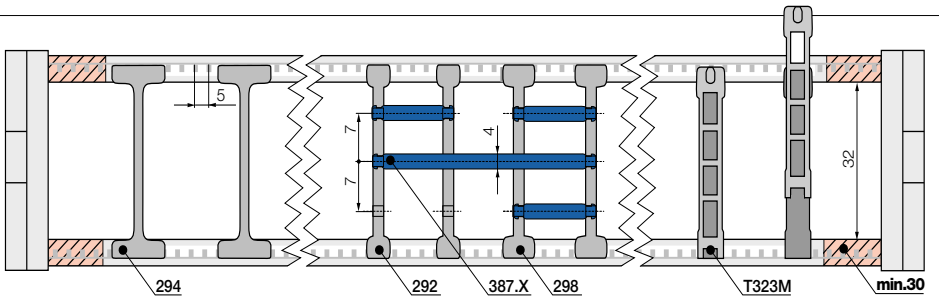
Lockable full-width shelves - for the standard interior separation

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**			

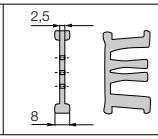
E4.1 | Series E4.32 | Interior separation | Options

Previous interior separation

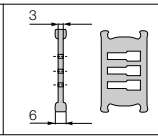
All elements can still be ordered ► www.igus.de/en/E4.32



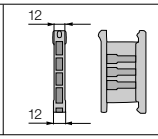
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!

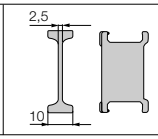
Open slotted separator for e-chains®/e-tubes	
unassembled	297
assembled	298

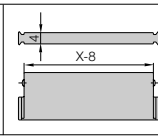
Slotted separator for e-chains®/e-tubes	
unassembled	291
assembled	292

Split separator for e-chains®	
unassembled	T323
assembled	T323M

Locking separator for e-chains®	
unassembled	293
assembled	294

Shelf	
unassembled	386.X
assembled	387.X

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.

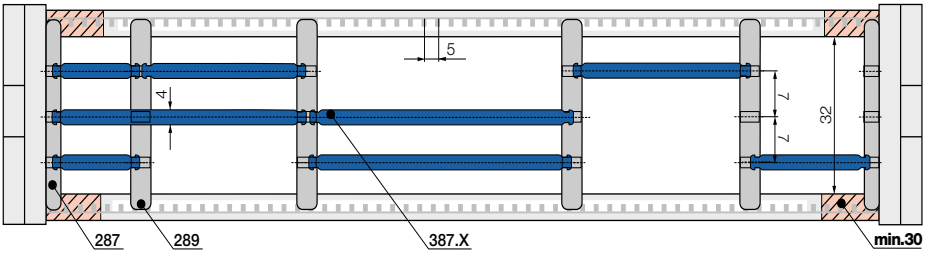
Shelf 386.X

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

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

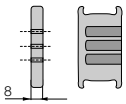
Previous interior separation

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



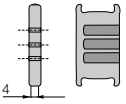
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!





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

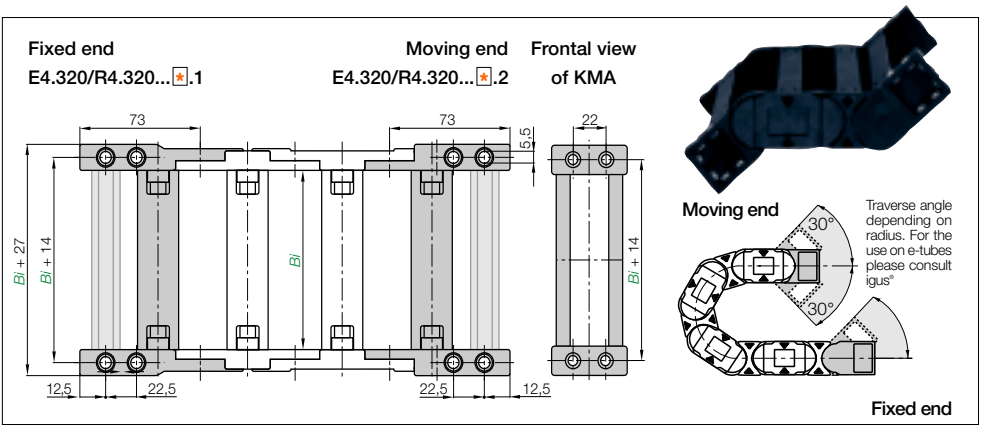
Works like middle plate.
Allows modular shelving close to the side links.

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**

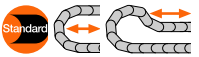
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05. ▶	E4.320. R4.320.05 .*.12.C	50
06. ▶	E4.320. – 06 .*.12.C	68
07. ▶	E4.320. R4.320.07 .*.12.C	75
087. ▶	E4.320. – 09 .*.12.C	87
09. ▶	E4.320. – 087.*.12.C	97
10. ▶	E4.320. R4.320.10 .*.12.C	100
11. ▶	E4.320. R4.320.11 .*.12.C	108
112. ▶	E4.320. – 112.*.12.C	112
12. ▶	E4.320. R4.320.12 .*.12.C	125
137. ▶	E4.320. – 137.*.12.C	137
15. ▶	E4.320. R4.320.15 .*.12.C	150
162. ▶	E4.320. – 162.*.12.C	162
17. ▶	E4.320. R4.320.17 .*.12.C	168
18. ▶	E4.320. – 18 .*.12.C	175
187. ▶	E4.320. – 187.*.12.C	187
20. ▶	E4.320. R4.320.20 .*.12.C	200

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
212. ▶	E4.320. – 212.*.12.C	212
23. ▶	E4.320. – 23 .*.12.C	225
237. ▶	E4.320. – 237.*.12.C	237
25. ▶	E4.320. R4.320.25 .*.12.C	250
262. ▶	E4.320. – 262.*.12.C	262
28. ▶	E4.320. – 28 .*.12.C	275
29. ▶	E4.320. – 29 .*.12.C	287
30. ▶	E4.320. R4.320.30 .*.12.C	300
312. ▶	E4.320. – 312.*.12.C	312
325. ▶	E4.320. – 325.*.12.C	325
337. ▶	E4.320. – 337.*.12.C	337
350. ▶	E4.320. – 350.*.12.C	350
362. ▶	E4.320. – 362.*.12.C	362
375. ▶	E4.320. – 375.*.12.C	375
387. ▶	E4.320. – 387.*.12.C	387
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

- C-profile option
- Full set
- even
- Width index
- Series

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)!



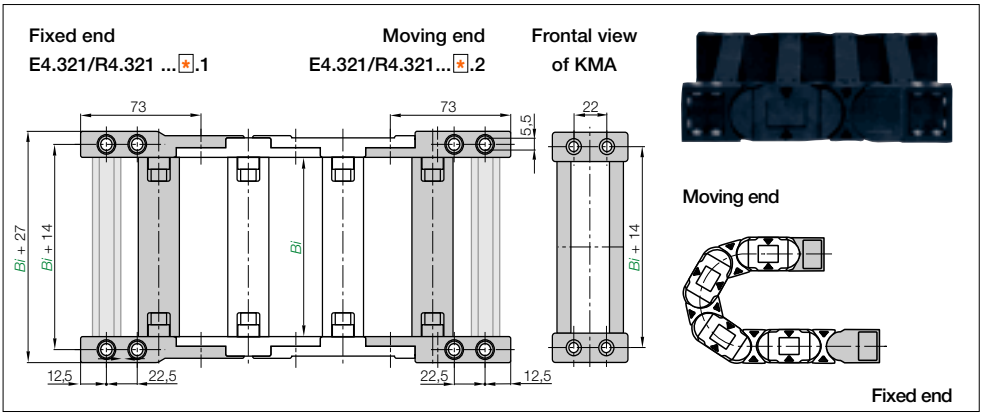
Single-part order:

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)

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]
05. ▶	E4.321. R4.321.05 .*.12.C	50
06. ▶	E4.321. – 06 .*.12.C	68
07. ▶	E4.321. R4.321.07 .*.12.C	75
087. ▶	E4.321. – 09 .*.12.C	87
09. ▶	E4.321. – 087.*.12.C	97
10. ▶	E4.321. R4.321.10 .*.12.C	100
11. ▶	E4.321. R4.321.11 .*.12.C	108
112. ▶	E4.321. – 112.*.12.C	112
12. ▶	E4.321. R4.321.12 .*.12.C	125
137. ▶	E4.321. – 137.*.12.C	137
15. ▶	E4.321. R4.321.15 .*.12.C	150
162. ▶	E4.321. – 162.*.12.C	162
17. ▶	E4.321. R4.321.17 .*.12.C	168
18. ▶	E4.321. – 18 .*.12.C	175
187. ▶	E4.321. – 187.*.12.C	187
20. ▶	E4.321. R4.321.20 .*.12.C	200

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
212. ▶	E4.321. – 212.*.12.C	212
23. ▶	E4.321. – 23 .*.12.C	225
237. ▶	E4.321. – 237.*.12.C	237
25. ▶	E4.321. R4.321.25 .*.12.C	250
262. ▶	E4.321. – 262.*.12.C	262
28. ▶	E4.321. – 28 .*.12.C	275
29. ▶	E4.321. – 29 .*.12.C	287
30. ▶	E4.321. R4.321.30 .*.12.C	300
312. ▶	E4.321. – 312.*.12.C	312
325. ▶	E4.321. – 325.*.12.C	325
337. ▶	E4.321. – 337.*.12.C	337
350. ▶	E4.321. – 350.*.12.C	350
362. ▶	E4.321. – 362.*.12.C	362
375. ▶	E4.321. – 375.*.12.C	375
387. ▶	E4.321. – 387.*.12.C	387
400. ▶	E4.321. – 400.*.12.C	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

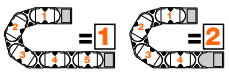
- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

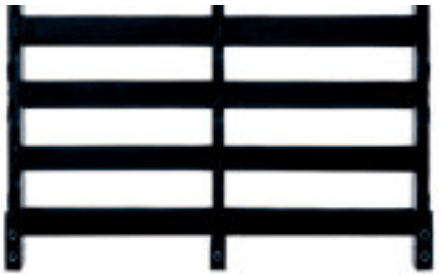
Mounting bracket **Moving end**
E4.321.30.2.2.C (even number of links)

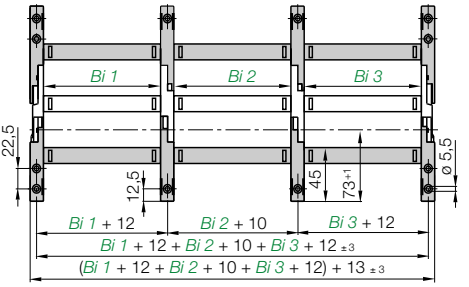
Mounting bracket **Fixed end**
E4.321.30.2.1.C (even number of links)

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





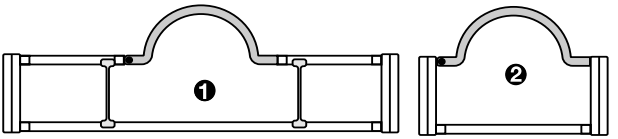
Extension links | for extremely wide e-chains® up to 3,0 m

- 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
- Attachement 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 hosed applications

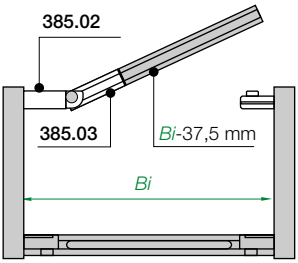
- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

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

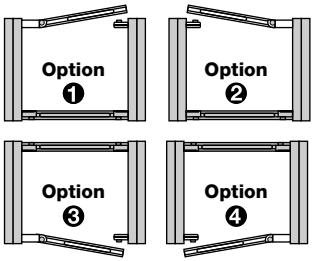
Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.32.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.32.10/15RHDZ115/10.*R*.0

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®:
E4.32.18RDZ115.*R*.0

E4.1 | **Series E4.32** | More options



(View from the fixed point)



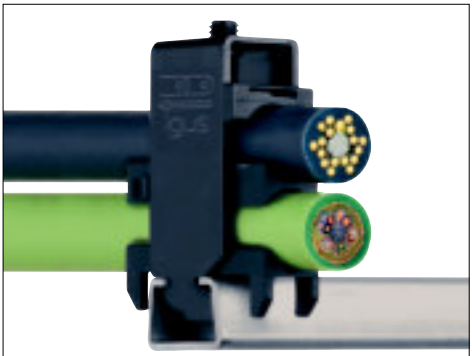


Hinged crossbars

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

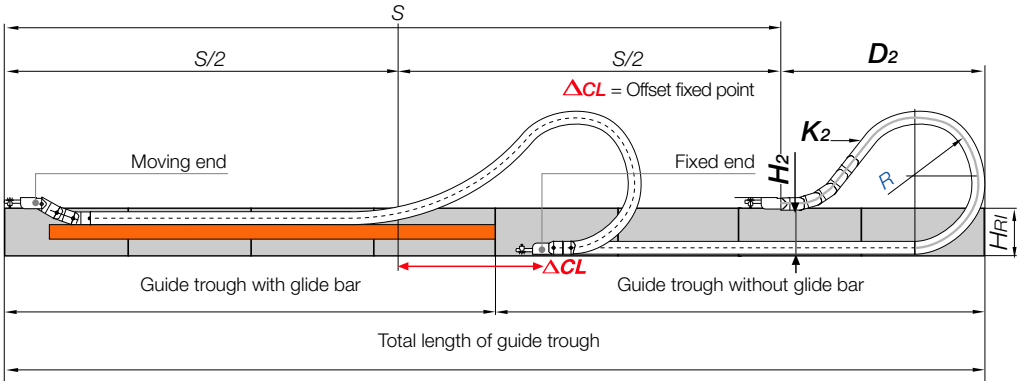


Support tray tool kit

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 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** = $S/2 + K$

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**

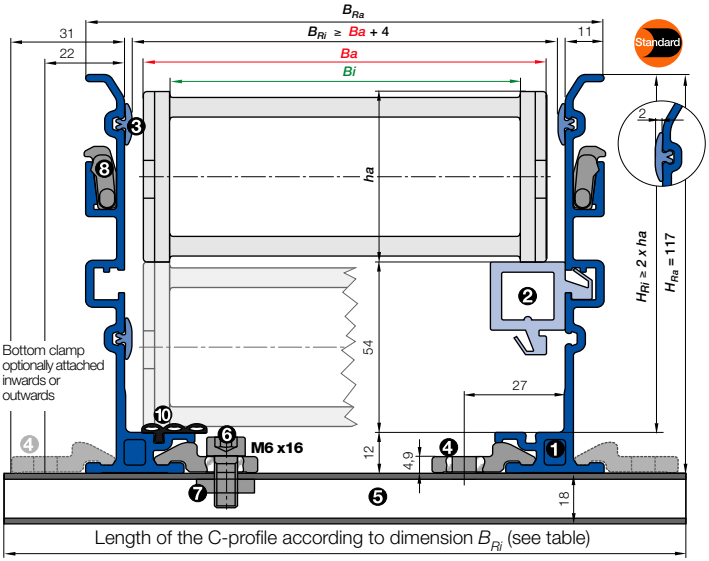
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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

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

Part No. 972.30.SL | **972.31.SL** | Trough height: 117 mm

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 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

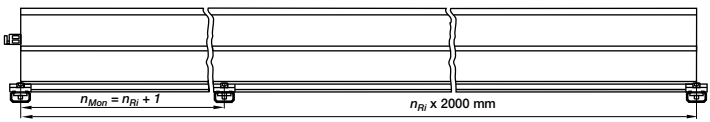
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: **16 m guide trough without glide bar** (8 x 2 m sections) **Part No. 972.30.SL**

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
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

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	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

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

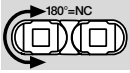
	Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
	Part No. Standard e-chains®/e-tubes	**Part No. Low noise (with pads) e-chains®/e-tubes**	**Part No. QuickLock crossbar for inner radius**	**Part No. QuickLock crossbar for outer radius**	**Part No. 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	**E4.32.30QZ.*R*.0** Crossbar every link	**E4.32.30QE.*R*.0** Crossbar every link	**E4.32.30Q.*R*.0** Crossbar every link
	H4.32.30.*R*.0 Crossbar every 2nd link	**HS4.32.30.*R*.0** Crossbar every 2nd link	**H4.32.30QZ.*R*.0** Crossbar every 2nd link	**H4.32.30QE.*R*.0** Crossbar every 2nd link	**H4.32.30Q.*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		ES4.32.30Q.*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	ES4.32.30Q.*R*.0		E4.32.30Q.*R*.0.NC	E4.32.30Q.*R1/R2*.0	E4.32.30Q.*R*.0.XXL	–	E4.32.30Q.*R*.0.ESD
NC-Version	ES4.32.30.*R*.0.NC	E4.32.30Q.*R*.0.NC		–	–	R4.32.30.*R*.0.HT.NC	E4.32.30.*R*.0.ESD.NC
RBR-Version	–	E4.32.30Q.*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	E4.32.30Q.*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	E4.32.30Q.*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	**R4.32.30HT.*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	**R4.32.30HTZ.*R*.0** Bottom only **R4.32.30HTE.*R*.0** Lid only	**R4.32.30.*R*.0.ESD** e-tube, closed
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

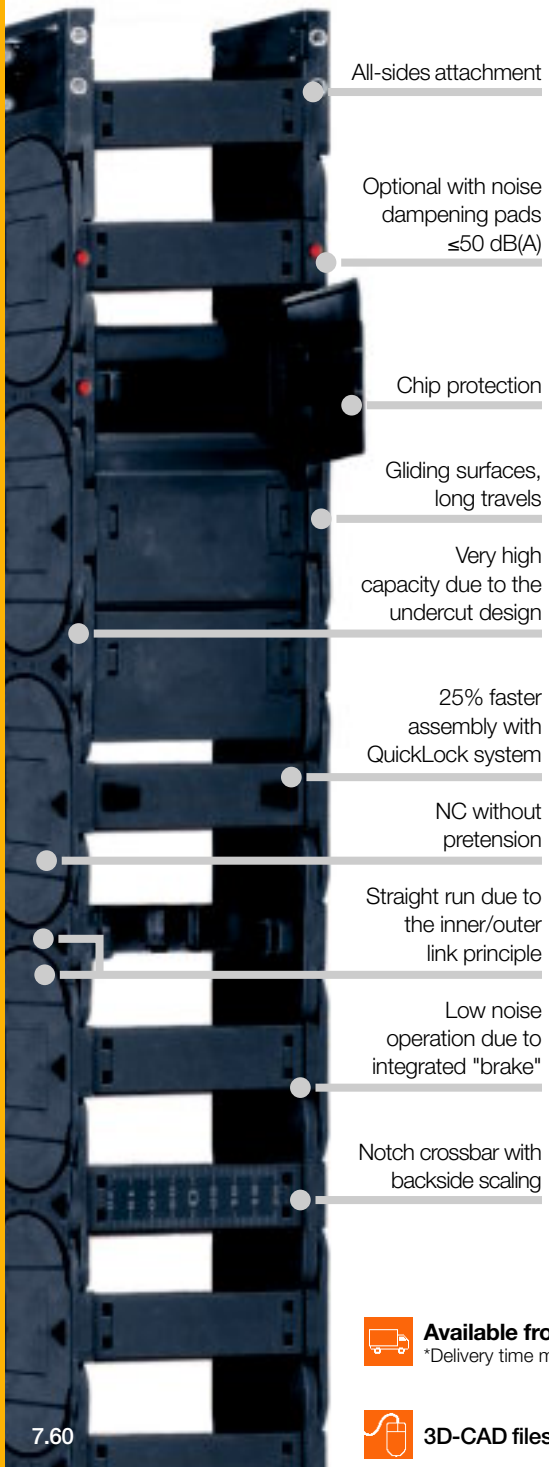
- Standard color
- black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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**

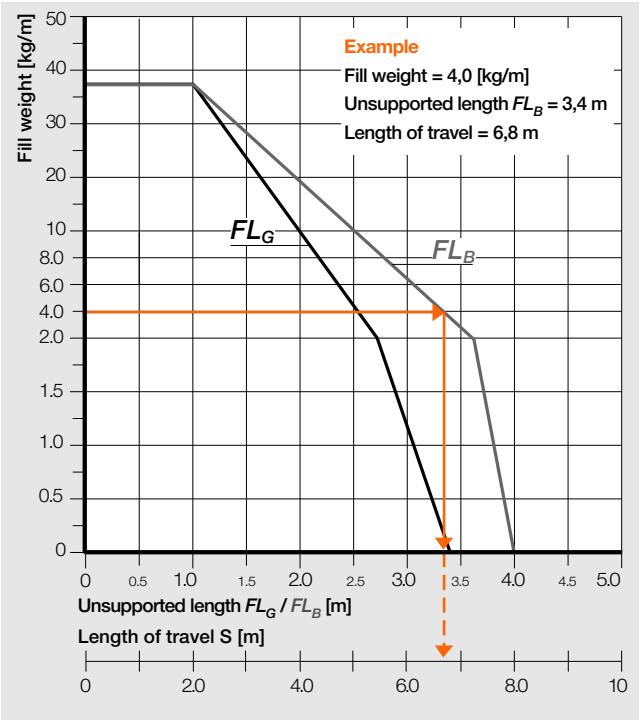
- If a less stable e-chain® can be used for economical reasons

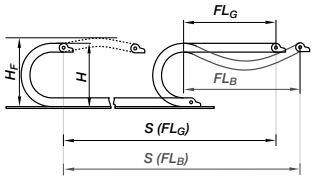
►**Series 3400/3450/3500/3480, page 5.204**

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

E4.1 | **Series E4.42** | Dimensions | **Unsupported**



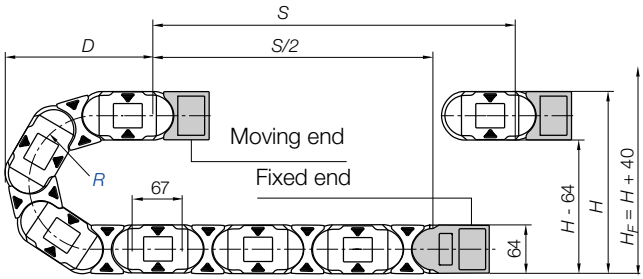


Unsupported applications

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

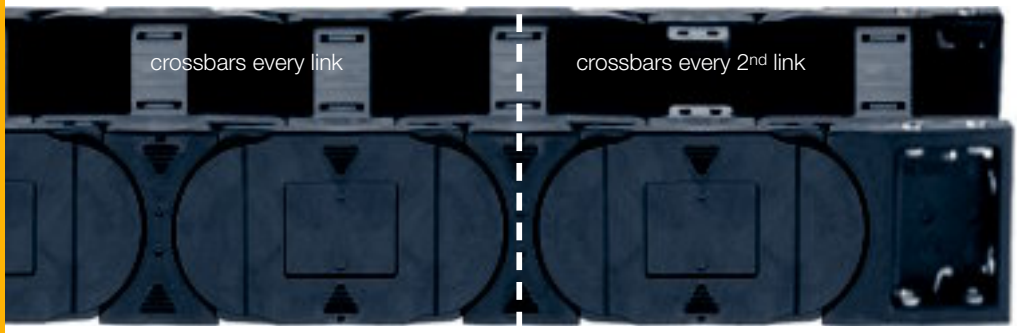
Speed, material, temperature and flammability class ▶ **page 7.16**

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
$H\ ^{-0}_{+25}$	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 = $\pi \bullet R +$ "safety"



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

Part No. crossbars every link	Part No. crossbars every 2nd 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	Part No. crossbars every 2nd 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	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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**

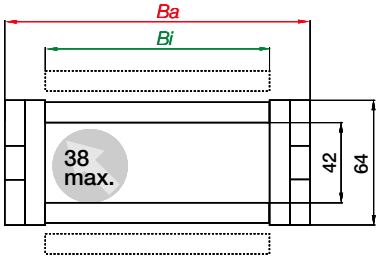
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

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



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

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	*Bi* [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. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	*Bi* [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**

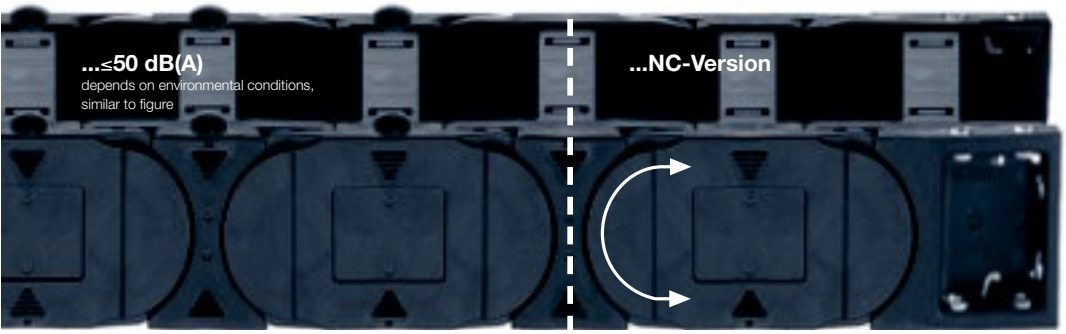
Part No. E4.42.30QZ.300.0 = QuickLock crossbar for inner radius

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



Noise dampening | ≤50 dB(A)

With pads crossbars every: link	2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 RS4 .42.05. R.0			50
ES4 HS4 – .42.06. R.0			68
ES4 HS4 RS4 .42.07. R.0			75
ES4 HS4 RS4 .42.087.R.0			87
ES4 HS4 – .42.09. R.0			97
ES4 HS4 RS4 .42.10. R.0			100
ES4 HS4 RS4 .42.11. R.0			108
ES4 HS4 – .42.112.R.0			112
ES4 HS4 RS4 .42.12. R.0			125
ES4 HS4 – .42.137.R.0			137
ES4 HS4 RS4 .42.15. R.0			150
ES4 HS4 – .42.162.R.0			162
ES4 HS4 RS4 .42.17. R.0			168
ES4 HS4 – .42.18. R.0			175
ES4 HS4 – .42.187.R.0			187
ES4 HS4 RS4 .42.20. R.0			200

With pads crossbars every: link	2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 – .42.212.R.0			212
ES4 HS4 – .42.23. R.0			225
ES4 HS4 – .42.237.R.0			237
ES4 HS4 RS4 .42.25. R.0			250
ES4 HS4 – .42.262.R.0			262
ES4 HS4 – .42.28. R.0			275
ES4 HS4 – .42.29. R.0			287
ES4 HS4 RS4 .42.30. R.0			300
ES4 HS4 – .42.312.R.0			312
ES4 HS4 – .42.325.R.0			325
ES4 HS4 – .42.337.R.0			337
ES4 HS4 – .42.350.R.0			350
ES4 HS4 – .42.362.R.0			362
ES4 HS4 – .42.375.R.0			375
ES4 HS4 – .42.387.R.0			387
ES4 HS4 – .42.400.R.0			400

NC-Version | Without pretension

NC-Version crossbars every: link	2nd	e-tube fully enclosed	Bi [mm]
E4 H4 R4.42.05. R.0.NC			50
E4 H4 – .42.06. R.0.NC			68
E4 H4 R4.42.07. R.0.NC			75
E4 H4 R4.42.087.R.0.NC			87
E4 H4 – .42.09. R.0.NC			97
E4 H4 R4.42.10. R.0.NC			100
E4 H4 R4.42.11. R.0.NC			108
E4 H4 – .42.112.R.0.NC			112
E4 H4 R4.42.12. R.0.NC			125
E4 H4 – .42.137.R.0.NC			137
E4 H4 R4.42.15. R.0.NC			150
E4 H4 – .42.162.R.0.NC			162
E4 H4 R4.42.17. R.0.NC			168
E4 H4 – .42.18. R.0.NC			175
E4 H4 – .42.187.R.0.NC			187
E4 H4 R4.42.20. R.0.NC			200

NC-Version crossbars every: link	2nd	e-tube fully enclosed	Bi [mm]
E4 H4 – .42.212.R.0.NC			212
E4 H4 – .42.23. R.0.NC			225
E4 H4 – .42.237.R.0.NC			237
E4 H4 R4.42.25. R.0.NC			250
E4 H4 – .42.262.R.0.NC			262
E4 H4 – .42.28. R.0.NC			275
E4 H4 – .42.29. R.0.NC			287
E4 H4 R4.42.30. R.0.NC			300
E4 H4 – .42.312.R.0.NC			312
E4 H4 – .42.325.R.0.NC			325
E4 H4 – .42.337.R.0.NC			337
E4 H4 – .42.350.R.0.NC			350
E4 H4 – .42.362.R.0.NC			362
E4 H4 – .42.375.R.0.NC			375
E4 H4 – .42.387.R.0.NC			387
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

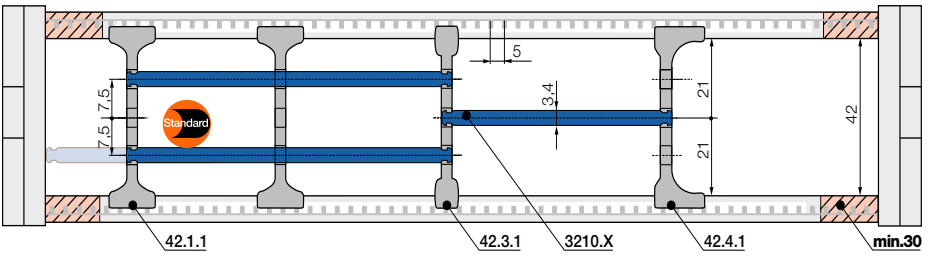
Supplement Part No. with required radius *(R)*. Example: **ES4.42.30.300.0 or E4.42.30.300.0.NC**

For e-chains® with noise dampening pads supplement Part No. with required index "**S**"
Example: **Part No. ES4.42.30.300.0** = e-chain® (crossbars every link) with noise dampening
For NC-e-chains® without pretension supplement Part No. with required index "**NC**"
Example: **Part No. E4.42.30.300.0.NC** = e-chain® (crossbars every link) without pretension

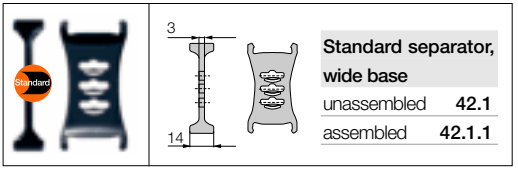
e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

E4.1 | **Series E4.42** | Interior separation | **Standard**

New generation interior separation



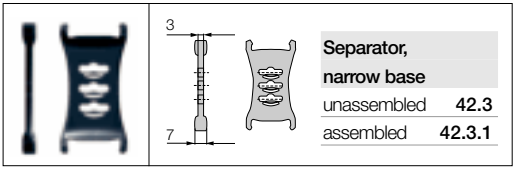
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**42.1**
assembled	**42.1.1**

Standard - for all applications

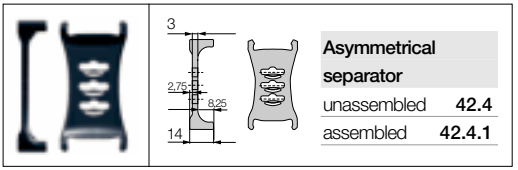
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	**42.3**
assembled	**42.3.1**

For many thin cables

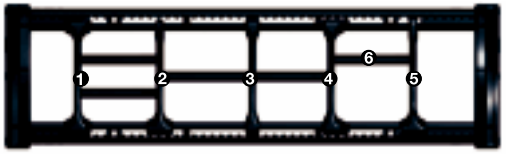
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

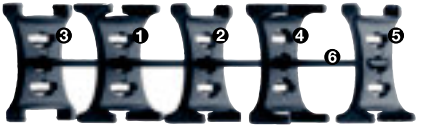


Asymmetrical separator	
unassembled	**42.4**
assembled	**42.4.1**

For side-mounted applications

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



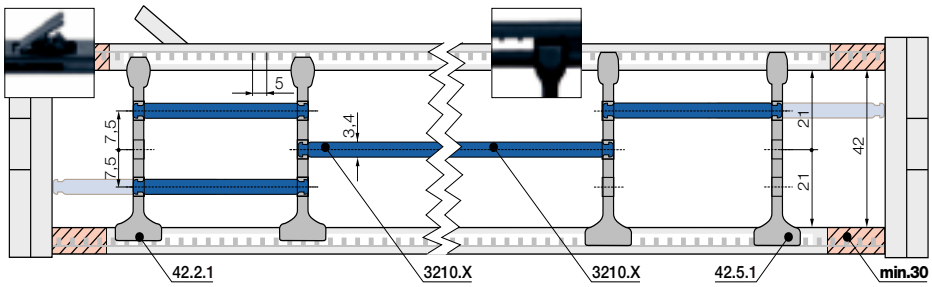


① Standard separator, wide base - Part No. 42.1 ③ Separator, narrow base - Part No. 42.3 ⑤ Notch separator - Part No. 42.5
② Separator for QuickLock crossbar - Part No. 42.2 ④ Separator, asymmetrical - Part No. 42.4 ⑥ Full-width self, lockable - Part No. 3200.XX

Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

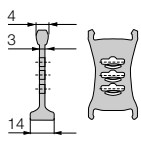
E4.1 | **Series E4.42** | Interior separation | **Standard**

New generation interior separation



Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



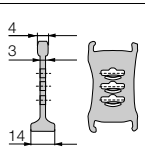


Separator for QuickLock crossbar	
unassembled	**42.2**
assembled	**42.2.1**

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.



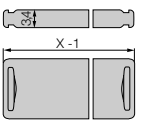


Notch separator for notch crossbar	
unassembled	**42.5**
assembled	**42.5.1**

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.



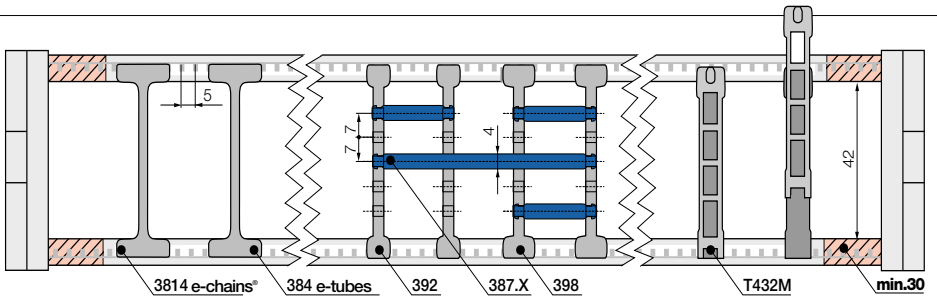
Lockable full-width shelves - for the standard interior separation

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**			

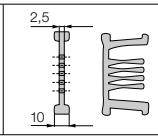
E4.1 | Series E4.42 | Interior separation | Options

Previous interior separation

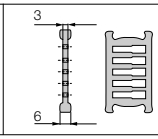
All elements can still be ordered ▶ www.igus.de/en/E4.42



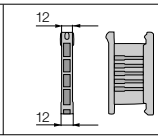
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!

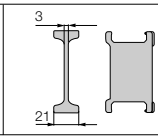
Open slotted separator for e-chains®/e-tubes	
unassembled	397
assembled	398

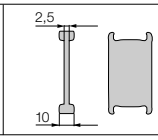
Slotted separator for e-chains®/e-tubes	
unassembled	391
assembled	392

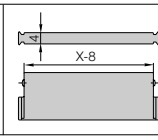
Split separator for e-chains®	
unassembled	T423
assembled	T423M

Locking separator for e-chains®	
unassembled	3804
assembled	3814

Locking separator for e-tubes	
unassembled	383
assembled	384

Shelf	
unassembled	386.X
assembled	387.X

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 391

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

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 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 383 (e-tubes only)

For e-tubes **R4.42.**

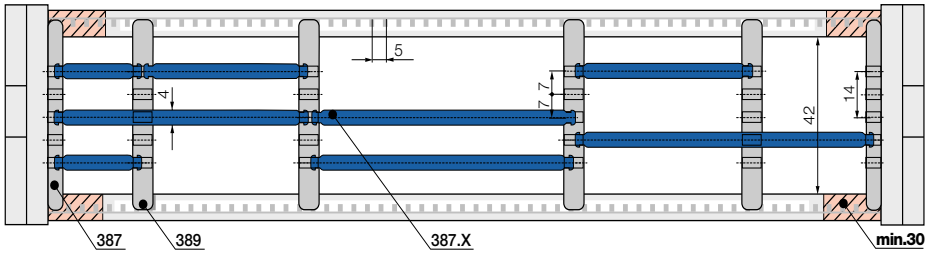
Shelf 386.X

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).

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

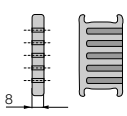
Previous interior separation

All elements can still be ordered ▶ www.igus.de/en/E4.42



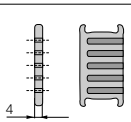
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!





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

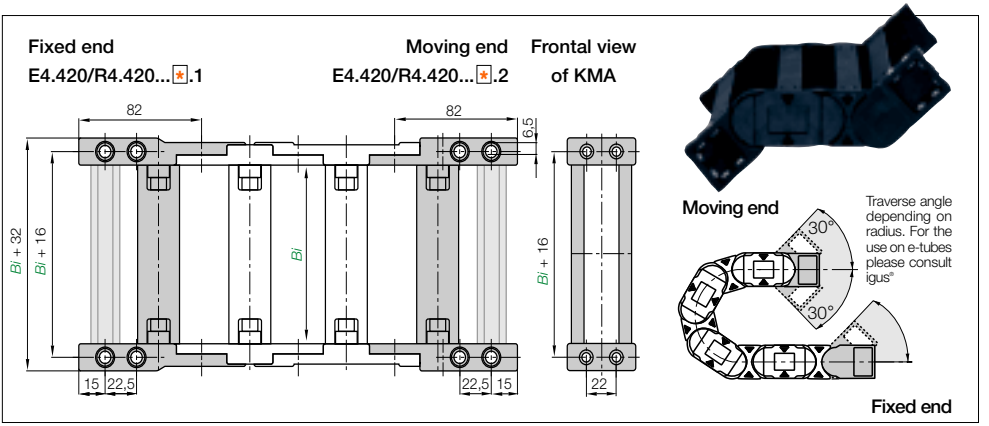
Works like middle plate.
Allows modular shelving close to the side links.

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**

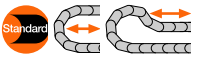
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05. ▶	E4.420. R4.420.05 .*.12.C	50
06. ▶	E4.420. – 06 .*.12.C	68
07. ▶	E4.420. R4.420.07 .*.12.C	75
087. ▶	E4.420. R4.420.087.*.12.C	87
09. ▶	E4.420. – 097.*.12.C	97
10. ▶	E4.420. R4.420.10 .*.12.C	100
11. ▶	E4.420. R4.420.11 .*.12.C	108
112. ▶	E4.420. – 112.*.12.C	112
12. ▶	E4.420. R4.420.12 .*.12.C	125
137. ▶	E4.420. – 137.*.12.C	137
15. ▶	E4.420. R4.420.15 .*.12.C	150
162. ▶	E4.420. – 162.*.12.C	162
17. ▶	E4.420. R4.420.17 .*.12.C	168
18. ▶	E4.420. – 18 .*.12.C	175
187. ▶	E4.420. – 187.*.12.C	187
20. ▶	E4.420. R4.420.20 .*.12.C	200

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
212. ▶	E4.420. – 212.*.12.C	212
23. ▶	E4.420. – 23 .*.12.C	225
237. ▶	E4.420. – 237.*.12.C	237
25. ▶	E4.420. R4.420.25 .*.12.C	250
262. ▶	E4.420. – 262.*.12.C	262
28. ▶	E4.420. – 28 .*.12.C	275
29. ▶	E4.420. – 29 .*.12.C	287
30. ▶	E4.420. R4.420.30 .*.12.C	300
312. ▶	E4.420. – 312.*.12.C	312
325. ▶	E4.420. – 325.*.12.C	325
337. ▶	E4.420. – 337.*.12.C	337
350. ▶	E4.420. – 350.*.12.C	350
362. ▶	E4.420. – 362.*.12.C	362
375. ▶	E4.420. – 375.*.12.C	375
387. ▶	E4.420. – 387.*.12.C	387
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

- C-profile option
- Full set
- even
- Width index
- Series

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)

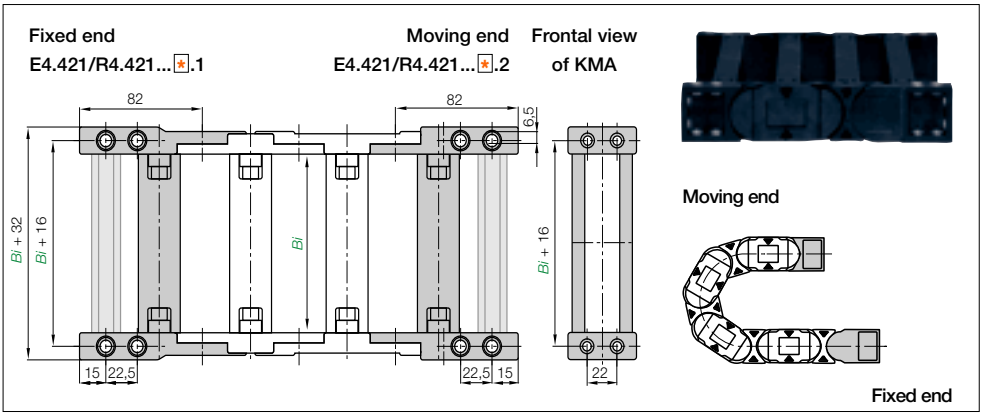
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



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]
05. ▶	E4.421. R4.421.05 .*.12.C	50
06. ▶	E4.421. – 06 .*.12.C	68
07. ▶	E4.421. R4.421.07 .*.12.C	75
087. ▶	E4.421. R4.421.087.*.12.C	87
09. ▶	E4.421. – 097.*.12.C	97
10. ▶	E4.421. R4.421.10 .*.12.C	100
11. ▶	E4.421. R4.421.11 .*.12.C	108
112. ▶	E4.421. – 112.*.12.C	112
12. ▶	E4.421. R4.421.12 .*.12.C	125
137. ▶	E4.421. – 137.*.12.C	137
15. ▶	E4.421. R4.421.15 .*.12.C	150
162. ▶	E4.421. – 162.*.12.C	162
17. ▶	E4.421. R4.421.17 .*.12.C	168
18. ▶	E4.421. – 18 .*.12.C	175
187. ▶	E4.421. – 187.*.12.C	187
20. ▶	E4.421. R4.421.20 .*.12.C	200

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
212. ▶	E4.421. – 212.*.12.C	212
23. ▶	E4.421. – 23 .*.12.C	225
237. ▶	E4.421. – 237.*.12.C	237
25. ▶	E4.421. R4.421.25 .*.12.C	250
262. ▶	E4.421. – 262.*.12.C	262
28. ▶	E4.421. – 28 .*.12.C	275
29. ▶	E4.421. – 29 .*.12.C	287
30. ▶	E4.421. R4.421.30 .*.12.C	300
312. ▶	E4.421. – 312.*.12.C	312
325. ▶	E4.421. – 325.*.12.C	325
337. ▶	E4.421. – 337.*.12.C	337
350. ▶	E4.421. – 350.*.12.C	350
362. ▶	E4.421. – 362.*.12.C	362
375. ▶	E4.421. – 375.*.12.C	375
387. ▶	E4.421. – 387.*.12.C	387
400. ▶	E4.421. – 400.*.12.C	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

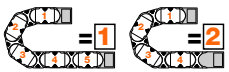
- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

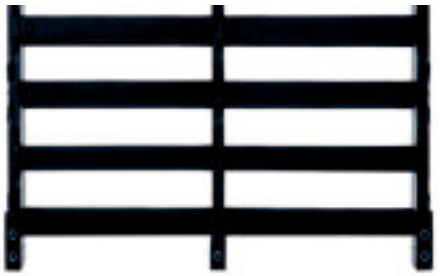
Mounting bracket **Moving end**
E4.421.30.2.2.C (even number of links)

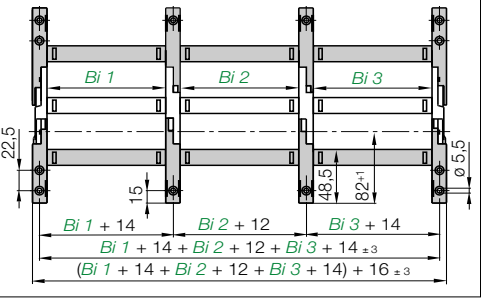
Mounting bracket **Fixed end**
E4.421.30.2.1.C (even number of links)

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





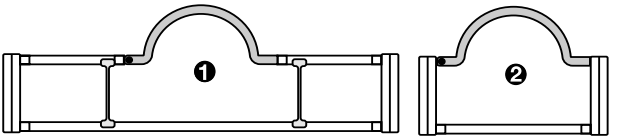
Extension links | for extremely wide e-chains® up to 3,0 m

- 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
- Attachement 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)



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 hosed applications

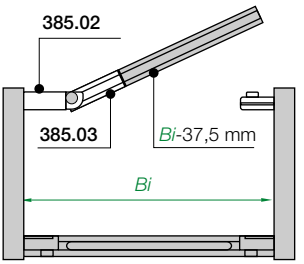
- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	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

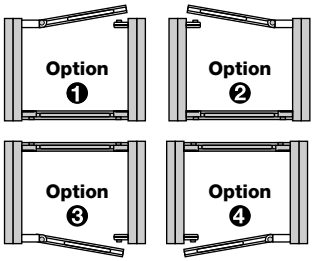
Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.42.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.42.10/15RHDZ115/10.*R*.0

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

E4.1 | **Series E4.42** | More options



(View from the fixed point)



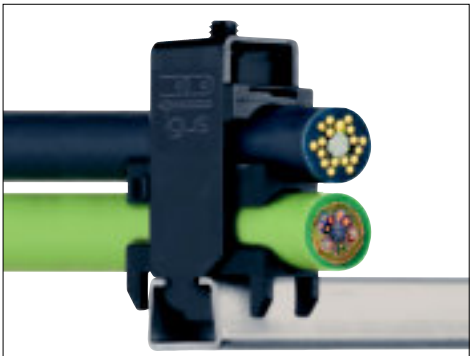


Hinged crossbars

- 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)
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



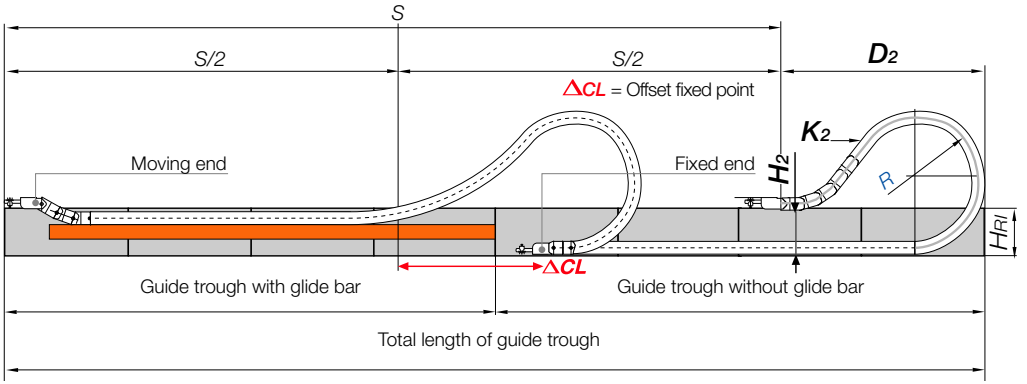
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ▶ **from page 10.1**



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. 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** = $^{S}/_{2} + K$

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**

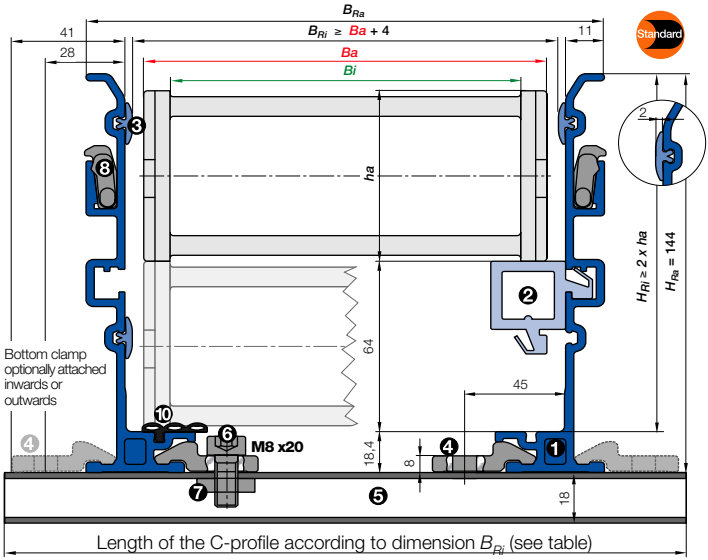
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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) · 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

Part No. 973.30.SL | **973.31.SL** | Trough height: 144 mm

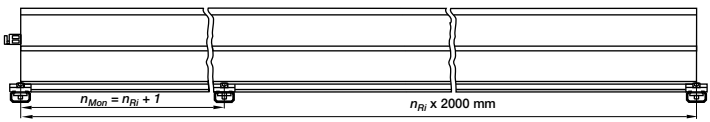
Aluminum "SuperTrough" | Basic Version



● **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 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_{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**

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**	**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**

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

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

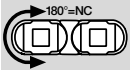
	Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
	Part No. Standard e-chains®/e-tubes	**Part No. Low noise (with pads) e-chains®/e-tubes**	**Part No. QuickLock crossbar for inner radius**	**Part No. QuickLock crossbar for outer radius**	**Part No. 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	**E4.42.30QZ.*R*.0** Crossbar every link	**E4.42.30QE.*R*.0** Crossbar every link	**E4.42.30Q.*R*.0** Crossbar every link
	H4.42.30.*R*.0 Crossbar every 2nd link	**HS4.42.30.*R*.0** Crossbar every 2nd link	**H4.42.30QZ.*R*.0** Crossbar every 2nd link	**H4.42.30QE.*R*.0** Crossbar every 2nd link	**H4.42.30Q.*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		ES4.42.30Q.*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	ES4.42.30Q.*R*.0		E4.42.30Q.*R*.0.NC	E4.42.30Q.*R1/R2*.0	E4.42.30Q.*R*.0.XXL	–	E4.42.30Q.*R*.0.ESD
NC-Version	ES4.42.30.*R*.0.NC	E4.42.30Q.*R*.0.NC		–	–	R4.42.30.*R*.0.HT.NC	E4.42.30.*R*.0.ESD.NC
RBR-Version	–	E4.42.30Q.*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	E4.42.30Q.*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	E4.42.30Q.*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	**R4.42.30HT.*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	**R4.42.30HTZ.*R*.0** Bottom only **R4.42.30HTE.*R*.0** Lid only	**R4.42.30.*R*.0.ESD** e-tube, closed
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

- Standard color
- black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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**

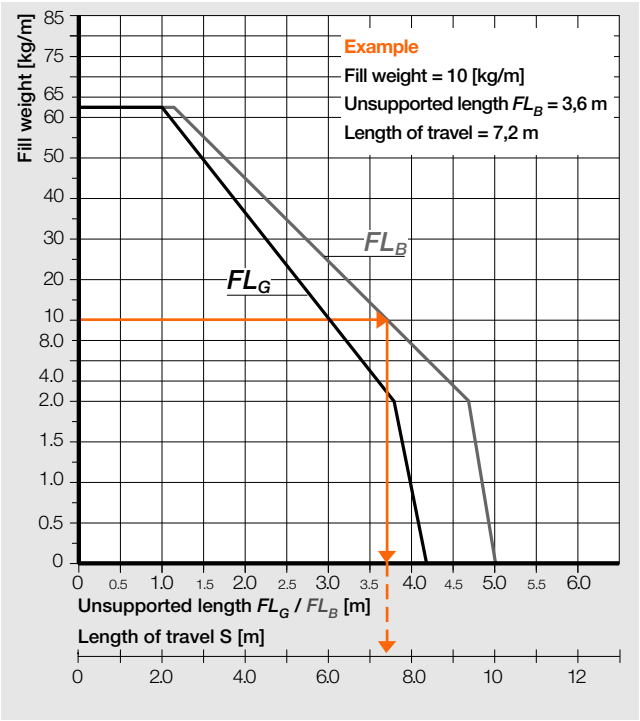
- If a less stable e-chain® can be used for economical reasons

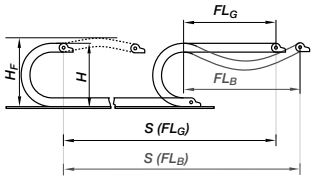
►**Series 14040/14140/R18840, page 7.164**

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



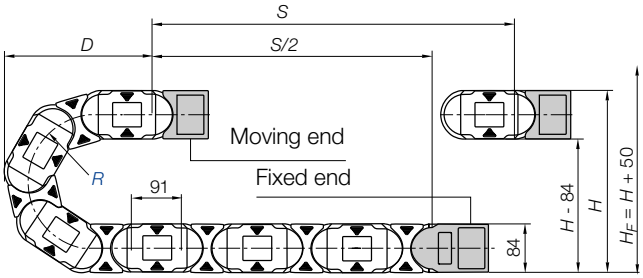


Unsupported applications

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

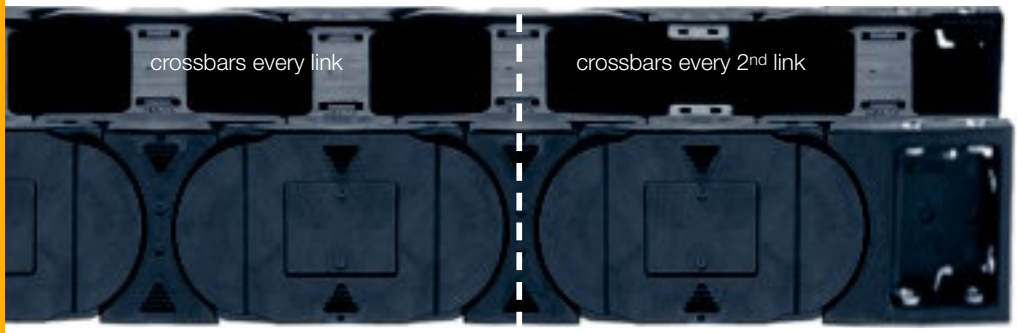
Speed, material, temperature and flammability class ▶ **page 7.16**

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 = $\pi \bullet R +$ "safety"



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

Part No. crossbars every link	Part No. crossbars every 2nd 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 2nd 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	*Bi* [mm]	*Ba* [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	*Bi* [mm]	*Ba* [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**

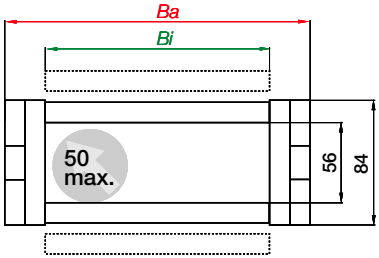
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

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



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

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [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
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**

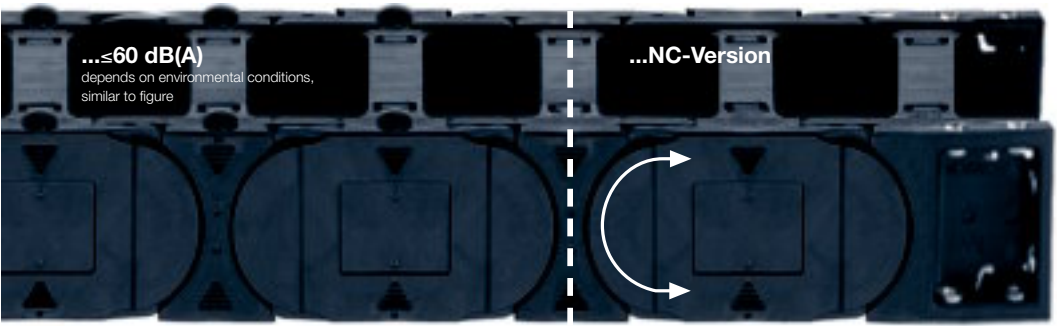
Part No. E4.56.30QZ.300.0 = QuickLock crossbar for inner radius

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



Noise dampening | ≤60 dB(A)

With pads crossbars every: link	2nd	e-tube fully enclosed		Bi [mm]
ES4	HS4	–	.56.05.R.0	50
ES4	HS4	–	.56.06.R.0	65
ES4	HS4	RS4	.56.07.R.0	75
ES4	HS4	–	.56.08.R.0	87
ES4	HS4	RS4	.56.10.R.0	100
ES4	HS4	–	.56.11.R.0	112
ES4	HS4	RS4	.56.12.R.0	125
ES4	HS4	–	.56.13.R.0	137
ES4	HS4	RS4	.56.15.R.0	150
ES4	HS4	–	.56.16.R.0	162
ES4	HS4	RS4	.56.17.R.0	175
ES4	HS4	–	.56.18.R.0	187
ES4	HS4	RS4	.56.20.R.0	200
ES4	HS4	–	.56.21.R.0	212
ES4	HS4	–	.56.22.R.0	225
ES4	HS4	–	.56.23.R.0	237
ES4	HS4	RS4	.56.25.R.0	250
ES4	HS4	–	.56.26.R.0	262
ES4	HS4	RS4	.56.27.R.0	275
ES4	HS4	–	.56.28.R.0	287
ES4	HS4	RS4	.56.30.R.0	300

With pads crossbars every: link	2nd	e-tube fully enclosed		Bi [mm]
ES4	HS4	–	.56.31.R.0	312
ES4	HS4	–	.56.32.R.0	325
ES4	HS4	–	.56.33.R.0	337
ES4	HS4	RS4	.56.35.R.0	350
ES4	HS4	–	.56.36.R.0	362
ES4	HS4	–	.56.37.R.0	375
ES4	HS4	–	.56.38.R.0	387
ES4	HS4	RS4	.56.40.R.0	400
ES4	HS4	–	.56.41.R.0	412
ES4	HS4	–	.56.42.R.0	425
ES4	HS4	–	.56.43.R.0	437
ES4	HS4	–	.56.45.R.0	450
ES4	HS4	RS4	.56.46.R.0	462
ES4	HS4	–	.56.47.R.0	475
ES4	HS4	–	.56.48.R.0	487
ES4	HS4	–	.56.50.R.0	500
ES4	HS4	–	.56.51.R.0	512
ES4	HS4	–	.56.52.R.0	525
ES4	HS4	–	.56.53.R.0	537
ES4	HS4	–	.56.55.R.0	550
ES4	HS4	–	.56.60.R.0	600

NC-Version | Without pretension

NC-Version crossbars every: link	2nd	e-tube fully enclosed		Bi [mm]
E4	H4	–	.56.05.R.0.NC	50
E4	H4	–	.56.06.R.0.NC	65
E4	H4	R4	.56.07.R.0.NC	75
E4	H4	–	.56.08.R.0.NC	87
E4	H4	R4	.56.10.R.0.NC	100
E4	H4	–	.56.11.R.0.NC	112
E4	H4	R4	.56.12.R.0.NC	125
E4	H4	–	.56.13.R.0.NC	137
E4	H4	R4	.56.15.R.0.NC	150
E4	H4	–	.56.16.R.0.NC	162
E4	H4	R4	.56.17.R.0.NC	175
E4	H4	–	.56.18.R.0.NC	187
E4	H4	R4	.56.20.R.0.NC	200
E4	H4	–	.56.21.R.0.NC	212
E4	H4	–	.56.22.R.0.NC	225
E4	H4	–	.56.23.R.0.NC	237
E4	H4	R4	.56.25.R.0.NC	250
E4	H4	–	.56.26.R.0.NC	262
E4	H4	R4	.56.27.R.0.NC	275
E4	H4	–	.56.28.R.0.NC	287
E4	H4	R4	.56.30.R.0.NC	300

NC-Version crossbars every: link	2nd	e-tube fully enclosed		Bi [mm]
E4	H4	–	.56.31.R.0.NC	312
E4	H4	–	.56.32.R.0.NC	325
E4	H4	–	.56.33.R.0.NC	337
E4	H4	R4	.56.35.R.0.NC	350
E4	H4	–	.56.36.R.0.NC	362
E4	H4	–	.56.37.R.0.NC	375
E4	H4	–	.56.38.R.0.NC	387
E4	H4	R4	.56.40.R.0.NC	400
E4	H4	–	.56.41.R.0.NC	412
E4	H4	–	.56.42.R.0.NC	425
E4	H4	–	.56.43.R.0.NC	437
E4	H4	–	.56.45.R.0.NC	450
E4	H4	R4	.56.46.R.0.NC	462
E4	H4	–	.56.47.R.0.NC	475
E4	H4	–	.56.48.R.0.NC	487
E4	H4	–	.56.50.R.0.NC	500
E4	H4	–	.56.51.R.0.NC	512
E4	H4	–	.56.52.R.0.NC	525
E4	H4	–	.56.53.R.0.NC	537
E4	H4	–	.56.55.R.0.NC	550
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

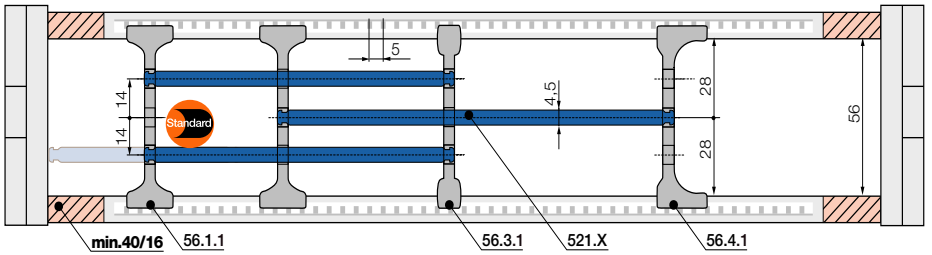
Supplement Part No. with required radius *(R)*. Example: **ES4.56.30.300.0 or E4.56.30.300.0.NC**

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

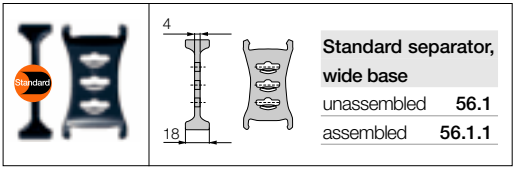
e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

E4.1 | **Series E4.56** | Interior separation | **Standard**

New generation interior separation



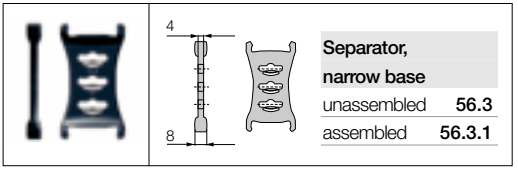
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**56.1**
assembled	**56.1.1**

Standard - for all applications

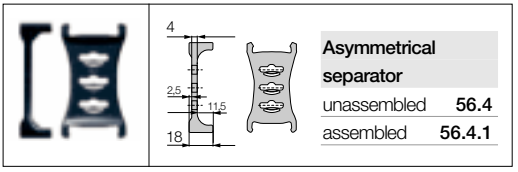
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	**56.3**
assembled	**56.3.1**

For many thin cables

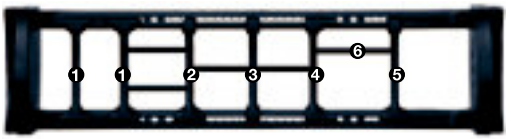
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



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.



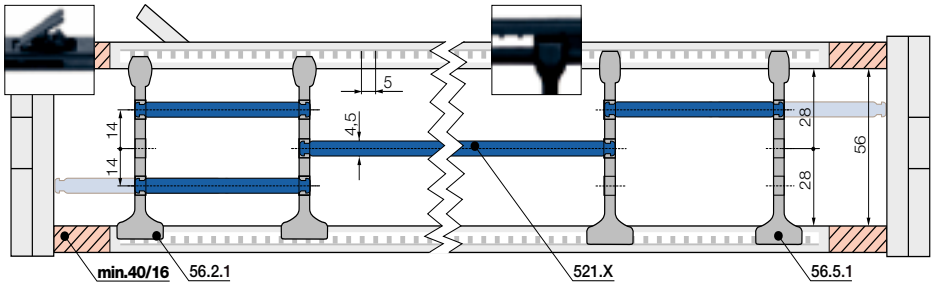


① Standard separator, wide base - Part No. 56.1 ③ Separator, narrow base - Part No. 56.3 ⑤ Notch separator - Part No. 56.5
② Separator for QuickLock crossbar - Part No. 56.2 ④ Separator, asymmetrical - Part No. 56.4 ⑥ Full-width self, lockable - Part No. 520.XX

Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

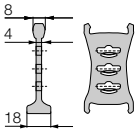
E4.1 | **Series E4.56** | Interior separation | **Standard**

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!



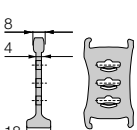


Separator for QuickLock crossbar	
unassembled	**56.2**
assembled	**56.2.1**

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.



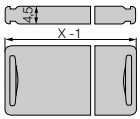


Notch separator for notch crossbar	
unassembled	**56.5**
assembled	**56.5.1**

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.



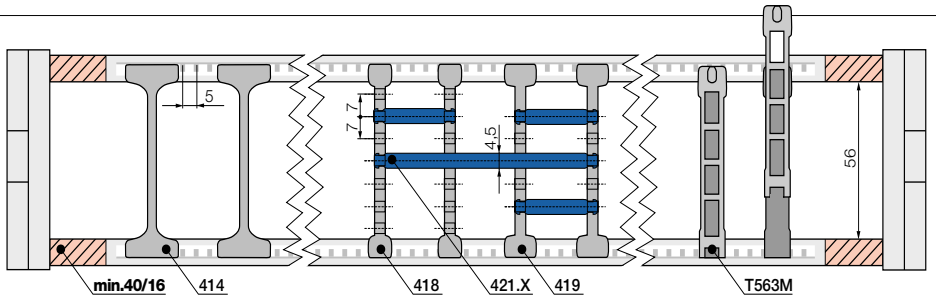
Lockable full-width shelves - for the standard interior separation

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**

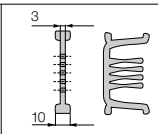
E4.1 | Series E4.56 | Interior separation | Options

Previous interior separation

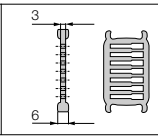
All elements can still be ordered ▶ www.igus.de/en/E4.56



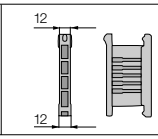
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

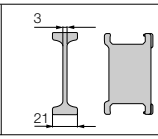
Open slotted separator for e-chains®/e-tubes	
unassembled	**409**
assembled	**419**

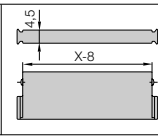
Slotted separator for e-chains®/e-tubes	
unassembled	**408**
assembled	**418**

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

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

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

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 408

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

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 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 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).

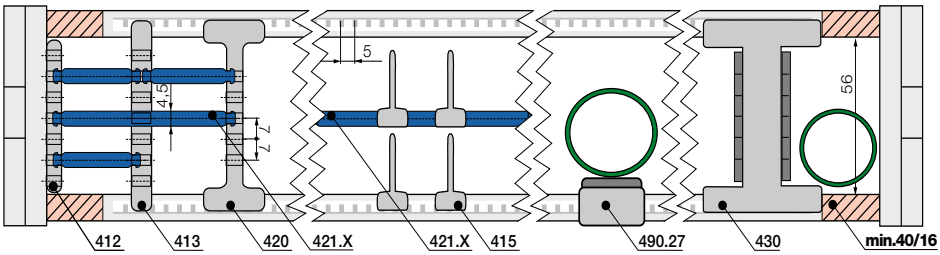
Shelves - interior separation options

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**			

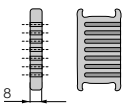
E4.1 | **Series E4.56** | Interior separation | **Options**

Previous interior separation

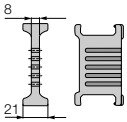
All elements can still be ordered ► www.igus.de/en/E4.56



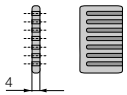
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

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).

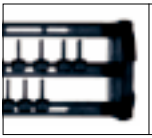
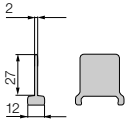
Locking vertical separator 410 (e-chains® only)

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

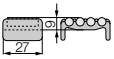
Side plate 402

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

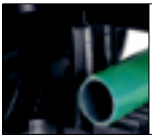
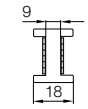
Additional elements for interior separation

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.

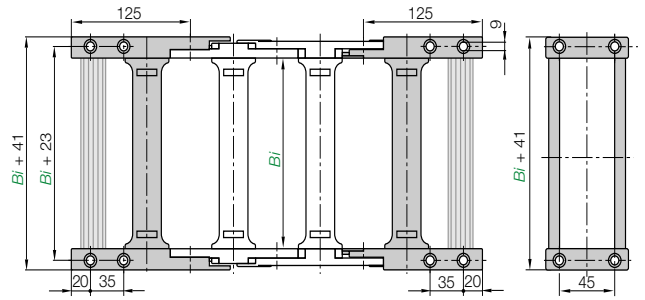
E4.1 | **Series E4.56** | KMA mounting brackets **pivoting**

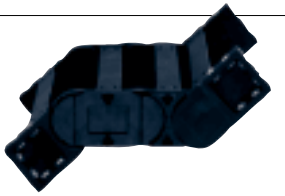
For tight installation conditions, all-sides attachment

Fixed end
E4.560/R4.560...[*].1

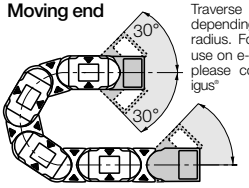
Moving end
E4.560/R4.560...[*].2

Frontal view of KMA





Moving end

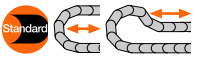


Traverse angle depending on radius. For the use on e-tubes please consult igus®

Fixed end

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

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

E4.560.30.[2].12.C

- C-profile option
- Full set
- even
- Width index
- Series

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)

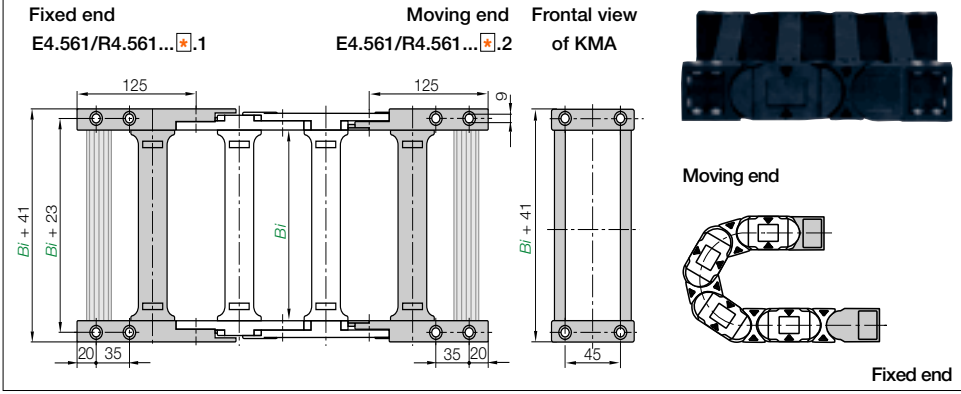
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index [1] (for odd) or [2] (for even)!



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]
05. ▶	E4.561. – 05 .*.12.C	50
06. ▶	E4.561. – 06 .*.12.C	65
07. ▶	E4.561. R4.561. 07 .*.12.C	75
08. ▶	E4.561. – 08 .*.12.C	87
10. ▶	E4.561. R4.561. 10 .*.12.C	100
11. ▶	E4.561. – 11 .*.12.C	112
12. ▶	E4.561. R4.561. 12 .*.12.C	125
13. ▶	E4.561. – 13 .*.12.C	137
15. ▶	E4.561. R4.561. 15 .*.12.C	150
16. ▶	E4.561. – 16 .*.12.C	162
17. ▶	E4.561. R4.560. 17 .*.12.C	175
18. ▶	E4.561. – 18 .*.12.C	187
20. ▶	E4.561. R4.561. 20 .*.12.C	200
21. ▶	E4.561. – 21 .*.12.C	212
22. ▶	E4.561. – 22 .*.12.C	225
23. ▶	E4.561. – 23 .*.12.C	237
25. ▶	E4.561. R4.561. 25 .*.12.C	250
26. ▶	E4.561. – 26 .*.12.C	262
27. ▶	E4.561. R4.561. 27 .*.12.C	275
28. ▶	E4.561. – 28 .*.12.C	287
30. ▶	E4.561. R4.561. 30 .*.12.C	300
31. ▶	E4.561. – 31 .*.12.C	312
32. ▶	E4.561. – 32 .*.12.C	325
33. ▶	E4.561. – 33 .*.12.C	337
35. ▶	E4.561. R4.561. 35 .*.12.C	350
36. ▶	E4.561. – 36 .*.12.C	362
37. ▶	E4.561. – 37 .*.12.C	375
38. ▶	E4.561. – 38 .*.12.C	387
40. ▶	E4.561. R4.561. 40 .*.12.C	400
41. ▶	E4.561. – 41 .*.12.C	412
42. ▶	E4.561. – 42 .*.12.C	425
43. ▶	E4.561. – 43 .*.12.C	437
45. ▶	E4.561. – 45 .*.12.C	450
46. ▶	E4.561. R4.561. 46 .*.12.C	462
47. ▶	E4.561. – 47 .*.12.C	475
48. ▶	E4.561. – 48 .*.12.C	487
50. ▶	E4.561. – 50 .*.12.C	500
51. ▶	E4.561. – 51 .*.12.C	512
52. ▶	E4.561. – 52 .*.12.C	525
53. ▶	E4.561. – 53 .*.12.C	537
55. ▶	E4.561. – 55 .*.12.C	550
60. ▶	E4.561. – 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)

E4.561.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket **Moving end**

E4.561.30.2.2.C (even number of links)

Mounting bracket **Fixed end**

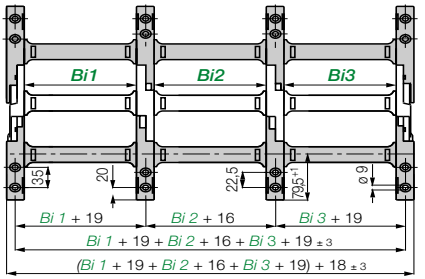
E4.561.30.2.1.C (even number of links)

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

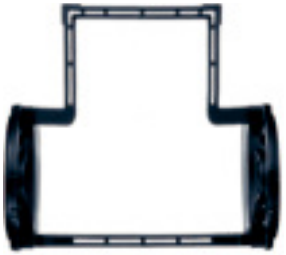


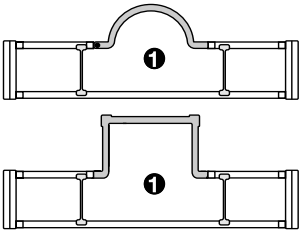


Extension links | for extremely wide e-chains® up to 3,0 m

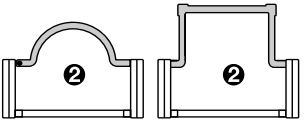
- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide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

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	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

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.56.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.56.10/15RHDZ115/10.*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

E4.1 | **Series E4.56** | More options





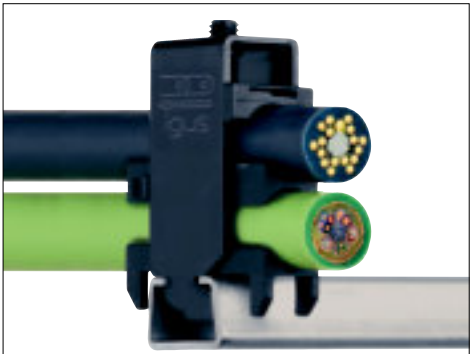
E4 snapclip | clip-on cable binder

- 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

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

Order example (here: inner width *Bi* 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

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



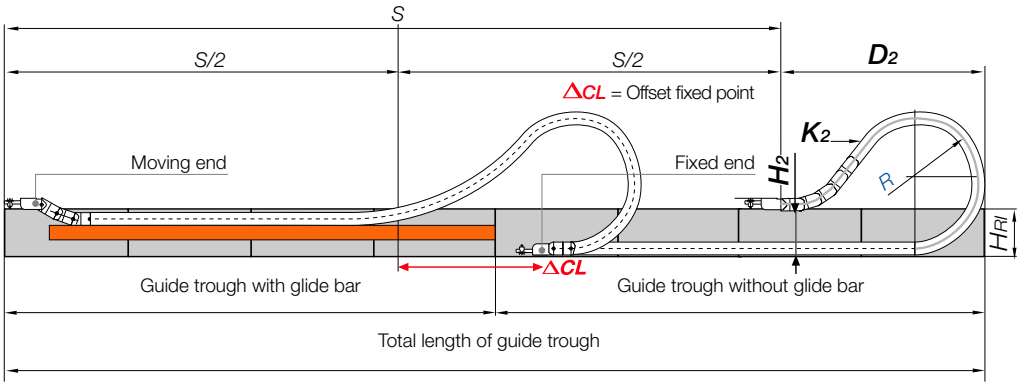
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ▶ **from page 10.1**



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** = $S/2 + K$

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**

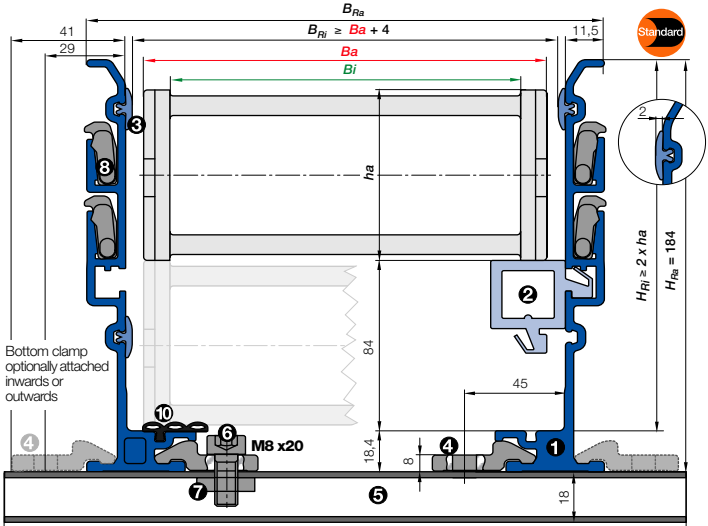
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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

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

Part No. 974.30.SL | **974.31.SL** | Trough height: 184 mm

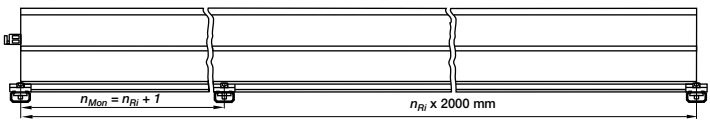
Aluminum "SuperTrough" | Basic Version



● **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 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_{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**

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	960.50.250
.10 138	960.50.200	960.50.275
.11 151	960.50.200	960.50.275
.12 163	960.50.225	960.50.300
.13 176	960.50.225	960.50.300
.15 188	960.50.250	960.50.325
.16 201	960.50.250	960.50.325
.17 213	960.50.275	960.50.350
.18 226	960.50.275	960.50.350
.20 238	960.50.300	960.50.375
.21. 251	960.50.300	960.50.375
.22 263	960.50.325	960.50.400
.23 276	960.50.325	960.50.400
.25 288	960.50.350	960.50.425
.26 301	960.50.350	960.50.425
.27 313	960.50.375	960.50.450
.28 326	960.50.375	960.50.450
.30 338	960.50.400	960.50.475
.31 351	960.50.400	960.50.475
.32 363	960.50.425	960.50.500
.33 376	960.50.425	960.50.500
.35 388	960.50.450	960.50.525
.36 401	960.50.450	960.50.525
.37 413	960.50.475	960.50.550
.38 426	960.50.475	960.50.550
.40 438	960.50.500	960.50.575
.41 451	960.50.500	960.50.575
.42 463	960.50.525	960.50.600
.43 476	960.50.525	960.50.600
.45 488	960.50.550	960.50.625
.46 501	960.50.550	960.50.625
.47 513	960.50.575	960.50.650
.48 526	960.50.575	960.50.650
.50 538	960.50.600	960.50.675
.51 551	960.50.600	960.50.675
.52 563	960.50.625	960.50.700
.53 576	960.50.625	960.50.700
.55 588	960.50.650	960.50.725
.60 638	960.50.700	960.50.775

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	**E4.56.30QZ.*R*.0** Crossbar every link	**E4.56.30QE.*R*.0** Crossbar every link	**E4.56.30Q.*R*.0** Crossbar every link
	H4.56.30.*R*.0 Crossbar every 2nd link	**HS4.56.30.*R*.0** Crossbar every 2nd link	**H4.56.30QZ.*R*.0** Crossbar every 2nd link	**H4.56.30QE.*R*.0** Crossbar every 2nd link	**H4.56.30Q.*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**

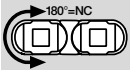
Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.56.30Q.*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	ES4.56.30Q.*R*.0		E4.56.30Q.*R*.0.NC	E4.56.30Q.*R1/R2*.0	E4.56.30Q.*R*.0.XXL	–	E4.56.30Q.*R*.0.ESD
NC-Version	ES4.56.30.*R*.0.NC	E4.56.30Q.*R*.0.NC		–	–	R4.56.30.*R*.0.HT.NC	E4.56.30.*R*.0.ESD.NC
RBR-Version	–	E4.56.30Q.*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	E4.56.30Q.*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	E4.56.30Q.*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	**R4.56.30HT.*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	**R4.56.30HTZ.*R*.0** Bottom only **R4.56.30HTE.*R*.0** Lid only	**R4.56.30.*R*.0.ESD** e-tube, closed
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

- Standard color: black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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**

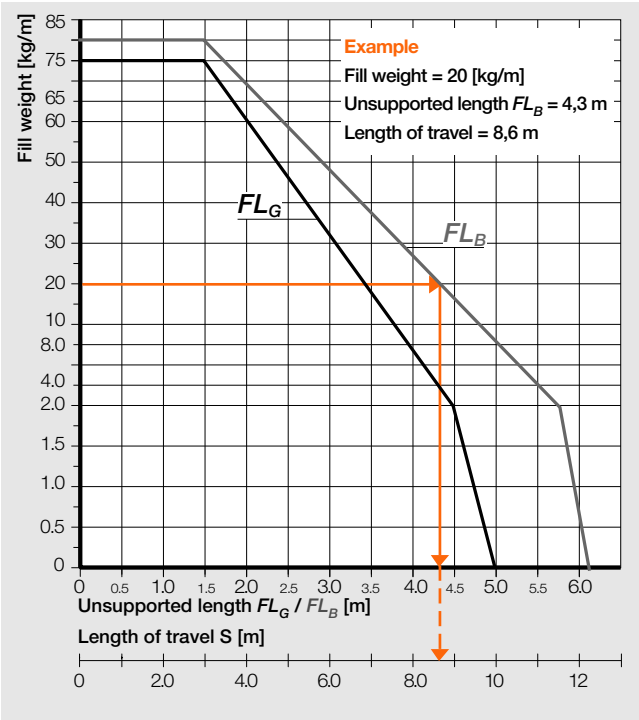
- If a less stable e-chain® can be used for economical reasons

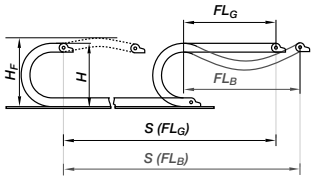
►**Series 15050/15150/R19850, page 7.216**

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





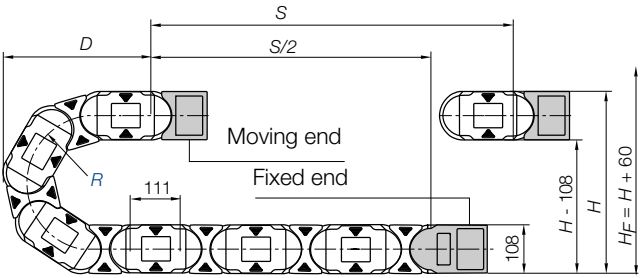
Unsupported applications

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

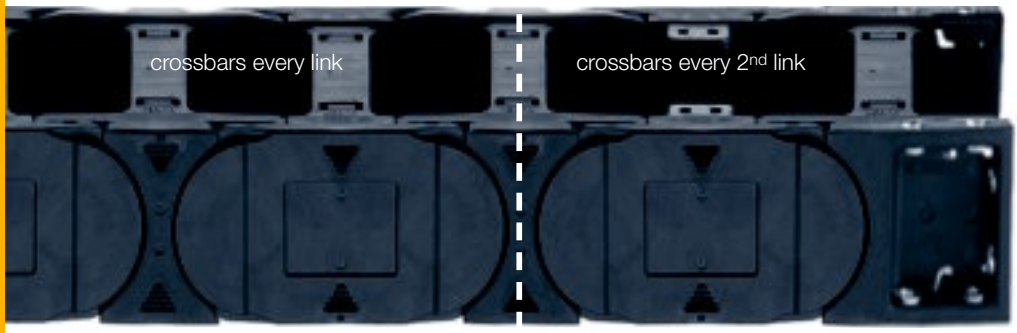
Speed, material, temperature and flammability class ▶ **page 7.16**

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
$H\ ^{-0}_{+25}$	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 = $\pi \bullet R$ + "safety"



Standard e-chains® | Series **E4.80** crossbars every link | Series **H4.80** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	E4.80 [kg/m]	H4.80 [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
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	*Bi* [mm]	*Ba* [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
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

More e-tube widths upon request.

Delivery Time: approx. 8-10 weeks after receipt of order

****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**

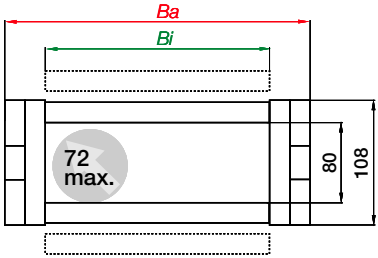
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

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



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

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
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
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

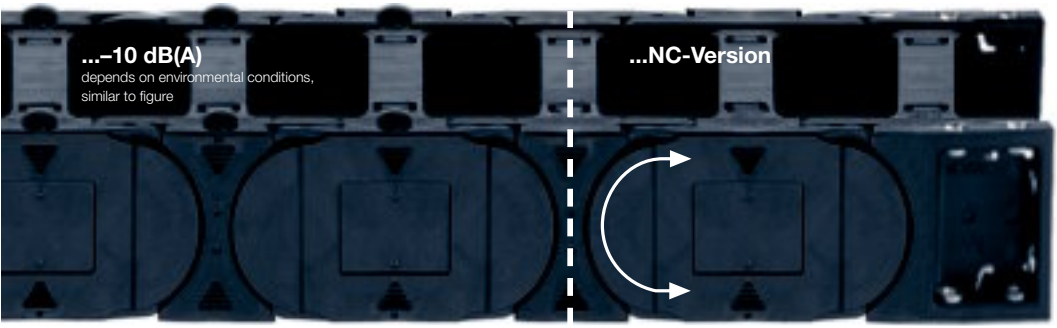
Part No. E4.80.30QE.300.0 = QuickLock crossbar for outer radius

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

7.100 3D-CAD files, configurators, PDF, applications ► www.igus.de/en/E4.80



Noise dampening | - ≈10 dB(A)

With pads crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 –	.80.05.*R*.0	50
ES4 HS4 –	.80.06.*R*.0	65
ES4 HS4 –	.80.07.*R*.0	75
ES4 HS4 –	.80.08.*R*.0	87
ES4 HS4 –	.80.10.*R*.0	100
ES4 HS4 –	.80.11.*R*.0	112
ES4 HS4 –	.80.12.*R*.0	125
ES4 HS4 –	.80.13.*R*.0	137
ES4 HS4 RS4	.80.15.*R*.0	150
ES4 HS4 –	.80.16.*R*.0	162
ES4 HS4 –	.80.17.*R*.0	175
ES4 HS4 –	.80.18.*R*.0	187
ES4 HS4 RS4	.80.20.*R*.0	200
ES4 HS4 –	.80.21.*R*.0	212
ES4 HS4 –	.80.22.*R*.0	225
ES4 HS4 –	.80.23.*R*.0	237
ES4 HS4 RS4	.80.25.*R*.0	250
ES4 HS4 –	.80.26.*R*.0	262
ES4 HS4 –	.80.27.*R*.0	275
ES4 HS4 –	.80.28.*R*.0	287
ES4 HS4 RS4	.80.30.*R*.0	300

With pads crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
ES4 HS4 –	.80.31.*R*.0	312
ES4 HS4 –	.80.32.*R*.0	325
ES4 HS4 –	.80.33.*R*.0	337
ES4 HS4 RS4	.80.35.*R*.0	350
ES4 HS4 –	.80.36.*R*.0	362
ES4 HS4 –	.80.37.*R*.0	375
ES4 HS4 –	.80.38.*R*.0	387
ES4 HS4 RS4	.80.40.*R*.0	400
ES4 HS4 –	.80.41.*R*.0	412
ES4 HS4 –	.80.42.*R*.0	425
ES4 HS4 –	.80.43.*R*.0	437
ES4 HS4 –	.80.45.*R*.0	450
ES4 HS4 RS4	.80.46.*R*.0	462
ES4 HS4 –	.80.47.*R*.0	475
ES4 HS4 –	.80.48.*R*.0	487
ES4 HS4 –	.80.50.*R*.0	500
ES4 HS4 –	.80.51.*R*.0	512
ES4 HS4 –	.80.52.*R*.0	525
ES4 HS4 –	.80.53.*R*.0	537
ES4 HS4 –	.80.55.*R*.0	550
ES4 HS4 –	.80.60.*R*.0	600

NC-Version | Without pretension

NC-Version crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
E4 H4 –	.80.05.*R*.0.NC	50
E4 H4 –	.80.06.*R*.0.NC	65
E4 H4 –	.80.07.*R*.0.NC	75
E4 H4 –	.80.08.*R*.0.NC	87
E4 H4 –	.80.10.*R*.0.NC	100
E4 H4 –	.80.11.*R*.0.NC	112
E4 H4 –	.80.12.*R*.0.NC	125
E4 H4 –	.80.13.*R*.0.NC	137
E4 H4 R4	.80.15.*R*.0.NC	150
E4 H4 –	.80.16.*R*.0.NC	162
E4 H4 –	.80.17.*R*.0.NC	175
E4 H4 –	.80.18.*R*.0.NC	187
E4 H4 R4	.80.20.*R*.0.NC	200
E4 H4 –	.80.21.*R*.0.NC	212
E4 H4 –	.80.22.*R*.0.NC	225
E4 H4 –	.80.23.*R*.0.NC	237
E4 H4 R4	.80.25.*R*.0.NC	250
E4 H4 –	.80.26.*R*.0.NC	262
E4 H4 –	.80.27.*R*.0.NC	275
E4 H4 –	.80.28.*R*.0.NC	287
E4 H4 R4	.80.30.*R*.0.NC	300

NC-Version crossbars every: link / 2nd	e-tube fully enclosed	Bi [mm]
E4 H4 –	.80.31.*R*.0.NC	312
E4 H4 –	.80.32.*R*.0.NC	325
E4 H4 –	.80.33.*R*.0.NC	337
E4 H4 R4	.80.35.*R*.0.NC	350
E4 H4 –	.80.36.*R*.0.NC	362
E4 H4 –	.80.37.*R*.0.NC	375
E4 H4 –	.80.38.*R*.0.NC	387
E4 H4 R4	.80.40.*R*.0.NC	400
E4 H4 –	.80.41.*R*.0.NC	412
E4 H4 –	.80.42.*R*.0.NC	425
E4 H4 –	.80.43.*R*.0.NC	437
E4 H4 –	.80.45.*R*.0.NC	450
E4 H4 R4	.80.46.*R*.0.NC	462
E4 H4 –	.80.47.*R*.0.NC	475
E4 H4 –	.80.48.*R*.0.NC	487
E4 H4 –	.80.50.*R*.0.NC	500
E4 H4 –	.80.51.*R*.0.NC	512
E4 H4 –	.80.52.*R*.0.NC	525
E4 H4 –	.80.53.*R*.0.NC	537
E4 H4 –	.80.55.*R*.0.NC	550
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

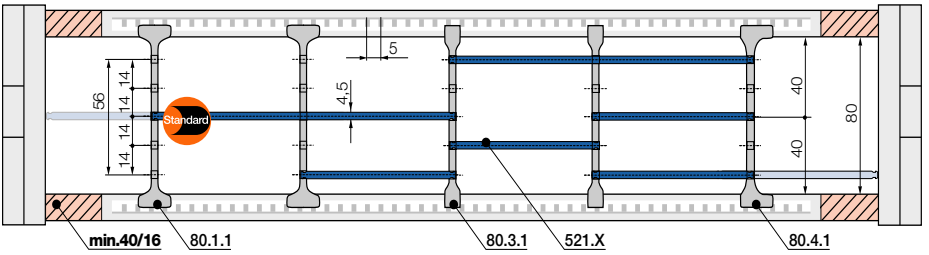
Supplement Part No. with required radius *(R)*. Example: **ES4.80.30.300.0 or E4.80.30.300.0.NC**

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

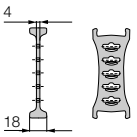
E4.1 | **Series E4.80** | Interior separation | **Standard**

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!



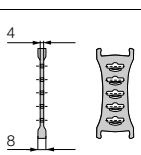


Standard separator, wide base	
unassembled	**80.1**
assembled	**80.1.1**

Standard - for all applications

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



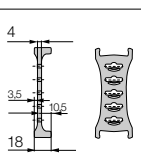


Separator, narrow base	
unassembled	**80.3**
assembled	**80.3.1**

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.

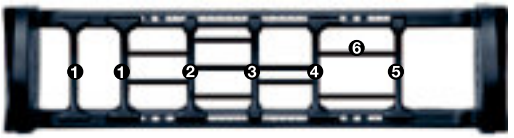


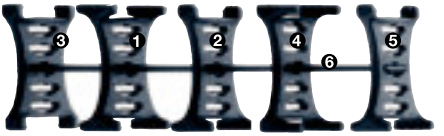


Asymmetrical separator	
unassembled	**80.4**
assembled	**80.4.1**

For side-mounted applications

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



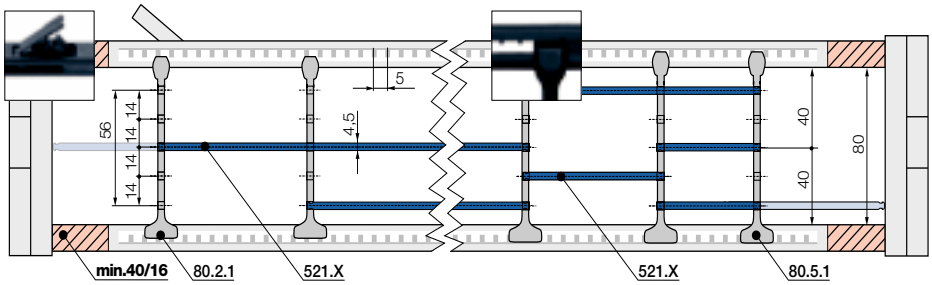


① Standard separator, wide base - Part No. 80.1 ③ Separator, narrow base - Part No. 80.3 ⑤ Notch separator - Part No. 80.5
② Separator for QuickLock crossbar - Part No. 80.2 ④ Separator, asymmetrical - Part No. 80.4 ⑥ Full-width self, lockable - Part No. 520.XX

Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

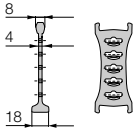
E4.1 | **Series E4.80** | Interior separation | **Standard**

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!



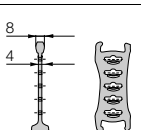


Separator for QuickLock crossbar	
unassembled	**80.2**
assembled	**80.2.1**

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.



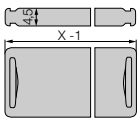


Notch separator for notch crossbar	
unassembled	**80.5**
assembled	**80.5.1**

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.



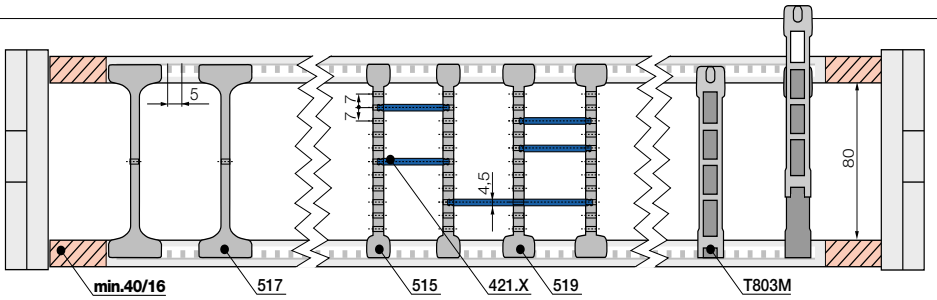
Lockable full-width shelves - for the standard interior separation

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**

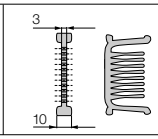
E4.1 | Series E4.80 | Interior separation | Options

Previous interior separation

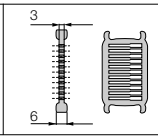
All elements can still be ordered ► www.igus.de/en/E4.80



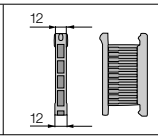
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

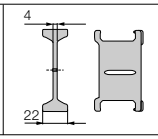
Open slotted separator for e-chains®/e-tubes	
unassembled	**509**
assembled	**519**

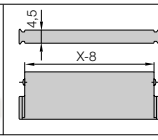
Slotted separator for e-chains®/e-tubes	
unassembled	**505**
assembled	**515**

Split separator for e-chains®	
unassembled	**T803**
assembled	**T803M**

Locking separator for e-chains®	
unassembled	**507**
assembled	**517**

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

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 505

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

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 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 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).

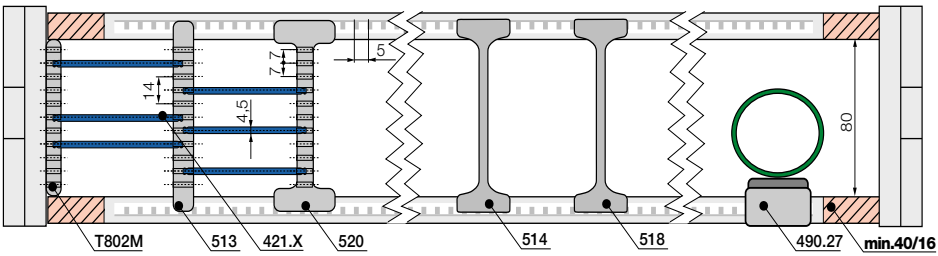
Shelves - interior separation options

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**			

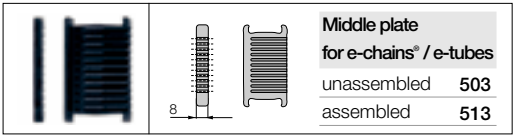
E4.1 | **Series E4.80** | Interior separation | **Options**

Previous interior separation

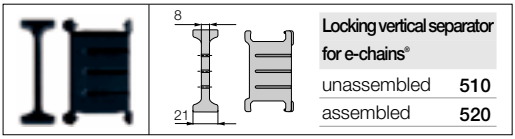
All elements can still be ordered ▶ www.igus.de/en/E4.80



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!



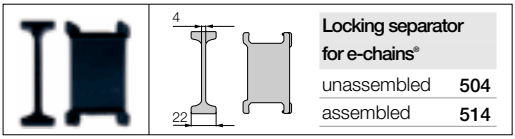
Middle plate for e-chains® / e-tubes	
unassembled	503
assembled	513



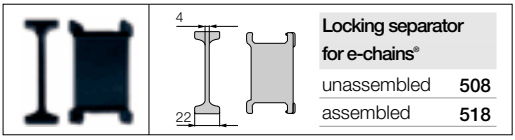
Locking vertical separator for e-chains®	
unassembled	510
assembled	520



Side plate for e-chains® / e-tubes	
unassembled	T802
assembled	T802M



Locking separator for e-chains®	
unassembled	504
assembled	514



Locking separator for e-chains®	
unassembled	508
assembled	518

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 510 (e-chains® only)

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

Side plate T802

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

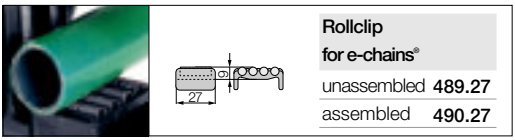
Locking separator 504

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 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



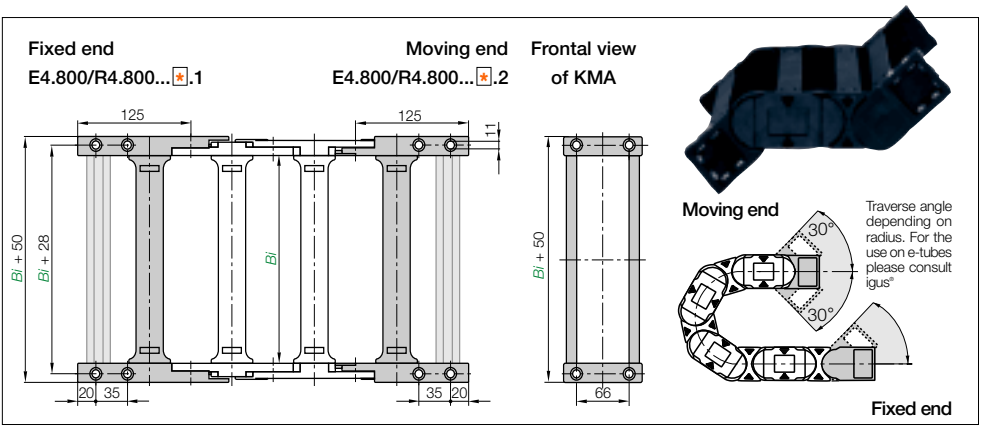
Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

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**

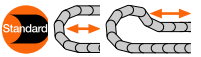
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05. ▶	E4.800. – 05 .*.12.C	50
06. ▶	E4.800. – 06 .*.12.C	65
07. ▶	E4.800. – 07 .*.12.C	75
08. ▶	E4.800. – 08 .*.12.C	87
10. ▶	E4.800. – 10 .*.12.C	100
11. ▶	E4.800. – 11 .*.12.C	112
12. ▶	E4.800. – 12 .*.12.C	125
13. ▶	E4.800. – 13 .*.12.C	137
15. ▶	E4.800. – 15 .*.12.C	150
16. ▶	E4.800. – 16 .*.12.C	162
17. ▶	E4.800. – 17 .*.12.C	175
18. ▶	E4.800. – 18 .*.12.C	187
20. ▶	E4.800. R4.800. 20 .*.12.C	200
21. ▶	E4.800. – 21 .*.12.C	212
22. ▶	E4.800. – 22 .*.12.C	225
23. ▶	E4.800. – 23 .*.12.C	237
25. ▶	E4.800. R4.800. 25 .*.12.C	250
26. ▶	E4.800. – 26 .*.12.C	262
27. ▶	E4.800. – 27 .*.12.C	275
28. ▶	E4.800. – 28 .*.12.C	287
30. ▶	E4.800. R4.800. 30 .*.12.C	300

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
31. ▶	E4.800. – 31 .*.12.C	312
32. ▶	E4.800. – 32 .*.12.C	325
33. ▶	E4.800. – 33 .*.12.C	337
35. ▶	E4.800. R4.800. 35 .*.12.C	350
36. ▶	E4.800. – 36 .*.12.C	362
37. ▶	E4.800. – 37 .*.12.C	375
38. ▶	E4.800. – 38 .*.12.C	387
40. ▶	E4.800. R4.800. 40 .*.12.C	400
41. ▶	E4.800. – 41 .*.12.C	412
42. ▶	E4.800. – 42 .*.12.C	425
43. ▶	E4.800. – 43 .*.12.C	437
45. ▶	E4.800. – 45 .*.12.C	450
46. ▶	E4.800. R4.800. 46 .*.12.C	462
47. ▶	E4.800. – 47 .*.12.C	475
48. ▶	E4.800. – 48 .*.12.C	487
50. ▶	E4.800. – 50 .*.12.C	500
51. ▶	E4.800. – 51 .*.12.C	512
52. ▶	E4.800. – 52 .*.12.C	525
53. ▶	E4.800. – 53 .*.12.C	537
55. ▶	E4.800. – 55 .*.12.C	550
60. ▶	E4.800. – 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)

E4.800.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket **Moving end**
E4.800.30.2.2.C (even number of links)

Mounting bracket **Fixed end**
E4.800.30.2.1.C (even number of links)

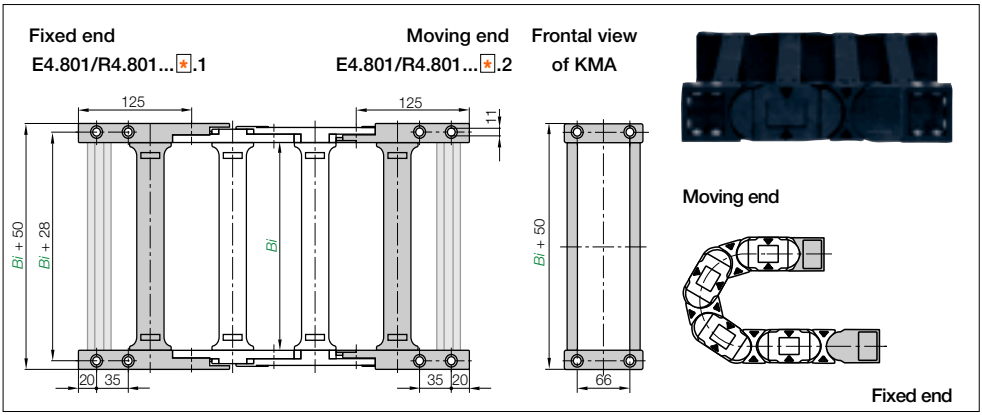
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



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 E4.80** | 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]
05. ▶	E4.801. – 05 .*.12.C	50
06. ▶	E4.801. – 06 .*.12.C	65
07. ▶	E4.801. – 07 .*.12.C	75
08. ▶	E4.801. – 08 .*.12.C	87
10. ▶	E4.801. – 10 .*.12.C	100
11. ▶	E4.801. – 11 .*.12.C	112
12. ▶	E4.801. – 12 .*.12.C	125
13. ▶	E4.801. – 13 .*.12.C	137
15. ▶	E4.801. – 15 .*.12.C	150
16. ▶	E4.801. – 16 .*.12.C	162
17. ▶	E4.801. – 17 .*.12.C	175
18. ▶	E4.801. – 18 .*.12.C	187
20. ▶	E4.801. R4.801. 20 .*.12.C	200
21. ▶	E4.801. – 21 .*.12.C	212
22. ▶	E4.801. – 22 .*.12.C	225
23. ▶	E4.801. – 23 .*.12.C	237
25. ▶	E4.801. R4.801. 25 .*.12.C	250
26. ▶	E4.801. – 26 .*.12.C	262
27. ▶	E4.801. – 27 .*.12.C	275
28. ▶	E4.801. – 28 .*.12.C	287
30. ▶	E4.801. R4.801. 30 .*.12.C	300

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
31. ▶	E4.801. – 31 .*.12.C	312
32. ▶	E4.801. – 32 .*.12.C	325
33. ▶	E4.801. – 33 .*.12.C	337
35. ▶	E4.801. R4.801. 35 .*.12.C	350
36. ▶	E4.801. – 36 .*.12.C	362
37. ▶	E4.801. – 37 .*.12.C	375
38. ▶	E4.801. – 38 .*.12.C	387
40. ▶	E4.801. R4.801. 40 .*.12.C	400
41. ▶	E4.801. – 41 .*.12.C	412
42. ▶	E4.801. – 42 .*.12.C	425
43. ▶	E4.801. – 43 .*.12.C	437
45. ▶	E4.801. – 45 .*.12.C	450
46. ▶	E4.801. R4.801. 46 .*.12.C	462
47. ▶	E4.801. – 47 .*.12.C	475
48. ▶	E4.801. – 48 .*.12.C	487
50. ▶	E4.801. – 50 .*.12.C	500
51. ▶	E4.801. – 51 .*.12.C	512
52. ▶	E4.801. – 52 .*.12.C	525
53. ▶	E4.801. – 53 .*.12.C	537
55. ▶	E4.801. – 55 .*.12.C	550
60. ▶	E4.801. – 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)

E4.801.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

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)

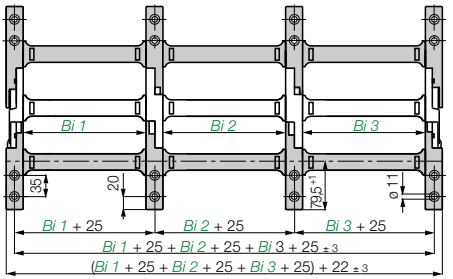
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, 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** | More options

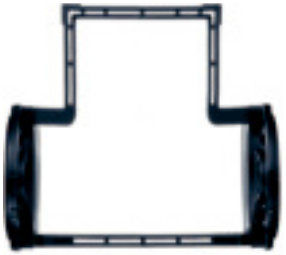


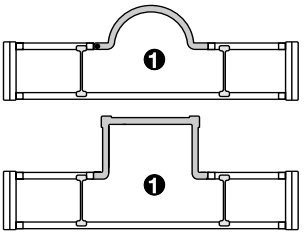


Extension links | for extremely wide e-chains® up to 3,0 m

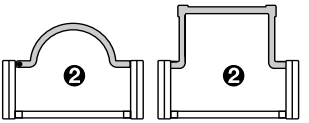
- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide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

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

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.80.10/15RHDE115/10.*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

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

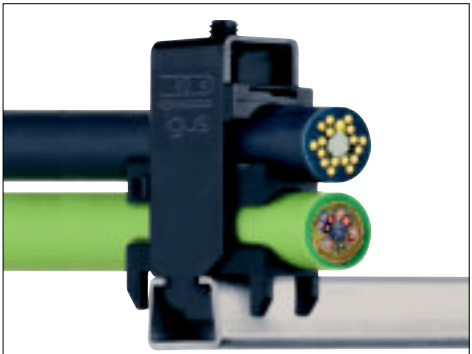
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 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

E4.1 | **Series E4.80** | e-chain® accessories



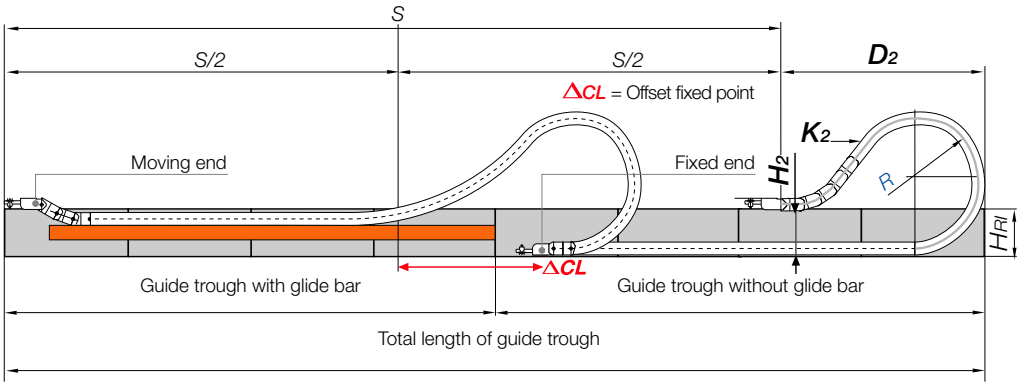
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ▶ **from page 10.1**



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 = 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**

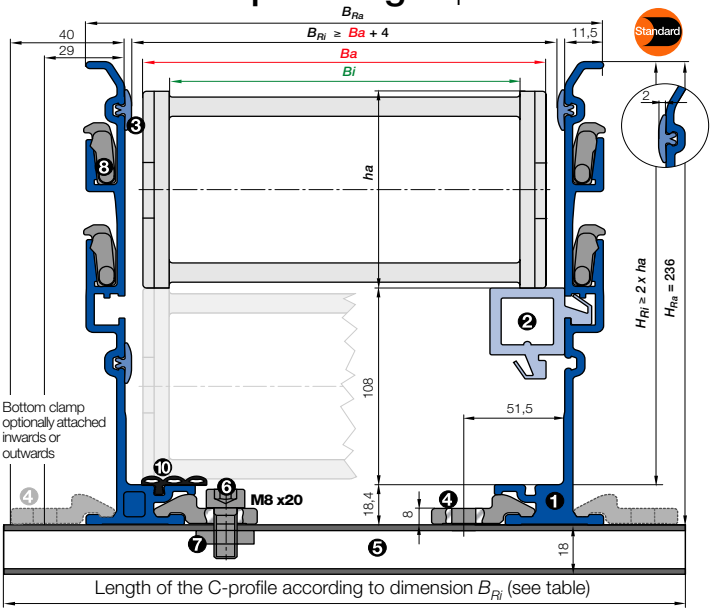
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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) · 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

Part No. 975.30.SL | **975.31.SL** | Trough height: 236 mm

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 E4.80.30.300.0 with B_{Ri} = 354

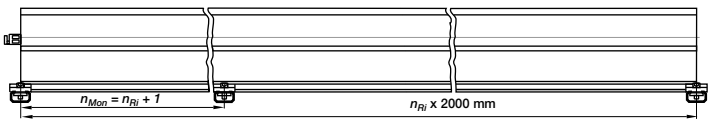
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 975.30.SL**

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
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

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	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

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	**E4.80.30QZ.*R*.0** Crossbar every link	**E4.80.30QE.*R*.0** Crossbar every link	**E4.80.30Q.*R*.0** Crossbar every link
	H4.80.30.*R*.0 Crossbar every 2nd link	**HS4.80.30.*R*.0** Crossbar every 2nd link	**H4.80.30QZ.*R*.0** Crossbar every 2nd link	**H4.80.30QE.*R*.0** Crossbar every 2nd link	**H4.80.30Q.*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

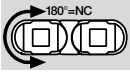
	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.80.30Q.*R*.0	ES4.80.30.*R*.0.NC	–	ES4.80.30.*R*.0.XXL	RS4.80.30.*R*.0.HT	ES4.80.30.*R*.0.ESD
QuickLock crossbar	ES4.80.30Q.*R*.0		E4.80.30Q.*R*.0.NC	E4.80.30Q.*R1/R2*.0	E4.80.30Q.*R*.0.XXL	–	E4.80.30Q.*R*.0.ESD
NC-Version	ES4.80.30.*R*.0.NC	E4.80.30Q.*R*.0.NC		–	–	R4.80.30.*R*.0.HT.NC	E4.80.30.*R*.0.ESD.NC
RBR-Version	–	E4.80.30Q.*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	E4.80.30Q.*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	E4.80.30Q.*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

7.112 3D-CAD files, configurators, PDF, applications ► www.igus.de/en/E4.80

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	**R4.80.30HT.*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	**R4.80.30HTZ.*R*.0** Bottom only **R4.80.30HTE.*R*.0** Lid only	**R4.80.30.*R*.0.ESD** e-tube, closed
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

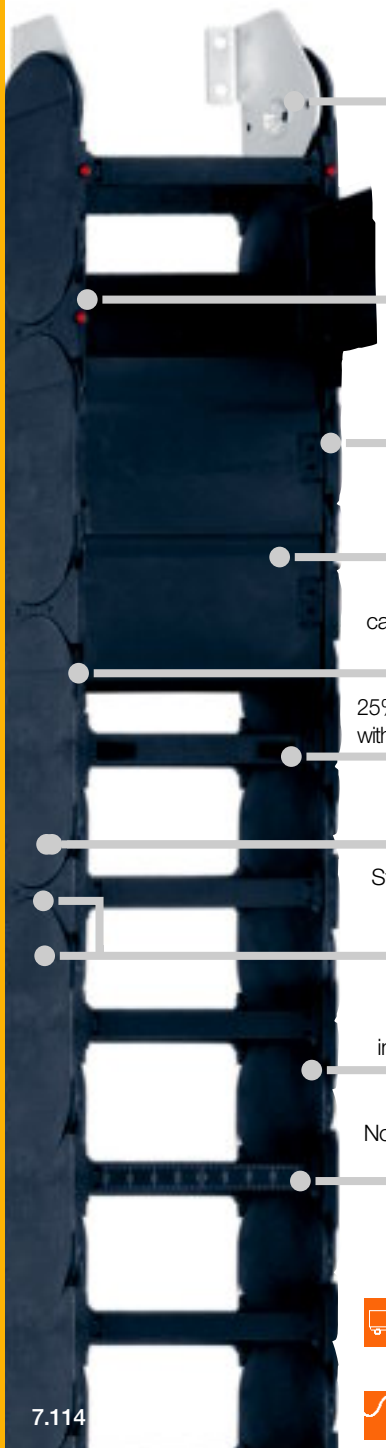
- Standard color
- black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

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



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

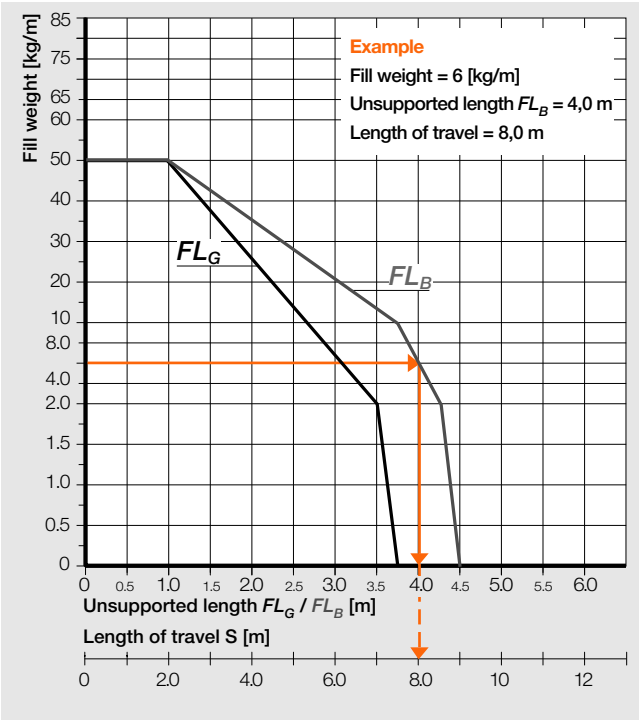
- If maximum stability is required

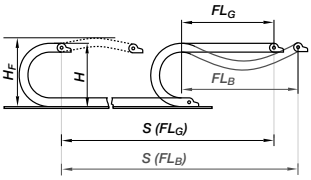
►**Series 600/R608, page 7.294**

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





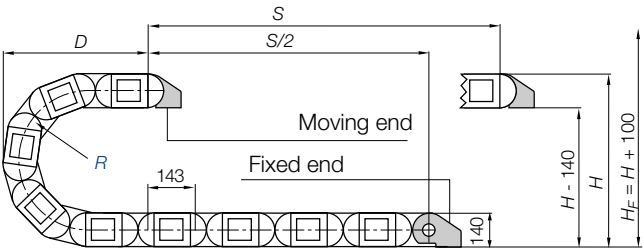
Unsupported applications

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 = $S/2 + K$

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)

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 = $\pi \bullet R$ + "safety"



e-chains® | Series **1640** with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	1640 [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

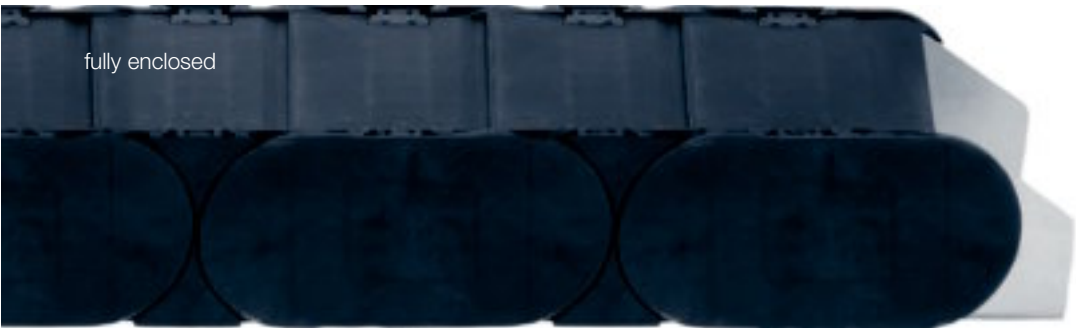
Part No. crossbars every link	Bi [mm]	Ba [mm]	1640 [kg/m]
1640. 31. R.0	312	346	≈ 6,41
1640. 32. R.0	325	359	≈ 6,48
1640. 33. R.0	337	371	≈ 6,59
1640. 35. R.0	350	384	≈ 6,61
1640. 36. R.0	362	396	≈ 6,67
1640. 37. R.0	375	409	≈ 6,71
1640. 38. R.0	387	421	≈ 6,76
1640. 40. R.0	400	434	≈ 6,89
1640. 41. R.0	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	*Bi* [mm]	*Ba* [mm]	1608 [kg/m]
1608. 20. *R*.0	200	234	7,690
1608. 25. *R*.0	250	284	8,390
1608. 30. *R*.0	300	334	9,090

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	1608 [kg/m]
1608. 35. *R*.0	350	384	9,790
1608. 40. *R*.0	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**

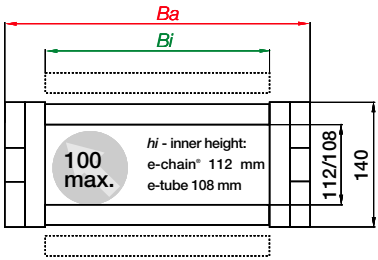
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

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. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
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
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**

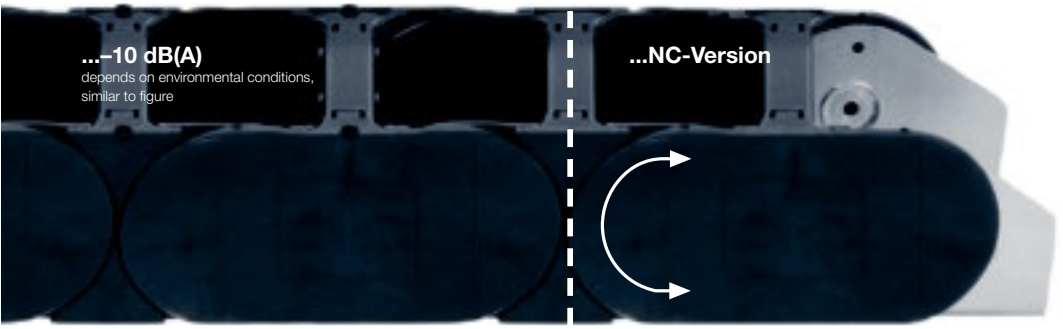
Part No. 1640.30QZ.300.0 = QuickLock crossbar for inner radius

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)

With pads crossb. every link	e-tube fully enclosed			Bi [mm]
S1640	–	.05. R.0		50
S1640	–	.06. R.0		65
S1640	–	.07. R.0		75
S1640	–	.08. R.0		87
S1640	–	.10. R.0		100
S1640	–	.11. R.0		112
S1640	–	.12. R.0		125
S1640	–	.13. R.0		137
S1640	–	.15. R.0		150
S1640	–	.16. R.0		162
S1640	–	.17. R.0		175
S1640	–	.18. R.0		187
S1640	S1608	.20. R.0		200
S1640	–	.21. R.0		212
S1640	–	.22. R.0		225
S1640	–	.23. R.0		237
S1640	S1608	.25. R.0		250
S1640	–	.26. R.0		262
S1640	–	.27. R.0		275
S1640	–	.28. R.0		287
S1640	S1608	.30. R.0		300

With pads crossb. every link	e-tube fully enclosed			Bi [mm]
S1640	–	.31. R.0		312
S1640	–	.32. R.0		325
S1640	–	.33. R.0		337
S1640	S1608	.35. R.0		350
S1640	–	.36. R.0		362
S1640	–	.37. R.0		375
S1640	–	.38. R.0		387
S1640	S1608	.40. R.0		400
S1640	–	.41. R.0		412
S1640	–	.42. R.0		425
S1640	–	.43. R.0		437
S1640	–	.45. R.0		450
S1640	–	.46. R.0		462
S1640	–	.47. R.0		475
S1640	–	.48. R.0		487
S1640	–	.50. R.0		500
S1640	–	.51. R.0		512
S1640	–	.52. R.0		525
S1640	–	.53. R.0		537
S1640	–	.55. R.0		550
S1640	–	.60. R.0		600

NC-Version | Without pretension

NC-Version crossb. every link	e-tube fully enclosed			Bi [mm]
1640	–	.05. R.0.NC		50
1640	–	.06. R.0.NC		65
1640	–	.07. R.0.NC		75
1640	–	.08. R.0.NC		87
1640	–	.10. R.0.NC		100
1640	–	.11. R.0.NC		112
1640	–	.12. R.0.NC		125
1640	–	.13. R.0.NC		137
1640	–	.15. R.0.NC		150
1640	–	.16. R.0.NC		162
1640	–	.17. R.0.NC		175
1640	–	.18. R.0.NC		187
1640	1608	.20. R.0.NC		200
1640	–	.21. R.0.NC		212
1640	–	.22. R.0.NC		225
1640	–	.23. R.0.NC		237
1640	1608	.25. R.0.NC		250
1640	–	.26. R.0.NC		262
1640	–	.27. R.0.NC		275
1640	–	.28. R.0.NC		287
1640	1608	.30. R.0.NC		300

NC-Version crossb. every link	e-tube fully enclosed			Bi [mm]
1640	–	.31. R.0.NC		312
1640	–	.32. R.0.NC		325
1640	–	.33. R.0.NC		337
1640	1608	.35. R.0.NC		350
1640	–	.36. R.0.NC		362
1640	–	.37. R.0.NC		375
1640	–	.38. R.0.NC		387
1640	1608	.40. R.0.NC		400
1640	–	.41. R.0.NC		412
1640	–	.42. R.0.NC		425
1640	–	.43. R.0.NC		437
1640	–	.45. R.0.NC		450
1640	–	.46. R.0.NC		462
1640	–	.47. R.0.NC		475
1640	–	.48. R.0.NC		487
1640	–	.50. R.0.NC		500
1640	–	.51. R.0.NC		512
1640	–	.52. R.0.NC		525
1640	–	.53. R.0.NC		537
1640	–	.55. R.0.NC		550
1640	–	.60. R.0.NC		600

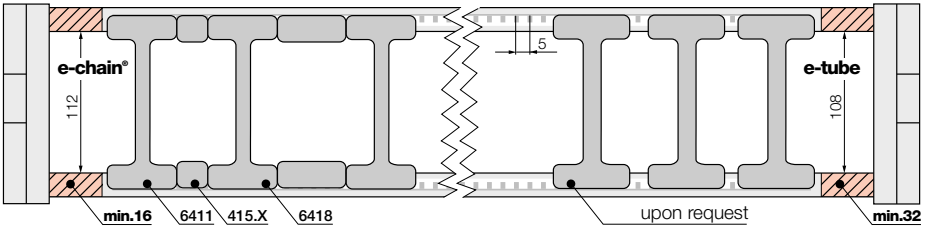
Available bending radii *R* [mm] 200* | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 *not available for e-tubes

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

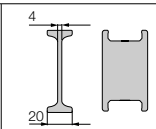
e-chain® with noise dampening pads - Delivery time: 3-5 work days.
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

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



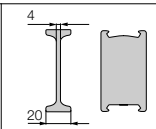
Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!





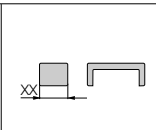
Separator for e-chains®	
unassembled	**6401**
assembled	**6411**





Locking separator for e-chains®	
unassembled	**6408**
assembled	**6418**





Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**

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)

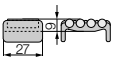
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

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



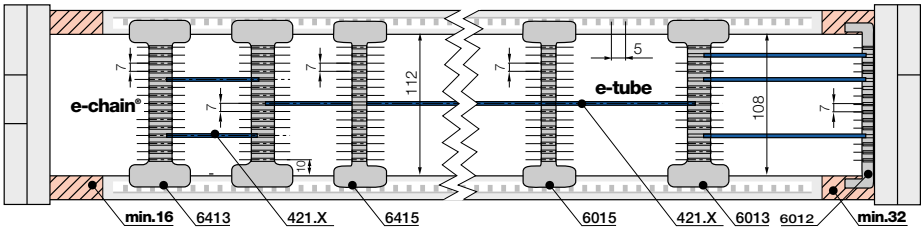


Rollclip for e-chains®	
unassembled	**489.27**
assembled	**490.27**

Rollclip

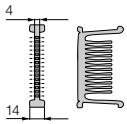
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Option 2 | Shelves

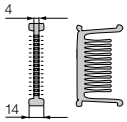


Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm** | **e-chain®: 16 mm**

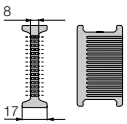
In the standard configuration separators are assembled every 2nd e-chain® link!

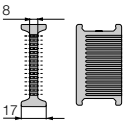
Open slotted separator for e-chains®	
unassembled	**6405**
assembled	**6415**

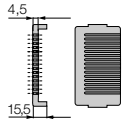
Open slotted separator for e-tubes	
unassembled	**6005**
assembled	**6005**

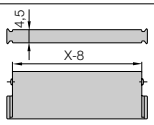
Middle plate for e-chains®	
unassembled	**6403**
assembled	**6413**

Middle plate for e-tubes	
unassembled	**6003**
assembled	**6013**

Side plate for e-chains®/e-tubes	
unassembled	**6002**
assembled	**6012**

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

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 6005

(e-tubes only, unilateral open)

Works like open, slotted separator 6405 on e-tube 1608

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 6003 (e-tubes only)

Works like middle plate 6403 on e-tube 1608

Side plate 6002 (e-chains®/e-tubes)

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

Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments). - see table below.

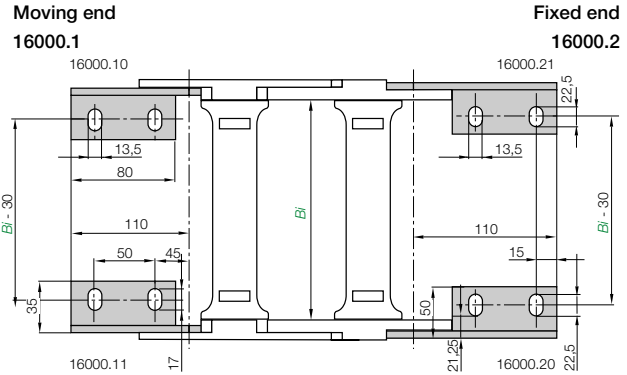
Width X [mm]	unassembled	assembled
018	**420.18**	**421.18**
023	**420.23**	**421.23**
025	**420.25**	**421.25**
028	**420.28**	**421.28**

Width X [mm]	unassembled	assembled
033	**420.33**	**421.33**
043	**420.43**	**421.43**
050	**420.50**	**421.50**
062	**420.62**	**421.62**

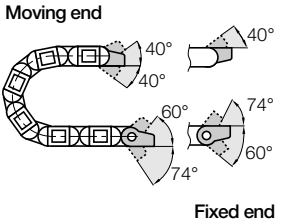
Width X [mm]	unassembled	assembled
075	**420.75**	**421.75**
088	**420.88**	**421.88**
100	**420.100**	**421.100**
125	**420.125**	**421.125**

Width X [mm]	unassembled	assembled
150	**420.150**	**421.150**
175	**420.175**	**421.175**
187	**420.187**	**421.187**
200	**420.200**	**421.200**

E4.1 | Series 1640·1608 | Steel mounting brackets pivoting



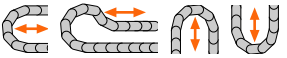




Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

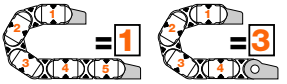
Part No.	Mounting bracket
16000.1.12.E	Full attachment set (both sides) for e-chain®, ending with outer side link
16000.3.12.E	Full attachment set (both sides) for e-chain®, beginning with outer side link (moving end), ending with inner side link (fixed end)
16000.1	Mounting bracket set **moving end** (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)

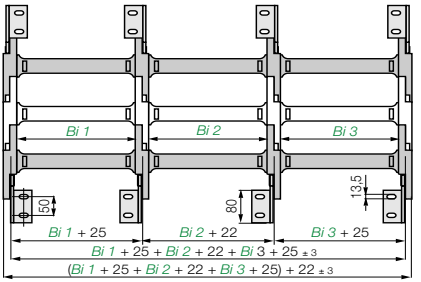


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1



Unsupported, harnessed Series 1640 in a stone machining application

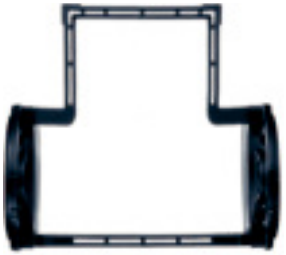


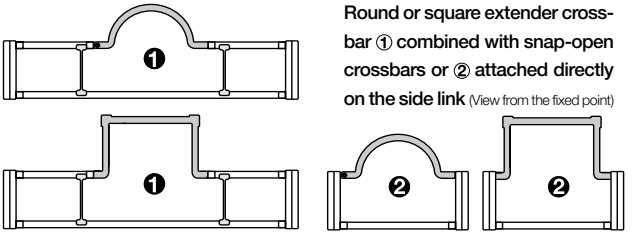


Extension links | for extremely wide e-chains® up to 3,0 m

- 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
- Attachement 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 hosed 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

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	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

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





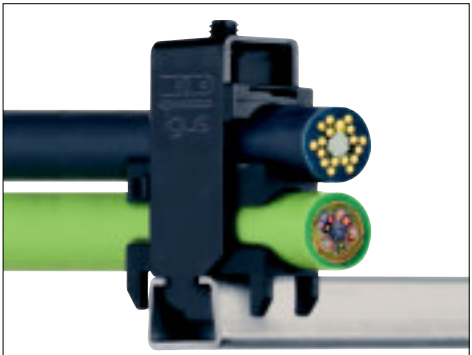
E4 snapclip | clip-on cable binder

- 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

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

Order example (here: inner width *Bi* 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

E4.1 | **Series 1640·1608** | e-chain® accessories



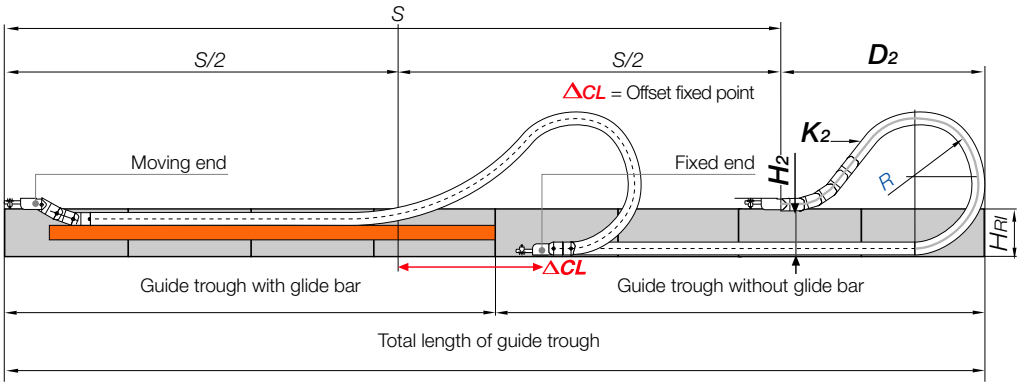
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ▶ **from page 10.1**



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 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** = $^{S}/_{2} + K$

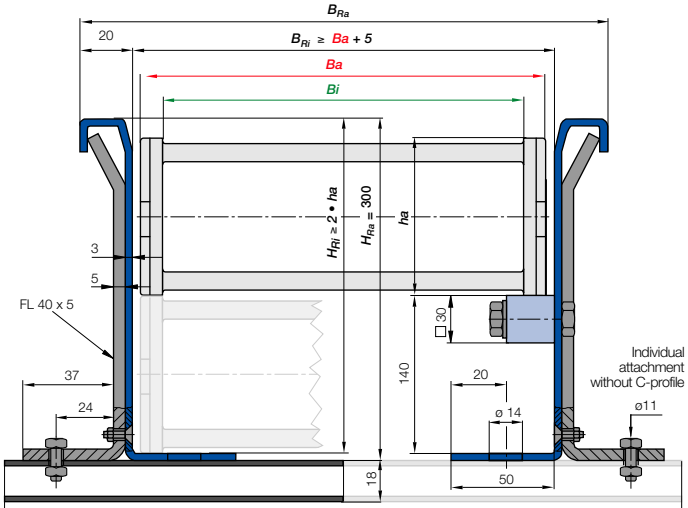
R	200	250	300	350	400	450	500	550	600
H_2	325	325	325	325	325	325	325	325	325
D_2^{+25}	900	1000	1100	1250	1450	1600	1700	1900	2050
K_2	1573	1716	1859	2288	2574	2860	3146	3432	3861
ΔCL	450	500	550	650	800	900	950	1100	1200

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

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

Part No. 98.30 | **98.31** | Trough height: 300 mm

Steel Guide Troughs



Length of the C-profile according to dimension B_{Ri} (see table)

- **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**

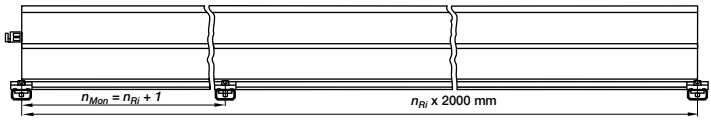
.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length 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
- *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

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

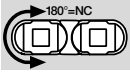
	Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
	Part No. Standard e-chains®/e-tubes	**Part No. Low noise (with pads) e-chains®/e-tubes**	**Part No. QuickLock crossbar for inner radius**	**Part No. QuickLock crossbar for outer radius**	**Part No. 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	**1640.30QZ.*R*.0** Crossbar every link	**1640.30QE.*R*.0** Crossbar every link	**1640.30Q.*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		S1640.30Q.*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..30Q.*R*.0		1640.30Q.*R*.0.NC	1640.30Q.*R1/R2*.0	1640.30Q.*R*.0.XXL	–	1640.30Q.*R*.0.ESD
NC-Version	S1640..30.*R*.0.NC	1640.30Q.*R*.0.NC		–	–	1608.30.*R*.0.HT.NC	1640.30.*R*.0.ESD.NC
RBR-Version	–	1640.30Q.*R1/R2*.0	–		–	1608.30.*R1/R2*.0.HT	1640.30.*R1/R2*.0.ESD
XXL-Material	S1640.30.*R*.0.XXL	1640.30Q.*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	1640.30Q.*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 2nd 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

- Standard color: black
- Bending radius *R*
- Width index
- Series / Type

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



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

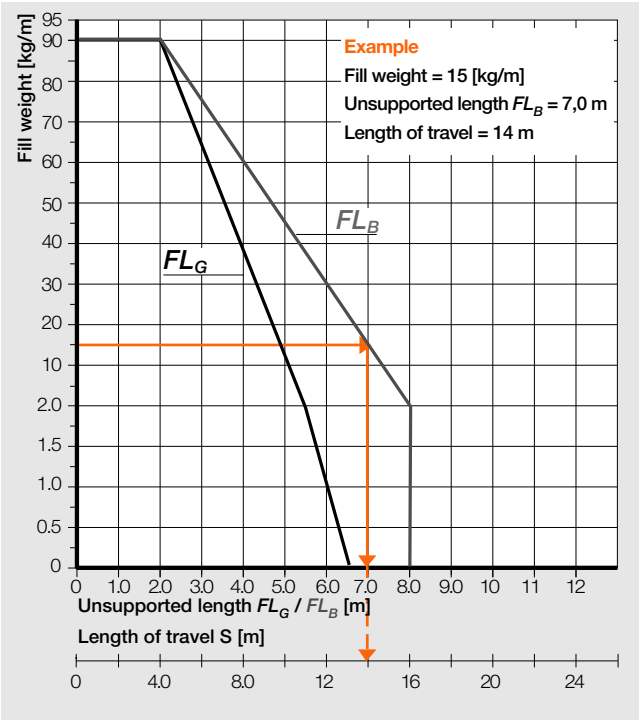
When to use a different igus® Series

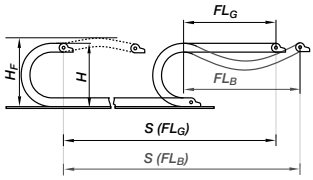
- If a light weighted, less stable e-chain® with identical inner height is required

►**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





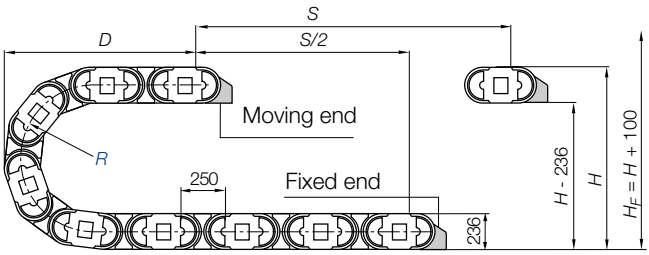
Unsupported applications

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

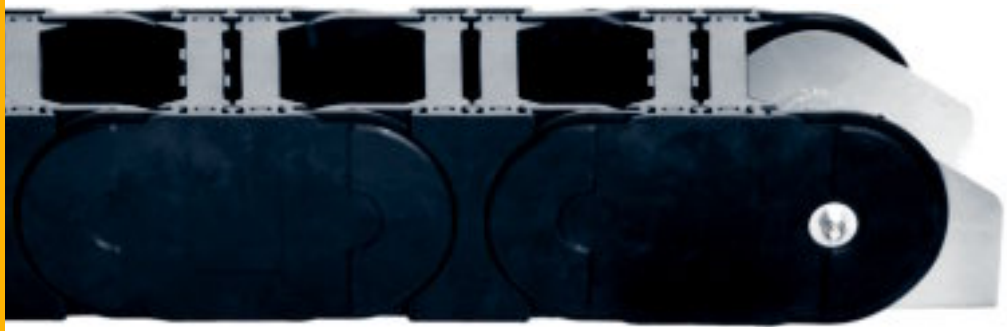
Speed, material, temperature and flammability class ▶ **page 7.16**

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 = $\pi \bullet R +$ "safety"



e-chains® | Series 800 with crossbars every link

Part No. crossbars every link			Bi [mm]	Ba [mm]	800 [kg/m]
800.	20.	R.0	200	260	≈ 15,09
800.	25.	R.0	250	310	≈ 15,50
800.	30.	R.0	300	360	≈ 15,89
800.	32.	R.0	325	385	≈ 16,05
800.	35.	R.0	350	410	≈ 16,22

Part No. crossbars every link			Bi [mm]	Ba [mm]	800 [kg/m]
800.	40.	R.0	400	460	≈ 16,74
800.	45.	R.0	450	510	≈ 16,88
800.	50.	R.0	500	560	≈ 17,23
800.	55.	R.0	550	610	≈ 17,63
800.	60.	R.0	600	660	≈ 18,19

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

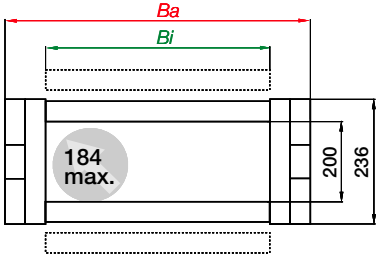
Supplement Part No. with required radius *(R)*. Example: **800.40.400.0**

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

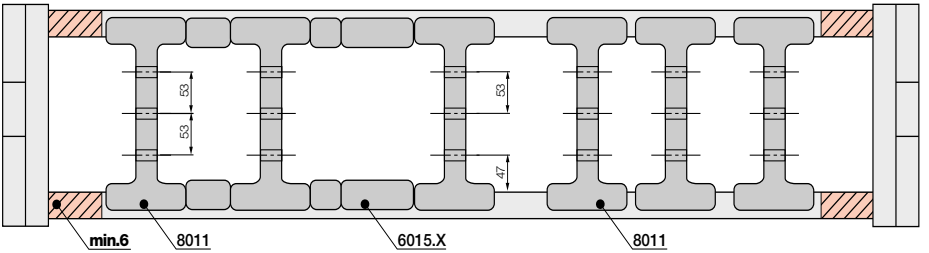
Part No. crossbars every link			*Bi* [mm]	Part No. crossbars every link			*Bi* [mm]
800.	20.	*R*.0.NC	200	800.	40.	*R*.0.NC	400
800.	25.	*R*.0.NC	250	800.	45.	*R*.0.NC	450
800.	30.	*R*.0.NC	300	800.	50.	*R*.0.NC	500
800.	32.	*R*.0.NC	325	800.	55.	*R*.0.NC	550
800.	35.	*R*.0.NC	350	800.	60.	*R*.0.NC	600

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**

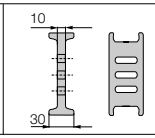
For NC-e-chains® without pretension supplement Part No. with required index "**NC**"
Example: **Part No. 800.40.400.0.NC** = e-chain® (crossbars every link) without pretension

NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods



Note e-chain®: Please observe a lateral spacing of **6 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!





Separator for e-chains®	
unassembled	**8001**
assembled	**8011**





Spacer* for e-chains®	
unassembled	**6005.XX**
assembled	**6015.XX**

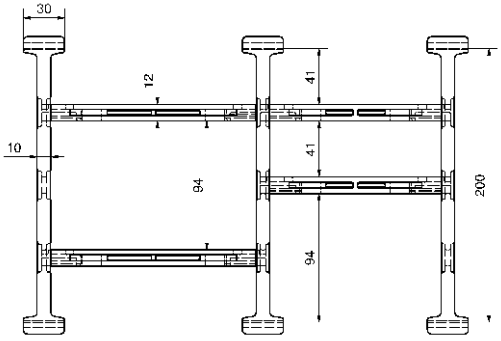
Separator 8001

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).

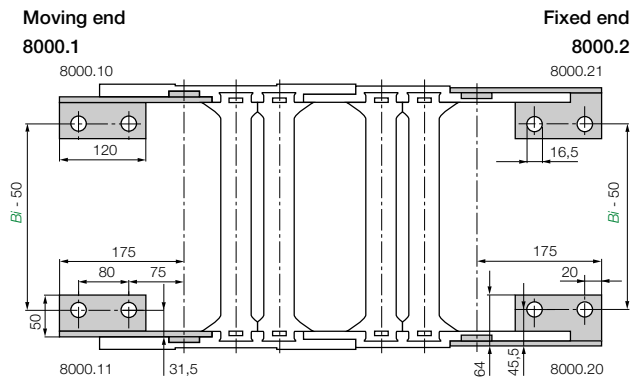
Modular E4 shelving system for Series 800



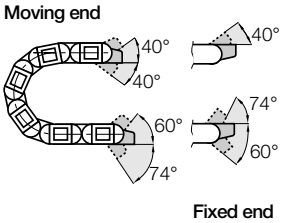


- Secure guide even for large cables
- Easy assembly
- Robust, also for large cable diameters
- Modular
- Widths from 50 - 600 mm

Part No. unassembled	Part No. assembled	Snap in tab	Part No. separator	Part No. crossbar	Width [mm]
8001H1	**8011H1**	single-sided	**8001**	**450.XX**	50-600
8001H2	**8011H2**	double-sided	**8001**	**450.XX**	50-600



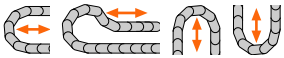




Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

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

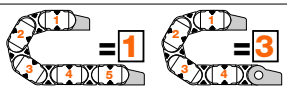
Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- 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)

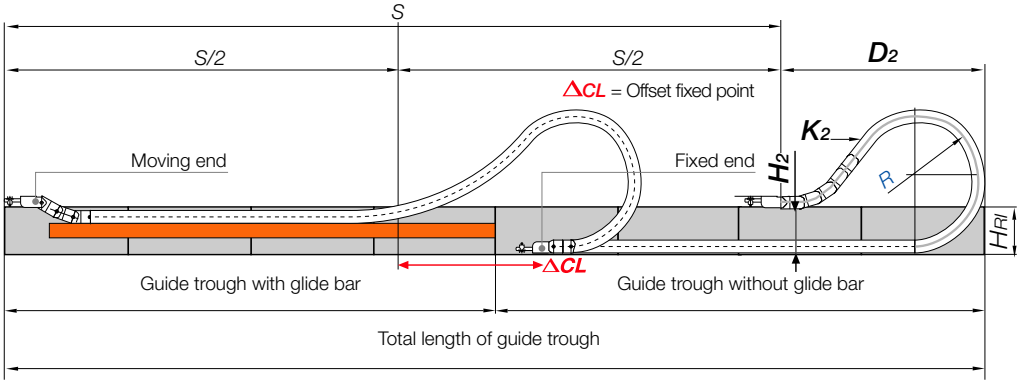
Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)



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.**



Pitch = 250 mm/link · **Links/m** = 4 (1000 mm) · **Chain length** = $S/2 + K$

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	*	*

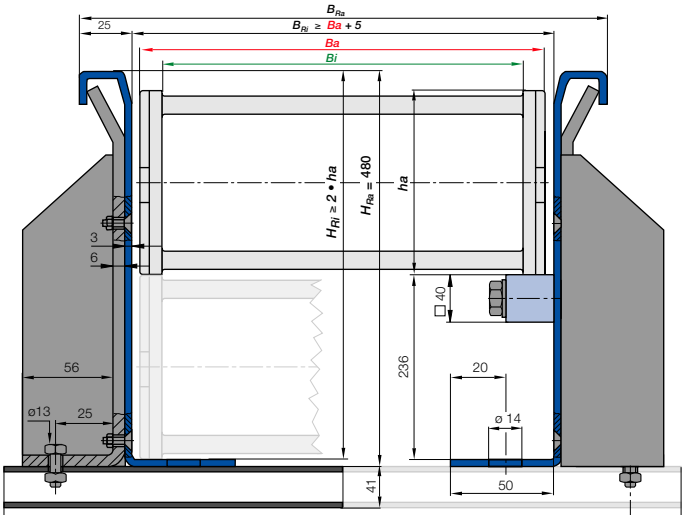
*upon request!

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

Part No. 90.30 | **90.31** | Trough height: 480 mm

Steel Guide Troughs



Length of the C-profile according to dimension B_{Ri} (see table)

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**

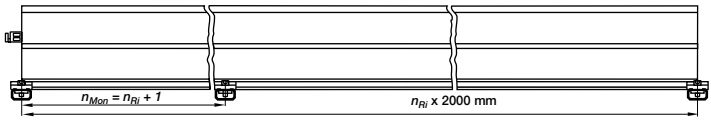
.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length 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)
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. 90.50.450**



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_{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 800** | **Options** and order key

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®

E4.1 | **Series 800** | **Options** and order key



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 2nd 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

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

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



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

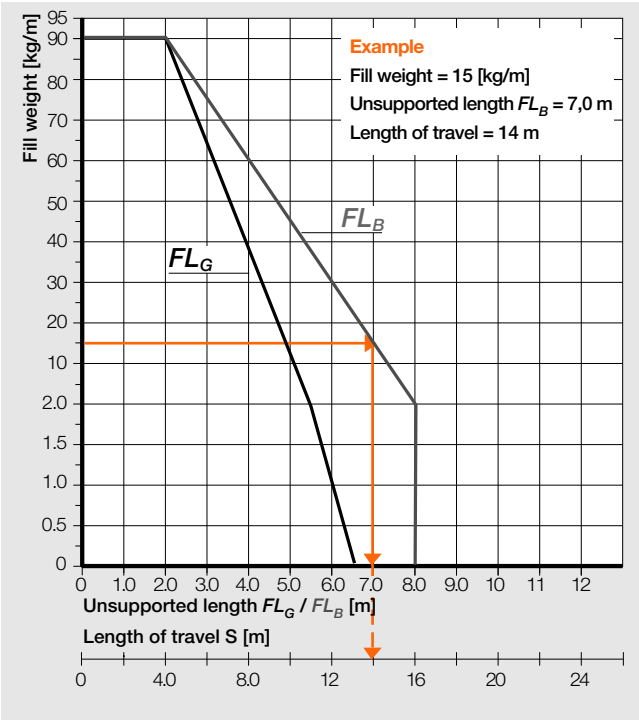
- If an even more stable e-chain® with identical inner height is required

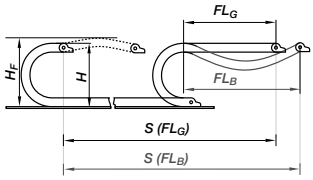
►**Series 800, page 7.130**

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





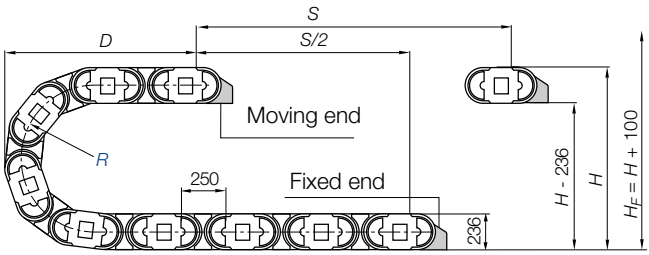
Unsupported applications

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 = $S/2 + K$

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 = $\pi \bullet R$ + "safety"



e-chains® | Series **840** with crossbars every link

Part No. crossbars every link	*Bi* [mm]	*Ba* [mm]	840 [kg/m]
840. 13. *R*.0	100	160	≈ 13,84
840. 15. *R*.0	113	173	≈ 13,87
840. 16. *R*.0	125	185	≈ 13,95
840. 17. *R*.0	138	198	≈ 14,04
840. 18. *R*.0	150	210	≈ 14,13
840. 20. *R*.0	163	223	≈ 14,17
840. 21. *R*.0	175	235	≈ 14,22
840. 22. *R*.0	188	248	≈ 14,27
840. 23. *R*.0	200	260	≈ 14,35
840. 25. *R*.0	213	273	≈ 14,43
840. 26. *R*.0	225	285	≈ 14,49
840. 27. *R*.0	238	298	≈ 14,57

Part No. crossbars every link	*Bi* [mm]	*Ba* [mm]	840 [kg/m]
840. 28. *R*.0	250	310	≈ 14,61
840. 30. *R*.0	263	323	≈ 14,72
840. 31. *R*.0	275	335	≈ 14,75
840. 32. *R*.0	288	348	≈ 14,82
840. 33. *R*.0	300	360	≈ 14,91
840. 35. *R*.0	313	373	≈ 15,06
840. 36. *R*.0	325	385	≈ 15,09
840. 37. *R*.0	338	398	≈ 15,11
840. 38. *R*.0	350	410	≈ 15,15
840. 40. *R*.0	363	423	≈ 15,34
840. 41. *R*.0	375	435	≈ 15,39
840. 42. *R*.0	388	448	≈ 15,50

Part No. crossbars every link	*Bi* [mm]	*Ba* [mm]	840 [kg/m]
840. 43. *R*.0	400	460	≈ 15,57
840. 45. *R*.0	413	473	≈ 15,63
840. 46. *R*.0	425	485	≈ 15,69
840. 47. *R*.0	438	498	≈ 15,72
840. 48. *R*.0	450	510	≈ 15,80
840. 50. *R*.0	463	523	≈ 15,87
840. 51. *R*.0	475	535	≈ 15,91
840. 52. *R*.0	488	548	≈ 15,93
840. 53. *R*.0	500	560	≈ 16,00
840. 55. *R*.0	513	573	≈ 16,31
840. 60. *R*.0	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.*

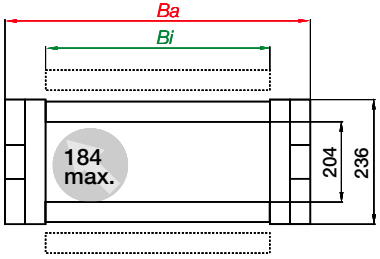
*Delivery time means time until shipping of goods

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	*Bi* [mm]	Part No. crossbars every link	*Bi* [mm]	Part No. crossbars every link	*Bi* [mm]
840. 13. *R*.0.NC	100	840. 28. *R*.0.NC	250	840. 43. *R*.0.NC	400
840. 15. *R*.0.NC	113	840. 30. *R*.0.NC	263	840. 45. *R*.0.NC	413
840. 16. *R*.0.NC	125	840. 31. *R*.0.NC	275	840. 46. *R*.0.NC	425
840. 17. *R*.0.NC	138	840. 32. *R*.0.NC	288	840. 47. *R*.0.NC	438
840. 18. *R*.0.NC	150	840. 33. *R*.0.NC	300	840. 48. *R*.0.NC	450
840. 20. *R*.0.NC	163	840. 35. *R*.0.NC	313	840. 50. *R*.0.NC	463
840. 21. *R*.0.NC	175	840. 36. *R*.0.NC	325	840. 51. *R*.0.NC	475
840. 22. *R*.0.NC	188	840. 37. *R*.0.NC	338	840. 52. *R*.0.NC	488
840. 23. *R*.0.NC	200	840. 38. *R*.0.NC	350	840. 53. *R*.0.NC	500
840. 25. *R*.0.NC	213	840. 40. *R*.0.NC	363	840. 55. *R*.0.NC	513
840. 26. *R*.0.NC	225	840. 41. *R*.0.NC	375	840. 60. *R*.0.NC	563
840. 27. *R*.0.NC	238	840. 42. *R*.0.NC	388		

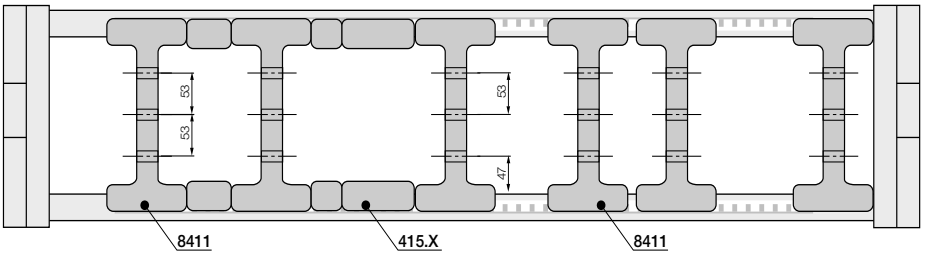
Available bending radii ***R*** [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

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

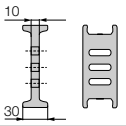
NC-Version - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

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!





Separator for e-chains®	
unassembled	**6401**
assembled	**6411**





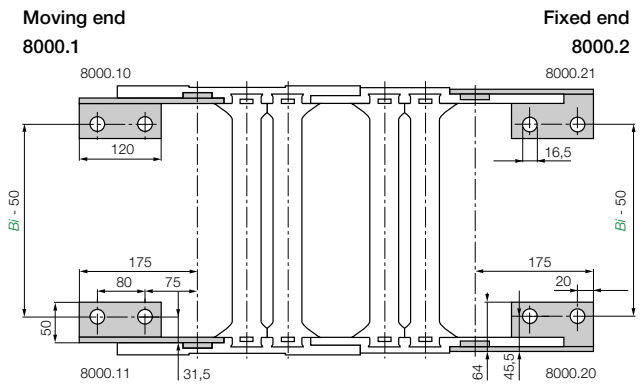
Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**

Separator 8401

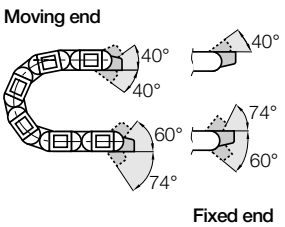
For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

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).



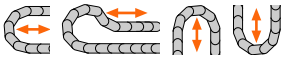




Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

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

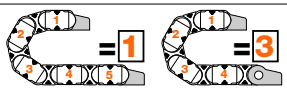
Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- 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)

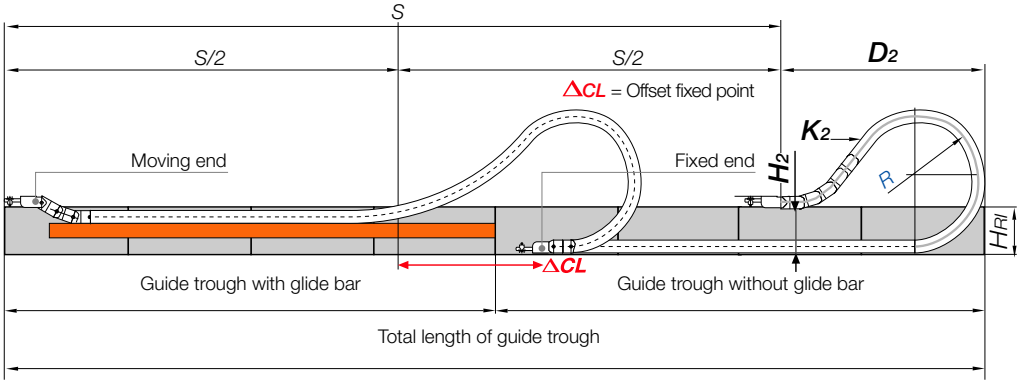
Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)



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.**



Pitch = 250 mm/link · **Links/m** = 4 (1000 mm) · **Chain length** = $S/2 + K$

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	*	*

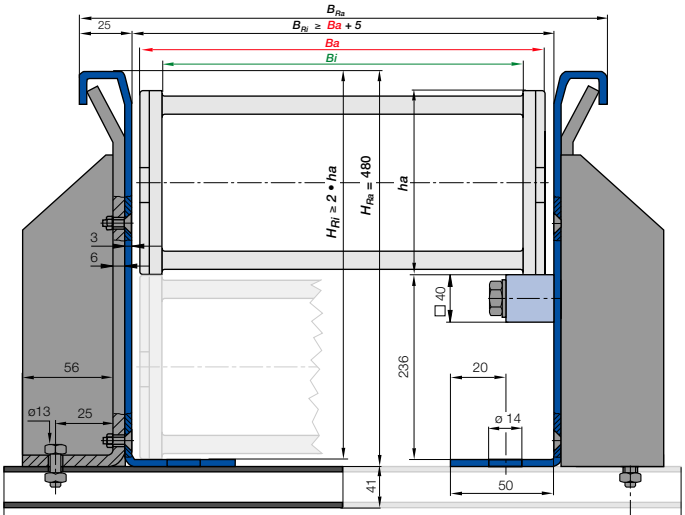
*upon request!

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

Part No. 90.30 | **90.31** | Trough height: 480 mm

Steel Guide Troughs



Length of the C-profile according to dimension B_{Ri} (see table)

- **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**

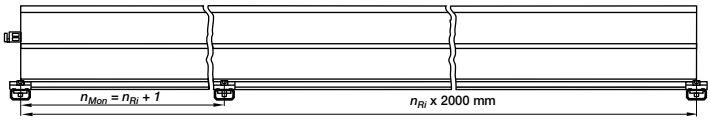
.XX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length 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

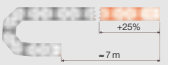
● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®

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**

E4.1 | **Series 840** | **Options** and order key

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

- Standard color: black
- Bending radius *R*
- Width index
- Series / Type

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



Largest all-plastic e-chain®, extreme inner height 350 mm

When to use Series E4.350:

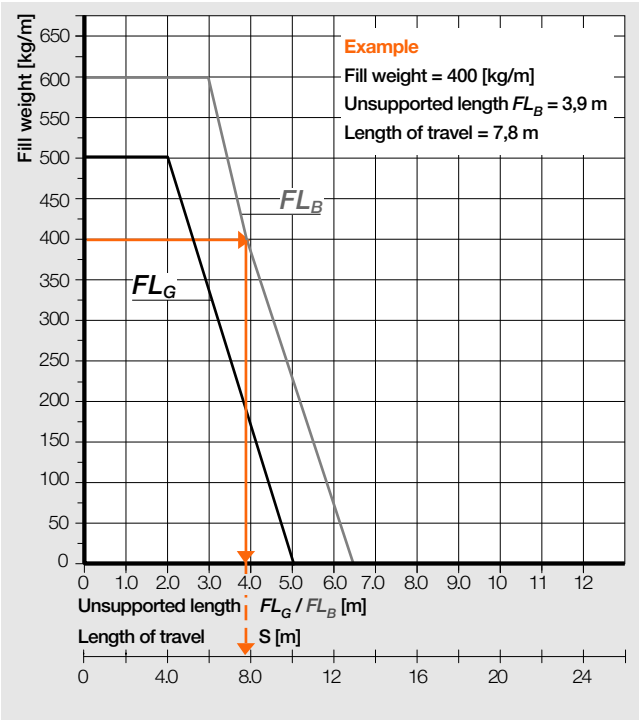
- If the world's largest all-plastic e-chain® (issue 04/2010) with an inner height of 350 mm is required
- For a very huge interior up to a diagonal of 42"and an inner width up to 1000 mm
- For unsupported lengths up to 6,5 m und fill weights >100 kg/m
- For large, heavy and stiff cables
- Ideal for 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

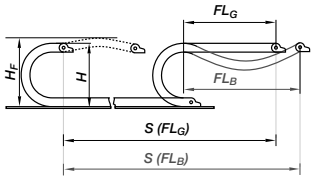
Please aks for additional support for this series. An optimal dimensioning is done by the igus® project team!



Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods

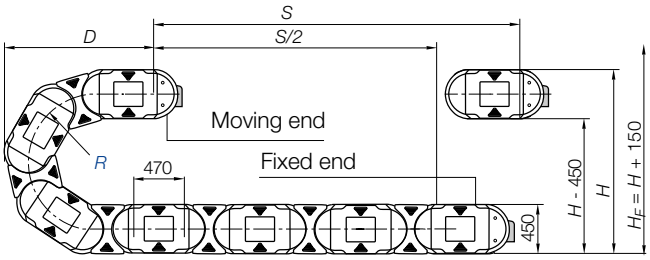
3D-CAD files, configurators, PDF ► www.igus.de/en/E4.350





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 = $S/2 + K$

R	**500**	**750**	**1000**
$H\ ^{-0}_{+25}$	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 = $\pi \bullet R +$ "safety"



e-chains® | Series **E4.350** with crossbars every link

Part No. crossbars every link	*Bi* [mm]	*Ba* [mm]	E4.350 [kg/m]
E4.350. 400. *R*.0	400	540	61,9
E4.350. 500. *R*.0	500	640	65,7
E4.350. 600. *R*.0	600	740	69,6

Part No. crossbars every link	*Bi* [mm]	*Ba* [mm]	E4.350 [kg/m]
E4.350. 700. *R*.0	700	840	73,4
E4.350. 800. *R*.0	800	940	77,2

Available bending radii *R* [mm] **500** | **750** | **1000**

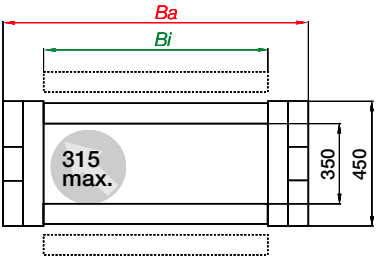
Supplement Part No. with required radius (*R*). Example: **E4.350.500.500.0**

Order key

E4.350. 500. 500. 0

- Standard color black
- Bending radius ***R***
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning

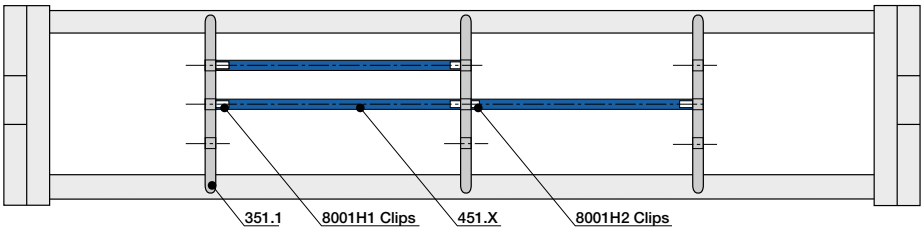


E4.350.500.500.0 = e-chain® with **crossbars every link**, inner width ***Bi*** **500** mm, radius ***R*** **500** mm, color black

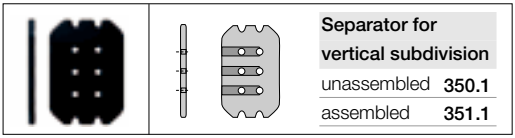
More order examples, variations and configurations ► page 7.155

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

*Delivery time means time until shipping of goods



In the standard configuration separators are assembled every 2nd e-chain® link
Note: No lateral spacing to side links necessary!



Separator for vertical subdivision	
unassembled	**350.1**
assembled	**351.1**



Shelf for horizontal subdivision	
unassembled	**450.X**
assembled	**451.X**

Separator for vertical subdivision 350.1

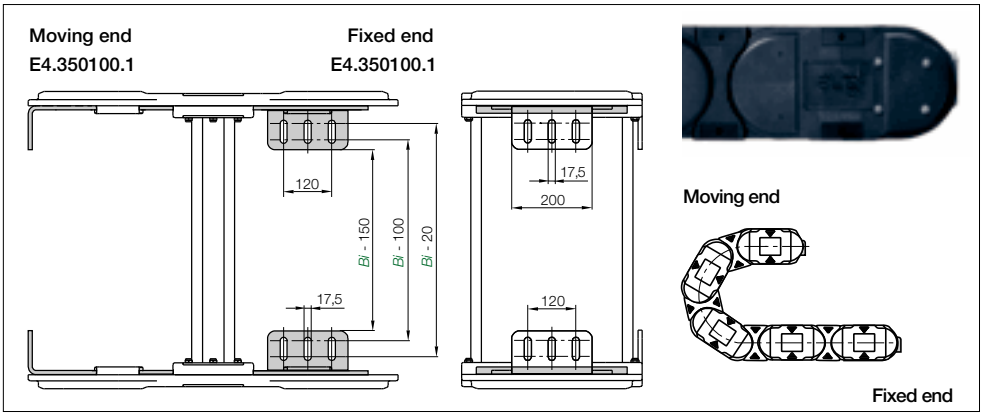
For a vertical subdivision subdivision 450.X in 3 levels.

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

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

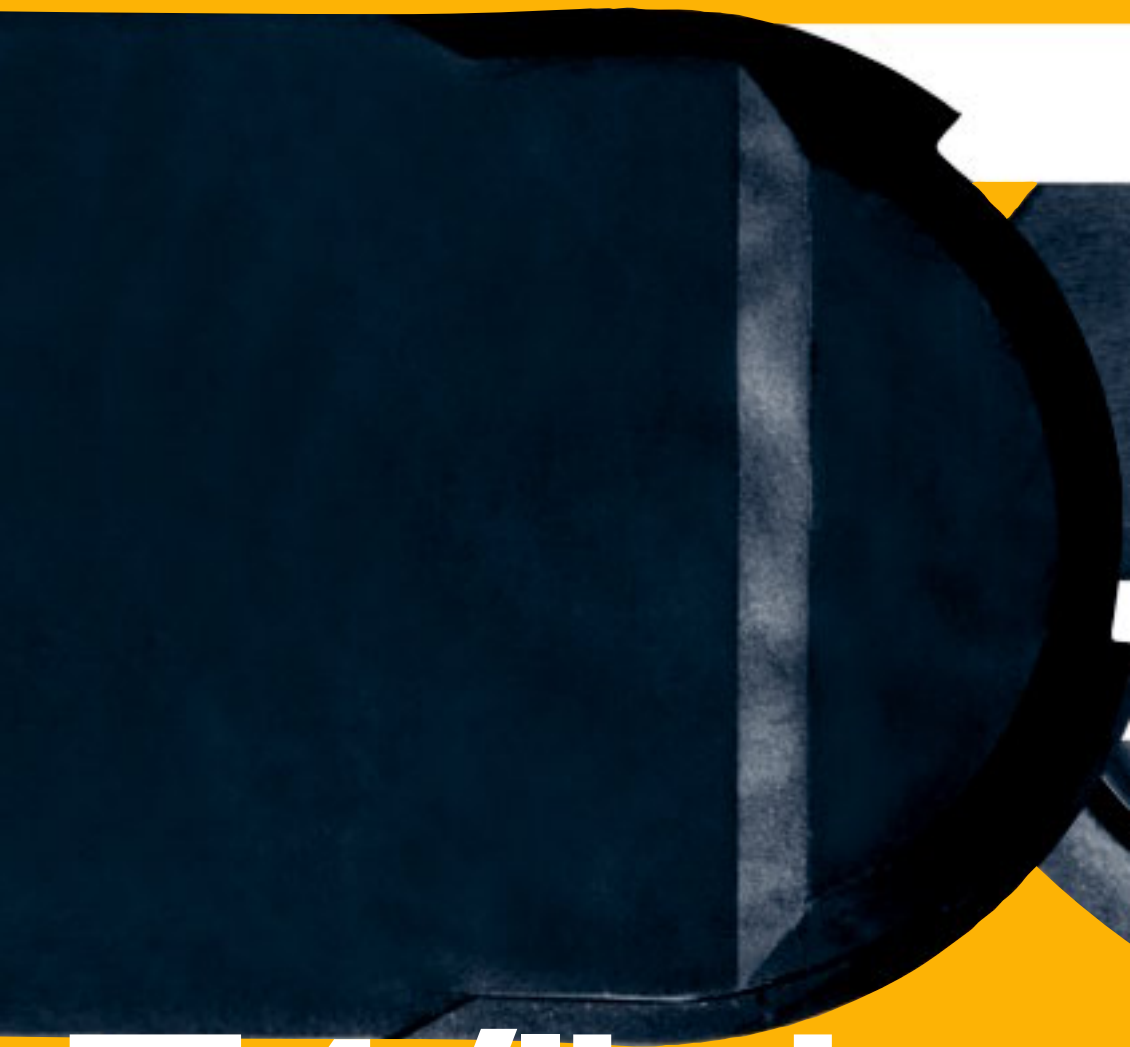
- Standard color black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

Color options for e-chains® and e-tubes

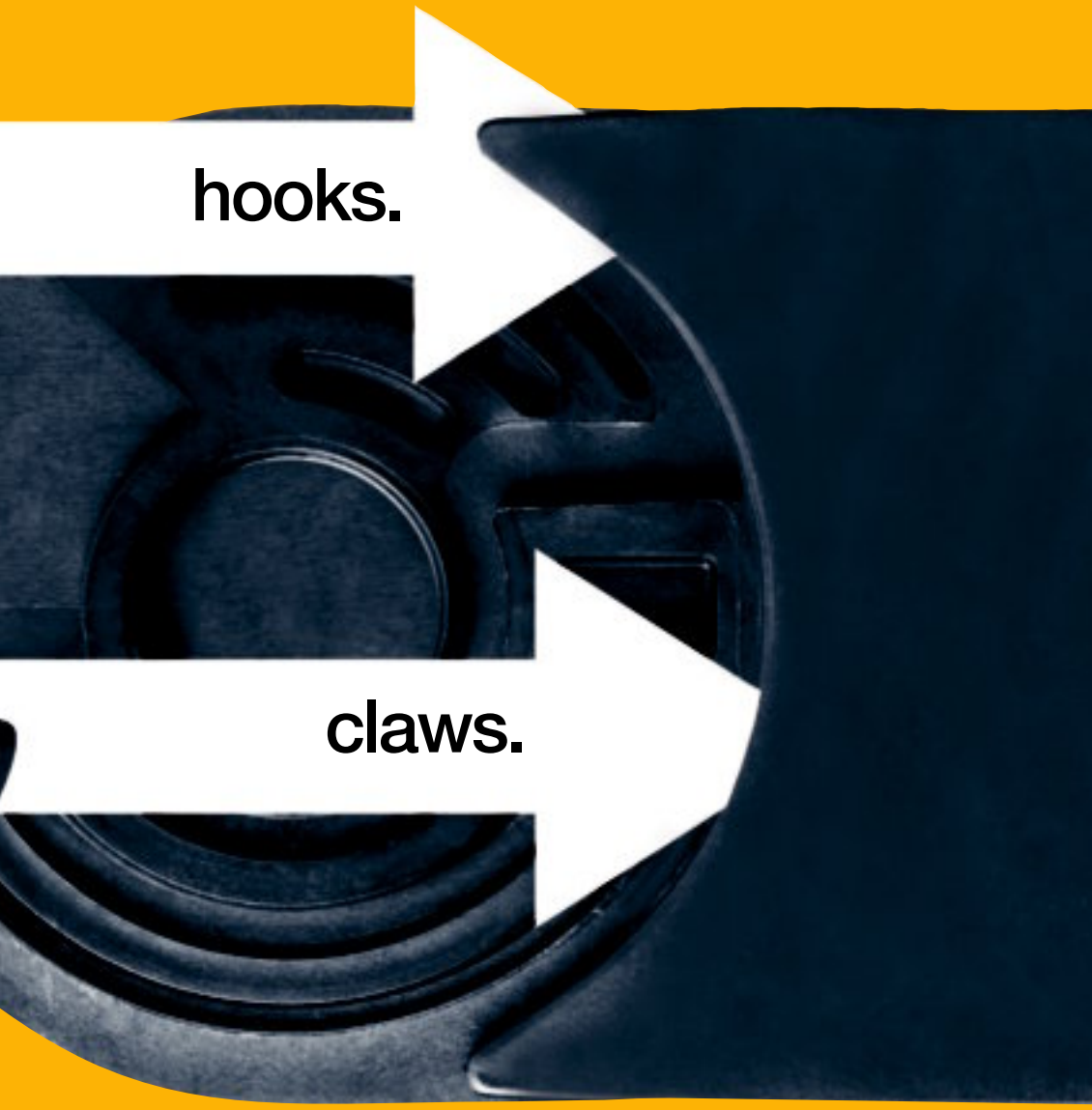
Color	Order index	Color	Order index
black	**.0** from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

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



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-chaines® 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

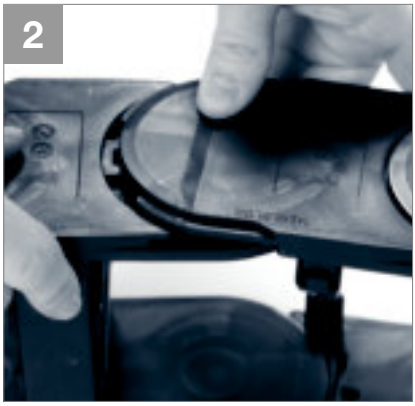
Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
							
Crossbars every link for particulary demanding applications							
14040	56	50 - 600	76 - 626	84	135 - 500	4,0	**7.164**
14240	62	50 - 400	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

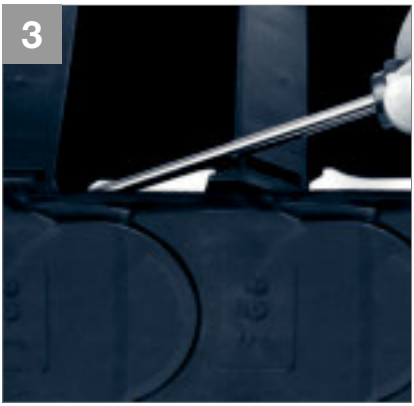
Available from stock. Delivery in 24h or today!*
*Delivery time means time until shipping of goods



Position side links at one side...
...and snap in



Position opposite side,
press together and snap in



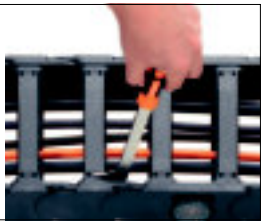
Assemble crossbars - push down
and snap in by using a screwdriver



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**

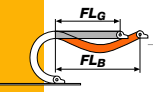


Technical data overview ▶next page

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



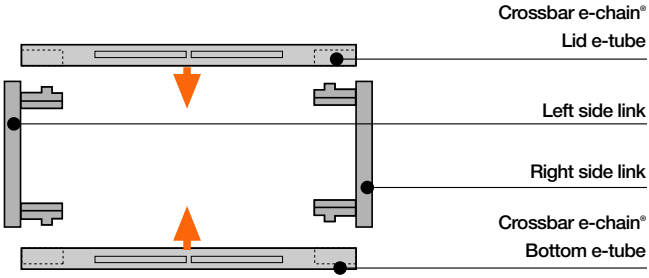
Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 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	Glinding	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.*Bi*	885.*Bi*	886.*Bi*	14040.01.*R*	14040.02.*R*
14240/14340	385.*Bi*	–	–	14240.01.*R*	14240.02.*R*
14550/14650/19050	450.*Bi*	885.*Bi*	886.*Bi*	14550.01.*R*	14550.02.*R*
15050/15150/19850	450.*Bi*	885.*Bi*	886.*Bi*	15050.01.*R*	15050.02.*R*
15250/15350	385.*Bi*	–	–	15250.01.*R*	15250.02.*R*

* 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



"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

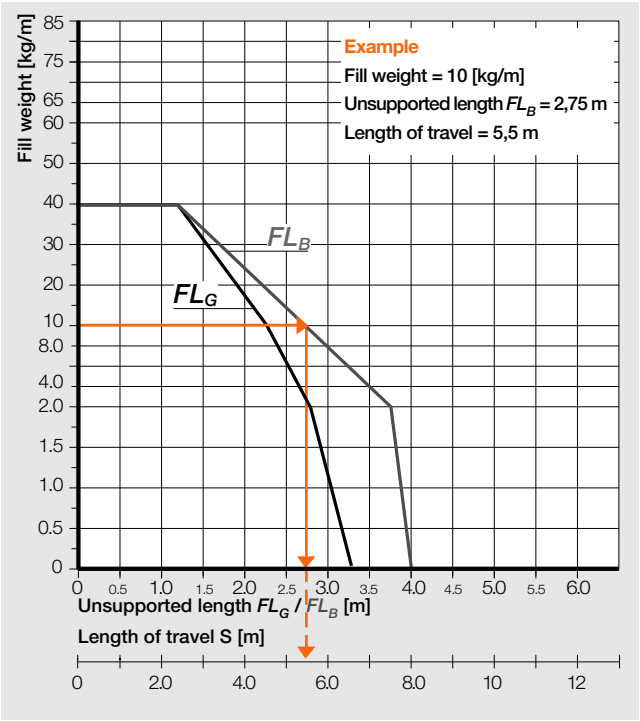
When to use a different igus® Series

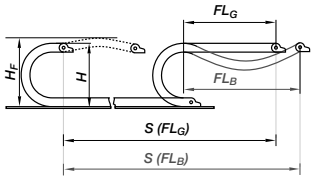
- If an extremely **low-noise** and low-vibration e-chain® is required (≤46 dB(A))
  ► **Series E6.52, page 8.66**
- If larger unsupported lengths are required in side-mounted applications
  ► **Series E4.56, page 7.78**
- If increased unsupported lengths and longer travels are required
  ► **Series 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





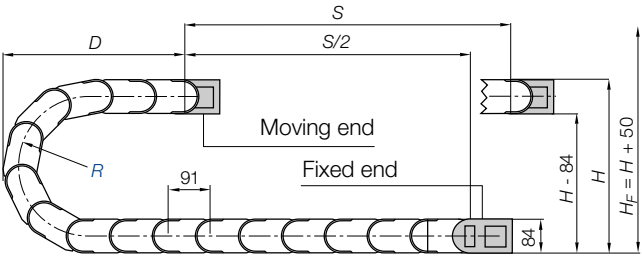
Unsupported applications

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

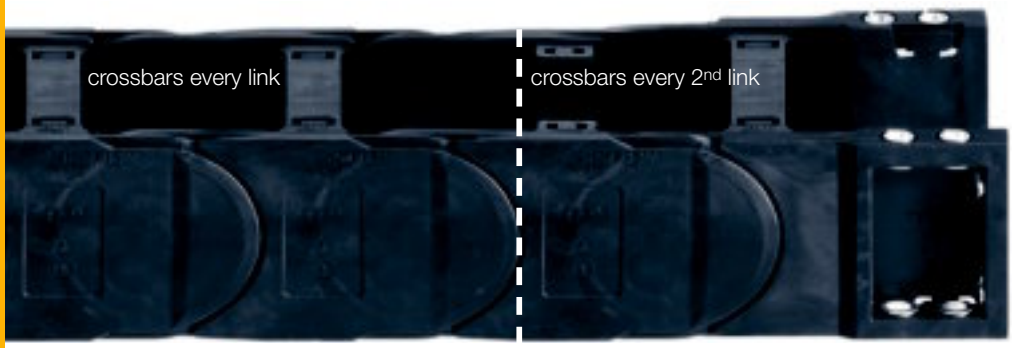
Speed, material, temperature and flammability class ▶ **page 7.162**

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
$K = \pi \bullet R +$ "safety"



e-chains® | Series **14040** crossbars every link | Series **14140** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	14040 [kg/m]	14140 [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
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	*Bi* [mm]	*Ba* [mm]	18840 [kg/m]
18840. 07. *R*.0*	75	101	≈ 3,20
18840. 10. *R*.0	100	126	≈ 3,49
18840. 12. *R*.0	125	151	≈ 3,85
18840. 15. *R*.0	150	176	≈ 4,28
18840. 17. *R*.0	175	201	≈ 4,54
18840. 20. *R*.0	200	226	≈ 4,85

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	18840 [kg/m]
18840. 25. *R*.0	250	276	≈ 5,58
18840. 27. *R*.0	275	301	≈ 5,85
18840. 30. *R*.0	300	326	≈ 6,24
18840. 35. *R*.0	350	376	≈ 6,99
18840. 40. *R*.0	400	426	≈ 7,94
18840. 46. *R*.0	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**

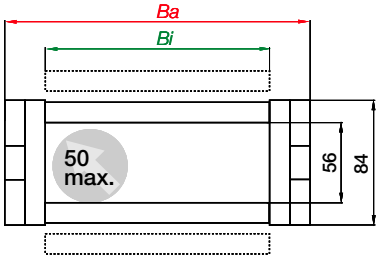
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

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



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

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [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
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 crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
S14040.	S14140.	–	05.R.0	50
S14040.	S14140.	–	06.R.0	65
S14040.	S14140.	S18840.	07.R.0	75
S14040.	S14140.	–	08.R.0	87
S14040.	S14140.	S18840.	10.R.0	100
S14040.	S14140.	–	11.R.0	112
S14040.	S14140.	S18840.	12.R.0	125
S14040.	S14140.	–	13.R.0	137
S14040.	S14140.	S18840.	15.R.0	150
S14040.	S14140.	–	16.R.0	162
S14040.	S14140.	S18840.	17.R.0	175
S14040.	S14140.	–	18.R.0	187
S14040.	S14140.	S18840.	20.R.0	200
S14040.	S14140.	–	21.R.0	212
S14040.	S14140.	–	22.R.0	225
S14040.	S14140.	–	23.R.0	237
S14040.	S14140.	S18840.	25.R.0	250
S14040.	S14140.	–	26.R.0	262
S14040.	S14140.	S18840.	27.R.0	275
S14040.	S14140.	–	28.R.0	287
S14040.	S14140.	S18840.	30.R.0	300

With pads crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
S14040.	S14140.	–	31.R.0	312
S14040.	S14140.	–	32.R.0	325
S14040.	S14140.	–	33.R.0	337
S14040.	S14140.	S18840.	35.R.0	350
S14040.	S14140.	–	36.R.0	362
S14040.	S14140.	–	37.R.0	375
S14040.	S14140.	–	38.R.0	387
S14040.	S14140.	S18840.	40.R.0	400
S14040.	S14140.	–	41.R.0	412
S14040.	S14140.	–	42.R.0	425
S14040.	S14140.	–	43.R.0	437
S14040.	S14140.	–	45.R.0	450
S14040.	S14140.	S18840.	46.R.0	462
S14040.	S14140.	–	47.R.0	475
S14040.	S14140.	–	48.R.0	487
S14040.	S14140.	–	50.R.0	500
S14040.	S14140.	–	51.R.0	512
S14040.	S14140.	–	52.R.0	525
S14040.	S14140.	–	53.R.0	537
S14040.	S14140.	–	55.R.0	550
S14040.	S14140.	–	60.R.0	600

NC-Version | Without pretension

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
14040.	14140.	–	05. R.0.NC	50
14040.	14140.	–	06. R.0.NC	65
14040.	14140.	18840.	07. R.0.NC	75
14040.	14140.	–	08. R.0.NC	87
14040.	14140.	18840.	10. R.0.NC	100
14040.	14140.	–	11. R.0.NC	112
14040.	14140.	18840.	12. R.0.NC	125
14040.	14140.	–	13. R.0.NC	137
14040.	14140.	18840.	15. R.0.NC	150
14040.	14140.	–	16. R.0.NC	162
14040.	14140.	18840.	17. R.0.NC	175
14040.	14140.	–	18. R.0.NC	187
14040.	14140.	18840.	20. R.0.NC	200
14040.	14140.	–	21. R.0.NC	212
14040.	14140.	–	22. R.0.NC	225
14040.	14140.	–	23. R.0.NC	237
14040.	14140.	18840.	25. R.0.NC	250
14040.	14140.	–	26. R.0.NC	262
14040.	14140.	18840.	27. R.0.NC	275
14040.	14140.	–	28. R.0.NC	287
14040.	14140.	18840.	30. R.0.NC	300

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
14040.	14140.	–	31. R.0.NC	312
14040.	14140.	–	32. R.0.NC	325
14040.	14140.	–	33. R.0.NC	337
14040.	14140.	18840.	35. R.0.NC	350
14040.	14140.	–	36. R.0.NC	362
14040.	14140.	–	37. R.0.NC	375
14040.	14140.	–	38. R.0.NC	387
14040.	14140.	18840.	40. R.0.NC	400
14040.	14140.	–	41. R.0.NC	412
14040.	14140.	–	42. R.0.NC	425
14040.	14140.	–	43. R.0.NC	437
14040.	14140.	–	45. R.0.NC	450
14040.	14140.	18840.	46. R.0.NC	462
14040.	14140.	–	47. R.0.NC	475
14040.	14140.	–	48. R.0.NC	487
14040.	14140.	–	50. R.0.NC	500
14040.	14140.	–	51. R.0.NC	512
14040.	14140.	–	52. R.0.NC	525
14040.	14140.	–	53. R.0.NC	537
14040.	14140.	–	55. R.0.NC	550
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

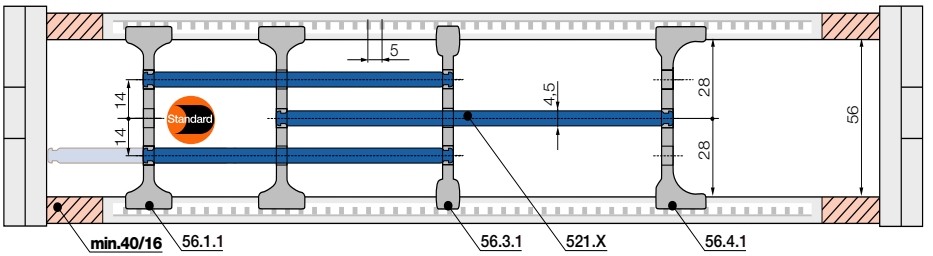
Supplement Part No. with required radius *(R)*. Example: **S14040.30.300.0 or 14040.30.300.0.NC**

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

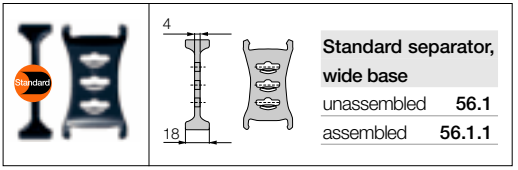
Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*
*Delivery time means time until shipping of goods

E4/light | 14040·14140·18840 | Interior separation | Standard

New generation interior separation



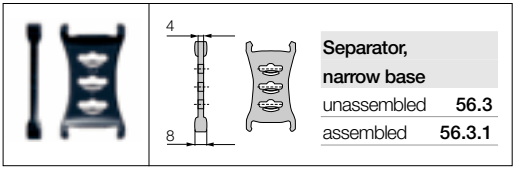
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**56.1**
assembled	**56.1.1**

Standard - for all applications

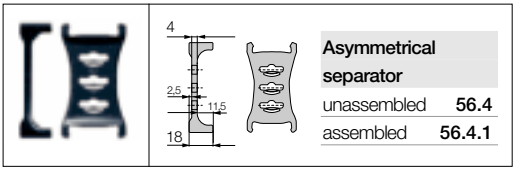
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	**56.3**
assembled	**56.3.1**

For many thin cables

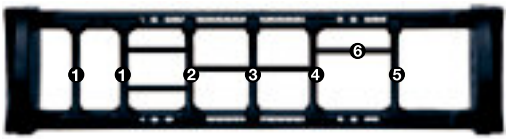
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



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.

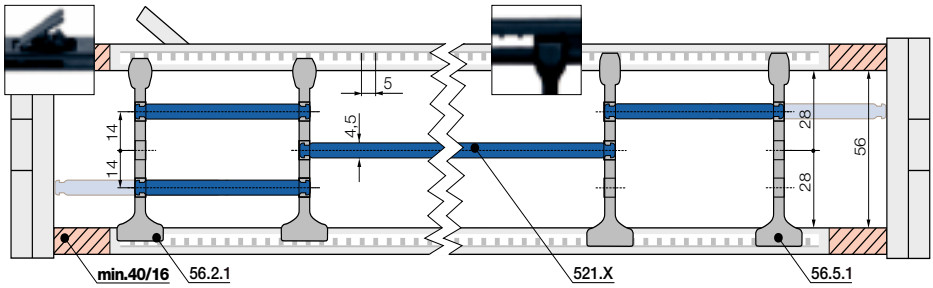




① Standard separator, wide base - Part No. 56.1 ③ Separator, narrow base - Part No. 56.3 ⑤ Notch separator - Part No. 56.5
② Separator for QuickLock crossbar - Part No. 56.2 ④ Separator, asymmetrical - Part No. 56.4 ⑥ Full-width self, lockable - Part No. 520.XX

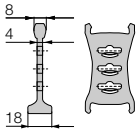
Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

New generation interior separation



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!



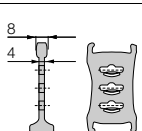


Separator for QuickLock crossbar	
unassembled	**56.2**
assembled	**56.2.1**

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.



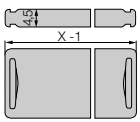


Notch separator for notch crossbar	
unassembled	**56.5**
assembled	**56.5.1**

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.

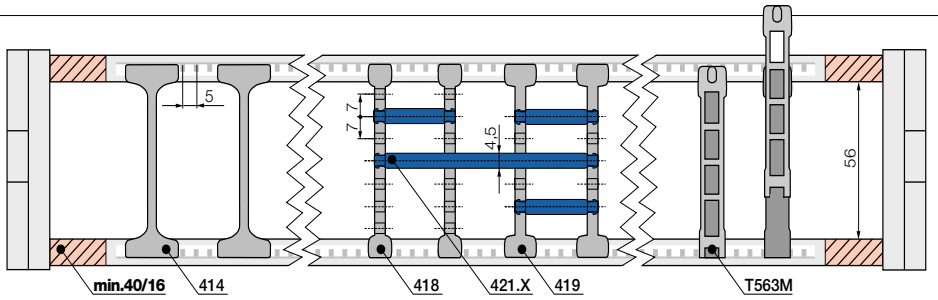


Lockable full-width shelves - for the standard interior separation

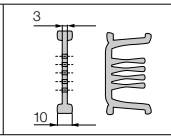
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	**520.050**	**521.050**	125	**520.125**	**521.125**	225	**520.225**	**521.225**
065	**520.065**	**521.065**	150	**520.150**	**521.150**	250	**520.250**	**521.250**
075	**520.075**	**521.075**	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

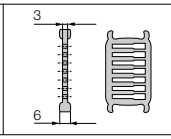
All elements can still be ordered ► www.igus.de/en/14040



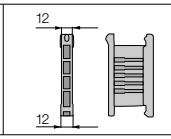
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

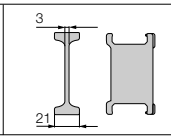
Open slotted separator for e-chains®/e-tubes	
unassembled	**409**
assembled	**419**

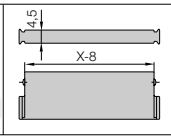
Slotted separator for e-chains®/e-tubes	
unassembled	**408**
assembled	**418**

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

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

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

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 408

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

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 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 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

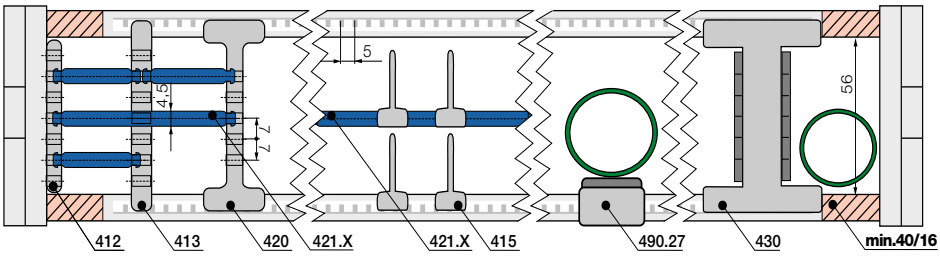
Width X [mm]	unassembled	assembled
018	**420.18**	**421.18**
023	**420.23**	**421.23**
025	**420.25**	**421.25**
028	**420.28**	**421.28**
033	**420.33**	**421.33**
043	**420.43**	**421.43**

Width X [mm]	unassembled	assembled
050	**420.50**	**421.50**
062	**420.62**	**421.62**
075	**420.75**	**421.75**
088	**420.88**	**421.88**
100	**420.100**	**421.100**
125	**420.125**	**421.125**

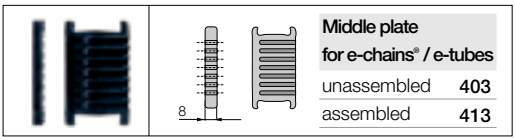
Width X [mm]	unassembled	assembled
150	**420.150**	**421.150**
175	**420.175**	**421.175**
187	**420.187**	**421.187**
200	**420.200**	**421.200**

Previous interior separation

All elements can still be ordered ► www.igus.de/en/14040



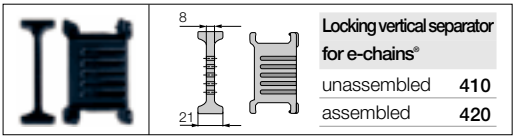
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



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

Middle plate 403

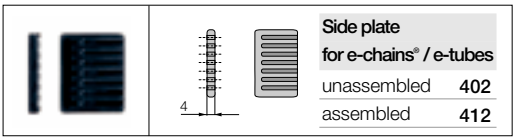
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).



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

Locking vertical separator 410 (e-chains® only)

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

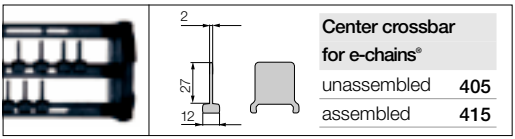


Side plate for e-chains® / e-tubes	
unassembled	402
assembled	412

Side plate 402

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

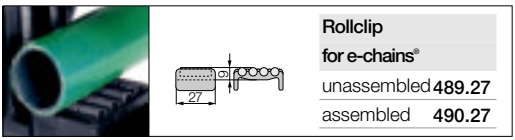
Additional elements for interior separation



Center crossbar for e-chains®	
unassembled	405
assembled	415

Center crossbar

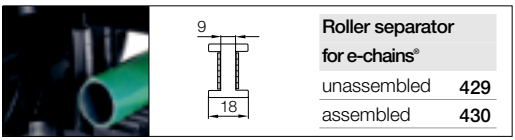
For applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain® independently into upper and lower halves.



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.

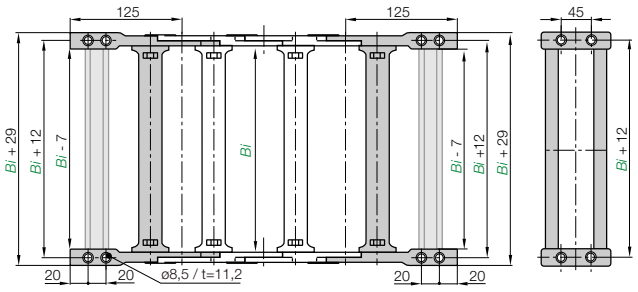
14040·14140·18840 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment

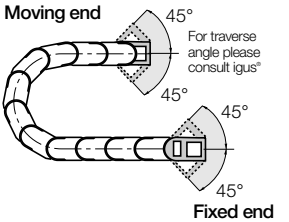
Moving end
141400/189400...2

Fixed end
141400/189400...1

Frontal view
of KMA



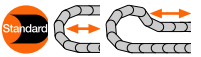




KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)			*Bi* [mm]
05. ▶	141400.	–	05.12.C	50
06. ▶	141400.	–	06.12.C	65
07. ▶	141400.	189400.	07.12.C	75
08. ▶	141400.	–	08.12.C	87
10. ▶	141400.	189400.	10.12.C	100
11. ▶	141400.	–	11.12.C	112
12. ▶	141400.	189400.	12.12.C	125
13. ▶	141400.	–	13.12.C	137
15. ▶	141400.	189400.	15.12.C	150
16. ▶	141400.	–	16.12.C	162
17. ▶	141400.	189400.	17.12.C	175
18. ▶	141400.	–	18.12.C	187
20. ▶	141400.	189400.	20.12.C	200
21. ▶	141400.	–	21.12.C	212
22. ▶	141400.	–	22.12.C	225
23. ▶	141400.	–	23.12.C	237
25. ▶	141400.	189400.	25.12.C	250
26. ▶	141400.	–	26.12.C	262
27. ▶	141400.	189400.	27.12.C	275
28. ▶	141400.	–	28.12.C	287
30. ▶	141400.	189400.	30.12.C	300

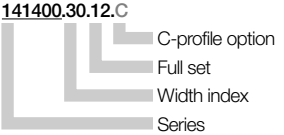
Width index	Part No. full set **pivoting** (+ C-profile option)			*Bi* [mm]
31. ▶	141400.	–	31.12.C	312
32. ▶	1404001	–	32.12.C	325
33. ▶	41400.	–	33.12.C	337
35. ▶	141400.	189400.	35.12.C	350
36. ▶	1404001	–	36.12.C	362
37. ▶	41400.	–	37.12.C	375
38. ▶	141400.	–	38.12.C	387
40. ▶	141400.	189400.	40.12.C	400
41. ▶	141400.	–	41.12.C	412
42. ▶	141400.	–	42.12.C	425
43. ▶	141400.	–	43.12.C	437
45. ▶	141400.	–	45.12.C	450
46. ▶	141400.	189400.	46.12.C	462
47. ▶	141400.	–	47.12.C	475
48. ▶	141400.	–	48.12.C	487
50. ▶	141400.	–	50.12.C	500
51. ▶	141400.	–	51.12.C	512
52. ▶	141400.	–	52.12.C	525
53. ▶	141400.	–	53.12.C	537
55. ▶	141400.	–	55.12.C	550
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:

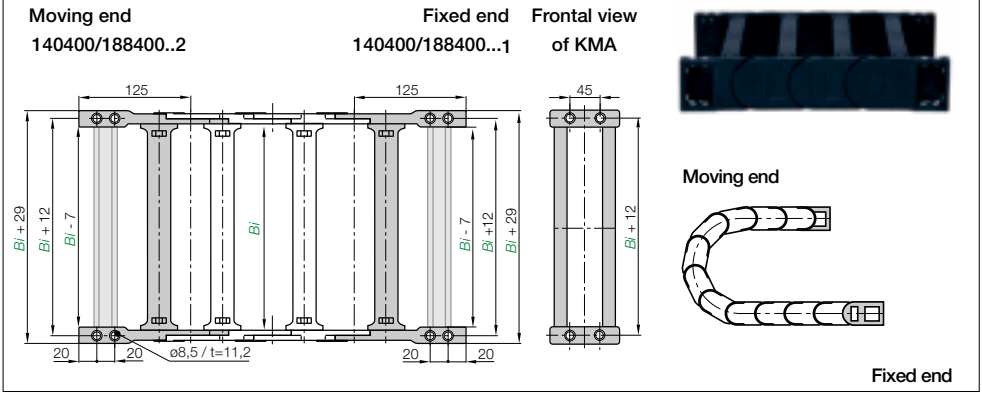
Mounting bracket **Moving end**
141400.30.2.C

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]
05. ▶	140400.	–	05.12.C	50
06. ▶	140400.	–	06.12.C	65
07. ▶	140400.	188400.	07.12.C	75
08. ▶	140400.	–	08.12.C	87
10. ▶	140400.	188400.	10.12.C	100
11. ▶	140400.	–	11.12.C	112
12. ▶	140400.	188400.	12.12.C	125
13. ▶	140400.	–	13.12.C	137
15. ▶	140400.	188400.	15.12.C	150
16. ▶	140400.	–	16.12.C	162
17. ▶	140400.	188400.	17.12.C	175
18. ▶	140400.	–	18.12.C	187
20. ▶	140400.	188400.	20.12.C	200
21. ▶	140400.	–	21.12.C	212
22. ▶	140400.	–	22.12.C	225
23. ▶	140400.	–	23.12.C	237
25. ▶	140400.	188400.	25.12.C	250
26. ▶	140400.	–	26.12.C	262
27. ▶	140400.	188400.	27.12.C	275
28. ▶	140400.	–	28.12.C	287
30. ▶	140400.	188400.	30.12.C	300

Width index	Part No. full set **locking** (+ C-profile option)			*Bi* [mm]
31. ▶	140400.	–	31.12.C	312
32. ▶	140400.	–	32.12.C	325
33. ▶	140400.	–	33.12.C	337
35. ▶	140400.	188400.	35.12.C	350
36. ▶	140400.	–	36.12.C	362
37. ▶	140400.	–	37.12.C	375
38. ▶	140400.	–	38.12.C	387
40. ▶	140400.	188400.	40.12.C	400
41. ▶	140400.	–	41.12.C	412
42. ▶	140400.	–	42.12.C	425
43. ▶	140400.	–	43.12.C	437
45. ▶	140400.	–	45.12.C	450
46. ▶	140400.	188400.	46.12.C	462
47. ▶	140400.	–	47.12.C	475
48. ▶	140400.	–	48.12.C	487
50. ▶	140400.	–	50.12.C	500
51. ▶	140400.	–	51.12.C	512
52. ▶	140400.	–	52.12.C	525
53. ▶	140400.	–	53.12.C	537
55. ▶	140400.	–	55.12.C	550
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

- C-profile option
- Full set
- Width index
- Series

Single-part order:

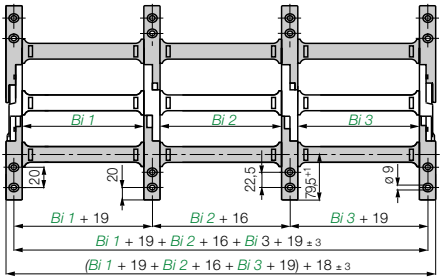
Mounting bracket **Moving end**
140400.30.1.C

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

E4/light | **14040·14140·18840** | More options

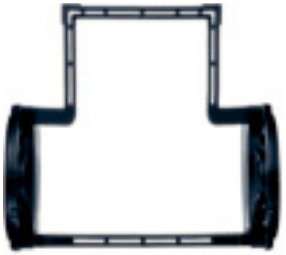


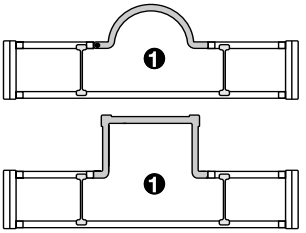


Extension links | for extremely wide e-chains® up to 3,0 m

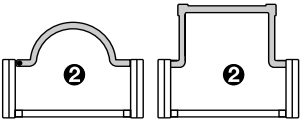
- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide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

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	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

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
14040.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" 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

E4/light | 14040·14140·18840 | 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

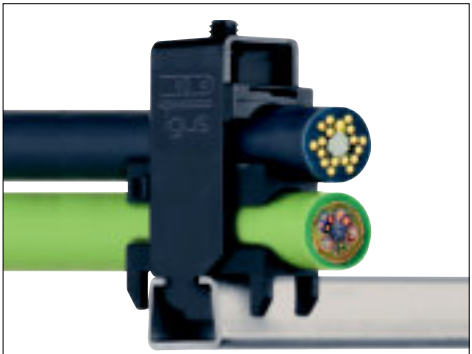
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 mm

Order example (here: inner width *Bi* 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

E4/light | 14040·14140·18840 | 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**

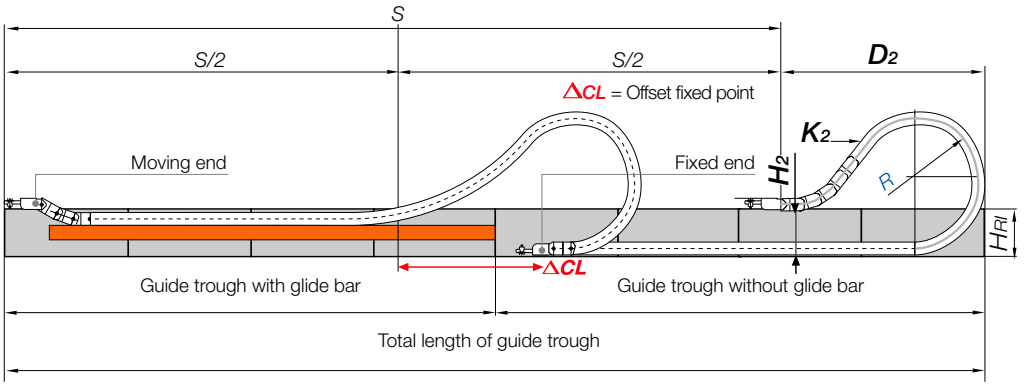


Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ▶ **from page 9.70**

14040·14140·18840 | Dimensions | Long travels

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** = $^{S}/_{2} + K$

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
ΔCL	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**

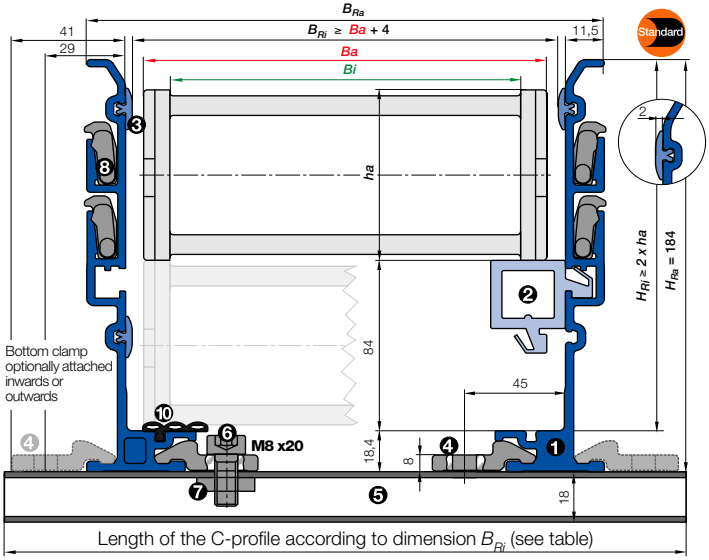
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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) · 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

Part No. 974.30.SL | **974.31.SL** | Trough height: 184 mm

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 14040.10.200.0 with B_{Ri} = 130

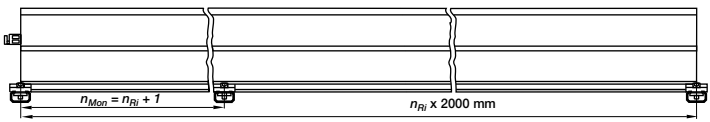
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

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
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

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	960.50.225
.10 130	960.50.200	960.50.250
.11 143	960.50.200	960.50.275
.12 155	960.50.225	960.50.275
.13 168	960.50.225	960.50.300
.15 180	960.50.250	960.50.300
.16 193	960.50.250	960.50.325
.17 205	960.50.275	960.50.325
.18 218	960.50.275	960.50.350
.20 230	960.50.300	960.50.350
.21 243	960.50.300	960.50.375
.22 255	960.50.325	960.50.375
.23 268	960.50.325	960.50.400
.25 280	960.50.350	960.50.400
.26 293	960.50.350	960.50.425
.27 305	960.50.375	960.50.425
.28 318	960.50.375	960.50.450
.30 330	960.50.400	960.50.450
.31 343	960.50.400	960.50.475
.32 355	960.50.425	960.50.475
.33 368	960.50.425	960.50.500
.35 380	960.50.450	960.50.500
.36 393	960.50.450	960.50.525
.37 405	960.50.475	960.50.525
.38 418	960.50.475	960.50.550
.40 430	960.50.500	960.50.550
.41 443	960.50.500	960.50.575
.42 455	960.50.525	960.50.575
.43 468	960.50.525	960.50.600
.45 480	960.50.550	960.50.600
.46 493	960.50.550	960.50.625
.47 505	960.50.575	960.50.625
.48 518	960.50.575	960.50.650
.50 530	960.50.600	960.50.650
.51 543	960.50.600	960.50.675
.52 555	960.50.625	960.50.675
.53 568	960.50.625	960.50.700
.55 580	960.50.650	960.50.700
.60 630	960.50.700	960.50.750

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

Part No.
Standard
e-chains®/e-tubes

Standard

14040.30.*R*.0
Crossbar every link

14140.30.*R*.0
Crossbar every 2nd link

18840.30.*R*.0
e-tube, closed

Delivery in 24h or today!*

Additional noise dampening with pads

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

S14040.30.*R*.0
Crossbar every link

S14140.30.*R*.0
Crossbar every 2nd link

S18840.30.*R*.0
e-tube, closed

Delivery time: 3-5 work days

QuickLock crossbar - reduce assembly time up to 25%

Part No.
QuickLock crossbar for inner radius

14040.30QZ.*R*.0
Crossbar every link

14140.30QZ.*R*.0
Crossbar every 2nd link

Delivery time: 3-5 work days

Part No.
QuickLock crossbar for outer radius

14040.30QE.*R*.0
Crossbar every link

14140.30QE.*R*.0
Crossbar every 2nd link

Delivery time: 3-5 work days

Part No.
QuickLock crossbar for both radii

14040.30Q.*R*.0
Crossbar every link

14140.30Q.*R*.0
Crossbar every 2nd link

Delivery time: 3-5 work days

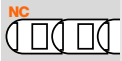
QuickLock crossbars: inner widths from *Bi* 150 mm!

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 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** 
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	**18840.30HT.*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	**18840.30HTZ.*R*.0** Bottom only	**18840.30.*R*.0.ESD** e-tube, closed
			18840.30HTE.*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

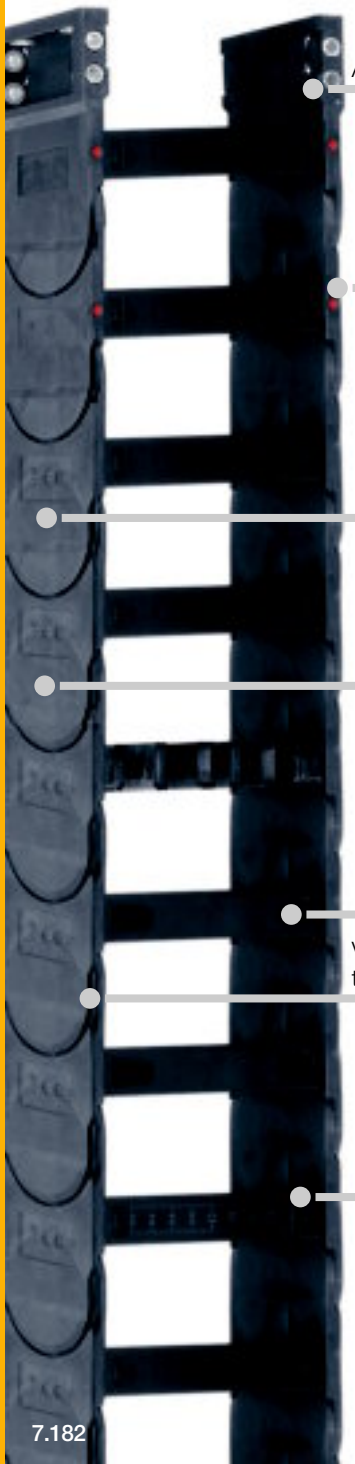
- Standard color
- black
- Bending radius *R*
- Width index
- Series / Type

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



"Light Design", large inner height

When to use Series 14240·14340:

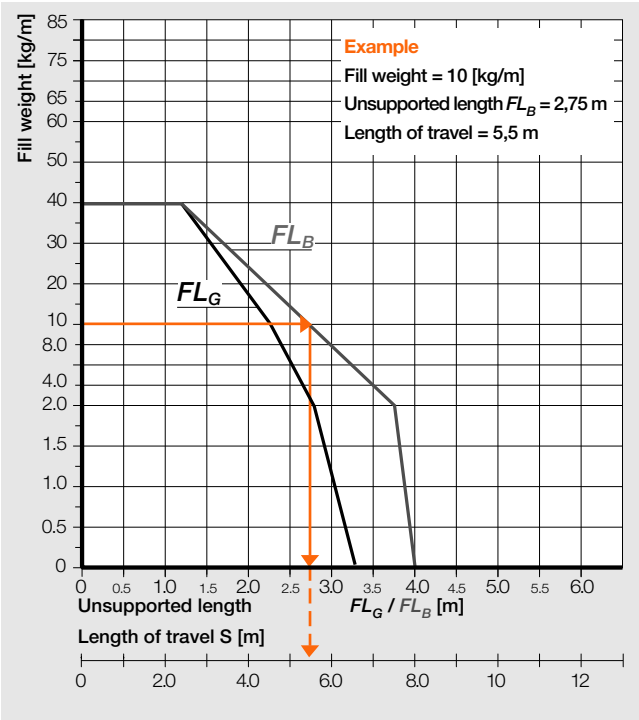
- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 62 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 40 kg/m
- For long travels up to 150 m
- Also suitable for side-mounted, vertical standing or hanging applications

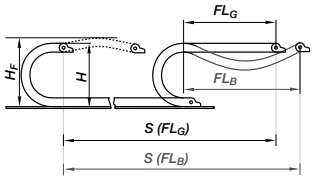
When to use a different igus® Series

- 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**
- If chip protection is necessary
  ► **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





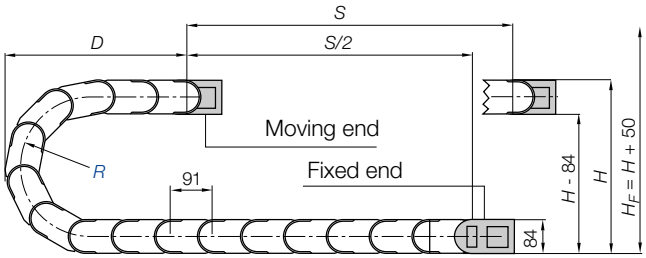
Unsupported applications

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

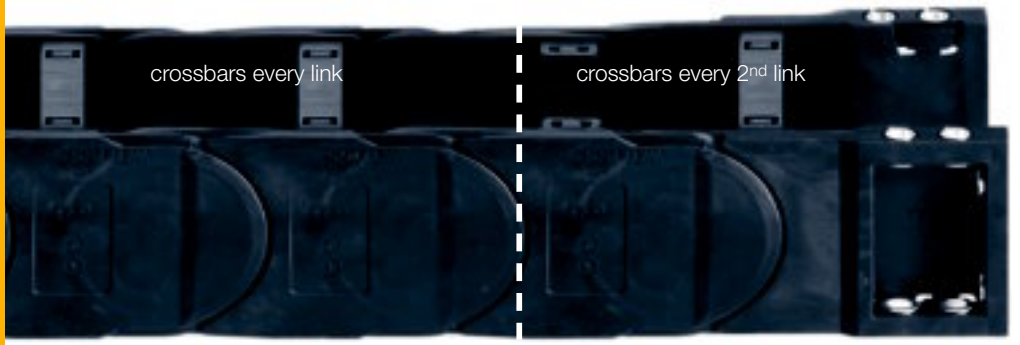
Speed, material, temperature and flammability class ▶ **page 7.162**

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)

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 = π • *R* + "safety"



e-chains® | Series **14240** crossbars every link | Series **14340** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	14240 [kg/m]	14340 [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
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

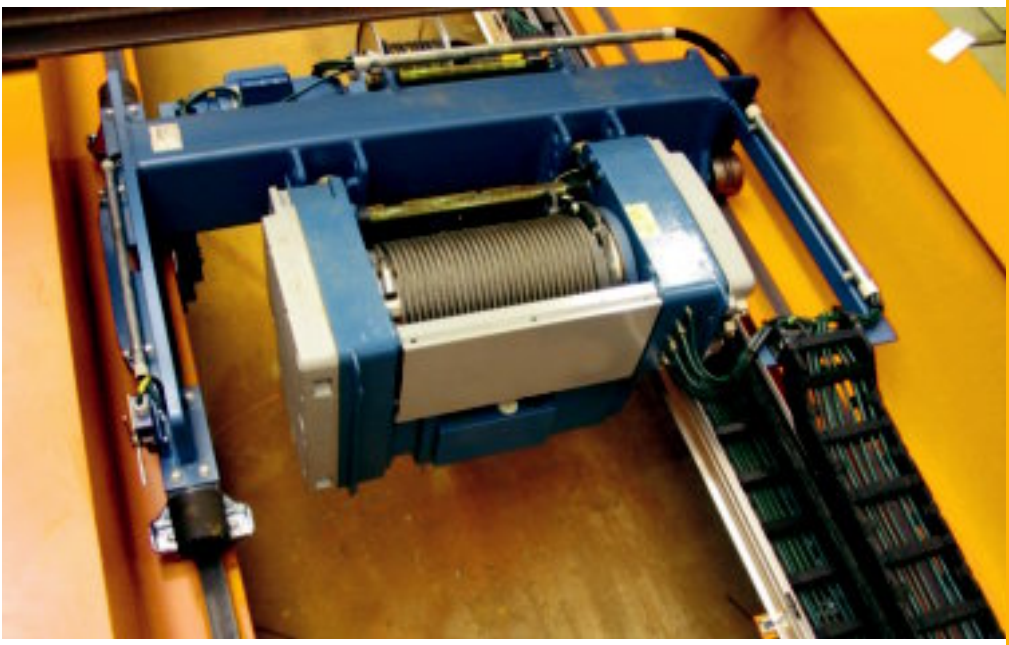
Supplement Part No. with required radius *(R)*. Example: **14240.30.300.0**

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

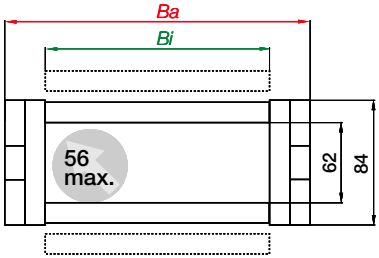
Part No. of e-chain® links as single parts ▶ page 7.163

Order key for all types

14240. 30. 300. 0 e-chain® **(crossbars every link)**
14340. 30. 300. 0 e-chain® **(crossbars every 2nd link)**

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

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. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	*Bi* [mm]
14240.	14340. 10	QZ.*R*.0	QE.*R*.0	Q.*R*.0	100
14240.	14340. 11	QZ.*R*.0	QE.*R*.0	Q.*R*.0	108
14240.	14340. 112	QZ.*R*.0	QE.*R*.0	Q.*R*.0	112
14240.	14340. 12	QZ.*R*.0	QE.*R*.0	Q.*R*.0	125
14240.	14340. 137	QZ.*R*.0	QE.*R*.0	Q.*R*.0	137
14240.	14340. 15	QZ.*R*.0	QE.*R*.0	Q.*R*.0	150
14240.	14340. 162	QZ.*R*.0	QE.*R*.0	Q.*R*.0	162
14240.	14340. 17	QZ.*R*.0	QE.*R*.0	Q.*R*.0	168
14240.	14340. 18	QZ.*R*.0	QE.*R*.0	Q.*R*.0	175
14240.	14340. 187	QZ.*R*.0	QE.*R*.0	Q.*R*.0	187
14240.	14340. 20	QZ.*R*.0	QE.*R*.0	Q.*R*.0	200
14240.	14340. 212	QZ.*R*.0	QE.*R*.0	Q.*R*.0	212
14240.	14340. 23	QZ.*R*.0	QE.*R*.0	Q.*R*.0	225
14240.	14340. 237	QZ.*R*.0	QE.*R*.0	Q.*R*.0	237
14240.	14340. 25	QZ.*R*.0	QE.*R*.0	Q.*R*.0	250
14240.	14340. 262	QZ.*R*.0	QE.*R*.0	Q.*R*.0	262

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	*Bi* [mm]
14240.	14340. 28	QZ.*R*.0	QE.*R*.0	Q.*R*.0	275
14240.	14340. 29	QZ.*R*.0	QE.*R*.0	Q.*R*.0	287
14240.	14340. 30	QZ.*R*.0	QE.*R*.0	Q.*R*.0	300
14240.	14340. 312	QZ.*R*.0	QE.*R*.0	Q.*R*.0	312
14240.	14340. 325	QZ.*R*.0	QE.*R*.0	Q.*R*.0	325
14240.	14340. 337	QZ.*R*.0	QE.*R*.0	Q.*R*.0	337
14240.	14340. 350	QZ.*R*.0	QE.*R*.0	Q.*R*.0	350
14240.	14340. 362	QZ.*R*.0	QE.*R*.0	Q.*R*.0	362
14240.	14340. 375	QZ.*R*.0	QE.*R*.0	Q.*R*.0	375
14240.	14340. 387	QZ.*R*.0	QE.*R*.0	Q.*R*.0	387
14240.	14340. 400	QZ.*R*.0	QE.*R*.0	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: **14240.30QZ.300.0**

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

Part No. 14240.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. 14240.30QE.300.0 = QuickLock crossbar for outer radius

Part No. 14240.30Q .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 crossbars every link	crossbars every 2nd link	Bi	[mm]
S14240.	S14340.	05.	R.0	50
S14240.	S14340.	06.	R.0	68
S14240.	S14340.	07.	R.0	75
S14240.	S14340.	087.	R.0	87
S14240.	S14340.	10.	R.0	100
S14240.	S14340.	11.	R.0	108
S14240.	S14340.	112.	R.0	112
S14240.	S14340.	12.	R.0	125
S14240.	S14340.	137.	R.0	137
S14240.	S14340.	15.	R.0	150
S14240.	S14340.	162.	R.0	162
S14240.	S14340.	17.	R.0	168
S14240.	S14340.	18.	R.0	175
S14240.	S14340.	187.	R.0	187
S14240.	S14340.	20.	R.0	200
S14240.	S14340.	212.	R.0	212

With pads crossbars every link	crossbars every 2nd link	Bi	[mm]
S14240.	S14340.	23.	R.0	225
S14240.	S14340.	237.	R.0	237
S14240.	S14340.	25.	R.0	250
S14240.	S14340.	262.	R.0	262
S14240.	S14340.	28.	R.0	275
S14240.	S14340.	29.	R.0	287
S14240.	S14340.	30.	R.0	300
S14240.	S14340.	312	R.0	312
S14240.	S14340.	325.	R.0	325
S14240.	S14340.	337.	R.0	337
S14240.	S14340.	350.	R.0	350
S14240.	S14340.	362	R.0	362
S14240.	S14340.	375.	R.0	375
S14240.	S14340.	387.	R.0	387
S14240.	S14340.	400.	R.0	400

NC-Version | Without pretension

NC-Version crossbars every link	crossbars every 2nd link	Bi	[mm]
14240.	14340.	05.	R.0.NC	50
14240.	14340.	06.	R.0.NC	68
14240.	14340.	07.	R.0.NC	75
14240.	14340.	087.	R.0.NC	87
14240.	14340.	10.	R.0.NC	100
14240.	14340.	11.	R.0.NC	108
14240.	14340.	112.	R.0.NC	112
14240.	14340.	12.	R.0.NC	125
14240.	14340.	137.	R.0.NC	137
14240.	14340.	15.	R.0.NC	150
14240.	14340.	162.	R.0.NC	162
14240.	14340.	17.	R.0.NC	168
14240.	14340.	18.	R.0.NC	175
14240.	14340.	187.	R.0.NC	187
14240.	14340.	20.	R.0.NC	200
14240.	14340.	212.	R.0.NC	212

NC-Version crossbars every link	crossbars every 2nd link	Bi	[mm]
14240.	14340.	23.	R.0.NC	225
14240.	14340.	237.	R.0.NC	237
14240.	14340.	25.	R.0.NC	250
14240.	14340.	262.	R.0.NC	262
14240.	14340.	28.	R.0.NC	275
14240.	14340.	29.	R.0.NC	287
14240.	14340.	30.	R.0.NC	300
14240.	14340.	312	R.0.NC	312
14240.	14340.	325.	R.0.NC	325
14240.	14340.	337.	R.0.NC	337
14240.	14340.	350.	R.0.NC	350
14240.	14340.	362	R.0.NC	362
14240.	14340.	375.	R.0.NC	375
14240.	14340.	387.	R.0.NC	387
14240.	14340.	400.	R.0.NC	400

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

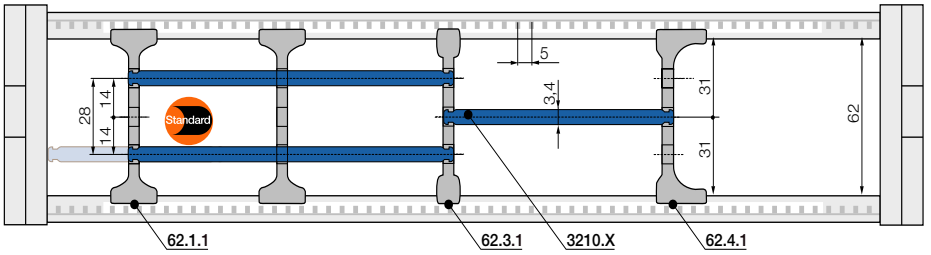
Supplement Part No. with required radius *(R)*. Example: **S14240.30.300.0 or 14240.30.300.0.NC**

For e-chains® with noise dampening pads supplement Part No. with required index "**S**"
Example: **Part No. S14240.30.300.0** = e-chain® (crossbars every link) with noise dampening
For NC-e-chains® without pretension supplement Part No. with required index "**NC**"
Example: **Part No. 14240.30.300.0.NC** = e-chain® (crossbars every link) without pretension

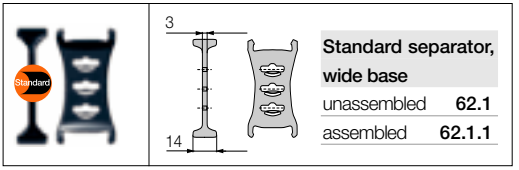
Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*
*Delivery time means time until shipping of goods

E4/light | Series 14240·14340 | Interior separation | Standard

New generation interior separation



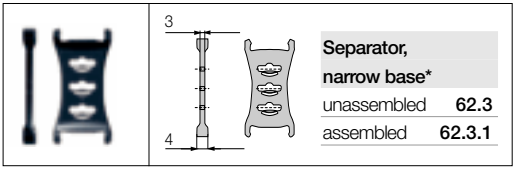
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	62.1
assembled	62.1.1

Standard - for all applications

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

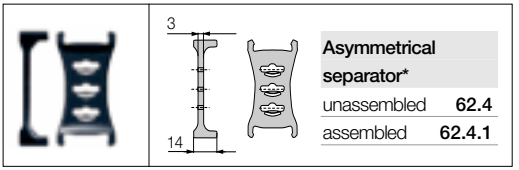


Separator, narrow base*	
unassembled	62.3
assembled	62.3.1

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

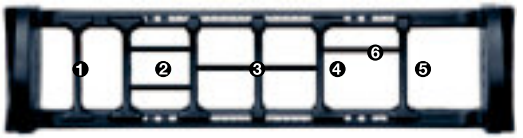


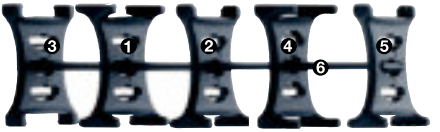
Asymmetrical separator*	
unassembled	62.4
assembled	62.4.1

For side-mounted applications

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

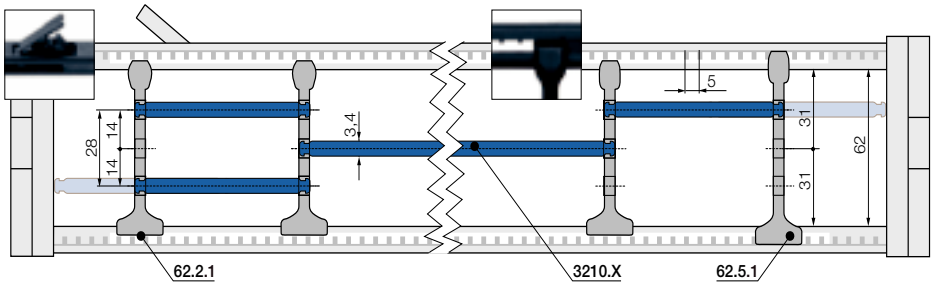
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order





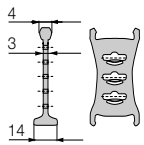
① Standard separator, wide base - Part No. 62.1 ③ Separator, narrow base - Part No. 62.3 ⑤ Notch separator - Part No. 62.5
② Separator for QuickLock crossbar - Part No. 62.2 ④ Separator, asymmetrical - Part No. 62.4 ⑥ Full-width self, lockable - Part No. 3200.XX

New generation interior separation



Note: **No lateral spacing to side links necessary!**
In the standard configuration separators are assembled every 2nd e-chain® link!



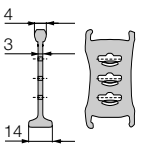


Separator for QuickLock crossbar*	
unassembled	**62.2**
assembled	**62.2.1**

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).





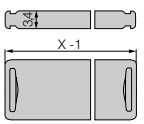
Notch separator for notch crossbar*	
unassembled	**62.5**
assembled	**62.5.1**

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

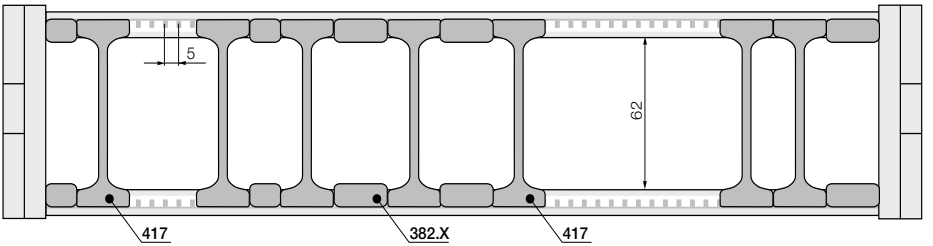
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.



Lockable full-width shelves - for the standard interior separation

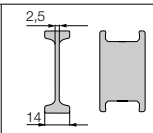
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	**3200.050**	**3210.050**	125	**3200.125**	**3210.125**	225	**3200.225**	**3210.225**
075	**3200.075**	**3210.075**	150	**3200.150**	**3210.150**	250	**3200.250**	**3210.250**
100	**3200.100**	**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)



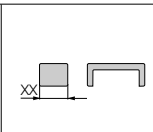
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!





Separator for e-chains®	
unassembled	**407**
assembled	**417**





Spacer* for e-chains®	
unassembled	**381.XX**
assembled	**382.XX**

Separator 407

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

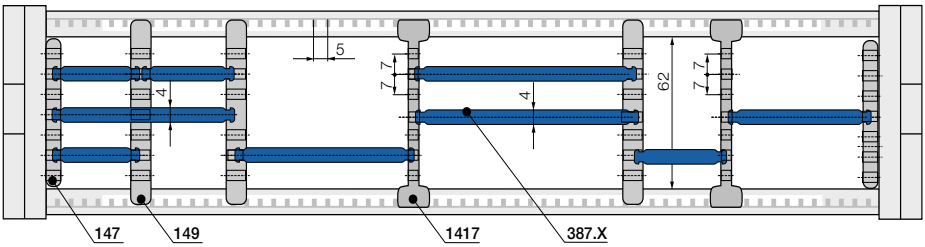
Spacer* 381.XX

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).

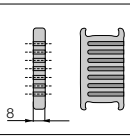
Shelves

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**

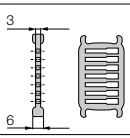
Option 2 | Shelves



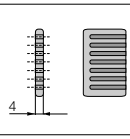
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!

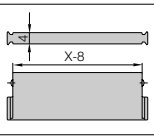
Middle plate for e-chains®	
unassembled	148
assembled	149

Slotted separator for e-chains®	
unassembled	1407
assembled	1417

Side plate for e-chains®	
unassembled	146
assembled	147

Shelf (18-149 mm)	
unassembled	386.X
assembled	387.X

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).

Slotted separator 1407

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

Side plate 146

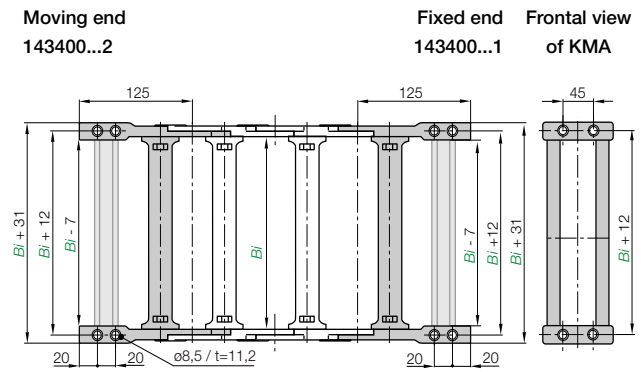
Works like middle plate.
Allows modular shelving close to the side links.

Shelf 386.X

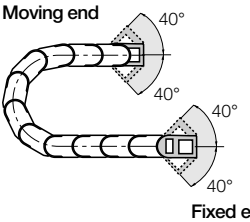
For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments) .

E4/light | 14240·14340 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



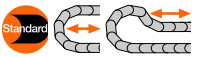




KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	▶ 143400. 05. 12.C	50
06.	▶ 143400. 06. 12.C	68
07.	▶ 143400. 07. 12.C	75
087.	▶ 143400. 087. 12.C	87
10.	▶ 143400. 10. 12.C	100
11.	▶ 143400. 11. 12.C	108
112.	▶ 143400. 112. 12.C	112
12.	▶ 143400. 12. 12.C	125
137.	▶ 143400. 137. 12.C	137
15.	▶ 143400. 15. 12.C	150
162.	▶ 143400. 162. 12.C	162
17.	▶ 143400. 17. 12.C	168
18.	▶ 143400. 18. 12.C	175
187.	▶ 143400. 187. 12.C	187
20.	▶ 143400. 20. 12.C	200
212.	▶ 143400. 212. 12.C	212

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
23.	▶ 143400. 23. 12.C	225
237.	▶ 143400. 237. 12.C	237
25.	▶ 143400. 25. 12.C	250
262.	▶ 143400. 262. 12.C	262
28.	▶ 143400. 28. 12.C	275
29.	▶ 143400. 29. 12.C	287
30.	▶ 143400. 30. 12.C	300
312	▶ 143400. 312 12.C	312
325.	▶ 143400. 325. 12.C	325
337.	▶ 143400. 337. 12.C	337
350.	▶ 143400. 350. 12.C	350
362	▶ 143400. 362 12.C	362
375.	▶ 143400. 375. 12.C	375
387.	▶ 143400. 387. 12.C	387
400.	▶ 143400. 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)

143400.30.12.C

- C-profile option
- Full set
- Width index
- Series

Single-part order:

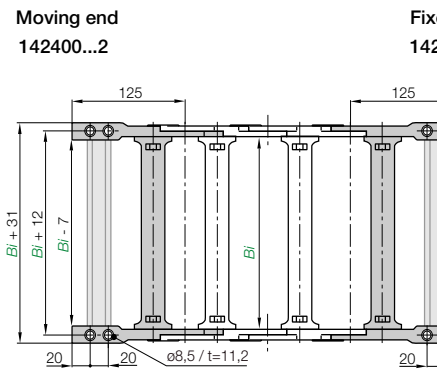
Mounting bracket **Moving end**
143400.30.2.C

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

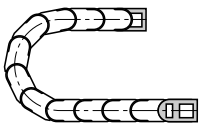
E4/light | 14240·14340 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment





Moving end



Fixed end

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

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	142400. 05. 12.C	50
06.	142400. 06. 12.C	68
07.	142400. 07. 12.C	75
087.	142400. 087. 12.C	87
10.	142400. 10. 12.C	100
11.	142400. 11. 12.C	108
112.	142400. 112. 12.C	112
12.	142400. 12. 12.C	125
137.	142400. 137. 12.C	137
15.	142400. 15. 12.C	150
162.	142400. 162. 12.C	162
17.	142400. 17. 12.C	168
18.	142400. 18. 12.C	175
187.	142400. 187. 12.C	187
20.	142400. 20. 12.C	200
212.	142400. 212. 12.C	212

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
23.	142400. 23. 12.C	225
237.	142400. 237. 12.C	237
25.	142400. 25. 12.C	250
262.	142400. 262. 12.C	262
28.	142400. 28. 12.C	275
29.	142400. 29. 12.C	287
30.	142400. 30. 12.C	300
312	142400. 312 12.C	312
325.	142400. 325. 12.C	325
337.	142400. 337. 12.C	337
350.	142400. 350. 12.C	350
362	142400. 362 12.C	362
375.	142400. 375. 12.C	375
387.	142400. 387. 12.C	387
400.	142400. 400. 12.C	400

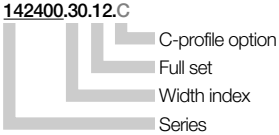


- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request

(KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

142400.30.12.C



Single-part order:

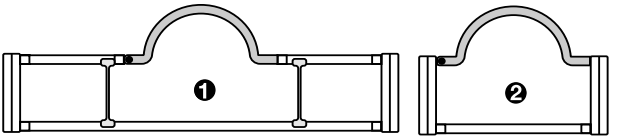
Mounting bracket **Moving end**
142400.30.2.C

Mounting bracket **Fixed end**
142400.30.1.C

Strain relief, e.g. clamps, tiewrap 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 hosed 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. single part	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

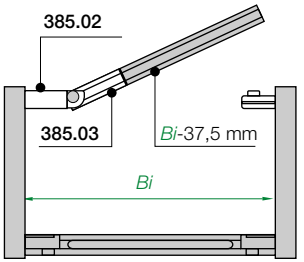
RHD115 for outer radius "E" incl. e-chain®:
14240.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
14240.10/15RHDZ115/10.*R*.0

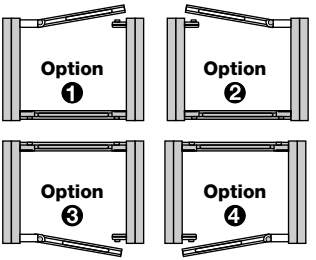
② Installation on side link

RD115 for outer radius "E" incl. e-chain®:
14240.18RDE115.*R*.0

RD115 for inner radius "Z" incl. e-chain®:
14240.18RDZ115.*R*.0



(View from the fixed point)

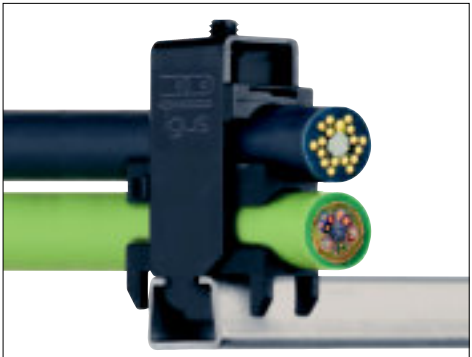




Hinged crossbars

- 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)

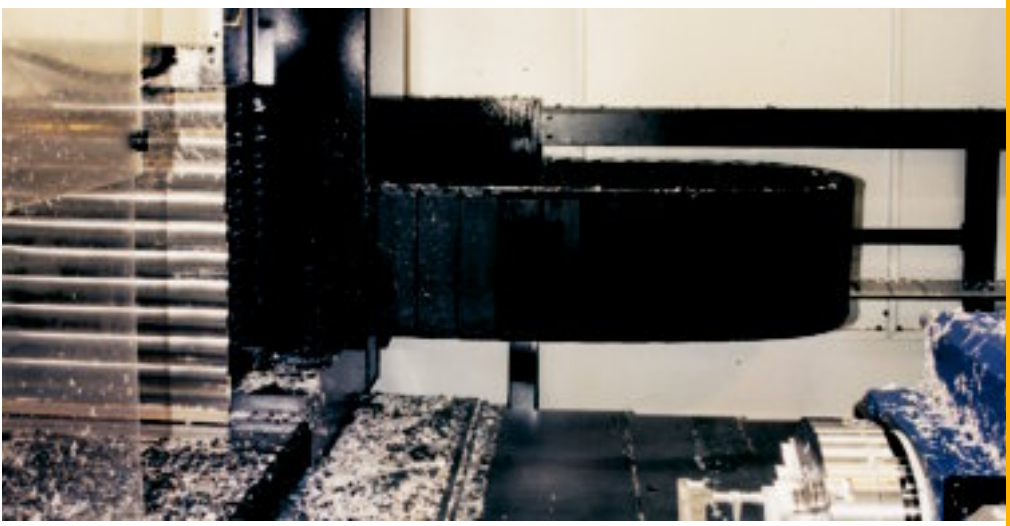
Order example (here: inner width *Bi* 150)
14240.15.Z.*R*.0 =
14240.15.01.*R*.0
Supplement Index "Z" with required option number ①, ②, ③ or ④



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



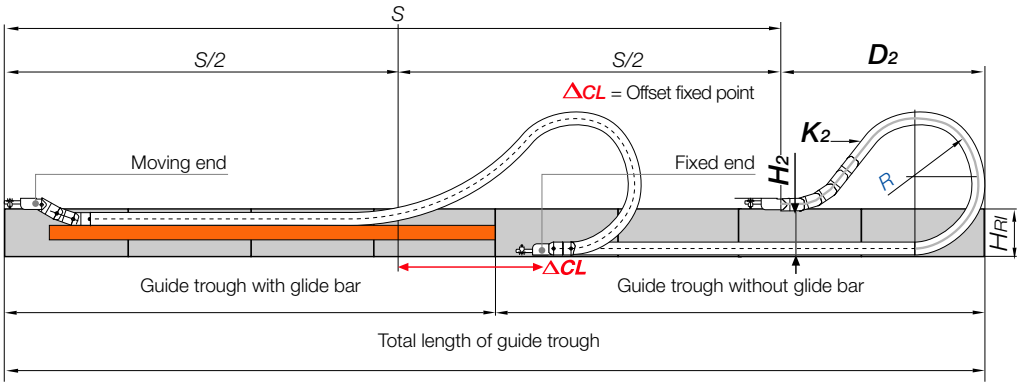
Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ▶ **from page 9.70**



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** = $S/2 + K$

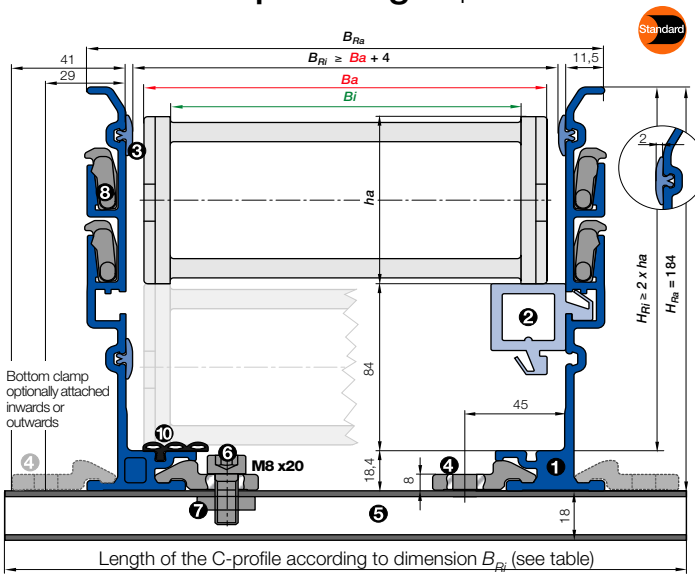
R	135	150	175	200	250	300	400	500
H_2	266	266	266	266	266	266	266	266
D_2^{+25}	390	450	550	710	920	1120	1530	1850
K_2	728	819	1001	1274	1638	1911	2548	3185
ΔCL	124	159	209	359	509	659	959	1159

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) · 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

Part No. 974.30.SL | **974.31.SL** | Trough height: 184 mm

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 14240.30.300.0 with B_{Ri} = 330

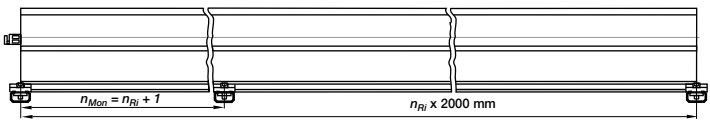
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

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 ● C-Profile
● Installation set Ba = Outer width e-chains® Bi = Inner width e-chains®
● Glide bar

B_{Ri} = Inner trough width H_{Ra} = Outer trough height
B_{Ra} = Outer trough width n_{Mon} = Number of installation sets
H_{Ri} = Inner trough height n_{Ri} = Number of trough sets

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	80	–	960.50.200
.06	98	–	960.50.225
.07	105	–	960.50.225
.087	118	960.50.175	960.50.250
.10	130	960.50.200	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

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

E4/light | **Series 14240·14340** | **Options** and order key

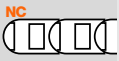
	Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
	Part No. **Standard** **e-chains®/e-tubes**	**Part No.** **Low noise (with pads)** **e-chains®/e-tubes**	**Part No.** **QuickLock crossbar for inner radius**	**Part No.** **QuickLock crossbar for outer radius**	**Part No.** **QuickLock crossbar for both radii**
			QuickLock crossbars: inner widths from *Bi* 100 mm!		
Crossbar every link	**14240.30.*R*.0**	**S14240.30.*R*.0**	**14240.30QZ.*R*.0**	**14240.30QE.*R*.0**	**14240.30Q.*R*.0**
Crossbar every 2nd link	**14340.30.*R*.0**	**S14340.30.*R*.0**	**14340.30QZ.*R*.0**	**14340.30QE.*R*.0**	**14340.30Q.*R*.0**
	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		S14240.30Q.*R*.0	S14240.30.*R*.0.NC	–	S14240.30.*R*.0.XXL	S14240.30.*R*.0.ESD
QuickLock crossbar	S14240.30Q.*R*.0		14240.30Q.*R*.0.NC	14240.30Q.*R1/R2*.0	14240.30Q.*R*.0.XXL	14240.30Q.*R*.0.ESD
NC-Version	S14240.30.*R*.0.NC	14240.30Q.*R*.0.NC		–	–	14240.30.*R*.0.ESD.NC
RBR-Version	–	14240.30Q.*R1/R2*.0	–		–	14240.30.*R1/R2*.0.ESD
XXL-Material	S14240.30.*R*.0.XXL	14240.30Q.*R*.0.XXL	–	–		–
ESD-Material	S14240.30.*R*.0.ESD	14240.30Q.*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 classified e-chains® - Ⅱ 2 GD*
Part No. **NC-Material** **e-chains®/e-tubes** NC 	**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** **Sidebands 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 2nd 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

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

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



"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

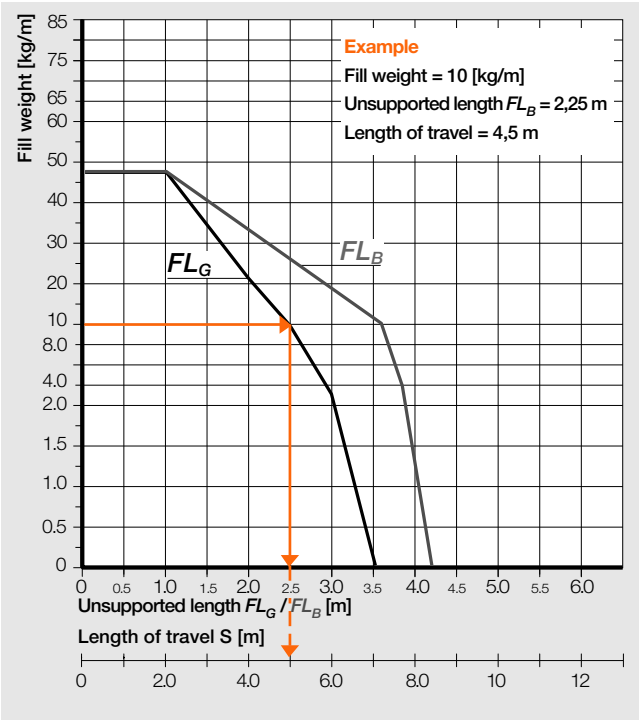
When to use a different igus® Series

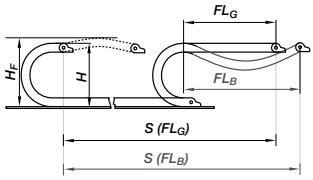
- If an extremely **low-noise** and low-vibration e-chain® is required (≤46 dB(A))
  ▶ **Series E6.80, page 8.88**
- If larger unsupported lengths are required in side-mounted applications
  ▶ **Series 15050, page 7.216**
  ▶ **Series E4.80, page 7.96**
- If increased unsupported lengths and longer travels 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



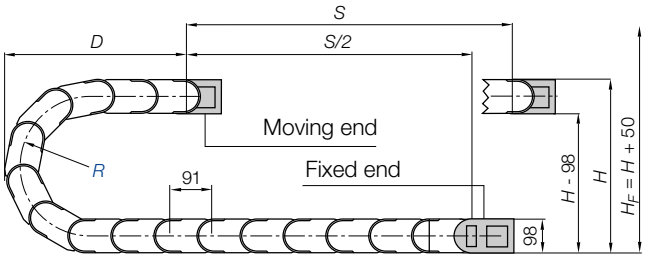


Unsupported applications

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)

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 = $\pi \bullet R$ + "safety"



e-chains® | Series **14550** crossbars every link | Series **14650** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	14550 [kg/m]	14650 [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
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

7.202 3D-CAD files, configurators, PDF, applications ► www.igus.de/en/14550



e-tubes | Series **19050** - fully enclosed

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	19050 [kg/m]
19050. 07. *R*.0	75	102	≈ 4,00
19050. 10. *R*.0	100	127	≈ 4,33
19050. 12. *R*.0	125	152	≈ 4,70
19050. 15. *R*.0	150	177	≈ 5,04
19050. 17. *R*.0	175	202	≈ 5,41
19050. 20. *R*.0	200	227	≈ 5,64

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	19050 [kg/m]
19050. 25. *R*.0	250	277	≈ 6,32
19050. 27. *R*.0	275	302	≈ 6,65
19050. 30. *R*.0	300	327	≈ 6,99
19050. 35. *R*.0	350	377	≈ 7,68
19050. 40. *R*.0	400	427	≈ 8,36
19050. 46. *R*.0	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**

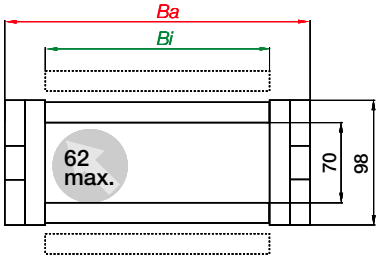
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

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. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
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
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)

With pads crossbars: every link	every 2nd link	e-tube fully enclosed	Bi [mm]
S14550.	S14650.	– 05. R.0	50
S14550.	S14650.	– 06. R.0	65
S14550.	S14650.	S19050. 07. R.0	75
S14550.	S14650.	– 08. R.0	87
S14550.	S14650.	S19050. 10. R.0	100
S14550.	S14650.	– 11. R.0	112
S14550.	S14650.	S19050. 12. R.0	125
S14550.	S14650.	– 13. R.0	137
S14550.	S14650.	S19050. 15. R.0	150
S14550.	S14650.	– 16. R.0	162
S14550.	S14650.	S19050. 17. R.0	175
S14550.	S14650.	– 18. R.0	187
S14550.	S14650.	S19050. 20. R.0	200
S14550.	S14650.	– 21 R.0	212
S14550.	S14650.	– 22. R.0	225
S14550.	S14650.	– 23. R.0	237
S14550.	S14650.	S19050. 25. R.0	250
S14550.	S14650.	– 26. R.0	262
S14550.	S14650.	S19050. 27. R.0	275
S14550.	S14650.	– 28. R.0	287
S14550.	S14650.	S19050. 30. R.0	300

With pads crossbars: every link	every 2nd link	e-tube fully enclosed	Bi [mm]
S14550.	S14650.	– 31. R.0	312
S14550.	S14650.	– 32. R.0	325
S14550.	S14650.	– 33. R.0	337
S14550.	S14650.	S19050. 35. R.0	350
S14550.	S14650.	– 36. R.0	362
S14550.	S14650.	– 37. R.0	375
S14550.	S14650.	– 38. R.0	387
S14550.	S14650.	S19050. 40. R.0	400
S14550.	S14650.	– 41. R.0	412
S14550.	S14650.	– 42. R.0	425
S14550.	S14650.	– 43. R.0	437
S14550.	S14650.	– 45. R.0	450
S14550.	S14650.	S19050. 46. R.0	462
S14550.	S14650.	– 47. R.0	475
S14550.	S14650.	– 48. R.0	487
S14550.	S14650.	– 50. R.0	500
S14550.	S14650.	– 51. R.0	512
S14550.	S14650.	– 52. R.0	525
S14550.	S14650.	– 53. R.0	537
S14550.	S14650.	– 55. R.0	550
S14550.	S14650.	– 60. R.0	600

NC-Version | Without pretension

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed	Bi [mm]
14550.	14650.	– 05. R.0.NC	50
14550.	14650.	– 06. R.0.NC	65
14550.	14650.	19050. 07. R.0.NC	75
14550.	14650.	– 08. R.0.NC	87
14550.	14650.	19050. 10. R.0.NC	100
14550.	14650.	– 11. R.0.NC	112
14550.	14650.	19050. 12. R.0.NC	125
14550.	14650.	– 13. R.0.NC	137
14550.	14650.	19050. 15. R.0.NC	150
14550.	14650.	– 16. R.0.NC	162
14550.	14650.	19050. 17. R.0.NC	175
14550.	14650.	– 18. R.0.NC	187
14550.	14650.	19050. 20. R.0.NC	200
14550.	14650.	– 21 R.0.NC	212
14550.	14650.	– 22. R.0.NC	225
14550.	14650.	– 23. R.0.NC	237
14550.	14650.	19050. 25. R.0.NC	250
14550.	14650.	– 26. R.0.NC	262
14550.	14650.	19050. 27. R.0.NC	275
14550.	14650.	– 28. R.0.NC	287
14550.	14650.	19050. 30. R.0.NC	300

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed	Bi [mm]
14550.	14650.	– 31. R.0.NC	312
14550.	14650.	– 32. R.0.NC	325
14550.	14650.	– 33. R.0.NC	337
14550.	14650.	19050. 35. R.0.NC	350
14550.	14650.	– 36. R.0.NC	362
14550.	14650.	– 37. R.0.NC	375
14550.	14650.	– 38. R.0.NC	387
14550.	14650.	19050. 40. R.0.NC	400
14550.	14650.	– 41. R.0.NC	412
14550.	14650.	– 42. R.0.NC	425
14550.	14650.	– 43. R.0.NC	437
14550.	14650.	– 45. R.0.NC	450
14550.	14650.	19050. 46. R.0.NC	462
14550.	14650.	– 47. R.0.NC	475
14550.	14650.	– 48. R.0.NC	487
14550.	14650.	– 50. R.0.NC	500
14550.	14650.	– 51. R.0.NC	512
14550.	14650.	– 52. R.0.NC	525
14550.	14650.	– 53. R.0.NC	537
14550.	14650.	– 55. R.0.NC	550
14550.	14650.	– 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

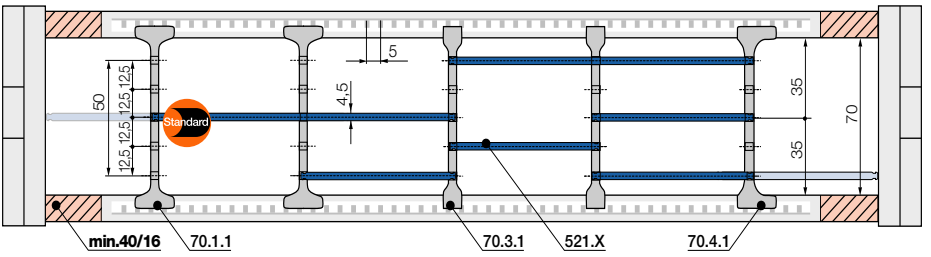
Supplement Part No. with required radius *(R)*. Example: **S14550.10.300.0 or 14550.10.300.0.NC**

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

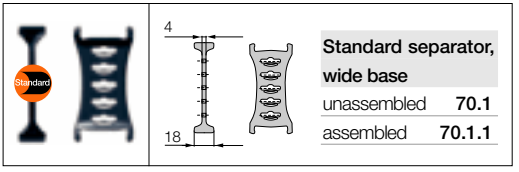
Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*
*Delivery time means time until shipping of goods

E4/light | 14550·14650·19050 | Interior separation | Standard

New generation interior separation



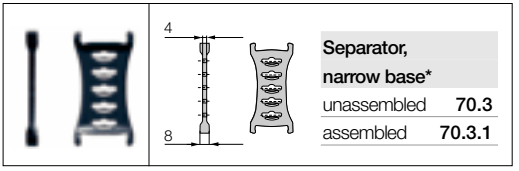
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**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.

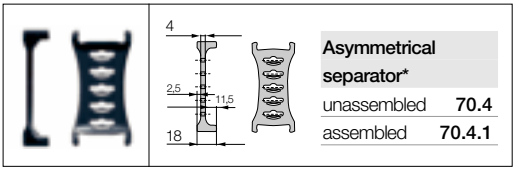


Separator, narrow base*	
unassembled	**70.3**
assembled	**70.3.1**

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

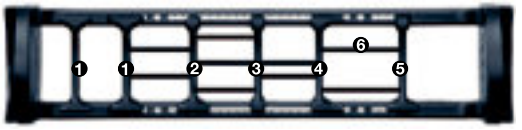


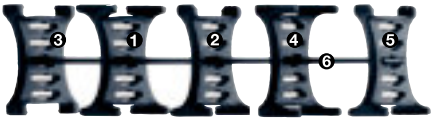
Asymmetrical separator*	
unassembled	**70.4**
assembled	**70.4.1**

For side-mounted applications

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

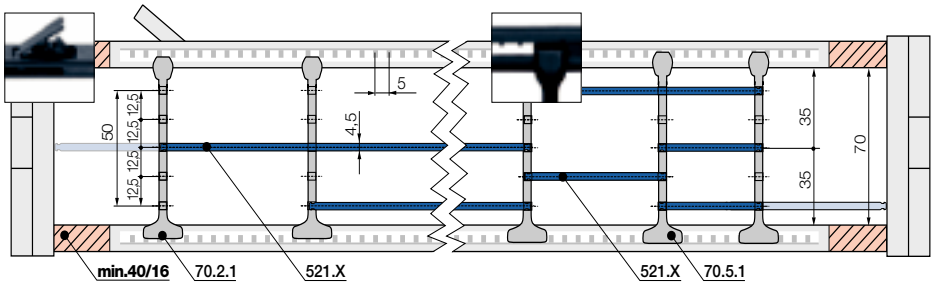
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order





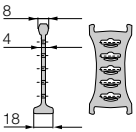
① Standard separator, wide base - Part No. 70.1 ③ Separator, narrow base - Part No. 70.3 ⑤ Notch separator - Part No. 70.5
② Separator for QuickLock crossbar - Part No. 70.2 ④ Separator, asymmetrical - Part No. 70.4 ⑥ Full-width self, lockable - Part No. 520.XX

New generation interior separation



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!





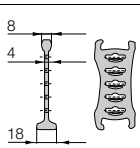
Separator for QuickLock crossbar*	
unassembled	**70.2**
assembled	**70.2.1**

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





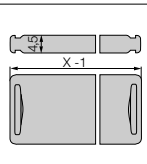
Notch separator for notch crossbar*	
unassembled	**70.5**
assembled	**70.5.1**

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.

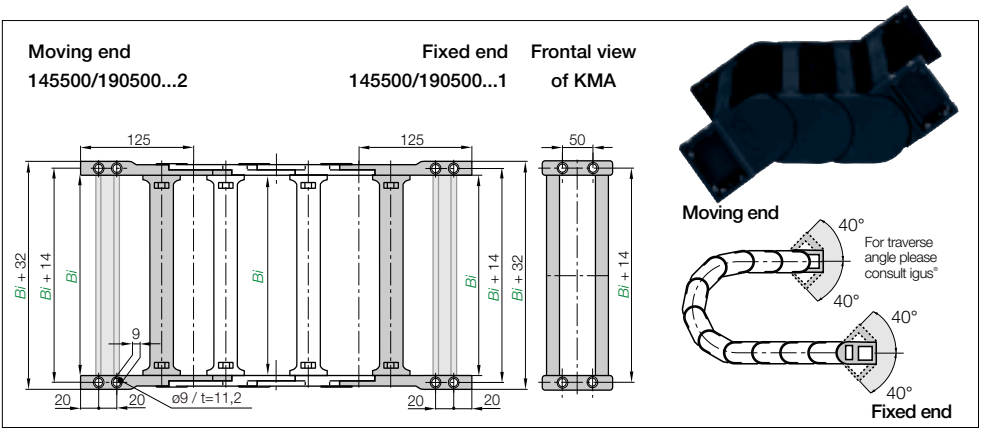


Lockable full-width shelves - for the standard interior separation

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**

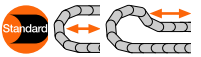
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set **pivoting** (+ C-profile option)	*Bi* [mm]
05. ▶	145500. – 05. 12.C	50
06. ▶	145500. – 06. 12.C	65
07. ▶	145500. 190500. 07. 12.C	75
08. ▶	145500. – 08. 12.C	87
10. ▶	145500. 190500. 10. 12.C	100
11. ▶	145500. – 11. 12.C	112
12. ▶	145500. 190500. 12. 12.C	125
13. ▶	145500. – 13. 12.C	137
15. ▶	145500. 190500. 15. 12.C	150
16. ▶	145500. – 16. 12.C	162
17. ▶	145500. 190500. 17. 12.C	175
18. ▶	145500. – 18. 12.C	187
20. ▶	145500. 190500. 20. 12.C	200
21 ▶	145500. – 21 12.C	212
22. ▶	145500. – 22. 12.C	225
23. ▶	145500. – 23. 12.C	237
25. ▶	145500. 190500. 25. 12.C	250
26. ▶	145500. – 26. 12.C	262
27. ▶	145500. 190500. 27. 12.C	275
28. ▶	145500. – 28. 12.C	287
30. ▶	145500. 190500. 30. 12.C	300

Width index	Part No. full set **pivoting** (+ C-profile option)	*Bi* [mm]
31. ▶	145500. – 31. 12.C	312
32. ▶	145500. – 32. 12.C	325
33. ▶	145500. – 33. 12.C	337
35. ▶	145500. 190500. 35. 12.C	350
36. ▶	145500. – 36. 12.C	362
37. ▶	145500. – 37. 12.C	375
38. ▶	145500. – 38. 12.C	387
40. ▶	145500. 190500. 40. 12.C	400
41. ▶	145500. – 41. 12.C	412
42. ▶	145500. – 42. 12.C	425
43. ▶	145500. – 43. 12.C	437
45. ▶	145500. – 45. 12.C	450
46. ▶	145500. 190500. 46. 12.C	462
47. ▶	145500. – 47. 12.C	475
48. ▶	145500. – 48. 12.C	487
50. ▶	145500. – 50. 12.C	500
51. ▶	145500. – 51. 12.C	512
52. ▶	145500. – 52. 12.C	525
53. ▶	145500. – 53. 12.C	537
55. ▶	145500. – 55. 12.C	550
60. ▶	145500. – 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)

145500.10.12.C

- C-profile option
- Full set
- Width index
- Series

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

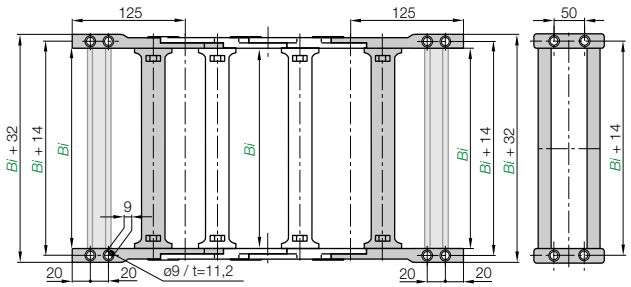
14550·14650·19050 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment

Moving end
145510/190510...2

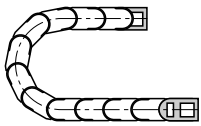
Fixed end
145510/190510...1

Frontal view of KMA





Moving end



Fixed end

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

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
05. ▶	**145510.** – **05. 12.C**	50
06. ▶	**145510.** – **06. 12.C**	65
07. ▶	**145510. 190510. 07. 12.C**	75
08. ▶	**145510.** – **08. 12.C**	87
10. ▶	**145510. 190510. 10. 12.C**	100
11. ▶	**145510.** – **11. 12.C**	112
12. ▶	**145510. 190510. 12. 12.C**	125
13. ▶	**145510.** – **13. 12.C**	137
15. ▶	**145510. 190510. 15. 12.C**	150
16. ▶	**145510.** – **16. 12.C**	162
17. ▶	**145510. 190510. 17. 12.C**	175
18. ▶	**145510.** – **18. 12.C**	187
20. ▶	**145510. 190510. 20. 12.C**	200
21 ▶	**145510.** – **21 12.C**	212
22. ▶	**145510.** – **22. 12.C**	225
23. ▶	**145510.** – **23. 12.C**	237
25. ▶	**145510. 190510. 25. 12.C**	250
26. ▶	**145510.** – **26. 12.C**	262
27. ▶	**145510. 190510. 27. 12.C**	275
28. ▶	**145510.** – **28. 12.C**	287
30. ▶	**145510. 190510. 30. 12.C**	300

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
31. ▶	**145510.** – **31. 12.C**	312
32. ▶	**145510.** – **32. 12.C**	325
33. ▶	**145510.** – **33. 12.C**	337
35. ▶	**145510. 190510. 35. 12.C**	350
36. ▶	**145510.** – **36. 12.C**	362
37. ▶	**145510.** – **37. 12.C**	375
38. ▶	**145510.** – **38. 12.C**	387
40. ▶	**145510. 190510. 40. 12.C**	400
41. ▶	**145510.** – **41. 12.C**	412
42. ▶	**145510.** – **42. 12.C**	425
43. ▶	**145510.** – **43. 12.C**	437
45. ▶	**145510.** – **45. 12.C**	450
46. ▶	**145510. 190510. 46. 12.C**	462
47. ▶	**145510.** – **47. 12.C**	475
48. ▶	**145510.** – **48. 12.C**	487
50. ▶	**145510.** – **50. 12.C**	500
51. ▶	**145510.** – **51. 12.C**	512
52. ▶	**145510.** – **52. 12.C**	525
53. ▶	**145510.** – **53. 12.C**	537
55. ▶	**145510.** – **55. 12.C**	550
60. ▶	**145510.** – **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)

145510.10.12.C

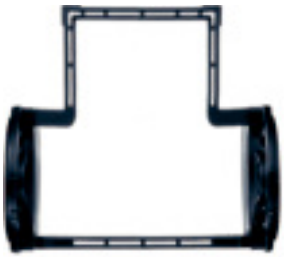
- C-profile option
- Full set
- Width index
- Series

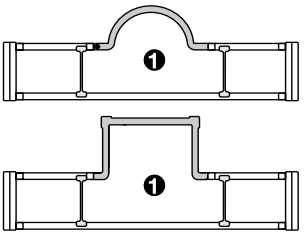
Single-part order:

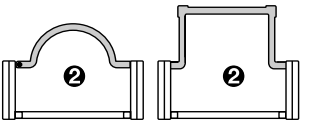
Mounting bracket **Moving end**
145510.10.2.C

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 hosed 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

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

Order examples - extender crossbar

① Combination with snap-open crossbars

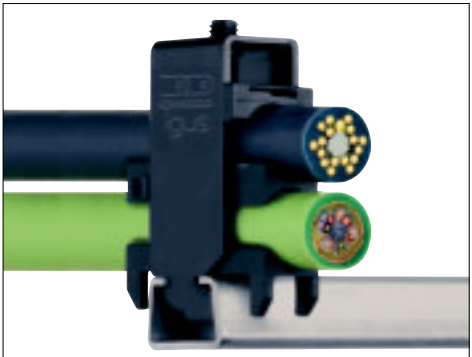
RHD115 for outer radius "E" incl. e-chain®:
14550.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
14550.10/15RHDZ115/10.*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



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**

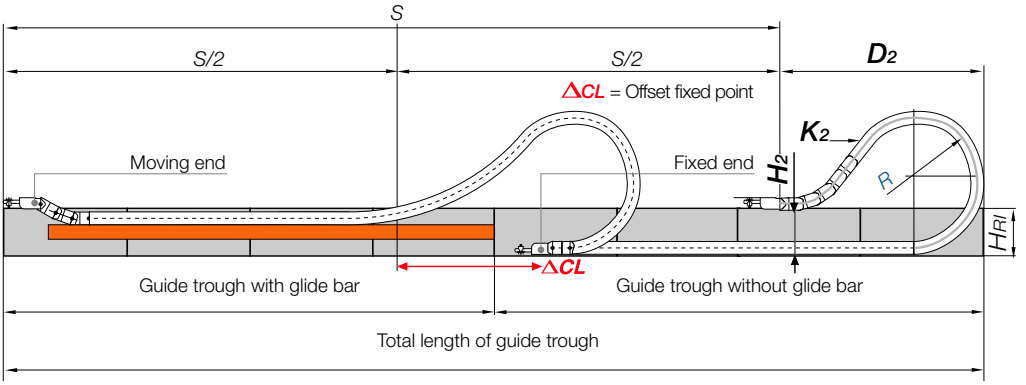


E4/light e-tubes protect tubes and hoses safely against dirt and chips

14550·14650·19050 | Dimensions | Long travels

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.**

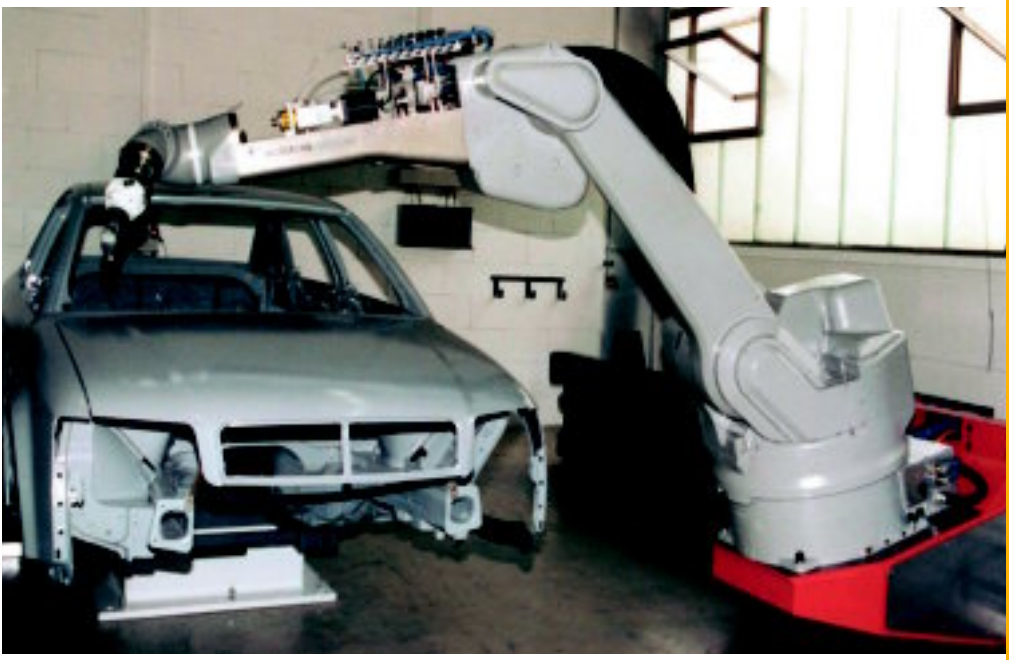
R	150	175	200	250	300	350	400	450	500	600*
H_2	266	266	266	266	266	266	266	266	266	*
D_2^{+25}	450	530	710	920	1120	1340	1530	**	1830	*
K_2	819	1001	1274	1638	1911	2184	2548	**	3185	*
ΔCL	124	159	209	359	509	659	829	959	1159	*

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

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

14550·14650·19050 | More application examples



Spray-painting robot with System E4 e-chain® used in an ATEX version made of igumid ESD.
High accelerations of up to 6 m/s² and high braking rates with a weight of the robot of approx. one ton

E4/light | 14550·14650·19050 | Options and order key

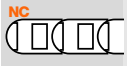
Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
Part No. Standard e-chains®/e-tubes (Standard)	**Part No. Low noise (with pads) e-chains®/e-tubes**	**Part No. QuickLock crossbar for inner radius**	**Part No. QuickLock crossbar for outer radius**	**Part No. QuickLock crossbar for both radii**
		QuickLock crossbars: inner widths from *Bi* 150 mm!		
14550.10.*R*.0 Crossbar every link	**S14550.10.*R*.0** Crossbar every link	**14550.10QZ.*R*.0** Crossbar every link	**14550.10QE.*R*.0** Crossbar every link	**14550.10Q.*R*.0** Crossbar every link
14650.10.*R*.0 Crossbar every 2nd link	**S14650.10.*R*.0** Crossbar every 2nd link	**14650.10QZ.*R*.0** Crossbar every 2nd link	**14650.10QE.*R*.0** Crossbar every 2nd link	**14650.10Q.*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		S14550.10Q.*R*.0	S14550.10.*R*.0.NC	–	S14550.10.*R*.0.XXL	S14550.10.*R*.0.HT	S14550.10.*R*.0.ESD
QuickLock crossbar	S14550.10Q.*R*.0		14550.10Q.*R*.0.NC	14550.10Q.*R1/R2*.0	14550.10Q.*R*.0.XXL	–	14550.10Q.*R*.0.ESD
NC-Version	S14550.10.*R*.0.NC	14550.10Q.*R*.0.NC		–	–	19050.10.*R*.0.HT.NC	14550.10.*R*.0.ESD.NC
RBR-Version	–	14550.10Q.*R1/R2*.0	–		–	19050.10.*R1/R2*.0.HT	14550.10.*R1/R2*.0.ESD
XXL-Material	S14550.10.*R*.0.XXL	14550.10Q.*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	14550.10Q.*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 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** 
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	**19050.10HT.*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	**19050.10HTZ.*R*.0** Bottom only	**19050.10.*R*.0.ESD** e-tube, closed
			19050.10HTE.*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

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

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



"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

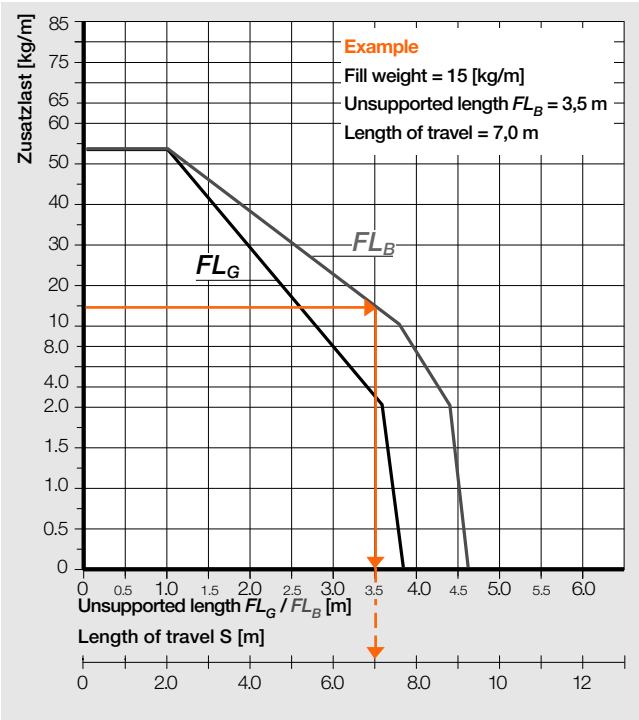
When to use a different igus® Series

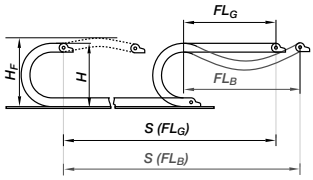
- If an extremely **low-noise** and low-vibration e-chain® is required (≤46 dB(A))
  ► **Series E6.80, page 8.88**
- If larger unsupported lengths are required in side-mounted applications
  ► **Series E4.80, page 7.96**
- If increased unsupported lengths and longer travels are required
  ► **Series 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





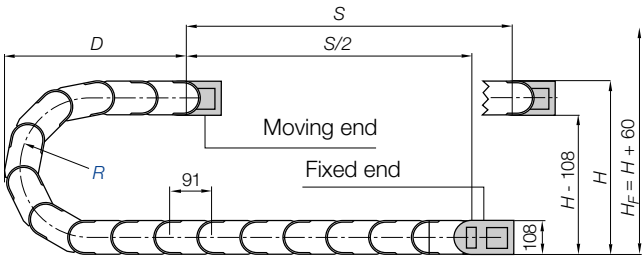
Unsupported applications

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

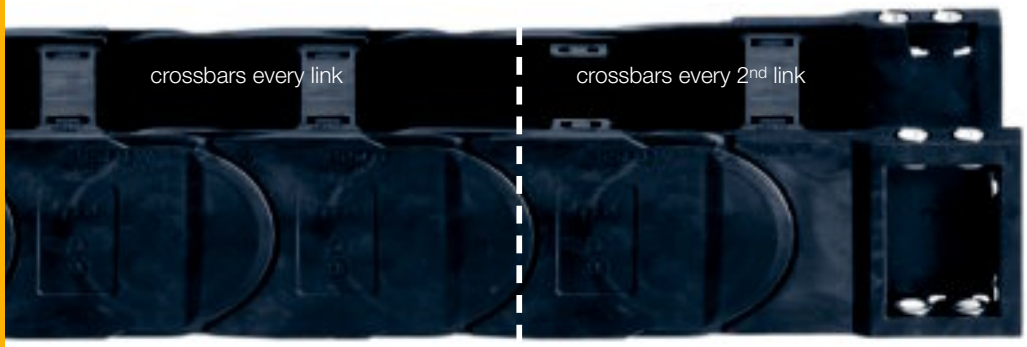
Speed, material, temperature and flammability class ▶ **page 7.162**

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)

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 = $\pi \bullet R$ + "safety"



e-chains® | Series **15050** crossbars every link | Series **15150** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	15050 [kg/m]	15150 [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
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

7.218 3D-CAD files, configurators, PDF, applications ► www.igus.de/en/15050



e-tubes | Series **19850** - fully enclosed

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	19850 [kg/m]
19850. 07. *R*.0	75	105	≈ 4,46
19850. 10. *R*.0	100	130	≈ 4,74
19850. 12. *R*.0	125	155	≈ 5,10
19850. 15. *R*.0	150	180	≈ 5,53
19850. 17. *R*.0	175	205	≈ 5,88
19850. 20. *R*.0	200	230	≈ 6,11

Part No. fully enclosed	*Bi* [mm]	*Ba* [mm]	19850 [kg/m]
19850. 25. *R*.0	250	280	≈ 6,83
19850. 27. *R*.0	275	305	≈ 7,26
19850. 30. *R*.0	300	330	≈ 7,49
19850. 35. *R*.0	350	380	≈ 8,24
19850. 40. *R*.0	400	430	≈ 9,20
19850. 46. *R*.0	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**

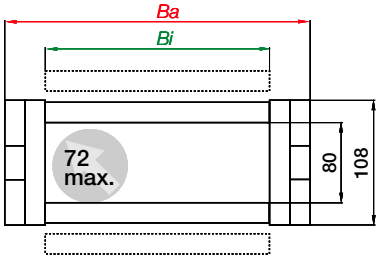
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version 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

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

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



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

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
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
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 crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
S15050.	S15150.	–	05.R.0	50
S15050.	S15150.	–	06.R.0	65
S15050.	S15150.	S19850.	07.R.0	75
S15050.	S15150.	–	08.R.0	87
S15050.	S15150.	S19850.	10.R.0	100
S15050.	S15150.	–	11.R.0	112
S15050.	S15150.	S19850.	12.R.0	125
S15050.	S15150.	–	13.R.0	137
S15050.	S15150.	S19850.	15.R.0	150
S15050.	S15150.	–	16.R.0	162
S15050.	S15150.	S19850.	17.R.0	175
S15050.	S15150.	–	18.R.0	187
S15050.	S15150.	S19850.	20.R.0	200
S15050.	S15150.	–	21.R.0	212
S15050.	S15150.	–	22.R.0	225
S15050.	S15150.	–	23.R.0	237
S15050.	S15150.	S19850.	25.R.0	250
S15050.	S15150.	–	26.R.0	262
S15050.	S15150.	S19850.	27.R.0	275
S15050.	S15150.	–	28.R.0	287
S15050.	S15150.	S19850.	30.R.0	300

With pads crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
S15050.	S15150.	–	31.R.0	312
S15050.	S15150.	–	32.R.0	325
S15050.	S15150.	–	33.R.0	337
S15050.	S15150.	S19850.	35.R.0	350
S15050.	S15150.	–	36.R.0	362
S15050.	S15150.	–	37.R.0	375
S15050.	S15150.	–	38.R.0	387
S15050.	S15150.	S19850.	40.R.0	400
S15050.	S15150.	–	41.R.0	412
S15050.	S15150.	–	42.R.0	425
S15050.	S15150.	–	43.R.0	437
S15050.	S15150.	–	45.R.0	450
S15050.	S15150.	S19850.	46.R.0	462
S15050.	S15150.	–	47.R.0	475
S15050.	S15150.	–	48.R.0	487
S15050.	S15150.	–	50.R.0	500
S15050.	S15150.	–	51.R.0	512
S15050.	S15150.	–	52.R.0	525
S15050.	S15150.	–	53.R.0	537
S15050.	S15150.	–	55.R.0	550
S15050.	S15150.	–	60.R.0	600

NC-Version | Without pretension

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
15050.	15150.	–	05. R.0.NC	50
15050.	15150.	–	06. R.0.NC	65
15050.	15150.	19850.	07. R.0.NC	75
15050.	15150.	–	08. R.0.NC	87
15050.	15150.	19850.	10. R.0.NC	100
15050.	15150.	–	11. R.0.NC	112
15050.	15150.	19850.	12. R.0.NC	125
15050.	15150.	–	13. R.0.NC	137
15050.	15150.	19850.	15. R.0.NC	150
15050.	15150.	–	16. R.0.NC	162
15050.	15150.	19850.	17. R.0.NC	175
15050.	15150.	–	18. R.0.NC	187
15050.	15150.	19850.	20. R.0.NC	200
15050.	15150.	–	21. R.0.NC	212
15050.	15150.	–	22. R.0.NC	225
15050.	15150.	–	23. R.0.NC	237
15050.	15150.	19850.	25. R.0.NC	250
15050.	15150.	–	26. R.0.NC	262
15050.	15150.	19850.	27. R.0.NC	275
15050.	15150.	–	28. R.0.NC	287
15050.	15150.	19850.	30. R.0.NC	300

NC-Version crossbars: every link	every 2nd link	e-tube fully enclosed		Bi [mm]
15050.	15150.	–	31. R.0.NC	312
15050.	15150.	–	32. R.0.NC	325
15050.	15150.	–	33. R.0.NC	337
15050.	15150.	19850.	35. R.0.NC	350
15050.	15150.	–	36. R.0.NC	362
15050.	15150.	–	37. R.0.NC	375
15050.	15150.	–	38. R.0.NC	387
15050.	15150.	19850.	40. R.0.NC	400
15050.	15150.	–	41. R.0.NC	412
15050.	15150.	–	42. R.0.NC	425
15050.	15150.	–	43. R.0.NC	437
15050.	15150.	–	45. R.0.NC	450
15050.	15150.	19850.	46. R.0.NC	462
15050.	15150.	–	47. R.0.NC	475
15050.	15150.	–	48. R.0.NC	487
15050.	15150.	–	50. R.0.NC	500
15050.	15150.	19850.	51. R.0.NC	512
15050.	15150.	–	52. R.0.NC	525
15050.	15150.	19850.	53. R.0.NC	537
15050.	15150.	–	55. R.0.NC	550
15050.	15150.	19850.	60. R.0.NC	600

Available bending radii *R* [mm] 150* | 200 | 250 | 300 | 350 | 400 | 500 | 600 *not available for e-tubes

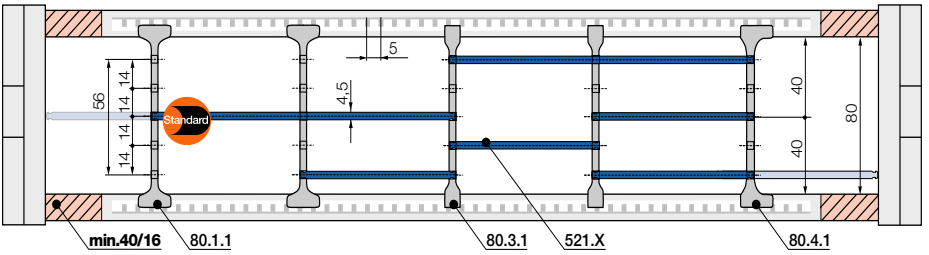
Supplement Part No. with required radius *(R)*. Example: **S15050.30.300.0 or 15050.30.300.0.NC**

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

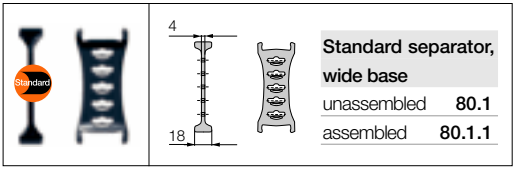
Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*
*Delivery time means time until shipping of goods

E4/light | 15050·15150·19850 | Interior separation | Standard

New generation interior separation



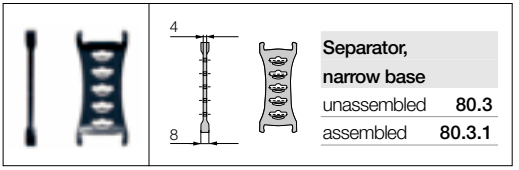
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	**80.1**
assembled	**80.1.1**

Standard - for all applications

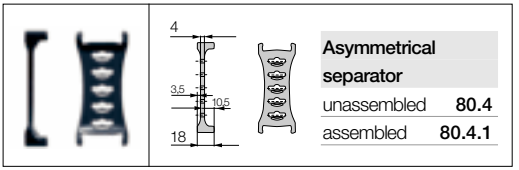
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	**80.3**
assembled	**80.3.1**

For many thin cables

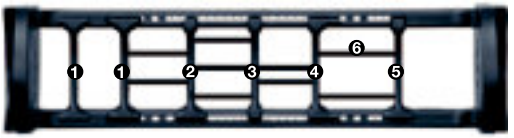
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

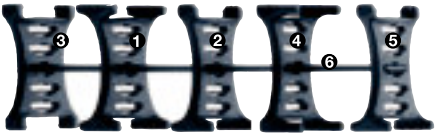


Asymmetrical separator	
unassembled	**80.4**
assembled	**80.4.1**

For side-mounted applications

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



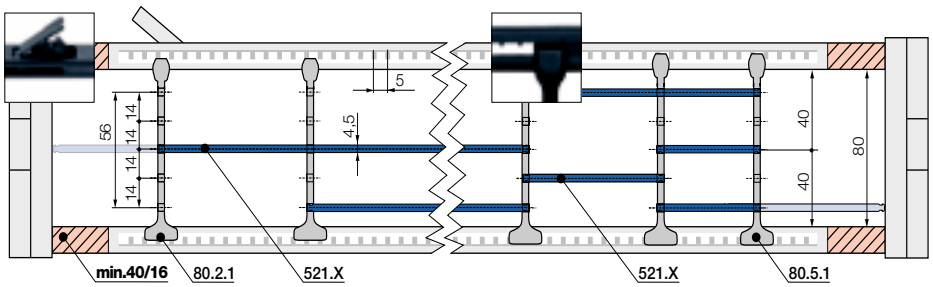


① Standard separator, wide base - Part No. 80.1 ③ Separator, narrow base - Part No. 80.3 ⑤ Notch separator - Part No. 80.5
② Separator for QuickLock crossbar - Part No. 80.2 ④ Separator, asymmetrical - Part No. 80.4 ⑥ Full-width self, lockable - Part No. 520.XX

Interior separation single-part order - Delivery in 24h or today!*
*Delivery time means time until shipping of goods

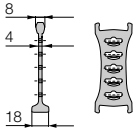
E4/light | 15050·15150·19850 | Interior separation | Standard

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!



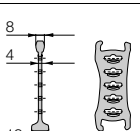


Separator for QuickLock crossbar	
unassembled	**80.2**
assembled	**80.2.1**

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.



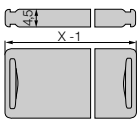


Notch separator for notch crossbar	
unassembled	**80.5**
assembled	**80.5.1**

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.



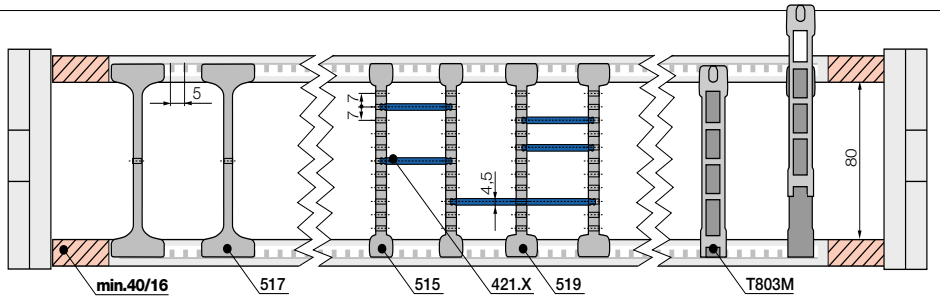
Lockable full-width shelves - for the standard interior separation

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**

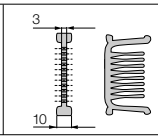
E4/light | 15050·15150·19850 | Interior separation | Options

Previous interior separation

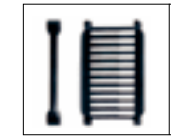
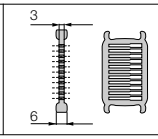
All elements can still be ordered ► www.igus.de/en/15050



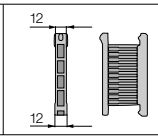
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

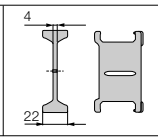
Open slotted separator for e-chains®/e-tubes	
unassembled	**509**
assembled	**519**

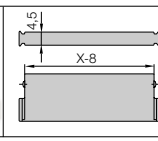
Slotted separator for e-chains®/e-tubes	
unassembled	**505**
assembled	**515**

Split separator for e-chains®	
unassembled	**T803**
assembled	**T803M**

Locking separator for e-chains®	
unassembled	**507**
assembled	**517**

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

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 505

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

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 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 420.X

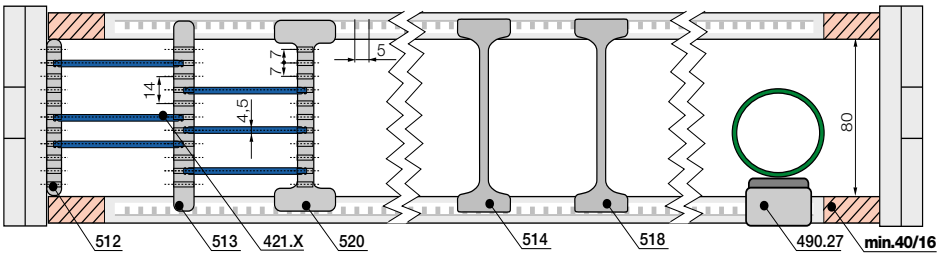
For horizontal separation. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments). (not in combination with 504, 508).

Shelves - interior separation options

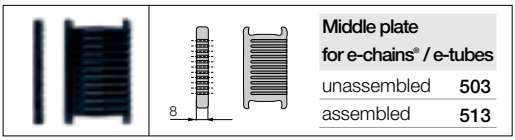
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	**420.18**	**421.18**	050	**420.50**	**421.50**	150	**420.150**	**421.150**
023	**420.23**	**421.23**	062	**420.62**	**421.62**	175	**420.175**	**421.175**
025	**420.25**	**421.25**	075	**420.75**	**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/15050



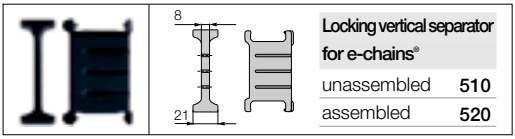
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	503
assembled	513

Middle plate 503 (e-chains® only)

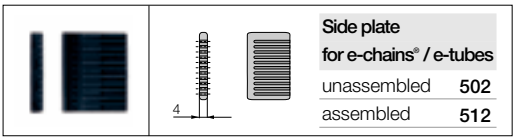
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).



Locking vertical separator for e-chains®	
unassembled	510
assembled	520

Locking vertical separator 510 (e-chains® only)

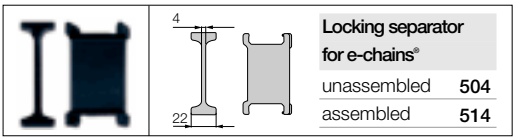
Works like middle plate, for applications exposed to very high humidity (> 85%).



Side plate for e-chains® / e-tubes	
unassembled	502
assembled	512

Side plate 502

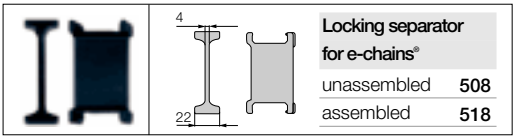
Works like middle plate.
Allows modular shelving close to the side links.



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.

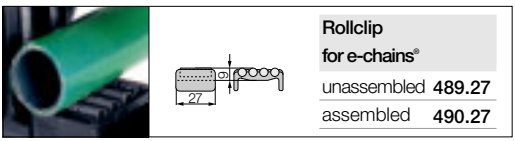


Locking separator for e-chains®	
unassembled	508
assembled	518

Locking separator 508

For applications exposed to very high humidity (> 85%). **Extra retention force** by asymmetric claws. Ensure proper alignment. Tip: one Locking separator per e-chain® link for better mounting.

Additional elements for interior separation



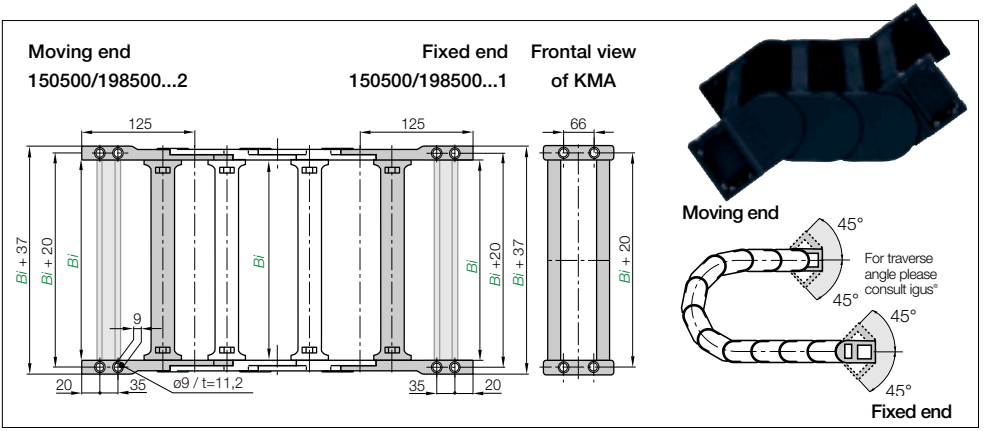
Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

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.

15050·15150·19850 | KMA mounting brackets **pivoting**

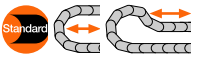
For tight installation conditions, all-sides attachment



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

Width index	Part No. full set **pivoting** (+ C-profile option)	*Bi* [mm]
05. ▶	150500. – 05. 12.C	50
06. ▶	150500. – 06. 12.C	65
07. ▶	150500. 198500. 07. 12.C	75
08. ▶	150500. – 08. 12.C	87
10. ▶	150500. 198500. 10. 12.C	100
11. ▶	150500. – 11. 12.C	112
12. ▶	150500. 198500. 12. 12.C	125
13. ▶	150500. – 13. 12.C	137
15. ▶	150500. 198500. 15. 12.C	150
16. ▶	150500. – 16. 12.C	162
17. ▶	150500. 198500. 17. 12.C	175
18. ▶	150500. – 18. 12.C	187
20. ▶	150500. 198500. 20. 12.C	200
21. ▶	150500. – 21. 12.C	212
22. ▶	150500. – 22. 12.C	225
23. ▶	150500. – 23. 12.C	237
25. ▶	150500. 198500. 25. 12.C	250
26. ▶	150500. – 26. 12.C	262
27. ▶	150500. 198500. 27. 12.C	275
28. ▶	150500. – 28. 12.C	287
30. ▶	150500. 198500. 30. 12.C	300

Width index	Part No. full set **pivoting** (+ C-profile option)	*Bi* [mm]
31. ▶	150500. – 31. 12.C	312
32. ▶	150500. – 32. 12.C	325
33. ▶	150500. – 33. 12.C	337
35. ▶	150500. 198500. 35. 12.C	350
36. ▶	150500. – 36. 12.C	362
37. ▶	150500. – 37. 12.C	375
38. ▶	150500. – 38. 12.C	387
40. ▶	150500. 198500. 40. 12.C	400
41. ▶	150500. – 41. 12.C	412
42. ▶	150500. – 42. 12.C	425
43. ▶	150500. – 43. 12.C	437
45. ▶	150500. – 45. 12.C	450
46. ▶	150500. 198500. 46. 12.C	462
47. ▶	150500. – 47. 12.C	475
48. ▶	150500. – 48. 12.C	487
50. ▶	150500. – 50. 12.C	500
51. ▶	150500. – 51. 12.C	512
52. ▶	150500. – 52. 12.C	525
53. ▶	150500. – 53. 12.C	537
55. ▶	150500. – 55. 12.C	550
60. ▶	150500. – 60. 12.C	600

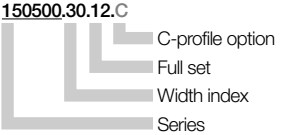


- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request

(KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

150500.30.12.C



Single-part order:

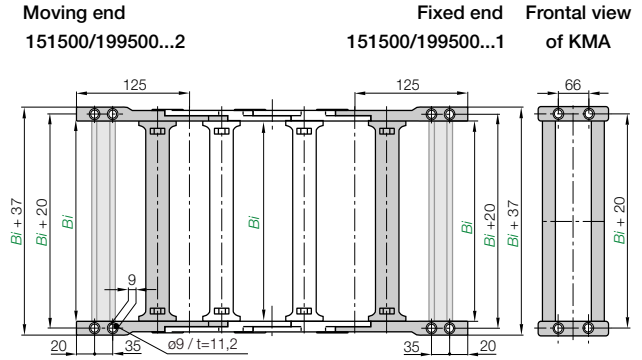
Mounting bracket **Moving end**
150500.30.2.C

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

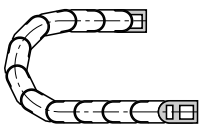
15050·15150·19850 | KMA mounting brackets **locking**

For very high speed and acceleration, all-sides attachment





Moving end



Fixed end

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

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
05. ▶	**151500.** – **05. 12.C**	50
06. ▶	**151500.** – **06. 12.C**	65
07. ▶	**151500. 199500. 07. 12.C**	75
08. ▶	**151500.** – **08. 12.C**	87
10. ▶	**151500. 199500. 10. 12.C**	100
11. ▶	**151500.** – **11. 12.C**	112
12. ▶	**151500. 199500. 12. 12.C**	125
13. ▶	**151500.** – **13. 12.C**	137
15. ▶	**151500. 199500. 15. 12.C**	150
16. ▶	**151500.** – **16. 12.C**	162
17. ▶	**151500. 199500. 17. 12.C**	175
18. ▶	**151500.** – **18. 12.C**	187
20. ▶	**151500. 199500. 20. 12.C**	200
21. ▶	**151500.** – **21. 12.C**	212
22. ▶	**151500.** – **22. 12.C**	225
23. ▶	**151500.** – **23. 12.C**	237
25. ▶	**151500. 199500. 25. 12.C**	250
26. ▶	**151500.** – **26. 12.C**	262
27. ▶	**151500. 199500. 27. 12.C**	275
28. ▶	**151500.** – **28. 12.C**	287
30. ▶	**151500. 199500. 30. 12.C**	300

Width index	Part No. full set **locking** (+ C-profile option)	*Bi* [mm]
31. ▶	**151500.** – **31. 12.C**	312
32. ▶	**151500.** – **32. 12.C**	325
33. ▶	**151500.** – **33. 12.C**	337
35. ▶	**151500. 199500. 35. 12.C**	350
36. ▶	**151500.** – **36. 12.C**	362
37. ▶	**151500.** – **37. 12.C**	375
38. ▶	**151500.** – **38. 12.C**	387
40. ▶	**151500. 199500. 40. 12.C**	400
41. ▶	**151500.** – **41. 12.C**	412
42. ▶	**151500.** – **42. 12.C**	425
43. ▶	**151500.** – **43. 12.C**	437
45. ▶	**151500.** – **45. 12.C**	450
46. ▶	**151500. 199500. 46. 12.C**	462
47. ▶	**151500.** – **47. 12.C**	475
48. ▶	**151500.** – **48. 12.C**	487
50. ▶	**151500.** – **50. 12.C**	500
51. ▶	**151500.** – **51. 12.C**	512
52. ▶	**151500.** – **52. 12.C**	525
53. ▶	**151500.** – **53. 12.C**	537
55. ▶	**151500.** – **55. 12.C**	550
60. ▶	**151500.** – **60. 12.C**	600

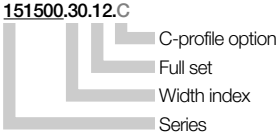


- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request

(KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

151500.30.12.C



Single-part order:

Mounting bracket **Moving end**

151500.30.2.C

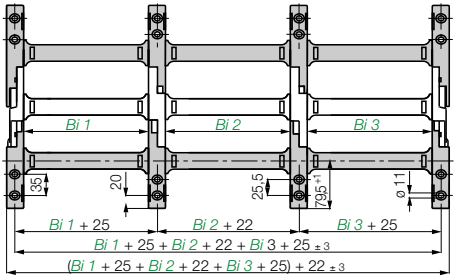
Mounting bracket **Fixed end**

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

E4/light | **15050·15150·19850** | More options

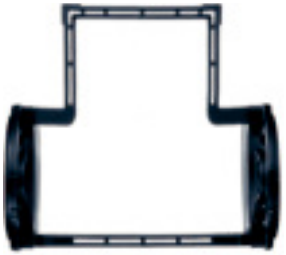


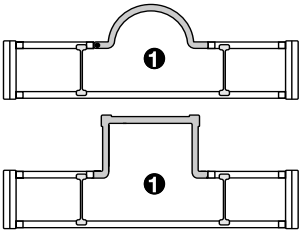


Extension links | for extremely wide e-chains® up to 3,0 m

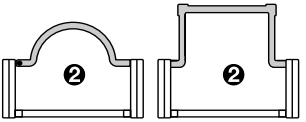
- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide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

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

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

E4/light | 15050·15150·19850 | Online 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

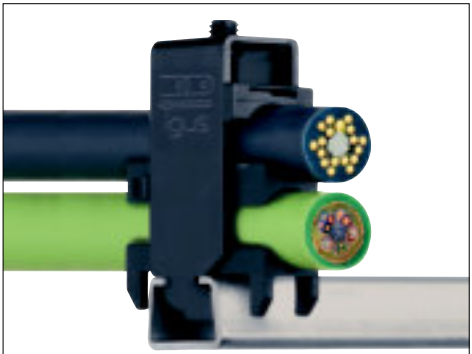
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 mm

Order example (here: inner width *Bi* 15)

Locking clip, to open along inner radius "Z":
15050.15.B12.200Z.R.0

Locking clip, to open along outer radius "E":
15050.15.B12.200E.R.0

E4/light | 15050·15150·19850 | 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**

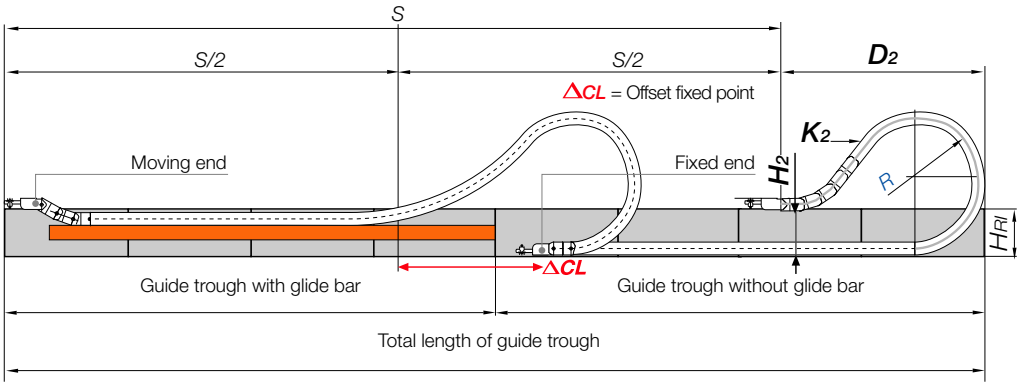


Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ▶ **from page 9.70**

15050·15150·19850 | Dimensions | Long travels

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** = $S/2 + K$

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	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**

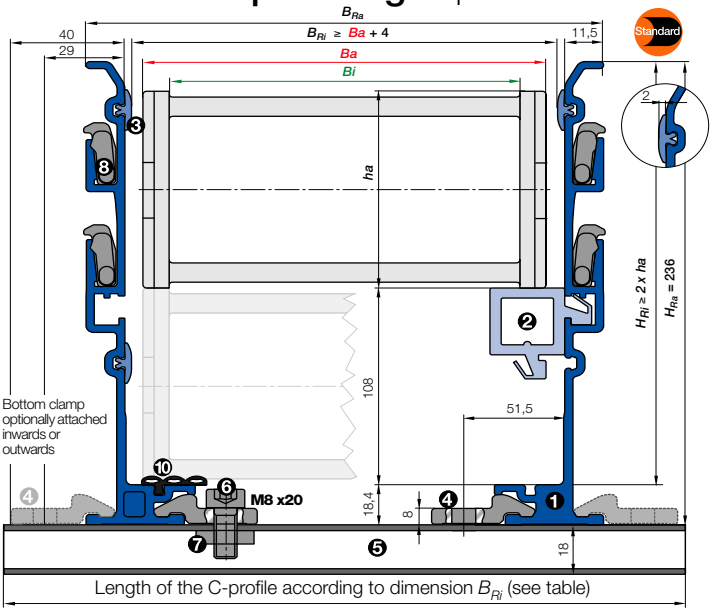
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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

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

Part No. 975.30.SL | **975.31.SL** | Trough height: 236 mm

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

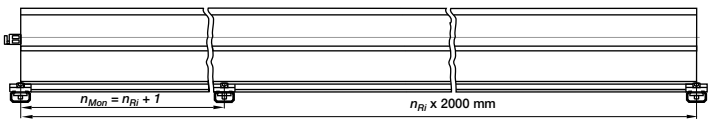
Guide trough set without glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 975.30.SL**

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**



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
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

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

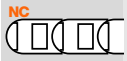
Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
Part No. Standard e-chains®/e-tubes	**Part No. Low noise (with pads) e-chains®/e-tubes**	**Part No. QuickLock crossbar for inner radius**	**Part No. QuickLock crossbar for outer radius**	**Part No. 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 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** 
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	**19850.30HT.*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	**19850.30HTZ.*R*.0** Bottom only	**19850.30.*R*.0.ESD** e-tube, closed
			19850.30HTE.*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

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

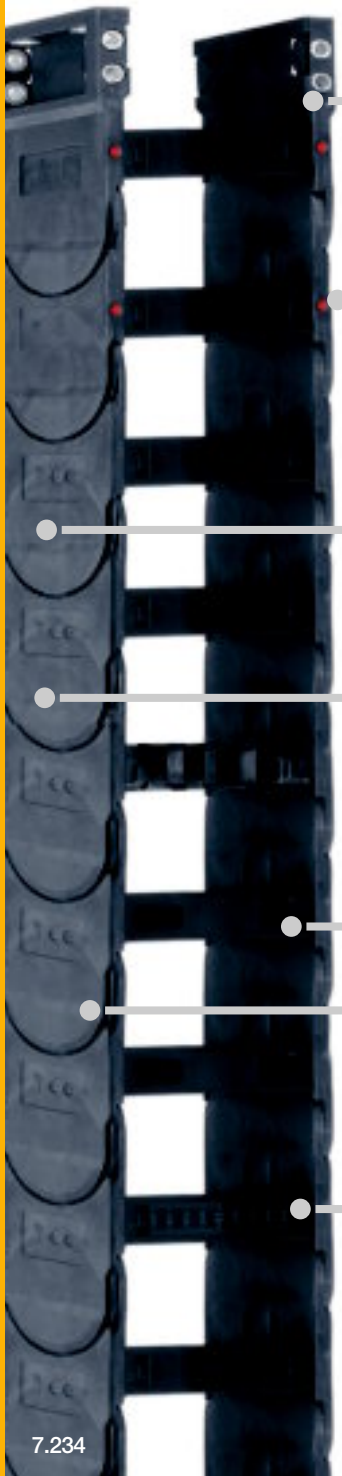
Color options for e-chains® and e-tubes

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



"Light Design", very large, new inner height

When to use Series 15250·15350:

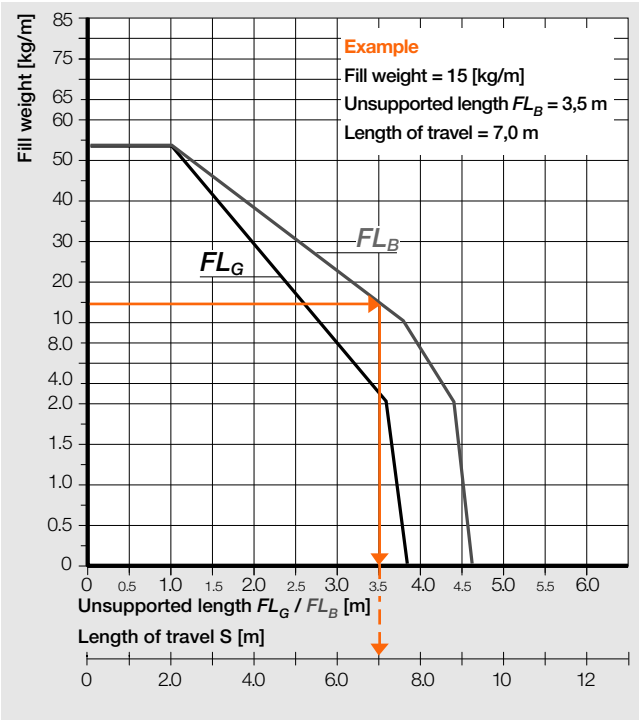
- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 86 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,6 m and fill weights up to 54 kg/m
- For long travels up to 250 m
- Also suitable for side-mounted, vertical standing or hanging applications

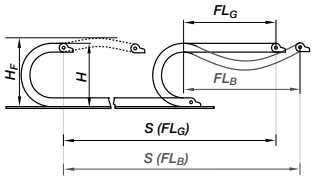
When to use a different igus® Series

- 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**
- If chip protection is necessary
  ▶ **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





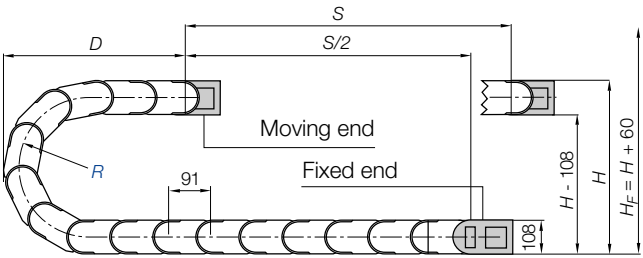
Unsupported applications

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

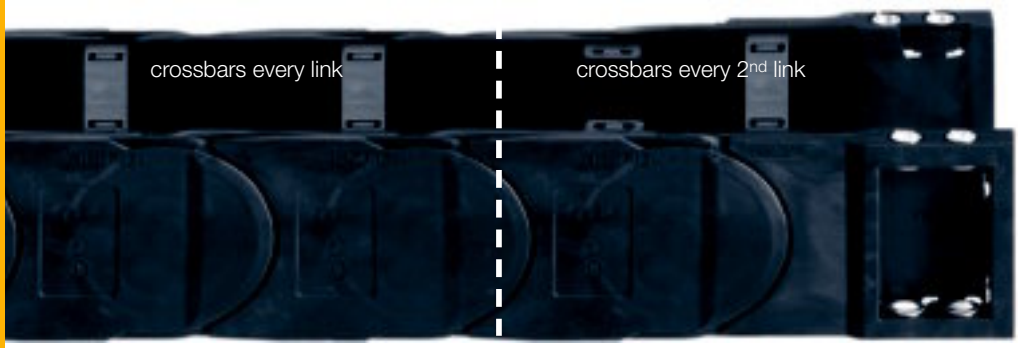
Speed, material, temperature and flammability class ▶ **page 7.162**

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}^{-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)

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 = $\pi \bullet R$ + "safety"



e-chains® | Series **15250** crossbars every link | Series **15350** crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	15250 [kg/m]	15350 [kg/m]
15250.	15350. 05. *R*.0	50	76	≈ 3,64	3,56
15250.	15350. 06. *R*.0	68	94	≈ 3,72	≈ 3,60
15250.	15350. 07. *R*.0	75	101	≈ 3,74	≈ 3,61
15250.	15350. 087. *R*.0	87	114	≈ 3,79	≈ 3,63
15250.	15350. 10. *R*.0	100	126	≈ 3,84	≈ 3,65
15250.	15350. 11. *R*.0	108	134	≈ 3,87	≈ 3,67
15250.	15350. 112. *R*.0	112	139	≈ 3,88	≈ 3,68
15250.	15350. 12. *R*.0	125	151	≈ 3,95	≈ 3,71
15250.	15350. 137. *R*.0	137	164	≈ 3,98	≈ 3,73
15250.	15350. 15. *R*.0	150	176	≈ 4,04	≈ 3,75
15250.	15350. 162. *R*.0	162	189	≈ 4,06	≈ 3,76
15250.	15350. 17. *R*.0	168	194	≈ 4,11	≈ 3,79
15250.	15350. 18. *R*.0	175	201	≈ 4,12	≈ 3,80
15250.	15350. 187. *R*.0	187	214	≈ 4,15	≈ 3,81
15250.	15350. 20. *R*.0	200	226	≈ 4,23	≈ 3,85
15250.	15350. 212. *R*.0	212	239	≈ 4,26	≈ 3,86

Part No. crossbars every link	Part No. crossbars every 2nd link	*Bi* [mm]	*Ba* [mm]	15250 [kg/m]	15350 [kg/m]
15250.	15350. 23. *R*.0	225	251	≈ 4,32	≈ 3,89
15250.	15350. 237. *R*.0	237	264	≈ 4,34	≈ 3,90
15250.	15350. 25. *R*.0	250	276	≈ 4,42	≈ 3,94
15250.	15350. 262. *R*.0	262	289	≈ 4,47	≈ 3,97
15250.	15350. 28. *R*.0	275	301	≈ 4,51	≈ 3,99
15250.	15350. 29. *R*.0	287	314	≈ 4,53	≈ 4,00
15250.	15350. 30. *R*.0	300	326	≈ 4,61	≈ 4,04
15250.	15350. 312. *R*.0	312	339	≈ 4,63	≈ 4,05
15250.	15350. 325. *R*.0	325	351	≈ 4,69	≈ 4,08
15250.	15350. 337. *R*.0	337	364	≈ 4,73	≈ 4,10
15250.	15350. 350. *R*.0	350	376	≈ 4,87	≈ 4,17
15250.	15350. 362. *R*.0	362	389	≈ 4,92	≈ 4,20
15250.	15350. 375. *R*.0	375	401	≈ 4,97	≈ 4,22
15250.	15350. 387. *R*.0	387	414	≈ 5,01	≈ 4,24
15250.	15350. 400. *R*.0	400	426	≈ 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**

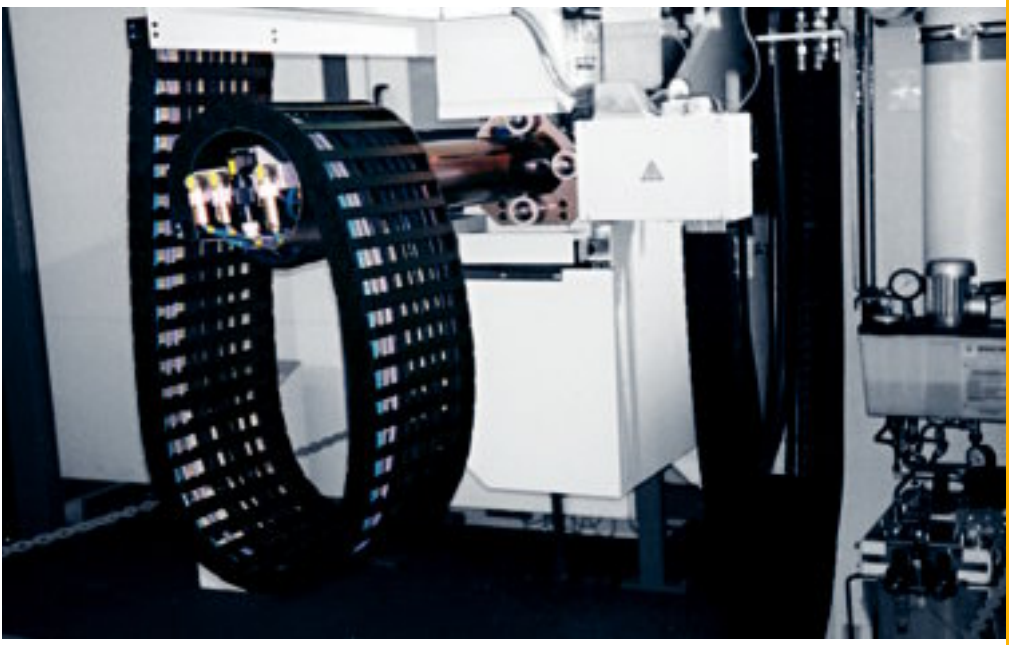
When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

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



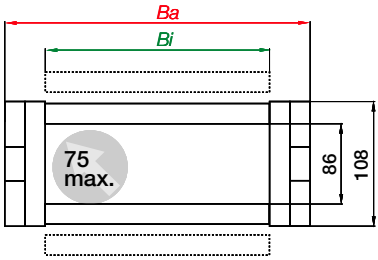
Circular movements (also with reverse bending radius "RBR") possible

Order key for all types

15250. 30. 300. 0 e-chain® **(crossbars every link)**
15350. 30. 300. 0 e-chain® **(crossbars every 2nd link)**

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



15250.30.300.0 = e-chain® with **crossbars every link**, inner width ***Bi*** 300 mm, radius ***R*** 300 mm, color black
15350.30.300.0 = 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 7.248



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

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	QuickLock crossbar for Outer radius	QuickLock crossbar for Both radii	Bi [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. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	QuickLock crossbar for Outer radius	QuickLock crossbar for Both radii	Bi [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: **15250.30QZ.300.0**

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

Part No. 15250.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. 15250.30QE.300.0 = QuickLock crossbar for outer radius

Part No. 15250.30Q .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 crossbars every link	With pads crossbars every 2nd link	Bi [mm]
S15250. S15350. 05. R.0	S15250. S15350. 23. R.0	50 / 225
S15250. S15350. 06. R.0	S15250. S15350. 237.R.0	68 / 237
S15250. S15350. 07. R.0	S15250. S15350. 25. R.0	75 / 250
S15250. S15350. 087.R.0	S15250. S15350. 262.R.0	87 / 262
S15250. S15350. 10. R.0	S15250. S15350. 28. R.0	100 / 275
S15250. S15350. 11. R.0	S15250. S15350. 29. R.0	108 / 287
S15250. S15350. 112.R.0	S15250. S15350. 30. R.0	112 / 300
S15250. S15350. 12. R.0	S15250. S15350. 312.R.0	125 / 312
S15250. S15350. 137.R.0	S15250. S15350. 325.R.0	137 / 325
S15250. S15350. 15. R.0	S15250. S15350. 337.R.0	150 / 337
S15250. S15350. 162.R.0	S15250. S15350. 350.R.0	162 / 350
S15250. S15350. 17. R.0	S15250. S15350. 362.R.0	168 / 362
S15250. S15350. 18. R.0	S15250. S15350. 375.R.0	175 / 375
S15250. S15350. 187.R.0	S15250. S15350. 387.R.0	187 / 387
S15250. S15350. 20. R.0	S15250. S15350. 400.R.0	200 / 400
S15250. S15350. 212.R.0		212

NC-Version | Without pretension

NC-Version crossbars every link	NC-Version crossbars every 2nd link	Bi [mm]
15250. 15350.05. R.0.NC	15250. 15350.23. R.0.NC	50 / 225
15250. 15350.06. R.0.NC	15250. 15350.237.R.0.NC	68 / 237
15250. 15350.07. R.0.NC	15250. 15350.25. R.0.NC	75 / 250
15250. 15350.087.R.0.NC	15250. 15350.262.R.0.NC	87 / 262
15250. 15350.10. R.0.NC	15250. 15350.28. R.0.NC	100 / 275
15250. 15350.11. R.0.NC	15250. 15350.29. R.0.NC	108 / 287
15250. 15350.112.R.0.NC	15250. 15350.30. R.0.NC	112 / 300
15250. 15350.12. R.0.NC	15250. 15350.312.R.0.NC	125 / 312
15250. 15350.137.R.0.NC	15250. 15350.325.R.0.NC	137 / 325
15250. 15350.15. R.0.NC	15250. 15350.337.R.0.NC	150 / 337
15250. 15350.162.R.0.NC	15250. 15350.350.R.0.NC	162 / 350
15250. 15350.17. R.0.NC	15250. 15350.362.R.0.NC	168 / 362
15250. 15350.18. R.0.NC	15250. 15350.375.R.0.NC	175 / 375
15250. 15350.187.R.0.NC	15250. 15350.387.R.0.NC	187 / 387
15250. 15350.20. R.0.NC	15250. 15350.400.R.0.NC	200 / 400
15250. 15350.212.R.0.NC		212

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

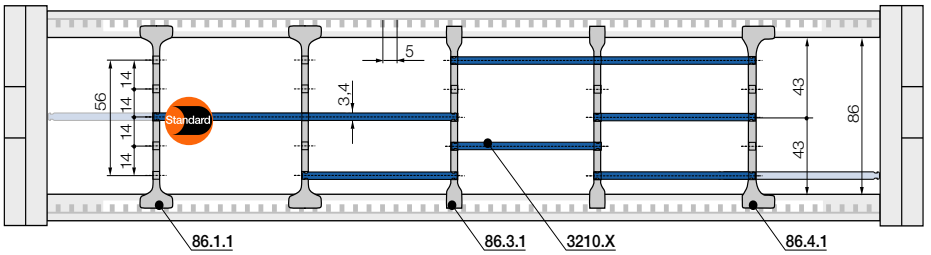
Supplement Part No. with required radius *(R)*. Example: **S15250.30.300.0 or 15250.30.300.0.NC**

For e-chains® with noise dampening pads supplement Part No. with required index "**S**"
Example: **Part No. S15250.30.300.0** = e-chain® (crossbars every link) with noise dampening
For NC-e-chains® without pretension supplement Part No. with required index "**NC**"
Example: **Part No. 15250.30.300.0.NC** = e-chain® (crossbars every link) without pretension

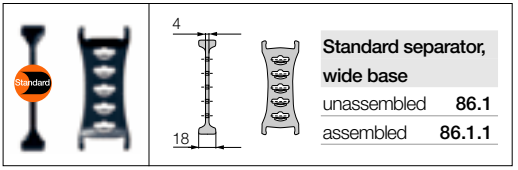
Low-noise e-chain® and NC-Version - Delivery time: 3-5 workdays*
*Delivery time means time until shipping of goods

E4/light | Series 15250·15350 | Interior separation | Standard

New generation interior separation



Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!

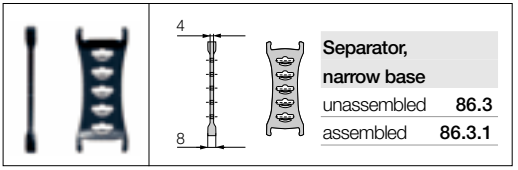


Standard separator, wide base	
unassembled	**86.1**
assembled	**86.1.1**

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

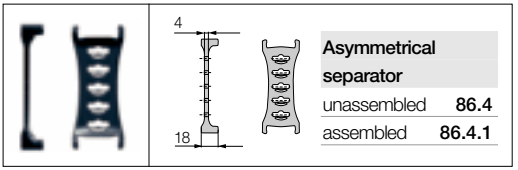


Separator, narrow base	
unassembled	**86.3**
assembled	**86.3.1**

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

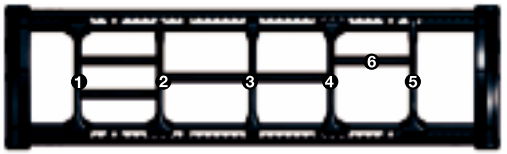


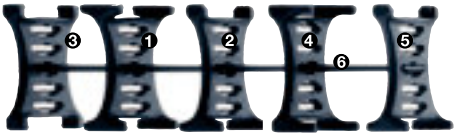
Asymmetrical separator	
unassembled	**86.4**
assembled	**86.4.1**

For side-mounted applications

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

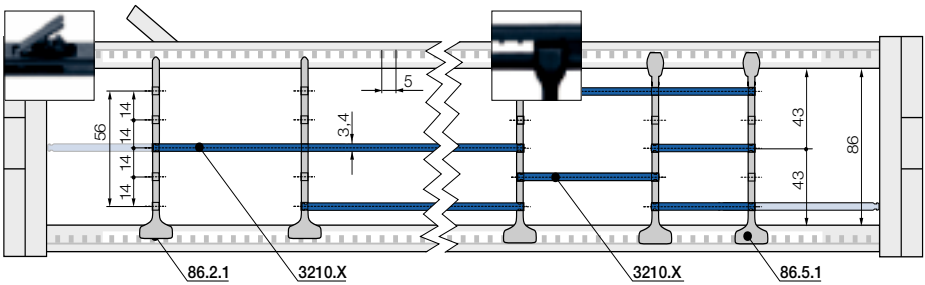
*available upon request. Delivery time: approx. 1-2 weeks after receipt of order





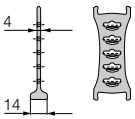
① Standard separator, wide base - Part No. 86.1 ③ Separator, narrow base - Part No. 86.3 ⑤ Notch separator - Part No. 86.5
② Separator for QuickLock crossbar - Part No. 86.2 ④ Separator, asymmetrical - Part No. 86.4 ⑥ Full-width self, lockable - Part No. 3200.XX

New generation interior separation



Note: **No lateral spacing to side links necessary!**
In the standard configuration separators are assembled every 2nd e-chain® link!



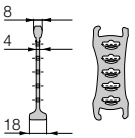


Separator for QuickLock crossbar	
unassembled	**86.2**
assembled	**86.2.1**

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).





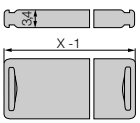
Notch separator for notch crossbar	
unassembled	**86.5**
assembled	**86.5.1**

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.

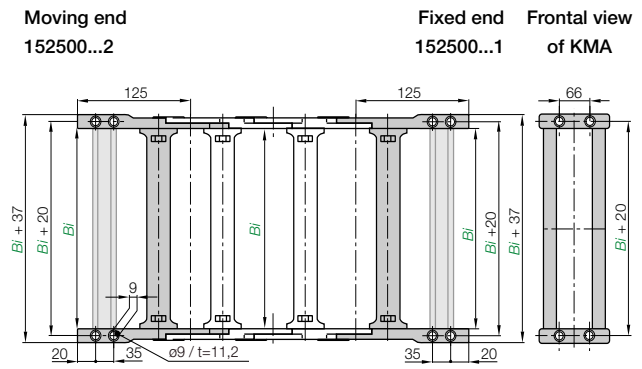


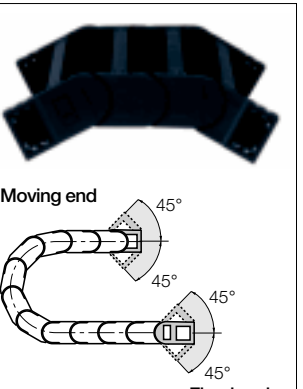
Lockable full-width shelves - for the standard interior separation

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**			

E4/light | 15250·15350 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment

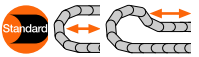




KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
.05	152500. 05. 12.C	50
.06	152500. 06. 12.C	68
.07	152500. 07. 12.C	75
.087	152500. 087. 12.C	87
.10	152500. 10. 12.C	100
.11	152500. 11. 12.C	108
.112	152500. 112. 12.C	112
.12	152500. 12. 12.C	125
.137	152500. 137. 12.C	137
.15	152500. 15. 12.C	150
.162	152500. 162. 12.C	162
.17	152500. 17. 12.C	168
.18	152500. 18. 12.C	175
.187	152500. 187. 12.C	187
.20	152500. 20. 12.C	200
.212	152500. 212. 12.C	212

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
.23	152500. 23. 12.C	225
.237	152500. 237. 12.C	237
.25	152500. 25. 12.C	250
.262	152500. 262. 12.C	262
.28	152500. 28. 12.C	275
.29	152500. 29. 12.C	287
.30	152500. 30. 12.C	300
.312	152500. 312 12.C	312
.325	152500. 325. 12.C	325
.337	152500. 337. 12.C	337
.350	152500. 350. 12.C	350
.362	152500. 362 12.C	362
.375	152500. 375. 12.C	375
.387	152500. 387. 12.C	387
.400	152500. 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)

152500.30.12.C

- C-profile option
- Full set
- Width index
- Series

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

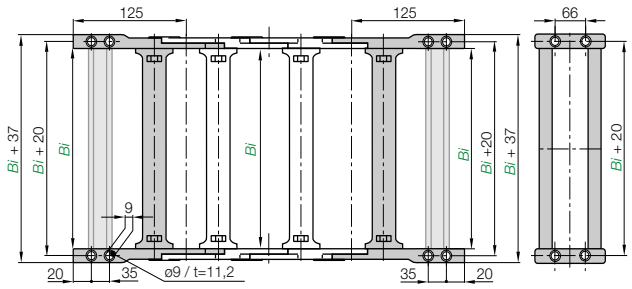
E4/light | 15250·15350 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment

Moving end
153500...2

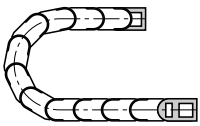
Fixed end
153500...1

Frontal view of KMA





Moving end



Fixed end

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

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
.05	153500.05.12.C	50
.06	153500.06.12.C	68
.07	153500.07.12.C	75
.087	153500.087.12.C	87
.10	153500.10.12.C	100
.11	153500.11.12.C	108
.112	153500.112.12.C	112
.12	153500.12.12.C	125
.137	153500.137.12.C	137
.15	153500.15.12.C	150
.162	153500.162.12.C	162
.17	153500.17.12.C	168
.18	153500.18.12.C	175
.187	153500.187.12.C	187
.20	153500.20.12.C	200
.212	153500.212.12.C	212

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
.23	153500.23.12.C	225
.237	153500.237.12.C	237
.25	153500.25.12.C	250
.262	153500.262.12.C	262
.28	153500.28.12.C	275
.29	153500.29.12.C	287
.30	153500.30.12.C	300
.312	153500.312.12.C	312
.325	153500.325.12.C	325
.337	153500.337.12.C	337
.350	153500.350.12.C	350
.362	153500.362.12.C	362
.375	153500.375.12.C	375
.387	153500.387.12.C	387
.400	153500.400.12.C	400

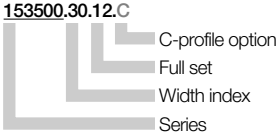


- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request

(KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

153500.30.12.C



Single-part order:

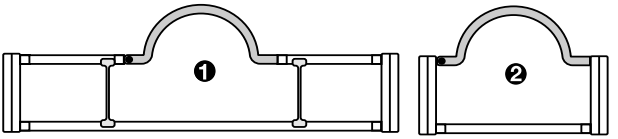
Mounting bracket **Moving end**
153500.30.2.C

Mounting bracket **Fixed end**
153500.30.1.C

Strain relief, e.g. clamps, tiewrap 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 hosed 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. single part	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

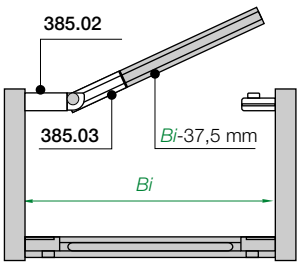
RHD115 for outer radius "E" incl. e-chain®:
15250.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
15250.10/15RHDZ115/10.*R*.0

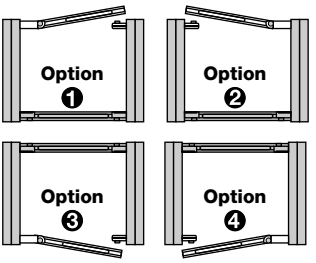
② Installation on side link

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)

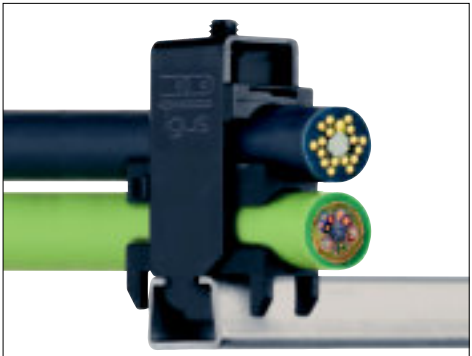




Hinged crossbars

- 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)

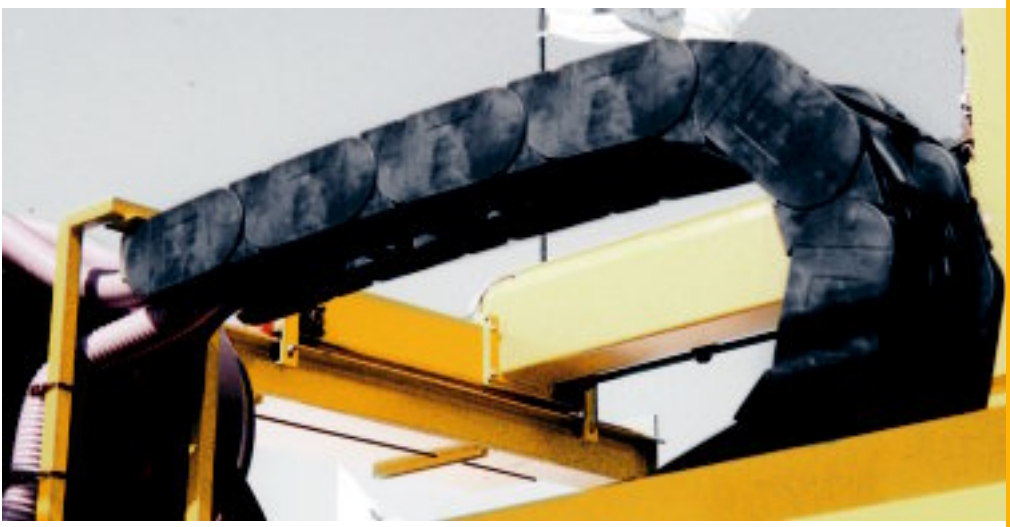
Order example (here: inner width *Bi* 150)
15250.15.Z.*R*.0 =
15250.15.01.*R*.0
Supplement Index "Z" with required option number ①, ②, ③ or ④



Strain relief system
Clamps, 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**

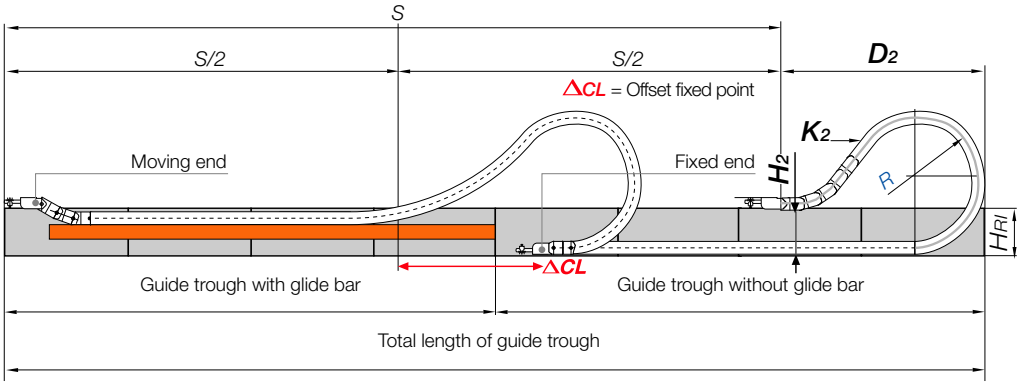


System E4 e-chain® - can be filled with cables of diameters up to 100 mm

Series 15250·15350 | Dimensions | Long travels

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** = $S/2 + K$

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**

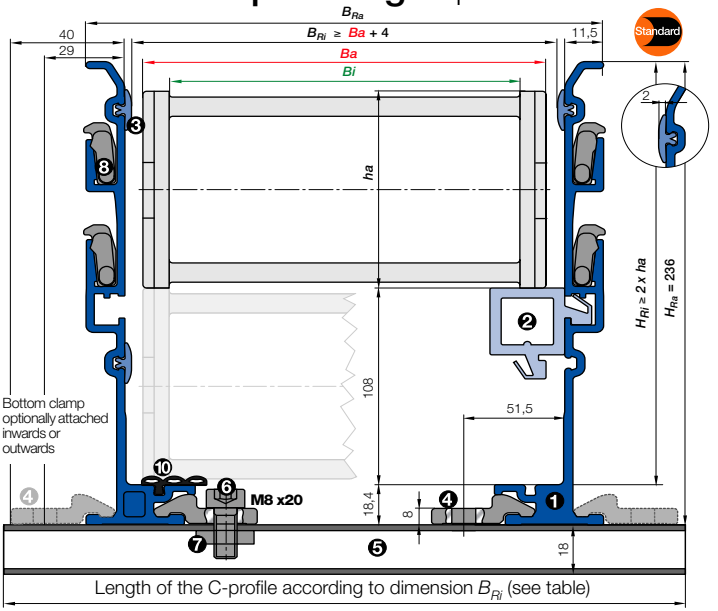
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ▶ page 9.97

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) · 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

Part No. 975.30.SL | **975.31.SL** | Trough height: 236 mm

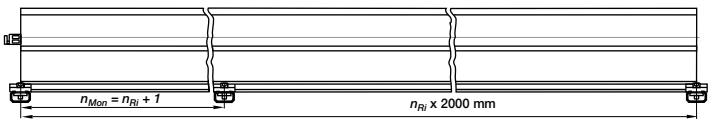
Aluminum "SuperTrough" | Basic Version



● **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**



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
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

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**

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

E4/light | **Series 15250·15350** | **Options** and order key

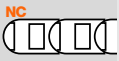
	Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
	Part No. **Standard** **e-chains®/e-tubes**	**Part No.** **Low noise (with pads)** **e-chains®/e-tubes**	**Part No.** **QuickLock crossbar for inner radius**	**Part No.** **QuickLock crossbar for outer radius**	**Part No.** **QuickLock crossbar for both radii**
			QuickLock crossbars: inner widths from *Bi* 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 classified e-chains® - II 2 GD*
Part No. **NC-Material** **e-chains®/e-tubes** NC 	**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 2nd 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

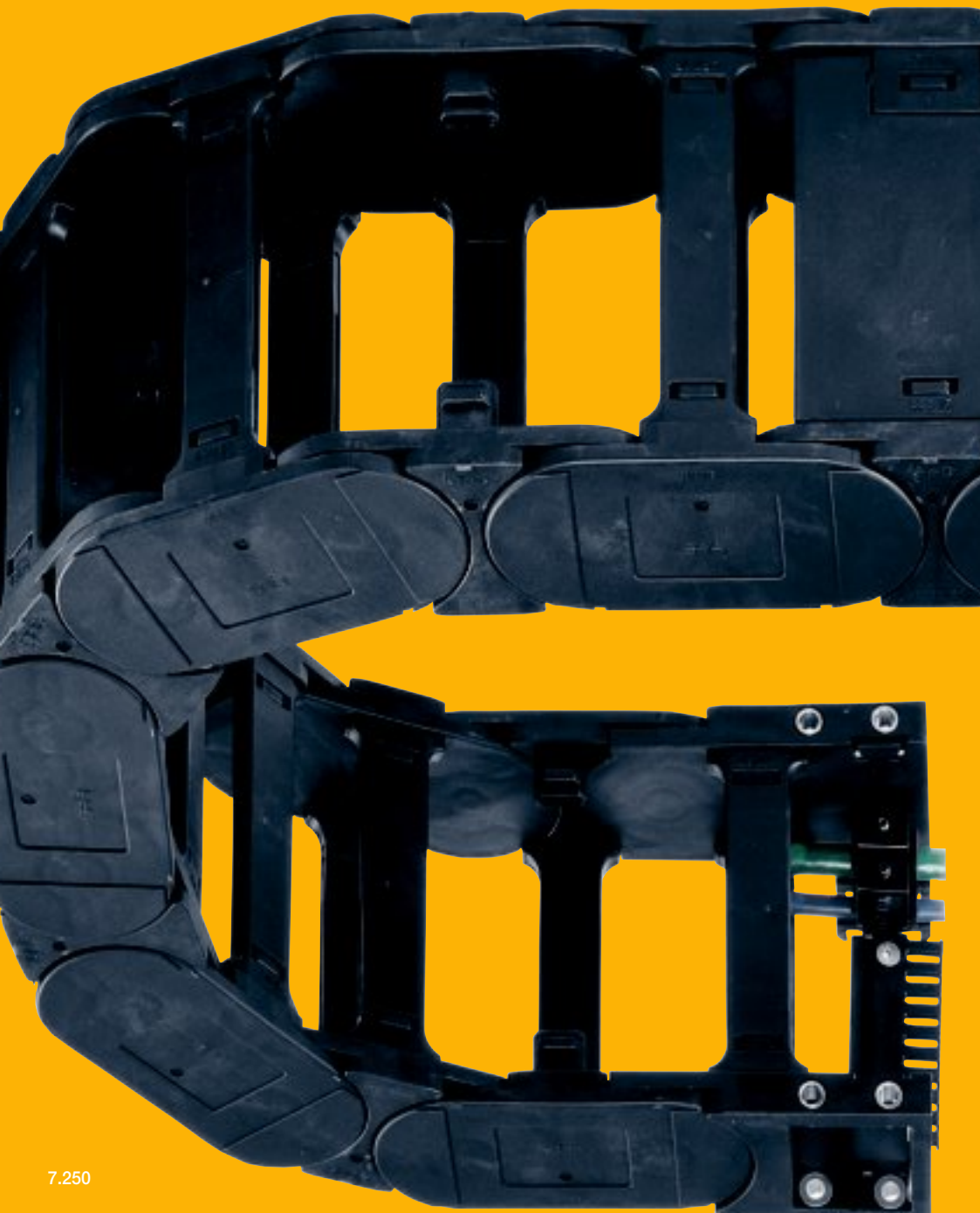
- Standard color black
- Bending radius *R*
- Width index
- Series / Type

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
- Gerneral 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

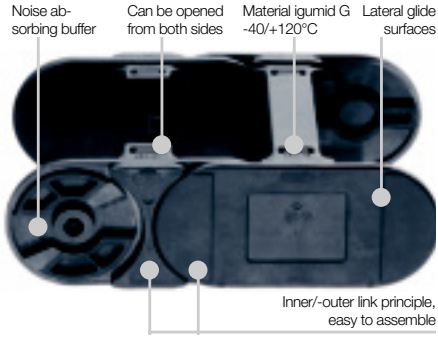


Quiet and strong - ideal for handling applications



Sturdy design for construction machines

Next Page ■ Find selection tables and assembly instructions



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

Crossbars every link
for particulary demanding applications



Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
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**



Remove crossbars - Insert screwdriver into the slot, push down, release by lever action



Remove clip - Insert screwdriver into the slot, release by lever action

System E4/00 | e-tubes | **Opening**



Remove lids/bottoms - Insert screwdriver into the slot, release by lever action

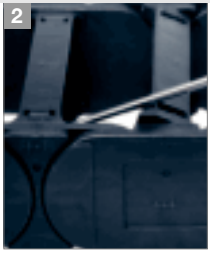


Release **only one side** to swivel the lid

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®

igus movie **You can find an assembly video on the web ▶ www.igus.de/en/E4_assembly**

We recommend for new designs Series E4.28 ▶ page 7.28

E4/00 | Series 220 · R760

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

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"



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

Also available as
E4/00-NC without
camber: 220-NC



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

Order example complete e-chain®

Please indicate chain-lenghts or number of links **Example: 3 m or 66 links**

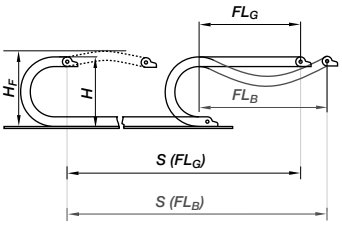
3 m **220.300.250.0**	**e-chain®**
with 2 separators **2211** assembled every 2nd link	**Interior separation**
1 set **2200.300.1.12**	**Mounting bracket**

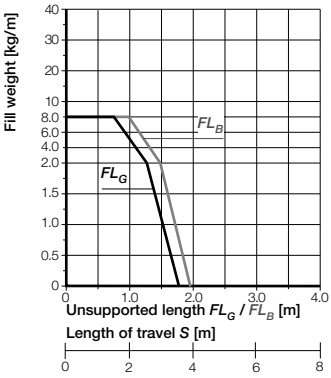
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

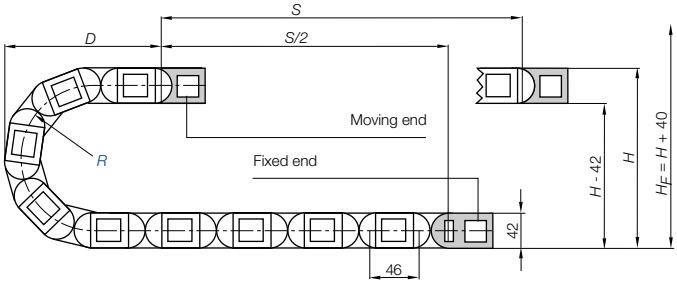
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

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
H_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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 ≤ 80 m
Vertical, standing ≤ 5 m
Side mounted, unsupp. ≤ 2 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

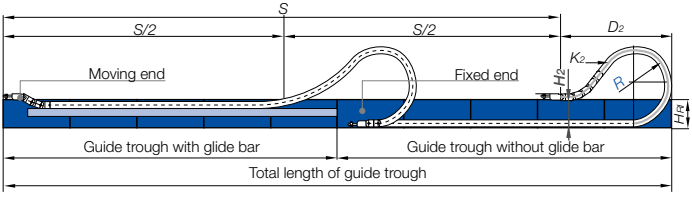
Short travels - unsupported

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

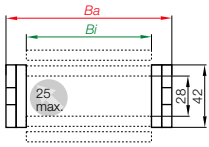
Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

▶ page 7.255

igus® e-chainsystems®
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Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de



Part No. structure

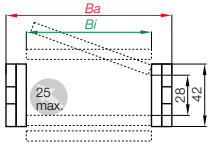
220.	300.	250.	0
			Color black
		Bending radius	
	Width		
Series			

Standard 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
			Color black
		Bending radius	
	Width		
Series			

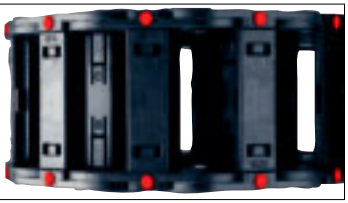
Series R760 - Fully enclosed e-tube



- 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. ☐ .0	40	60	≈ 1,06	–
220/760.050. ☐ .0	50	70	≈ 1,10	≈ 1,25
220.062. ☐ .0	62	82	≈ 1,14	–
220.070. ☐ .0	70	90	≈ 1,18	–
220./760.075. ☐ .0	75	95	≈ 1,21	≈ 1,44
220.087. ☐ .0	87	107	≈ 1,27	–
220/760.100. ☐ .0	100	120	≈ 1,32	≈ 1,64
220/760.125. ☐ .0	125	145	≈1,43	≈ 1,84
220/760.150. ☐ .0	150	170	≈ 1,54	≈ 2,02
220/760.175. ☐ .0	175	195	≈ 1,65	≈ 2,26
220/760.200. ☐ .0	200	220	≈ 1,76	≈ 2,40
220/760.225. ☐ .0	225	245	≈ 1,87	≈ 2,56
220/760.250. ☐ .0	250	270	≈ 1,98	≈ 2,85
220.275. ☐ .0	275	295	≈ 2,09	–
220/760.300. ☐ .0	300	320	≈ 2,20	≈ 3,21

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

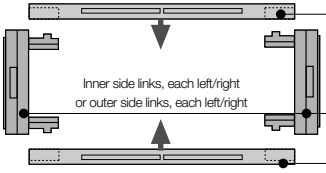
*not available for R760

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:

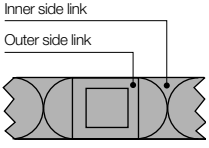
Full e-tube made of HT*:
760.050.150.0.HT
Lids made of HT:
760.050.HTE.150.0
*for long travels upon request
Further Information:
www.igus.de/en/HT
Delivery time up to 4 weeks!





Single crossbar, e-chain®, **Part No. 225.*Bi***
Single lid, e-tube, **Part No. 765.*Bi***
Outer side link, single part **Part No. 220.01**
(suitable for all radii)
Inner side link, single part **Part No. 220.02.** ☐ ***R***
Single bottom, e-tube, **Part No. 766.*Bi***

Part No. e-chain® links, single parts



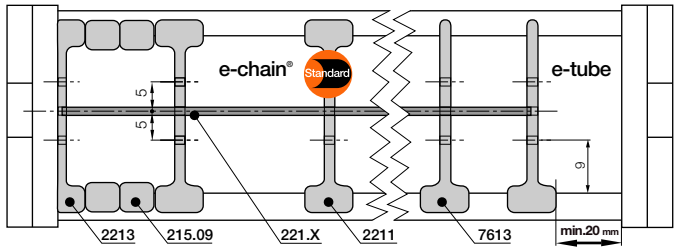
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

▶ page 7.255

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Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de



Vertical separators are used if a verticVertical 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)!





Standard

Vertical separator 2201



Vertical separator 7603



Spacer 205.09

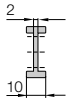


Side plate 2203

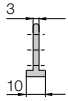


Full-width shelf 220.X

Vertical separator for e-chains®	
unassembled	**2201**
assembled	**2211**



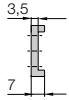
Vertical separator for e-tubes	
unassembled	**7603**
assembled	**7613**



Spacer* for e-chains®	
unassembled	**205.09**
assembled	**215.09**



Side plate for e-chains®	
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.

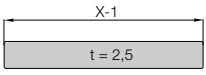
● **Vertical separator 7603** for e-tubes R760.

● 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:

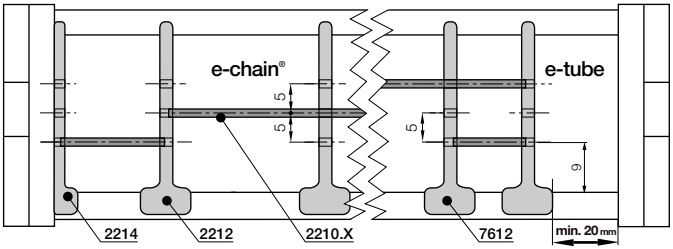
● **Side plate 2203 and full-width shelf 220.X -** this option makes sense in applications with many thin cables with similar diameters. It is based upon **vertical separator 2201 (7603)** for the Series **R760 e-tube)** is put in place and the shelf is inserted into the separator's slots. If no separators are desired, **side plate 2203** must be used with the **Series 220 e-chain®**. This solution is not available for e-tubes.

Full-width shelf



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**



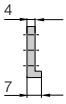


For use with many cables of differing diameters. e-chains® and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

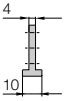
Option 2: Shelves

● **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**).

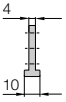
● A **middle plate 7602** is available for the e-tube. Side plates are not available for the e-tube.



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**

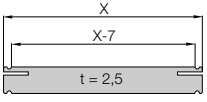


Middle plate **7602**



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**

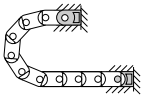
System E4/00
Inner height: 28 mm

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Fax +49- (0) 22 03-96 49-222

▶ page 7.255







The attachment variants arising automatically by the choice of the KMA mounting bracket

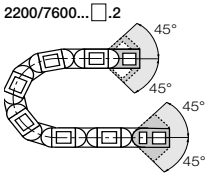
Standard

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

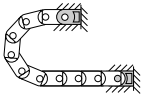
Moving end
2200/7600...□.2



Fixed end
2200/7600...□.1







The attachment variants arising automatically by the choice of the KMA mounting bracket

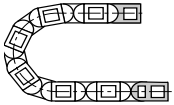
Option KMA - locking

- 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)

2200. 7600.	050.	2.	12	
				Full set
				odd/even
				Width
				2200 = e-chain® 7600 = e-tube

Part No. structure (locking)

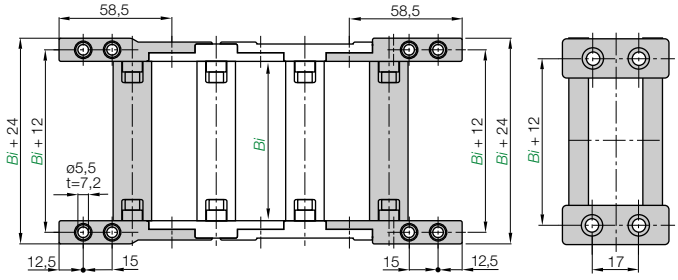
2300. 7650.	050.	2.	12	
				Full set
				odd/even
				Width
				2300 = e-chain® 7650 = e-tube

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. full set pivoting	locking		Bi [mm]
.040.	2200	2300	.040.□.12	40
.050.	2200/7600	2300/7650	.050.□.12	50
.062.	2200	2300	.062.□.12	62
.070.	2200	2300	.070.□.12	70
.075.	2200/7600	2300/7650	.075.□.12	75
.087.	2200	2300	.087.□.12	87
.100.	2200/7600	2300/7650	.100.□.12	100
.125.	2200/7600	2300/7650	.125.□.12	125
.150.	2200/7600	2300/7650	.150.□.12	150
.175.	2200/7600	2300/7650	.175.□.12	175
.200.	2200/7600	2300/7650	.200.□.12	200
.225.	2200/7600	2300/7650	.225.□.12	225
.250.	2200/7600	2300/7650	.250.□.12	250
.275.	2200	2300	.275.□.12	275
.300.	2200/7600	2300/7650	.300.□.12	300

Please insert 1 for odd number of links or 2 for even number of links

E4/00 | **Series 220·R760** | **Accessories** | Strain Relief

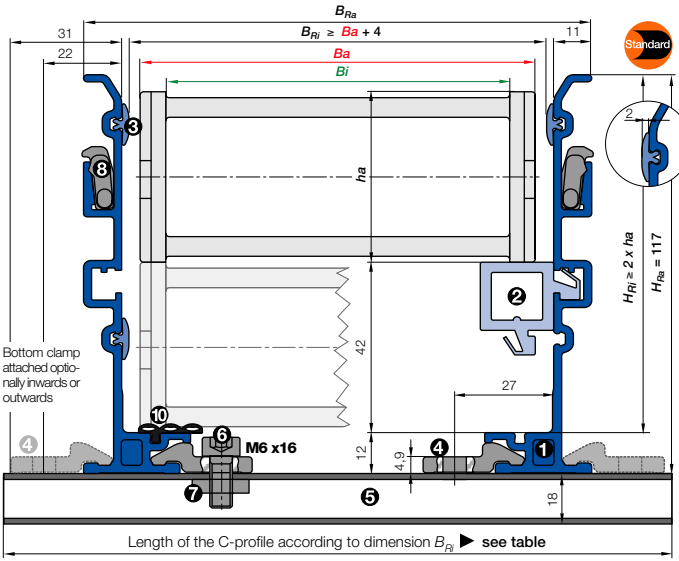


Strain relief tiewrap plate Part No. 2050.Z can be fixed on the last crossbar. **Details ▶ chapter 10**

Part. No.	Width [mm]	Number of teeth
2050.Z	60	6

igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de

Part No. 972.02.30.SL | 972.02.31.SL | Trough height: 117 mm
Aluminum "SuperTrough" | Basic Version





● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M6 x16 ❼ Sliding nut M6 ❽ Interface connector, plastic

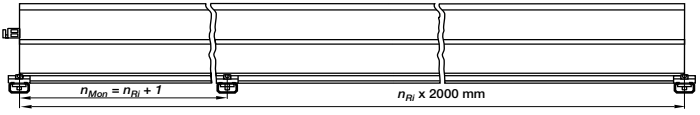
Ba = Outer width e-chains® / e-tube
Bi = Inner width e-chains® / e-tube
ha = Outer height e-chains® / e-tube
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
B_{Ri} = Inner trough width ▶ depends on dim. *Ba*
B_{Ra} = Outer trough width
n_{Mon} = Number of installation sets (left/right)
n_{Ri} = Number of trough sets (left/right)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

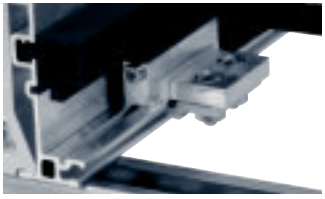
● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile

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

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	Part No. attached outwards
.040	64	–	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	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"

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▶ chapter 10
▶ chapter 9
▶ page 7.255

We recommend for new designs Series E4.32 ▶ page 7.42

E4/00 | Series 280·290·R770

32 32

Price index

Series 280 Series 290 Series R770

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-lenghts or number of links **Example: 4 m or 72 links**

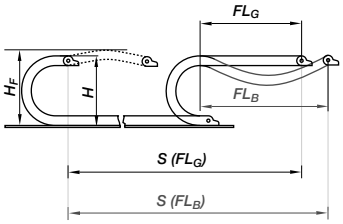
4 m **280.30.300.0**	**e-chain®**
with 2 separators **282** assembled every 2nd link	**Interior separation**
1 set **2800.30.1.12.C**	**Mounting bracket**

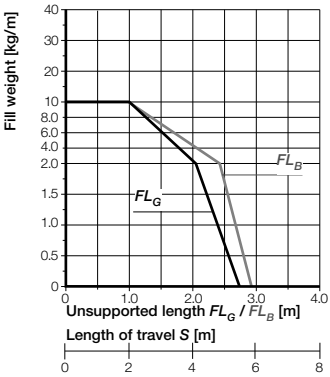
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

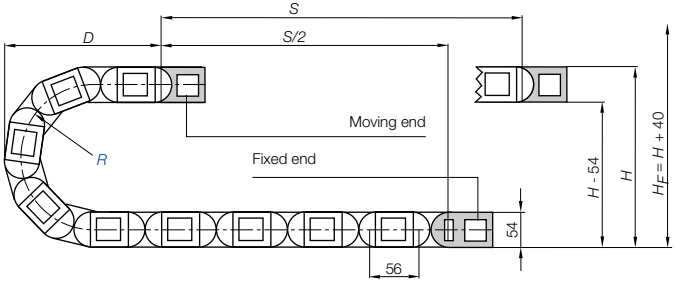
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Unsupported length

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	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

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
H_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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 ≤ 80 m
Vertical, standing ≤ 5 m
Side mounted, unsupp. ≤ 1,5 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

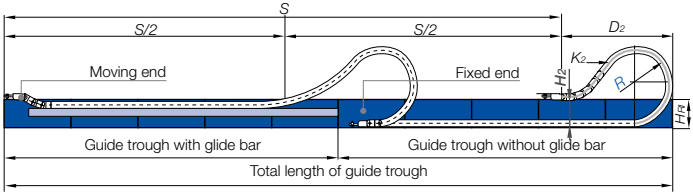
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

▶ page 7.255

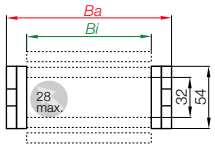
igus® e-chainsystems®

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

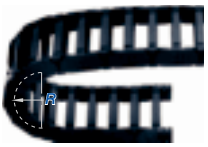
Internet: www.igus.eu
E-mail: info@igus.de

Series 280 - e-chain® with crossbars every link



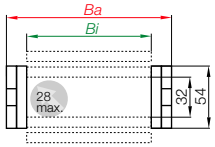
Part No. structure

280.	30.	300.	0
			Color black
		Bending radius	
	Width		
Series			



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



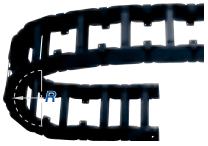


Part No. structure

290.	20.	300.	0
			Color black
		Bending radius	
	Width		
Series			

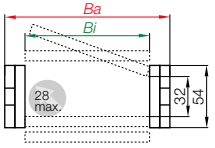
Standard

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
			Color black
		Bending radius	
	Width		
Series			

Series R770 - Fully enclosed e-tube



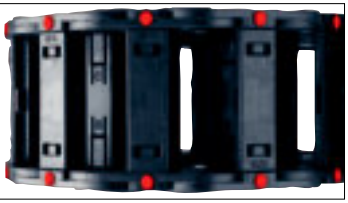
- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely 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.		*Bi* [mm]	*Ba* [mm]	280 [kg/m]	290 [kg/m]	R770 [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

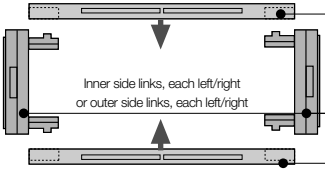
Hot Chips up to 850°C

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!

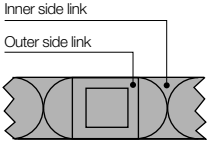


Extender crossbar for large diameter hoses ▶ page 7.270



Single crossbar, e-chain®, **Part No. 385.*Bi***
Single lid, e-tube, **Part No. 775.*Bi***
Outer side link, single part **Part No. 280.01**
(suitable for all radii)
Inner side link, single part **Part No. 280.02.** *R*
Single bottom, e-tube, **Part No. 776.*Bi***

Part No. e-chain® links, single parts

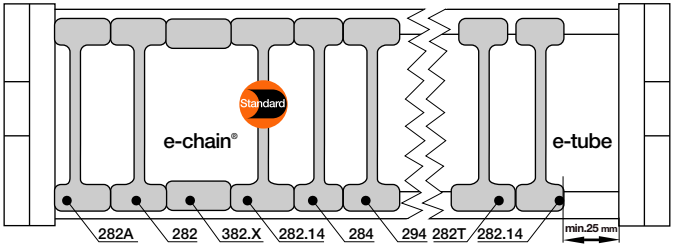


▶ page 7.255

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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)!

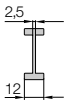




Standard

Vertical separator 281

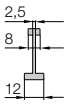
Vertical separator for e-chains®	
unassembled	281
assembled	282





Vertical separator 281T

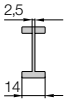
Vertical separator for e-tubes	
unassembled	281T
assembled	282T





Vertical separator 281.14

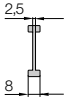
Vertical separator for e-chains®/e-tubes	
unassembled	281.14
assembled	282.14





Vertical separator 283

Vertical separator for e-chains®	
unassembled	283
assembled	284





Spacer 381.XX

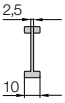
Spacer* for e-chains®	
unassembled	381.XX
assembled	382.XX

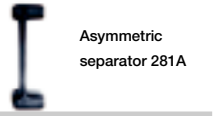




Locking separator 293

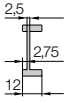
Locking separator for e-chains®	
unassembled	293
assembled	294





Asymmetric separator 281A

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.

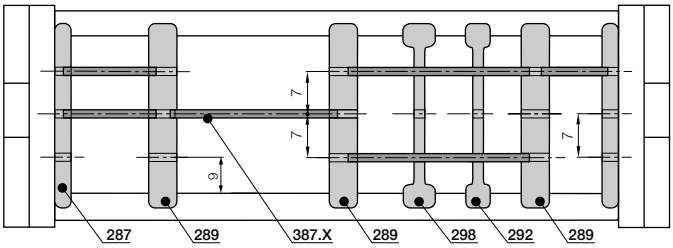
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 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.

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igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de





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.

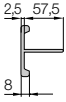
● The unilateral **open, slotted separator 297 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



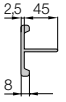
Side plate for e-chains®/e-tubes	
unassembled	286
assembled	287



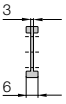
Middle plate for e-chains®/e-tubes	
unassembled	288
assembled	289



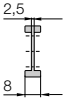
Vertical separator for e-chains®/e-tubes	
unassembled	281.S.57
assembled	282.S.57



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



Side plate 286



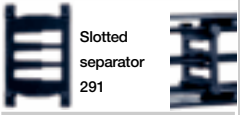
Middle plate 288



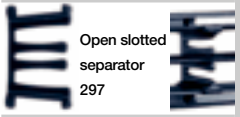
Vertical separator 281.S.57



Vertical separator 281.S.45



Slotted separator 291

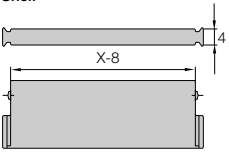


Open slotted separator 297



Shelf 386.X

Shelf



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

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▶ page 7.255

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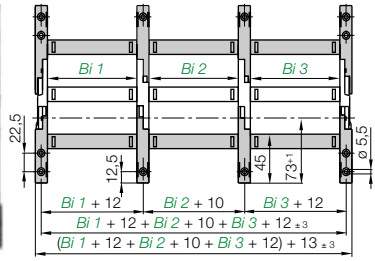




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





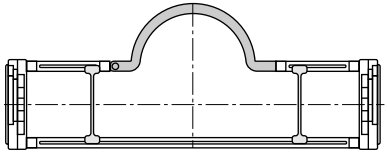
Part No. structure
280.10 /20 /10. 200 .0
280.*Bi1/Bi2/Bi3*. R .0



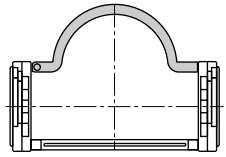
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed 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



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap attached directly on the side link

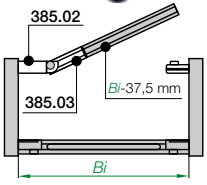
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	105	○	–	+
385.18.RD115	105	○	+	–

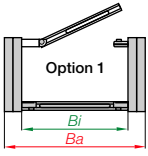
○ = round + = yes / – = no

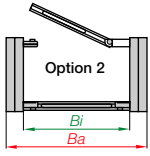


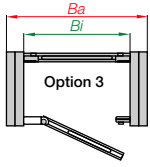
Hinged crossbars

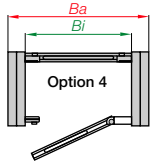
- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): *Bi*-37,5 mm **Part No. 385.03**
- Please consult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











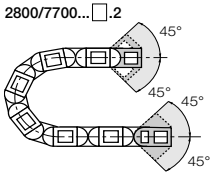
3D-CAD files, pdf-downloads ▶ www.igus.de/en/280 · www.igus.de/en/290 · www.igus.de/en/r770

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

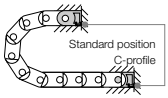
Moving end
2800/7700...□.2



Fixed end
2800/7700...□.1



The attachment variants arising automatically by the choice of the KMA mounting bracket



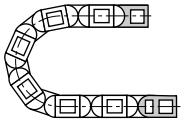
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

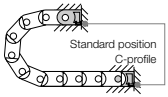
Moving end
2900/7750...□.2



Fixed end
2900/7750...□.1

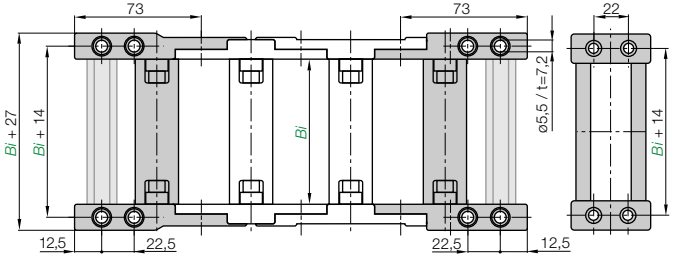


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
2800/7700...□.1 (pivoting)
2900/7750...□.1 (locking)

Moving end
(pivoting) 2800/7700...□.2
(locking) 2900/7750...□.2



Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.05.	2800/7700	2900/7750	.05.□.12.C	50
.06.	2800	2900	.06.□.12.C	68
.07.	2800/7700	2900/7750	.07.□.12.C	75
.087.	2800	2900	.087.□.12.C	87
.10.	2800/7700	2900/7750	.10.□.12.C	100
.11.	2800/7700	2900/7750	.11.□.12.C	108
.112.	2800	2900	.112.□.12.C	112
.12.	2800/7700	2900/7750	.12.□.12.C	125
.137.	2800	2900	.137.□.12.C	137
.15.	2800/7700	2900/7750	.15.□.12.C	150
.162.	2800	2900	.162.□.12.C	162
.17.	2800/7700	2900/7750	.17.□.12.C	168
.18.	2800	2900	.18.□.12.C	175
.187.	2800	2900	.187.□.12.C	187
.20.	2800/7700	2900/7750	.20.□.12.C	200
.212.	2800	2900	.212.□.12.C	212

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.23.	2800	2900	.23.□.12.C	225
.237.	2800	2900	.237.□.12.C	237
.25.	2800/7700	2900/7750	.25.□.12.C	250
.262.	2800	2900	.262.□.12.C	262
.28.	2800	2900	.28.□.12.C	275
.29.	2800	2900	.29.□.12.C	287
.30.	2800/7700	2900/7750	.30.□.12.C	300
.312.	2800	2900	.312.□.12.C	312
.325.	2800	2900	.325.□.12.C	325
.337.	2800	2900	.337.□.12.C	337
.350.	2800	2900	.350.□.12.C	350
.362.	2800	2900	.362.□.12.C	362
.375.	2800	2900	.375.□.12.C	375
.387.	2800	2900	.387.□.12.C	387
.400.	2800	2900	.400.□.12.C	400

Please insert 1 for odd number of links or 2 for even number of links

Dimensions and order configurations

Part No. structure (pivoting)

2800.
7700. | 05. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  2800 = e-chain®
  7700 = e-tube

Part No. structure (locking)

2900.
7750. | 05. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  2900 = e-chain®
  7750 = e-tube

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:
2900. 05. 2. 12.C (even)

Single-part order:
2900. 05. 2. 2. C (even)
Mounting bracket **moving end**
2900. 05. 2. 1. C (even)
Mounting bracket **fixed end**

▶ page 7.255



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**

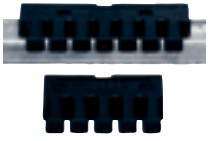
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	**CFC-08-M**	**CFC-08-C**
08 - 12	**CFC-12-M**	**CFC-12-C**
12 - 16	**CFC-16-M**	**CFC-16-C**
16 - 20	**CFC-20-M**	**CFC-20-C**
20 - 24	**CFC-24-M**	**CFC-24-C**



chainfix Nugget for the C-Profil

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 tiewrap plates with clip-on connection for the C-profile

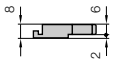
Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

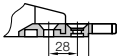


Tiewrap plate as individual part

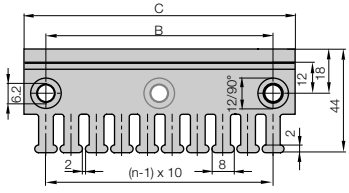
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



Shown assembled



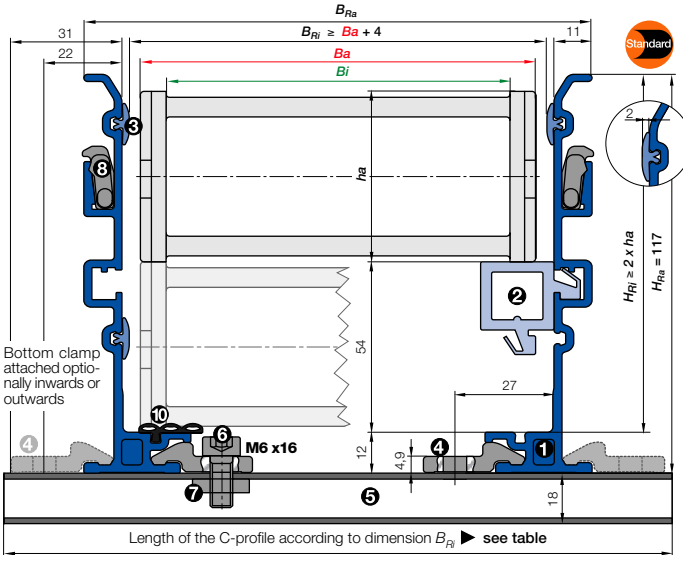
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(– = no / + = yes)

Details about all strain relief option for this series ▶ chapter 10

igus® e-chainsystems®
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de

Part No. 972.30.SL | 972.31.SL | Trough height: 117 mm
Aluminum "SuperTrough" | Basic Version

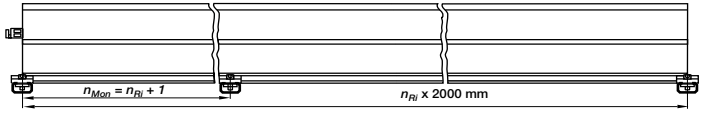




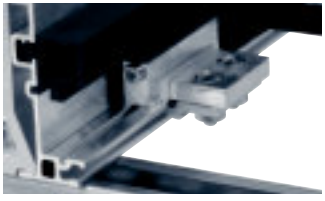
● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M6 x16 ❼ Sliding nut M6 ❽ 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**

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)

$H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = 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	Part No. 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**

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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Fax +49- (0) 22 03-96 49-222

▶ chapter 10
▶ chapter 9
▶ page 7.255

Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

We recommend for new designs Series E4.42 ▶ page 7.60

E4/00 | Series 380·390·R780

Price index

Series 380 | Series 390 | Series R780

Low noise version E4/101
Series 381 available with
special rubber pads design

Clean-Room
Cleanroom test
upon request

EX
ESD classification:
Electrically conductive ESD/ATEX
version upon request

1. Crossbars on e-chain® removable along both radii
2. Stop dog with "brake" for noise reduction
3. Closed and open styles can be combined
4. Hinged snap-open removable lids along outer radius of e-tube
5. Numerous interior separation possibilities
6. Optimized glide pads with lateral wear allowance
7. Wide, rounded plastic crossbars - cable friendly
8. Integrated strain relief possible
9. KMA mounting brackets with attachment points on all sides
10. Locking or pivoting mounting brackets available
11. e-chains® also available with reverse bending radius "RBR"

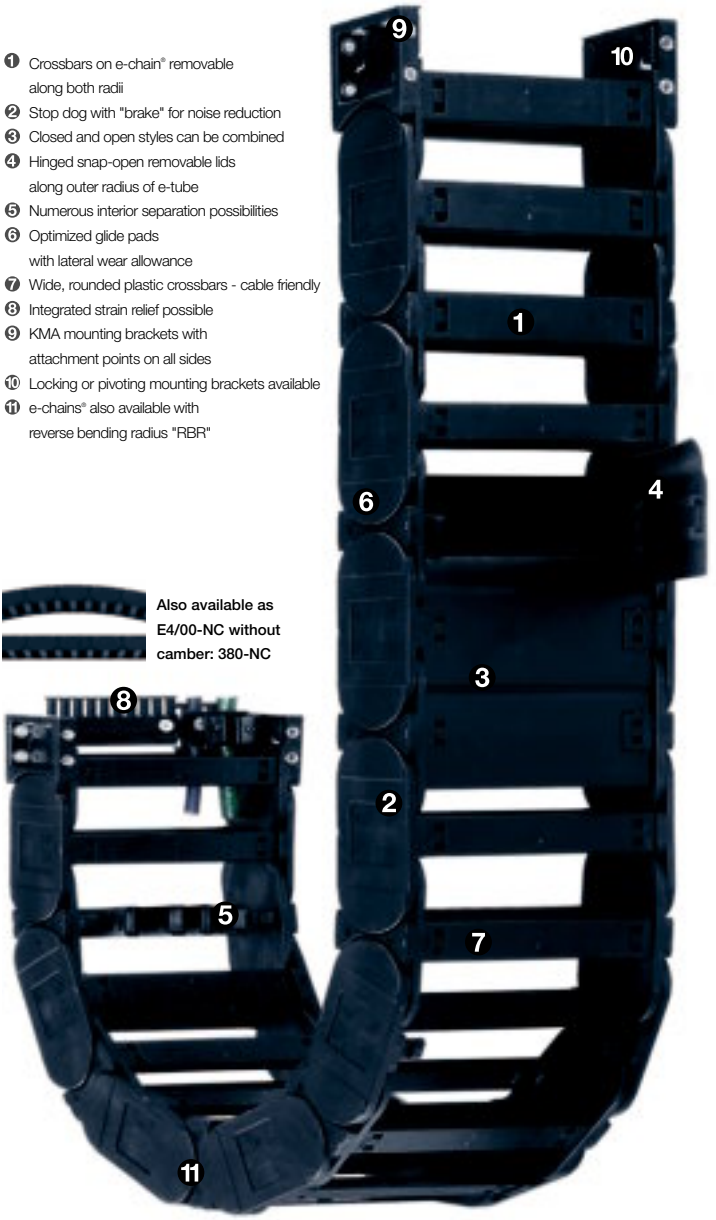


Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action

Also available as E4/00-NC without camber: 380-NC



Remove lids/bottoms (e-tubes) - Insert screwdriver 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

Order example complete e-chain®

Please indicate chain-lenghts or number of links **Example: 5 m or 75 links**

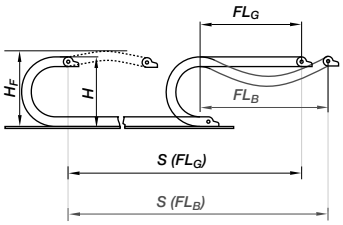
5 m **380.20.300.0**	**e-chain®**
with 2 separators **382** assembled every 2nd link	**Interior separation**
1 set **3800.20.1.12.C**	**Mounting bracket**

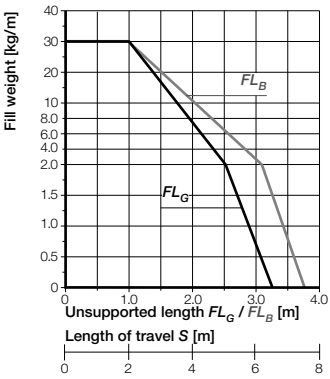
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

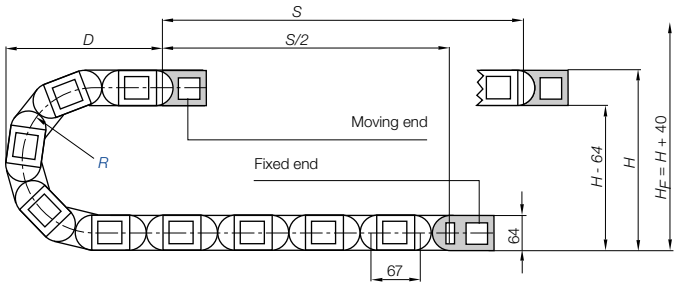
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Unsupported length

FL_G = with straight upper run
FL_B = with permitted sag
Further information ▶ **Design, page 1.12**







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_{-25}^{-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

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
H_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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, unsupp. ≤ 2 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

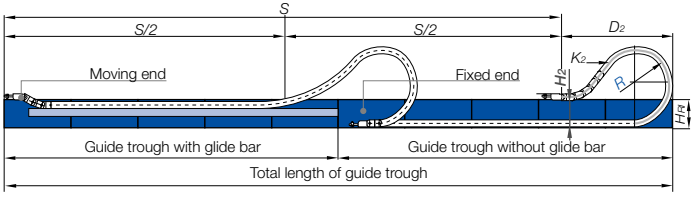
Short travels - unsupported

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 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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

▶ page 7.255

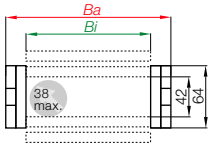
For support of the lower run - **Support Tray tool kit** available ▶page 9.70

igus® e-chainsystems®

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igus® GmbH
51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de



Part No. structure

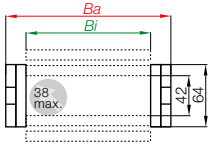
380.	400.	300.	0
			Color black
			Bending radius
			Width
			Series

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



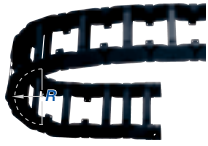


Part No. structure

390.	400.	300.	0
			Color black
			Bending radius
			Width
			Series

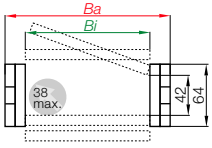
Standard

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
			Color black
			Bending radius
			Width
			Series

Series R780 - Fully enclosed e-tube

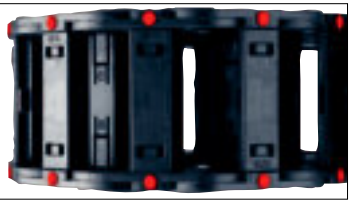


- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely 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.	*Bi* [mm]	*Ba* [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

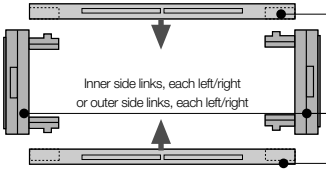
Hot Chips up to 850°C

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!



Extender crossbar for large diameter hoses ▶ page 7.280



Single crossbar, e-chain®, **Part No. 385.*Bi***

Single lid, e-tube, **Part No. 785.*Bi***

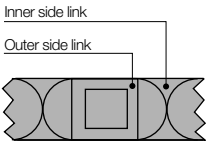
Outer side link, single part **Part No. 380.01**

(suitable for all radii)

Inner side link, single part **Part No. 380.02.*R***

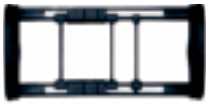
Single bottom, **Part No. 786.*Bi***

Part No. e-chain® links, single parts

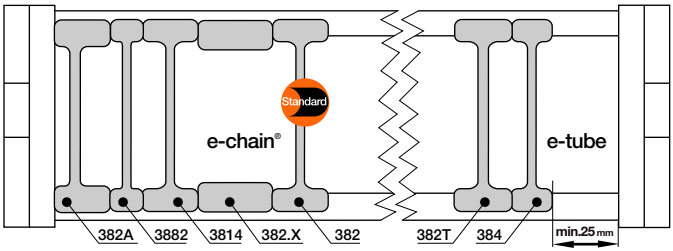


▶ page 7.255

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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

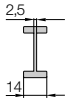


Locking separator 383

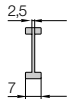


Asymmetric separator 381A

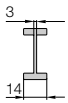
Vertical separator for e-chains®	
unassembled	381
assembled	382



Vertical separator* for e-chains®	
unassembled	3881
assembled	3882



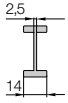
Vertical separator for e-tubes	
unassembled	381T
assembled	382T



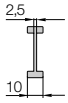
Spacer* for e-chains®	
unassembled	381.XX
assembled	382.XX



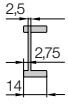
Locking separator for e-chains®	
unassembled	3804
assembled	3814



Locking separator for e-tubes	
unassembled	383
assembled	384



Asymmetric separator for e-chains®	
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)

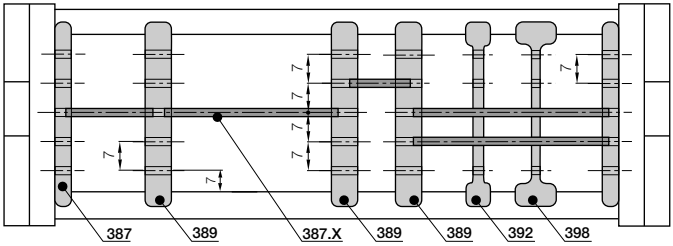
Additionally:

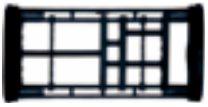
● **Locking separator 3804 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **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

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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.

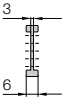
● The unilateral **open slotted separator 397 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



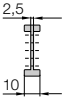
Side plate for e-chains®/e-tubes	
unassembled	**386**
assembled	**387**



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

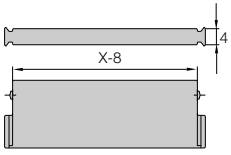


Open slotted separator 397



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**

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▶ page 7.255

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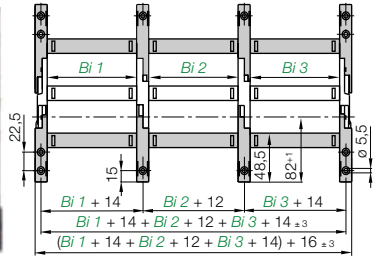




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





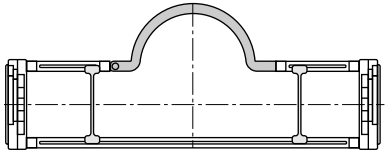
Part No. structure
380.10 /20 /10.[200].0
380.*Bi1/Bi2/Bi3*.[*R*].0



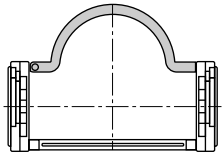
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed 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 attached directly on the side link

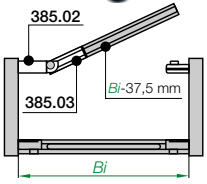
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	115	○	–	+
385.18.RD115	115	○	+	–

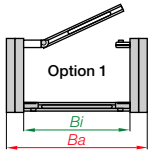
○ = round + = yes / – = no

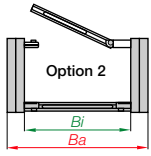


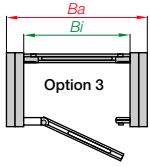
Hinged crossbars

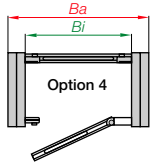
- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): *Bi*-37,5 mm **Part No. 385.03**
- Please consult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









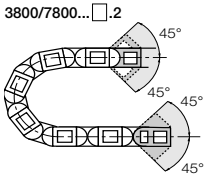


The Standard - Option KMA* - pivoting

- 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

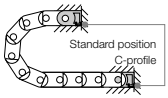
Moving end
3800/7800...□.2



Fixed end
3800/7800...□.1



The attachment variants arising automatically by the choice of the KMA mounting bracket



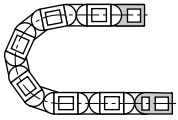
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

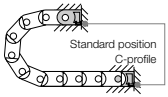
Moving end
3900/7900...□.2



Fixed end
3900/7900...□.1

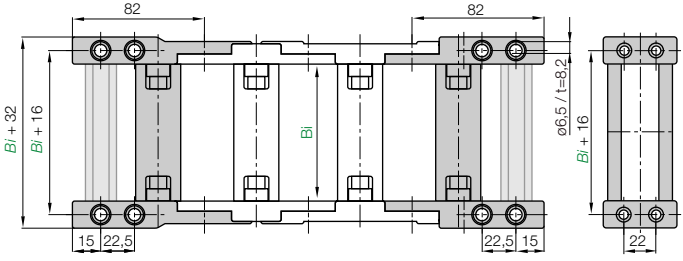


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
3800/7800...□.1 (pivoting)
3900/7900...□.1 (locking)

Moving end
(pivoting) 3800/7800...□.2
(locking) 3900/7900...□.2



Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.05.	3800/7800	3900/7900	.05. □.12.C	50
.06.	3800	3900	.06. □.12.C	68
.07.	3800/7800	3900/7900	.07. □.12.C	75
.087.	3800	3900	.087. □.12.C	87
.10.	3800/7800	3900/7900	.10. □.12.C	100
.11.	3800/7800	3900/7900	.11. □.12.C	108
.112.	3800	3900	.112. □.12.C	112
.12.	3800/7800	3900/7900	.12. □.12.C	125
.137.	3800	3900	.137. □.12.C	137
.15.	3800/7800	3900/7900	.15. □.12.C	150
.162.	3800	3900	.162. □.12.C	162
.17.	3800/7800	3900/7900	.17. □.12.C	168
.18.	3800	3900	.18. □.12.C	175
.187.	3800	3900	.187. □.12.C	187
.20.	3800/7800	3900/7900	.20. □.12.C	200
.212.	3800	3900	.212. □.12.C	212

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.23.	3800	3900	.23. □.12.C	225
.237	3800	3900	.237. □.12.C	237
.25.	3800/7800	3900/7900	.25. □.12.C	250
.262	3800	3900	.262. □.12.C	262
.28.	3800	3900	.28. □.12.C	275
.29.	3800	3900	.29. □.12.C	287
.30.	3800/7800	3900/7900	.30. □.12.C	300
.312.	3800	3900	.312. □.12.C	312
.325.	3800	3900	.325. □.12.C	325
.337.	3800	3900	.337. □.12.C	337
.350.	3800	3900	.350. □.12.C	350
.362.	3800	3900	.362. □.12.C	362
.375.	3800	3900	.375. □.12.C	375
.387.	3800	3900	.387. □.12.C	387
.400.	3800	3900	.400. □.12.C	400

Please insert 1 for odd number of links or 2 for even number of links

Dimensions and order configurations

Part No. structure (pivoting)

3800.
7800. | 05. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  3800 = e-chain®
  7800 = e-tube

Part No. structure (locking)

3900.
7900. | 05. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  3900 = e-chain®
  7900 = e-tube

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. 2. 12.C (even)

Single-part order:
3800. 05. 2. 2. C (even)
Mounting bracket **moving end**
3800. 05. 2. 1. C (even)
Mounting bracket **fixed end**

▶ page 7.255



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**

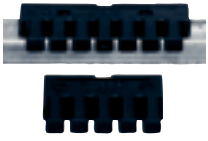
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	**CFC-08-M**	**CFC-08-C**
08 - 12	**CFC-12-M**	**CFC-12-C**
12 - 16	**CFC-16-M**	**CFC-16-C**
16 - 20	**CFC-20-M**	**CFC-20-C**
20 - 24	**CFC-24-M**	**CFC-24-C**



chainfix Nugget for the C-Profil

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 tiewrap plates with clip-on connection for the C-profile

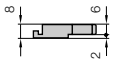
Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

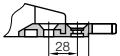


Tiewrap plate as individual part

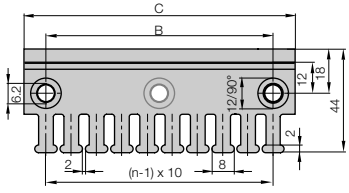
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



Shown assembled



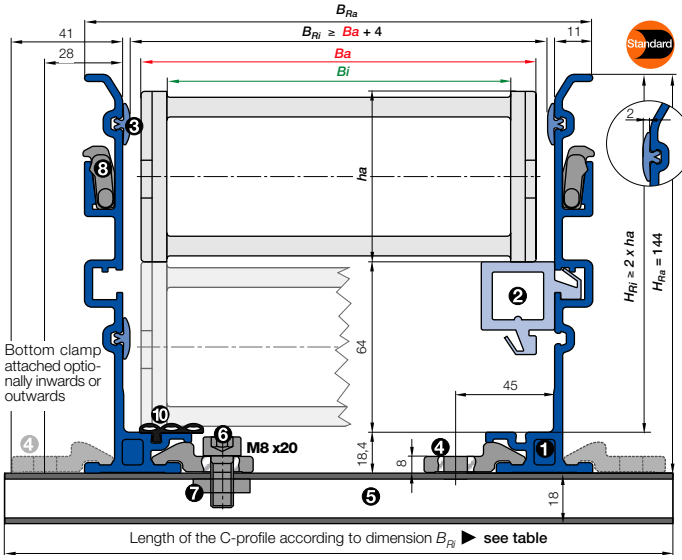
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(– = no / + = yes)

Details about all strain relief option for this series ▶ chapter 10

igus® e-chainsystems®
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Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de

Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm
Aluminum "SuperTrough" | Basic Version

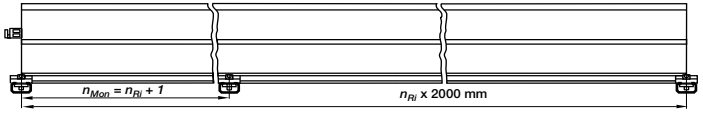




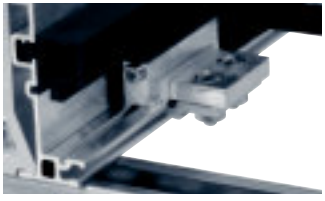
● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M8 x 20 ❼ Sliding nut M8 ❽ 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**

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)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = 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	Part No. 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

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

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▶ chapter 10
▶ chapter 9
▶ page 7.255

We recommend for new designs Series E4.56 ▶ page 7.78

E4/00 | Series 400·410·R880

56 56

Price index

Series 400 Series 410 Series R880

Low noise version E4/101
Series 401 available with
special rubber pads design

Clean-Room
Cleanroom test
upon request

EX
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:

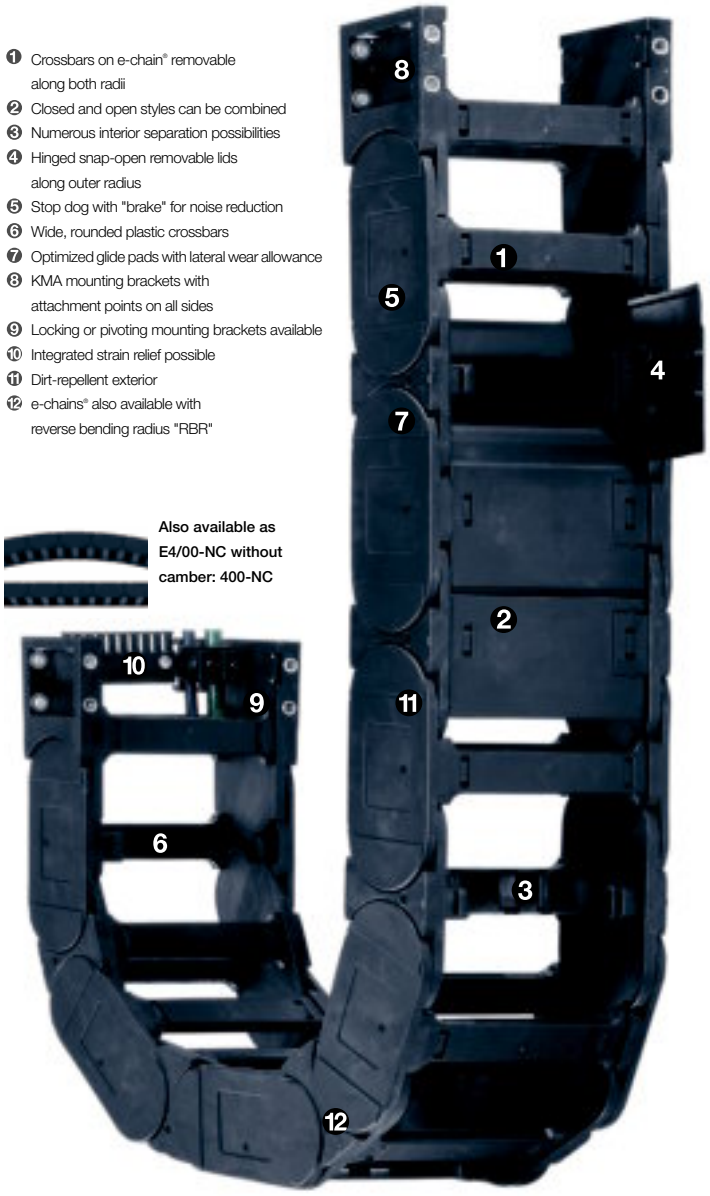
- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads
- Also available without camber

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**

1. Crossbars on e-chain® removable along both radii
2. Closed and open styles can be combined
3. Numerous interior separation possibilities
4. Hinged snap-open removable lids along outer radius
5. Stop dog with "brake" for noise reduction
6. Wide, rounded plastic crossbars
7. Optimized glide pads with lateral wear allowance
8. KMA mounting brackets with attachment points on all sides
9. Locking or pivoting mounting brackets available
10. Integrated strain relief possible
11. Dirt-repellent exterior
12. 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-lenghts or number of links **Example: 3 m or 33 links**

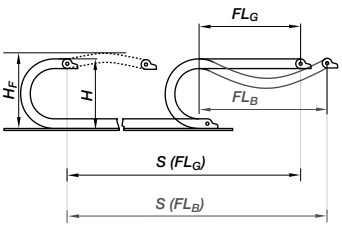
3 m **400.30.300.0**	**e-chain®**
with 2 separators **411** assembled every 2nd link	**Interior separation**
1 set **4000.30.1.12.C**	**Mounting bracket**

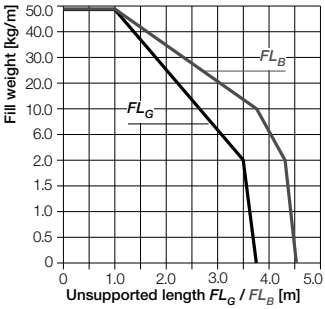
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

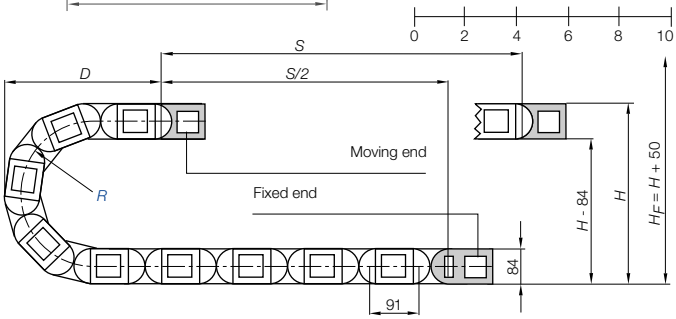
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Unsupported length

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^{-0}_{+25}	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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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, unsupp. ≤ 2,5 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

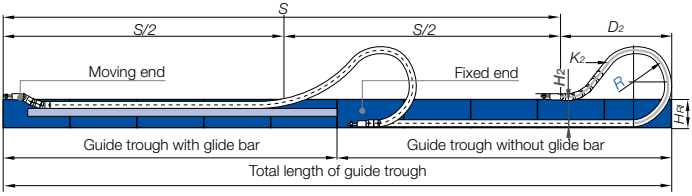
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

▶ page 7.255

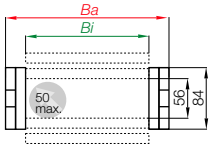
igus® e-chainsystems®

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Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

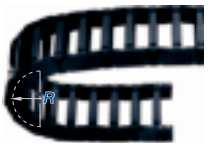
Internet: www.igus.eu
E-mail: info@igus.de

Series 400 - e-chain® with crossbars every link



Part No. structure

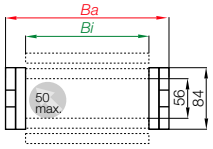
400.	13.	250.	0
			Color black
			Bending radius
		Width	
Series			



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

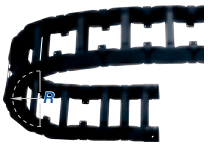


Series 410 - e-chain® with crossbars every 2nd link



Part No. structure

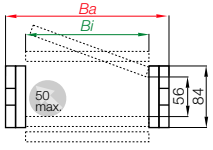
410.	13.	250.	0
			Color black
			Bending radius
		Width	
Series			



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Series R880 - Fully enclosed e-tube



Part No. structure

880.	25.	250.	0
			Color black
			Bending radius
		Width	
Series			

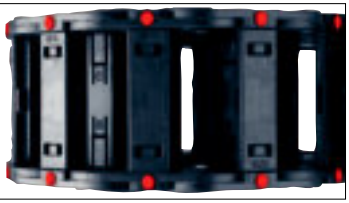


- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely 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



Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

Part No.	*Bi* [mm]	*Ba* [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	–

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

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

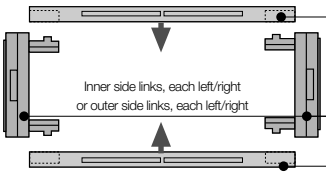
Further Information:
www.igus.de/en/HT
Delivery time up to 4 weeks!



* Removable lid only, no hinged option

** not available for R880

Extender crossbar for large diameter hoses ▶ page 7.290



Single crossbar, e-chain®, **Part No. 450.*Bi***

Single lid, e-tube, **Part No. 885.*Bi***

Outer side link, single part **Part No. 400.01**
(suitable for all radii)

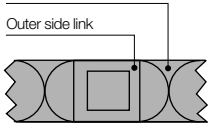
Inner side link, single part **Part No. 400.02. *R***

Single bottom, e-tube, **Part No. 886.*Bi***

Part No. e-chain® links, single parts

Inner side link

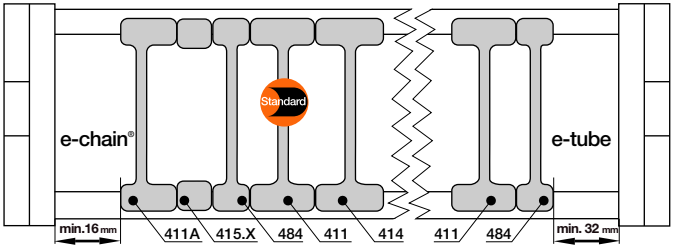
Outer side link



▶ 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®)!





Standard

Vertical separator 401



Vertical separator 483



Spacer 405.XX



Locking separator 404

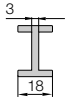


Vertical separator 406

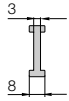


Asymmetric separator 401A

Vertical separator for e-chains®/e-tubes	
unassembled	**401**
assembled	**411**



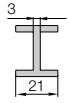
Vertical separator for e-chains®/e-tubes	
unassembled	**483**
assembled	**484**



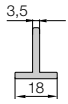
Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**



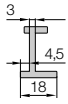
Locking separator for e-chains®	
unassembled	**404**
assembled	**414**



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)

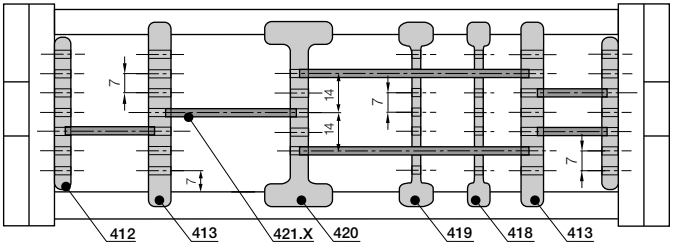
Additionally:

● **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.

igus® e-chainsystems®
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de





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.

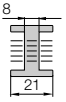
● The unilateral **open slotted separator 409 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



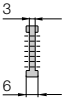
Side plate for e-chains®/e-tubes	
unassembled	**402**
assembled	**412**



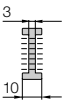
Middle plate for e-chains®/e-tubes	
unassembled	**403**
assembled	**413**



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**



Side plate
402



Middle plate
403



Locking vertical separator
410



Slotted separator
408



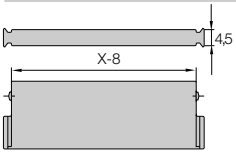


Open slotted separator
409





Shelf 420.X



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**

Additional elements for interior separation



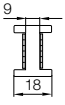
Center crossbar	
unassembled	**405**
assembled	**415**

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.

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

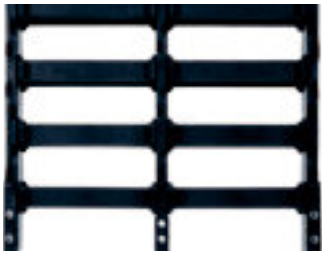
▶ page 7.255

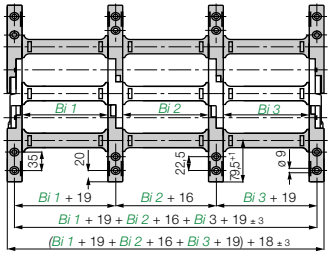




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





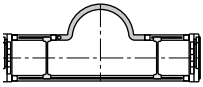
Part No. structure
400.10 /20 /10. 200 .0
400.*Bi1*/*Bi2*/*Bi3*. *R* .0



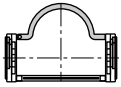
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed applications

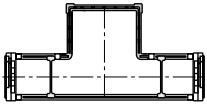
- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



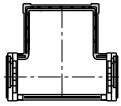
Round extender crossbar with snap-open crossbars



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

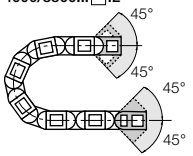
igus® GmbH
51147 Cologne
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
Internet: www.igus.eu
E-mail: info@igus.de

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

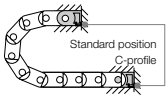
Moving end
4000/8800...□.2



Fixed end
4000/8800...□.1



The attachment variants arising automatically by the choice of the KMA mounting bracket



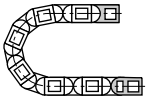
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

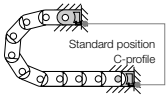
Moving end
4100/8900...□.2



Fixed end
4100/8900...□.1

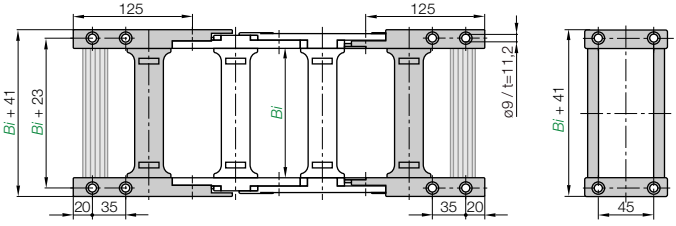


The attachment variants arising automatically by the choice of the KMA mounting bracket



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 pivoting	locking	C-profile option	Bi [mm]
.05.	4000	4100	.05.□.12.C	50
.06.	4000	4100	.06.□.12.C	65
.07.	4000/8800	4100/8900	.07.□.12.C	75
.08.	4000	4100	.08.□.12.C	87
.10.	4000/8800	4100/8900	.10.□.12.C	100
.11.	4000	4100	.11.□.12.C	112
.12.	4000/8800	4100/8900	.12.□.12.C	125
.13.	4000	4100	.13.□.12.C	137
.15.	4000/8800	4100/8900	.15.□.12.C	150
.16.	4000	4100	.16.□.12.C	162
.17.	4000/8800	4100/8900	.17.□.12.C	175
.18.	4000	4100	.18.□.12.C	187
.20.	4000/8800	4100/8900	.20.□.12.C	200
.21.	4000	4100	.21.□.12.C	212
.22.	4000	4100	.22.□.12.C	225
.23.	4000	4100	.23.□.12.C	237
.25.	4000/8800	4100/8900	.25.□.12.C	250
.26.	4000	4100	.26.□.12.C	262
.27.	4000/8800	4100/8900	.27.□.12.C	275
.28.	4000	4100	.28.□.12.C	287
.30.	4000/8800	4100/8900	.30.□.12.C	300

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.31.	4000	4100	.31.□.12.C	312
.32.	4000	4100	.32.□.12.C	325
.33.	4000	4100	.33.□.12.C	337
.35.	4000/8800	4100/8900	.35.□.12.C	350
.36.	4000	4100	.36.□.12.C	362
.37.	4000	4100	.37.□.12.C	375
.38.	4000	4100	.38.□.12.C	387
.40.	4000/8800	4100/8900	.40.□.12.C	400
.41.	4000	4100	.41.□.12.C	412
.42.	4000	4100	.42.□.12.C	425
.43.	4000	4100	.43.□.12.C	437
.45	4000	4100	.45.□.12.C	450
.46.	4000/8800	4100/8900	.46.□.12.C	462
.47.	4000	4100	.47.□.12.C	475
.48.	4000	4100	.48.□.12.C	487
.50.	4000	4100	.50.□.12.C	500
.51.	4000	4100	.51.□.12.C	512
.52.	4000	4100	.52.□.12.C	525
.53.	4000	4100	.53.□.12.C	537
.55.	4000	4100	.55.□.12.C	550
.60.	4000	4100	.60.□.12.C	600

Please insert 1 for odd number of links or 2 for even number of links

Dimensions and order configurations

Part No. structure (pivoting)

4000.
8800. | 07. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  4000 = e-chain®
  8800 = e-tube

Part No. structure (locking)

4100.
8900. | 07. | 2. | 12. | C

- Optional with C-profile
- Full set
- odd/even
- Width
  4100 = e-chain®
  8900 = e-tube

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. 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**

▶ page 7.255



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**

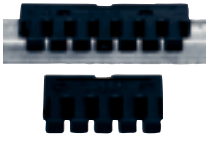
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	**CFC-08-M**	**CFC-08-C**
08 - 12	**CFC-12-M**	**CFC-12-C**
12 - 16	**CFC-16-M**	**CFC-16-C**
16 - 20	**CFC-20-M**	**CFC-20-C**
20 - 24	**CFC-24-M**	**CFC-24-C**



chainfix Nugget for the C-Profil

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 tiewrap plates with clip-on connection for the C-profile

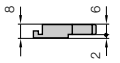
Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all e-chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

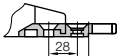


Tiewrap plate as individual part

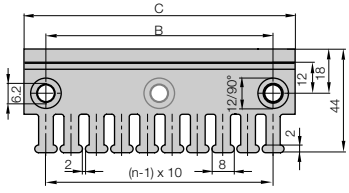
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



Shown assembled



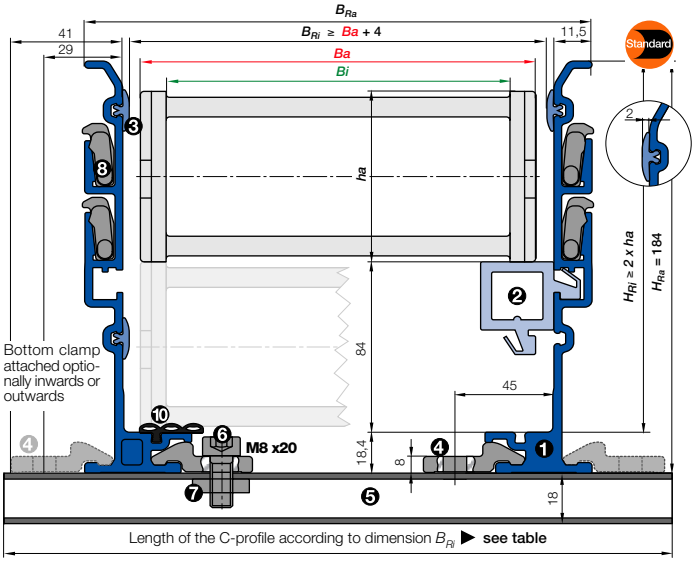
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(– = no / + = yes)

Details about all strain relief option for this series ▶ chapter 10

igus® e-chainsystems®
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igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de

Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm
Aluminum "SuperTrough" | Basic Version

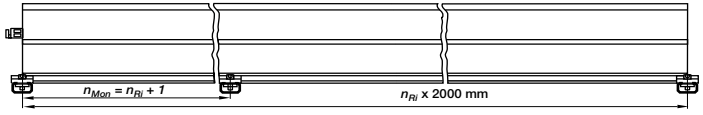




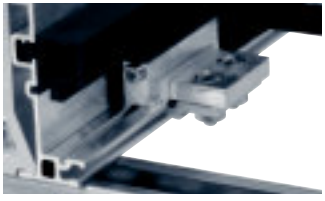
● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M8 x 20 ❼ Sliding nut M8 ❽ 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**

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)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = 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	Part No. attached outwards
.05	88	–	960.50.225
.06	103	–	960.50.225
.07	113	–	960.50.250
.08	125	960.50.175	960.50.250
.10	138	960.50.200	960.50.275
.11	151	960.50.200	960.50.275
.12	163	960.50.225	960.50.300
.13	176	960.50.225	960.50.300
.15	188	960.50.250	960.50.325
.16	201	960.50.250	960.50.325
.17	213	960.50.275	960.50.350
.18	226	960.50.275	960.50.350
.20	238	960.50.300	960.50.375
.21.	251	960.50.300	960.50.375
.22	263	960.50.325	960.50.400
.23	276	960.50.325	960.50.400
.25	288	960.50.350	960.50.425
.26	301	960.50.350	960.50.425
.27	313	960.50.375	960.50.450
.28	326	960.50.375	960.50.450
.30	338	960.50.400	960.50.475
.31	351	960.50.400	960.50.475
.32	363	960.50.425	960.50.500
.33	376	960.50.425	960.50.500
.35	388	960.50.450	960.50.525
.36	401	960.50.450	960.50.525
.37	413	960.50.475	960.50.550
.38	426	960.50.475	960.50.550
.40	438	960.50.500	960.50.575
.41	451	960.50.500	960.50.575
.42	463	960.50.525	960.50.600
.43	476	960.50.525	960.50.600
.45	488	960.50.550	960.50.625
.46	501	960.50.550	960.50.625
.47	513	960.50.575	960.50.650
.48	526	960.50.575	960.50.650
.50	538	960.50.600	960.50.675
.51	551	960.50.600	960.50.675
.52	563	960.50.625	960.50.700
.53	576	960.50.625	960.50.700
.55	588	960.50.650	960.50.725
.60	638	960.50.700	960.50.775

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

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Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

Increased inner height

E4/00 | Series 600·601·R608

108 108

Price Index

Series 600 | Series 601 | Series R608

Clean-Room **Cleanroom test upon request**

EX **ESD classification: Electrically conductive ESD/ATEX version upon request**

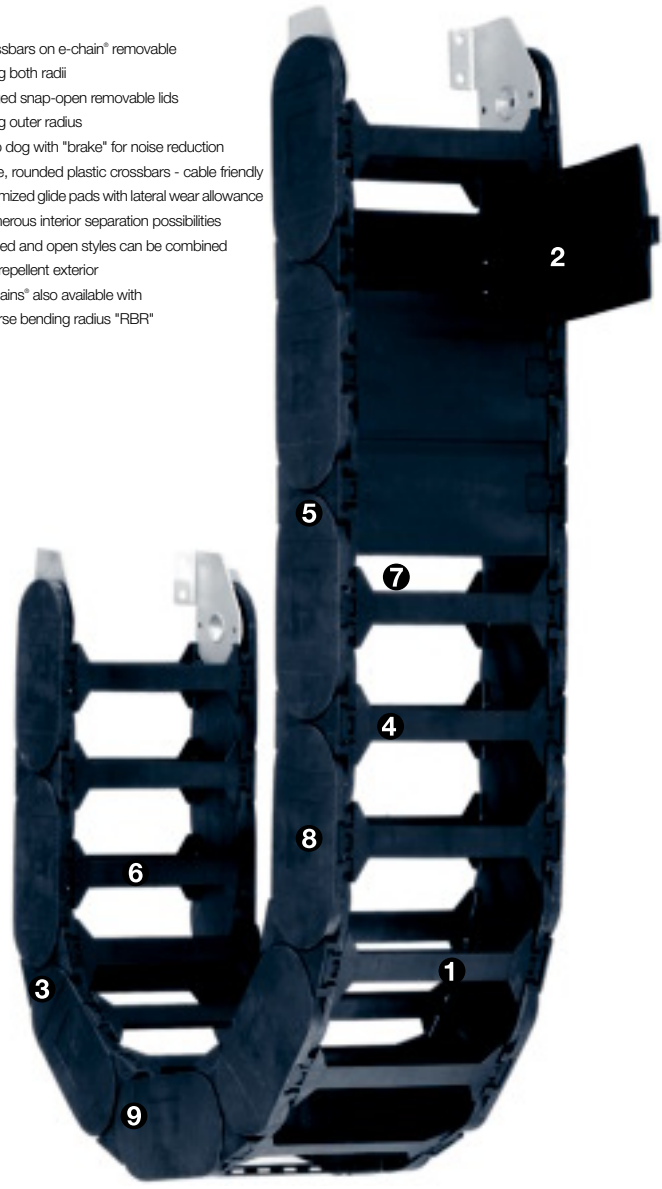
1. Crossbars on e-chain® removable along both radii
2. Hinged snap-open removable lids along outer radius
3. Stop dog with "brake" for noise reduction
4. Wide, rounded plastic crossbars - cable friendly
5. Optimized glide pads with lateral wear allowance
6. Numerous interior separation possibilities
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-lenghts or number of links **Example: 6 m or 42 links**

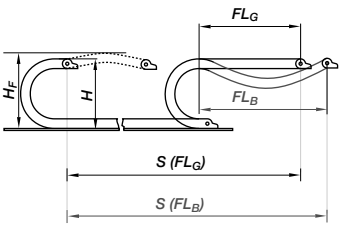
6 m **600.30.300.0**	**e-chain®**
with 2 separators **6011** assembled every 2nd link	**Interior separation**
1 set **6000.1.12**	**Mounting bracket**

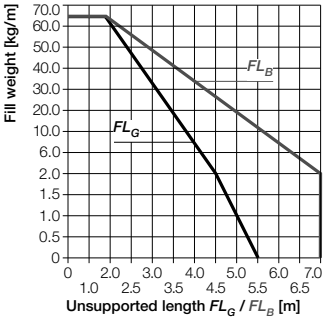
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

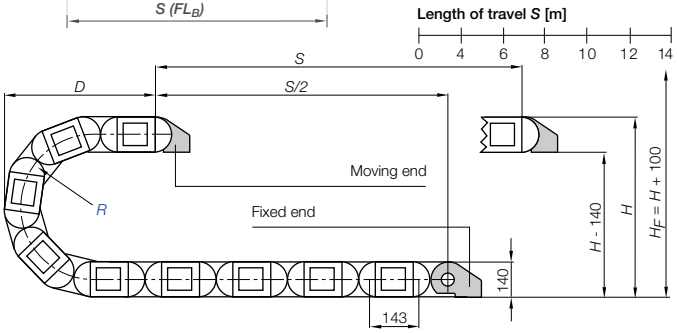
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Unsupported length

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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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 ≤ 120 m
Vertical, standing ≤ 6 m
Side mounted, unsupp. ≤ 6 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

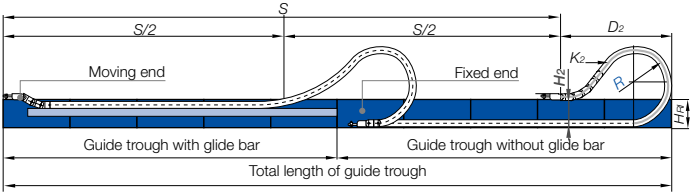
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

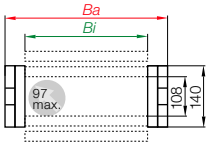
▶ page 7.255

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E-mail: info@igus.de

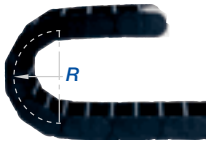


Part No. structure

600.	30.	300.	0

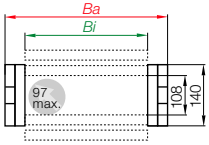
Color
black
Bending
radius
Width
Series

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





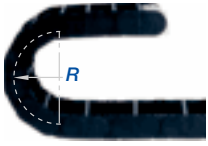
Part No. structure

601.	30.	300.	0

Color
black
Bending
radius
Width
Series

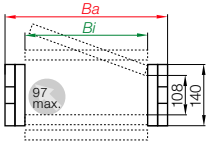
Standard

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



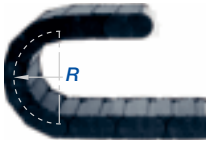


Part No. structure

608.	30.	300.	0

Color
black
Bending
radius
Width
Series

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.	*Bi* [mm]	*Ba* [mm]	600 [kg/m]	601 [kg/m]	R608 [kg/m]
600/601/608.20.□.0	200	252	≈ 8,75	≈7,99	**
600/601/608.25.□.0	250	302	≈ 9,11	≈ 8,17	**
600/601/608.30.□.0	300	352	≈ 9,45	≈ 8,34	**
600/601.32.□.0	320	372	≈ 9,59	≈ 8,41	–
600/601/608.35.□.0	350	402	≈ 9,74	≈ 8,48	**
600/601.38.□.0**	380	432	≈ 10,01	≈ 8,62	–
600/601/608.40.□.0	400	452	≈ 10,19	≈ 8,71	**
600/601.45.□.0	450	502	≈ 10,32	≈ 8,77	–
600/601/608.50.□.0**	500	552	≈ 10,63	≈ 8,93	**
600/601.55.□.0	550	602	≈ 10,98	≈ 9,10	–
600/601.60.□.0	600	652	≈ 11,47	≈ 9,35	–

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!



**NEW in this catalog

Available bending radii

R [mm] 200* | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1000

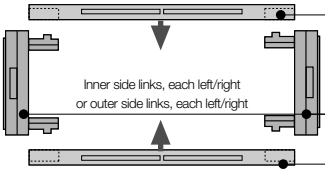
Supplement Part No. with required radius. Example: 600.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 143 mm/link - Links/m = 7

*not available for R608 **upon request

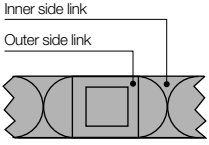


Extension links for extremely wide e-chains® ▶ upon request



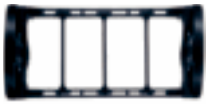
Single crossbar, e-chain®, **Part No. 650.*Bi***
Single lid, e-tube, **Part No. 6085.*Bi***
Outer side link, single part **Part No. 600.01**
(suitable for all radii)
Inner side link, single part **Part No. 600.02.*R***
Single bottom, e-tube, **Part No. 6086.*Bi***

Part No. e-chain® links, single parts



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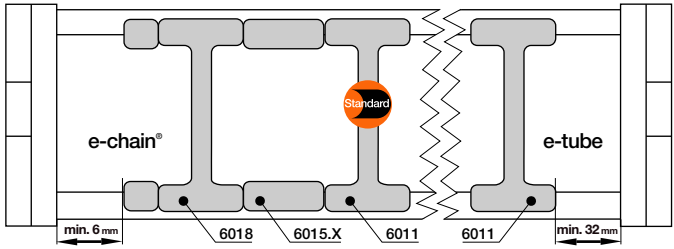
▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **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

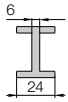


Spacer
6005.XX



Locking separator
6008

Vertical separator for e-chains®/e-tubes	
unassembled	**6001**
assembled	**6011**

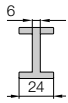


Spacer*, for e-chains®	
unassembled	**6005.XX**
assembled	**6015.XX**



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:

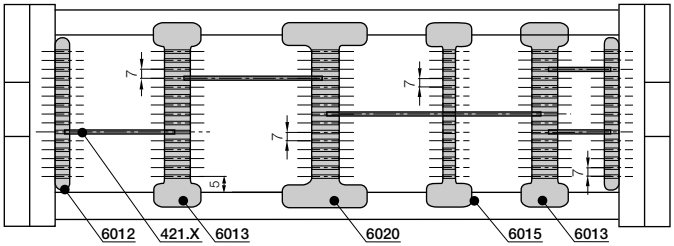
● **Locking separator 6008 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

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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

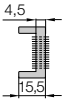
Option 2: Shelves

● **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**).

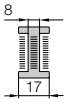
● **Locking vertical separator 6010** combined with shelves. Triple slots (only for e-chains®).

● **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.



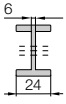
Side plate for e-chains®/e-tubes	
unassembled	**6002**
assembled	**6012**



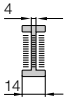
Middle plate for e-chains®/e-tubes	
unassembled	**6003**
assembled	**6013**



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





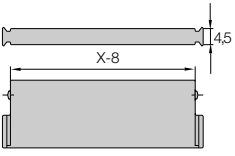
Open slotted separator
6005





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**

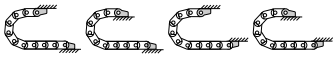
System E4/00
Inner height: 108 mm

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▶ page 7.255







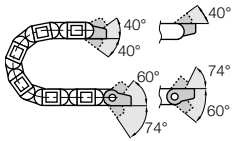
Possible installation conditions -
Further installation angles ▶ installation sketch



Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
6000.1



Fixed end
6000.2

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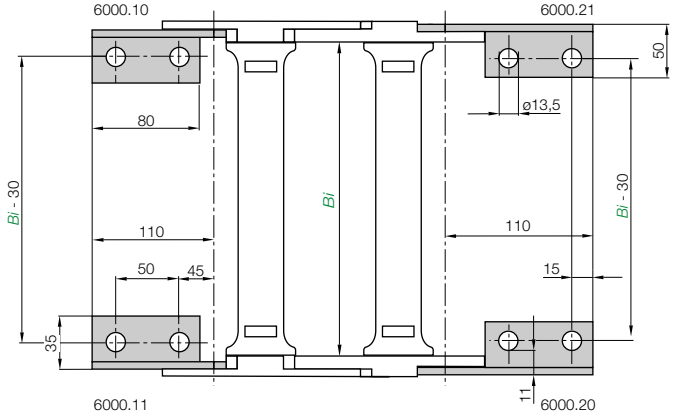
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51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de

Dimensions and order configurations

Moving end
6000.1

Fixed end
6000.2



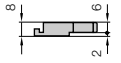
Note mounting brackets:
Depending on the e-chain® length, the carrier will end with outer or inner side links. For the best appearance, make sure the chain ends with outer side link whenever possible. An odd number of links will always end with outer side links.

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

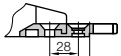


Tiewrap plate as individual part

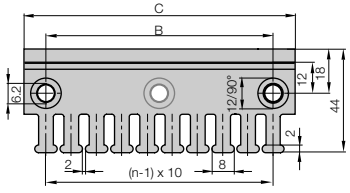
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate



Shown assembled

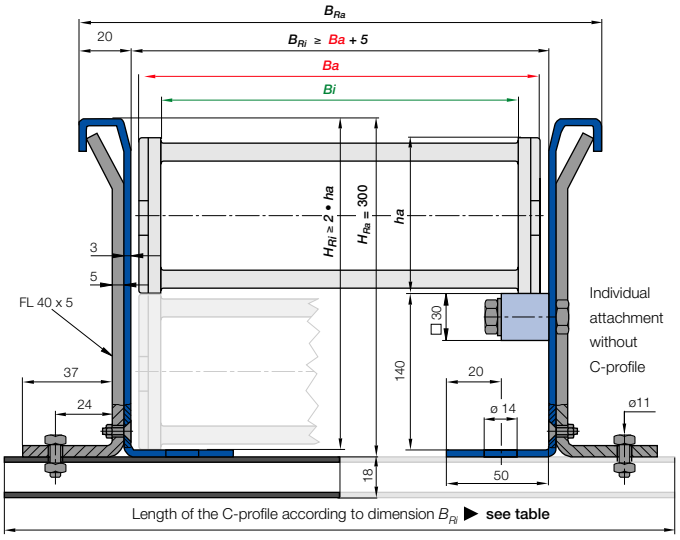


Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(– = no / + = yes)

Part No. 98.30 | **98.31** | Trough height: 300 mm

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

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)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 5$

● = Guide trough set ● = Glide bar
● = Installation set ● = C-profile

Installation set with C-profile

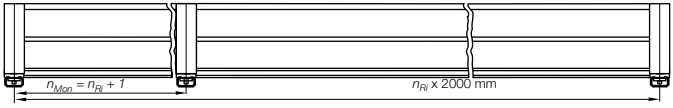
600.**20**.300.0 ▶ Order example

	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



Details about steel guide troughs ▶ chapter 9, Guide Troughs

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▶ chapter 10
▶ chapter 9
▶ page 7.255

Price index

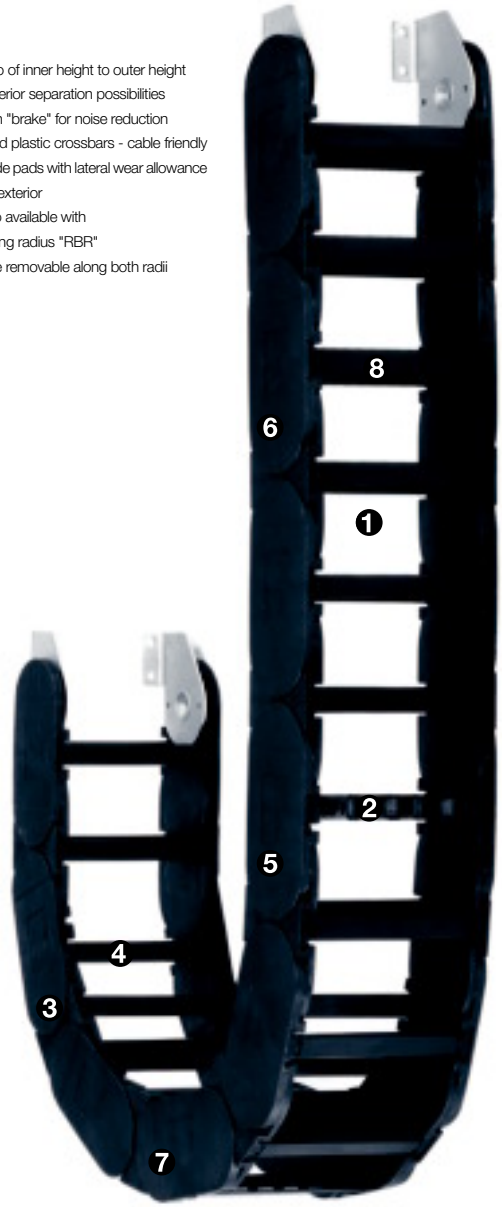
Clean-Room **Cleanroom test upon request**

EX **ESD classification: Electrically conductive ESD/ATEX version upon request**

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



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**

Order example complete e-chain®
Please indicate chain-lenghts or number of links **Example: 4 m or 28 links**

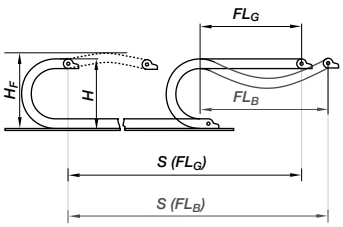
4 m **640.33.300.0**	**e-chain®**
with 2 separators **6411** assembled every 2nd link	**Interior separation**
1 set **6000.1.12**	**Mounting bracket**

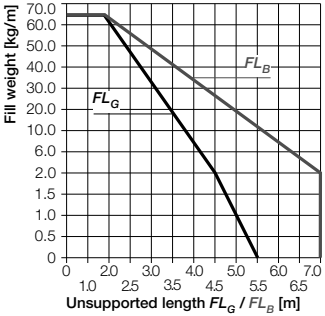
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

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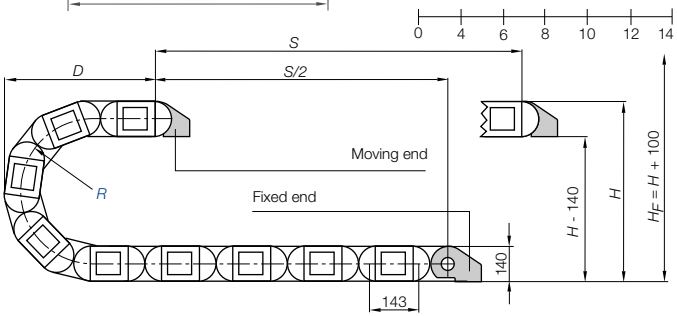
Unsupported length

FL_G = with straight upper run
FL_B = with permitted sag
Further information ▶ **Design, page 1.12**





Length of travel *S* [m]



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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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 ≤ 120 m
Vertical, standing ≤ 6 m
Side mounted, unsupp. ≤ 4 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

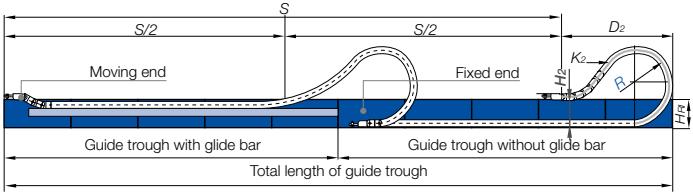
Short travels - unsupported

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.

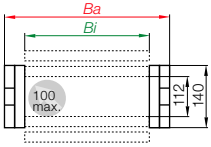
Technical Data

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

Details of material properties
▶ **page 1.38**

▶ page 7.255

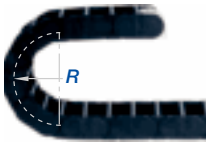
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igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de



Part No. structure

640.	33.	300.	0
			Color black
		Bending radius	
	Width		
Series			

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



3D-CAD files, pdf-downloads and many online features ▶ www.igus.de/en/640

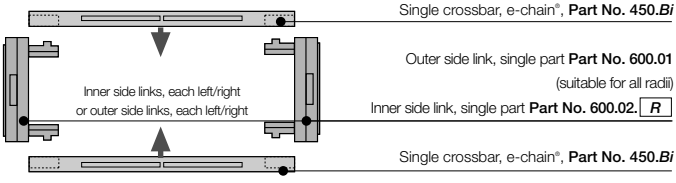
Part No.	*Bi* [mm]	*Ba* [mm]	Weight [kg/m]
640.12. ☐.0	87	139	≈ 7,57
640.13. ☐.0	100	152	≈ 7,66
640.15. ☐.0	112	164	≈ 7,70
640.16. ☐.0	125	177	≈ 7,77
640.17. ☐.0	137	189	≈ 7,84
640.18. ☐.0	150	202	≈ 7,91
640.20. ☐.0	162	214	≈ 7,92
640.21. ☐.0	175	227	≈ 7,99
640.22. ☐.0	187	239	≈ 8,04
640.23. ☐.0	200	252	≈ 8,12
640.25. ☐.0	212	264	≈ 8,18
640.26. ☐.0	225	277	≈ 8,23
640.27. ☐.0	237	289	≈ 8,30
640.28. ☐.0	250	302	≈ 8,32
640.30. ☐.0	262	314	≈ 8,39
640.31. ☐.0	275	327	≈ 8,46
640.32. ☐.0	287	339	≈ 8,51
640.33. ☐.0	300	352	≈ 8,62
640.35. ☐.0	312	364	≈ 8,68
640.36. ☐.0	325	377	≈ 8,72
640.37. ☐.0	337	389	≈ 8,74
640.38. ☐.0	350	402	≈ 8,79
640.40. ☐.0	362	414	≈ 8,92
640.41. ☐.0	375	427	≈ 9,02
640.42. ☐.0	387	439	≈ 9,11
640.43. ☐.0	400	452	≈ 9,16
640.45. ☐.0	412	464	≈ 9,20
640.46. ☐.0	425	477	≈ 9,21
640.47. ☐.0	437	489	≈ 9,26
640.48. ☐.0	450	502	≈ 9,30
640.50. ☐.0	462	514	≈ 9,38
640.51. ☐.0	475	527	≈ 9,39
640.52. ☐.0	487	539	≈ 9,42
640.53. ☐.0	500	552	≈ 9,52
640.55. ☐.0	512	564	≈ 9,83
640.60. ☐.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



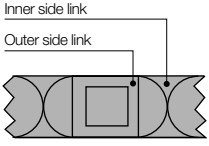
Single crossbar, e-chain®, **Part No. 450.*Bi***

Outer side link, single part **Part No. 600.01**
(suitable for all radii)

Inner side link, single part **Part No. 600.02.** *R*

Single crossbar, e-chain®, **Part No. 450.*Bi***

Part No. e-chain® links, single parts



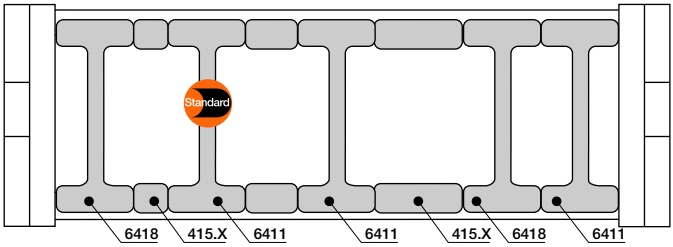
▶ page 7.255

System E4/00
Inner height: 112 mm

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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

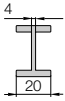


Spacer
405.XX



Locking separator
6408

Vertical separator for e-chains®	
unassembled	**6401**
assembled	**6411**

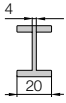


Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**



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:

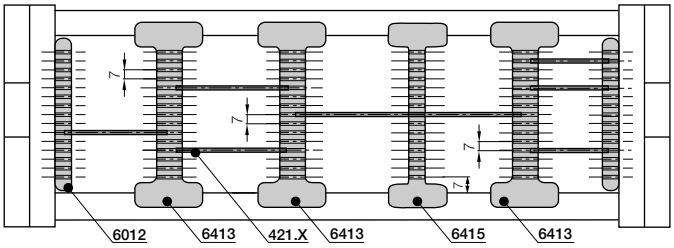
● The **Locking separator for e-chains® 6408** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the e-chain®.

igus® e-chainsystems®

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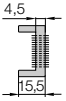


For use with many cables of differing diameters. e-chains® and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

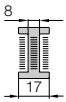
Option 2: Shelves

● **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**).

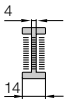
● The unilateral **open slotted separator 6405 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



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**



Side plate
6002



Middle plate
6403



Open slotted separator
6405

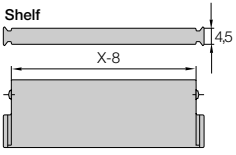




Shelf 420.X

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**

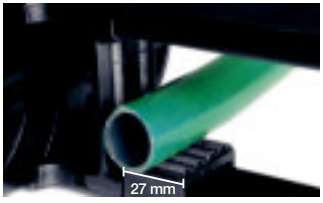


Additional elements for interior separation



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.



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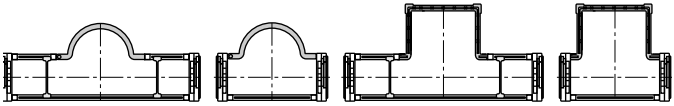
▶ page 7.255



Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed 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

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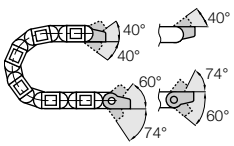
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Option steel - pivoting

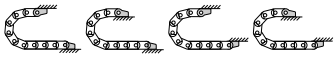
- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
6000.1



Fixed end
6000.2

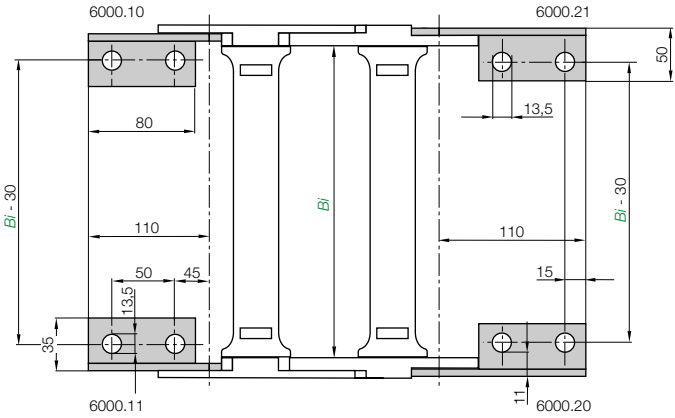




Possible installation conditions -
Further installation angles ▶ installation sketch

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.

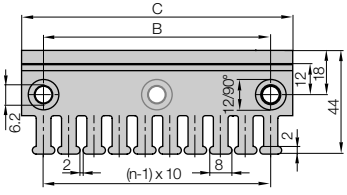
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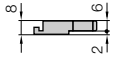
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

Tiewrap plate as individual part

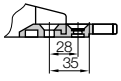
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**







Single tiewrap plate



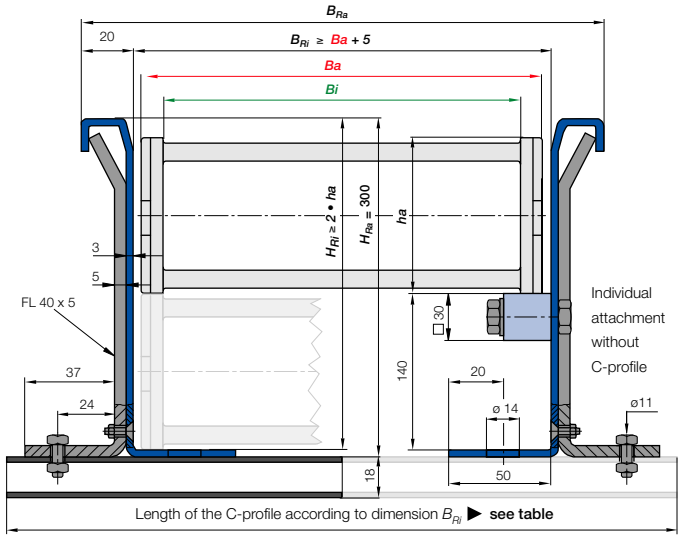
Shown assembled

▶ chapter 10

▶ page 7.255

Part No. 98.30 | 98.31 | Trough height: 300 mm

Steel Guide Troughs | Very stable and rugged



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)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 5$

● = Guide trough set ● = Glide bar
● = Installation set ● = C-profile

Installation set with C-profile

640.12.300.0 ▶ Order example

	B_{Ri}	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.

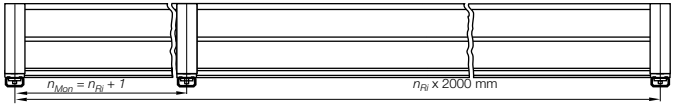


Illustration top: Guide trough with and without glide bar. Illustration bottom: installation set

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		
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**

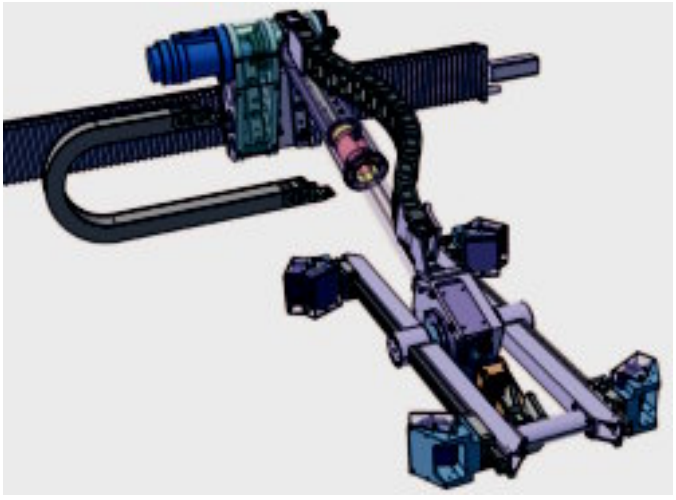
Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



Details about steel guide troughs ▶ chapter 9, Guide Troughs

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Friction welding machine - Special E4/00 version bend in two directions

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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

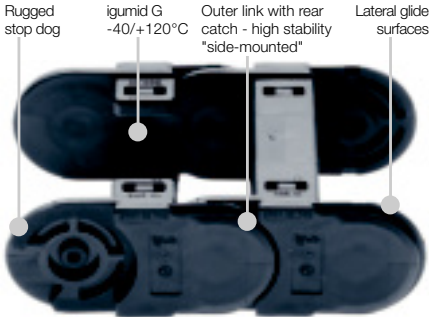


Special case: Side-mounted, unsupported - undercut design offers stability



200 m travels and more possible

Next Page ■ Find selection tables and assembly instructions



- 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

Crossbars every link
for particulary demanding applications



Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
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**



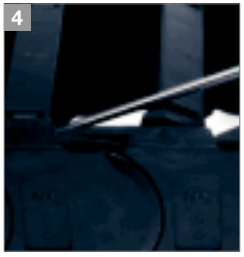
Remove crossbars at connection point. Slide side links into each other - Press together



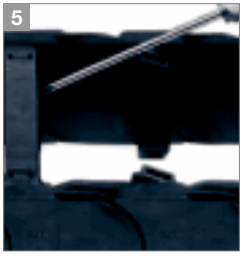
Join the side links - join the second side link by pressing from the top



Join the side links together on the opposite side by applying pressure to the outer link



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 E4/4 | e-chains® and e-tubes | **Separating**





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®

e-chains® | Opening



Remove crossbars - Insert screwdriver into the slot, push down, release by lever action

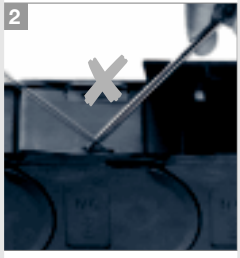


Remove clips - Insert screwdriver into the slot and push down, release by lever action

e-tube | Opening



Remove lids/bottoms - Insert screwdriver into the slot, release by lever action



Release only **one side** to swivel the lid

We recommend for new designs Series E4.32 ▶ page 7.42

E4/4 | Series 2828·2928·R7728

32 32

Price index

Series 2828 Series 2928 Series R7728

Side-mounted - unsupported

High torsional rigidity

ESD classification: Electrically conductive ESD/ATEX version upon request

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



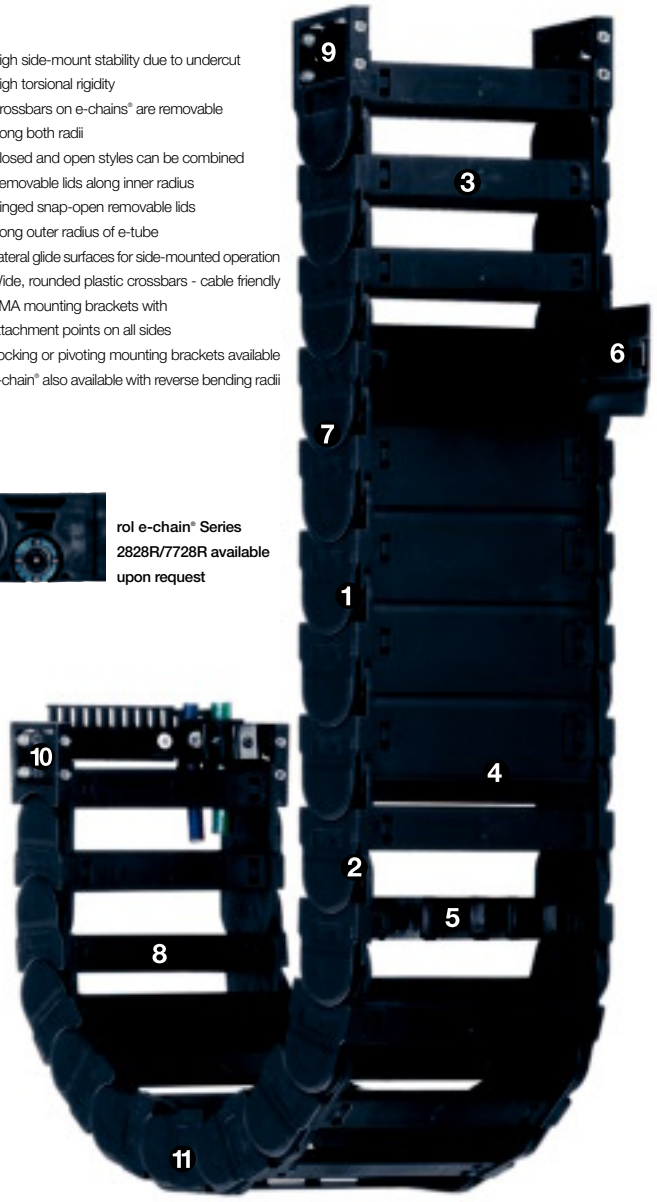
Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



rol e-chain® Series 2828R/7728R available upon request



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**

Order example complete e-chain®

Please indicate chain-lenghts or number of links **Example: 3 m or 54 links**

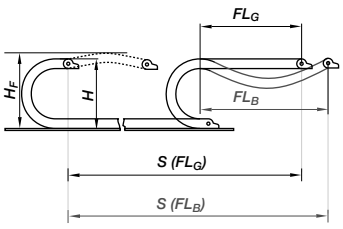
3 m **2828.30.300.0**	**e-chain®**
with 2 separators **282** assembled every 2nd link	**Interior separation**
1 set **28280.30.12C**	**Mounting bracket**

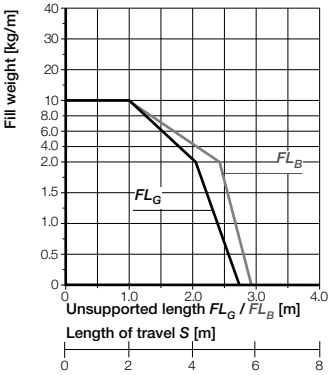
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

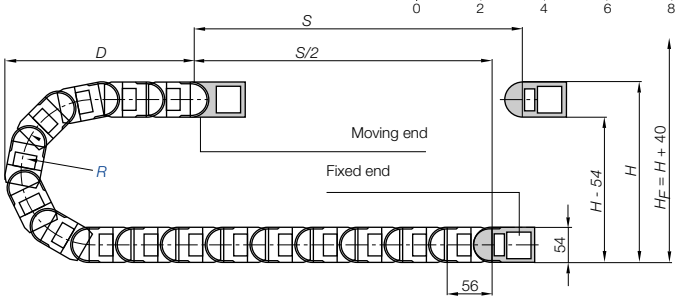
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

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^{-0}_{+20}	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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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, unsupp. ≤ 2 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

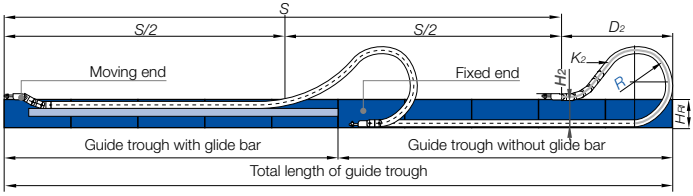
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

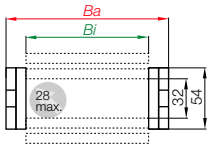
▶ page 7.317

igus® e-chainsystems®

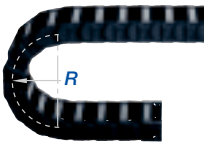
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de



Series 2828 - e-chain® with crossbars every link



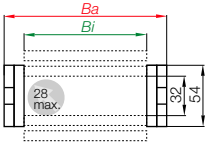
- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

Part No. structure

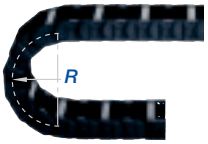
2828.	30.	300.	0

Color
black
Bending
radius
Width
Series





Standard Series 2928 - e-chain® with crossbars every 2nd link



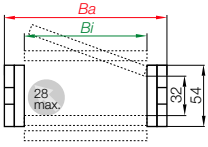
- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

Part No. structure

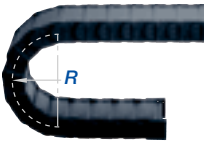
2928.	30.	300.	0

Color
black
Bending
radius
Width
Series





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.

Part No. structure

7728.	30.	300.	0

Color
black
Bending
radius
Width
Series



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.		*Bi* [mm]	*Ba* [mm]	2828 [kg/m]	2928 [kg/m]	R7728 [kg/m]
2828/2928/7728.05.	.0*	50	74	≈ 1,73	≈ 1,64	≈ 2,63
2828/2928.06.	.0	68	92	≈ 1,79	≈ 1,67	–
2828/2928/7728.07.	.0	75	99	≈ 1,84	≈ 1,69	≈ 2,75
2828/2928.087.	.0	87	111	≈ 1,93	≈ 1,73	–
2828/2928/7728.10.	.0	100	124	≈ 2,02	≈ 1,78	≈ 2,83
2828/2928/7728.11.	.0	108	132	≈ 2,08	≈ 1,81	≈ 2,94
2828/2928.112.	.0	112	137	≈ 2,15	≈ 1,84	–
2828/2928/7728.12.	.0	125	149	≈ 2,20	≈ 1,87	≈ 3,03
2828/2928.137.	.0	137	162	≈ 2,29	≈ 1,91	–
2828/2928/7728.15.	.0	150	174	≈ 2,38	≈ 1,96	≈ 3,19
2828/2928.162.	.0	162	187	≈ 2,44	≈ 1,99	–
2828/2928/7728.17.	.0	168	192	≈ 2,51	≈ 2,02	≈ 3,39
2828/2928.18.	.0	175	199	≈ 2,56	≈ 2,05	–
2828/2928.187.	.0	187	212	≈ 2,65	≈ 2,09	–
2828/2928/7728.20.	.0	200	224	≈ 2,74	≈ 2,14	≈ 3,59
2828/2928.212.	.0	212	237	≈ 2,87	≈ 2,20	–
2828/2928.23.	.0	225	249	≈ 2,92	≈ 2,22	–
2828/2928.237.	.0	237	262	≈ 3,05	≈ 2,29	–
2828/2928/7728.25.	.0	250	274	≈ 3,10	≈ 2,32	≈ 4,04
2828/2928.262.	.0	262	286	≈ 3,19	≈ 2,36	–
2828/2928.28.	.0	275	299	≈ 3,28	≈ 2,41	–
2828/2928.29.	.0	287	312	≈ 3,37	≈ 2,45	–
2828/2928/7728.30.	.0	300	324	≈ 3,46	≈ 2,50	≈ 4,43
2828/2928.312.	.0	312	337	≈ 3,59	≈ 2,56	–
2828/2928.325.	.0	325	349	≈ 3,68	≈ 2,60	–
2828/2928.337.	.0	337	362	≈ 3,77	≈ 2,65	–
2828/2928.350.	.0	350	374	≈ 3,86	≈ 2,69	–
2828/2928.362.	.0	362	387	≈ 3,95	≈ 2,74	–
2828/2928.375.	.0	375	399	≈ 4,04	≈ 2,79	–
2828/2928.387.	.0	387	412	≈ 4,11	≈ 2,82	–
2828/2928.400.	.0	400	424	≈ 4,18	≈ 2,86	–

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

Hot Chips up to 850°C

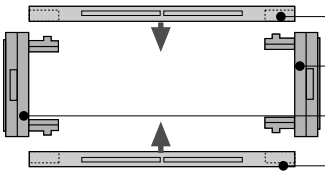
e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example:

Full e-tube made of HT*:
7728.30.150.0.HT
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!



Extender crossbar for large diameter hoses ▶ page 7.324



Single crossbar, e-chain®, **Part No. 385.*Bi***

Single lid, e-tube, **Part No. 775.*Bi***

Right side link*, single part, **Part No. 2828.02.** R

Left side link*, single part, **Part No. 2828.01.** R

Single bottom, e-tube, **Part No. 776.*Bi***

Part No. e-chain® - links, single parts

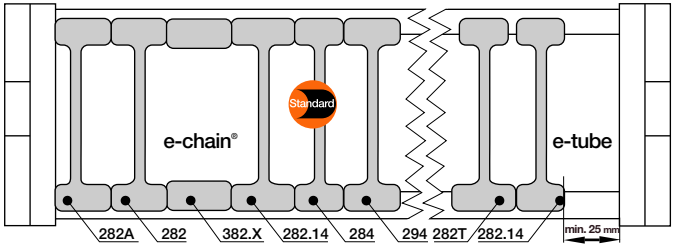
*View from the fixed point of the e-chain®/e-tube

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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 25 mm (e-tube)





Vertical separator 281



Vertical separator 281T



Vertical separator 281.14



Vertical separator 283



Spacer 381.XX

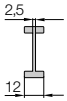


Locking separator 293

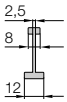


Asymmetric separator 281A

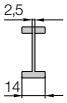
Vertical separator for e-chains®	
unassembled	281
assembled	282



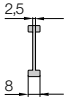
Vertical separator for e-tubes	
unassembled	281T
assembled	282T



Vertical separator for e-chains®/e-tubes	
unassembled	281.14
assembled	282.14



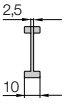
Vertical separator for e-chains®	
unassembled	283
assembled	284



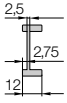
Spacer* for e-chains®	
unassembled	381.XX
assembled	382.XX



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.

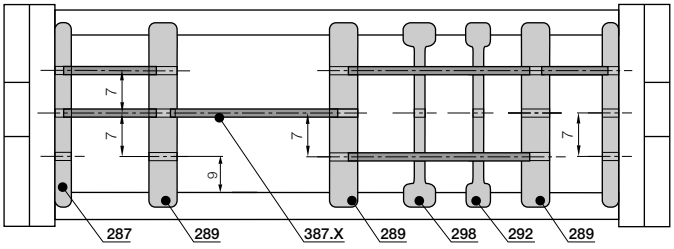
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 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.

igus® e-chainsystems®
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de





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.

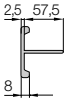
● The unilateral **open slotted separator 297 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



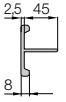
Side plate for e-chains®/e-tubes	
unassembled	286
assembled	287



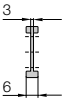
Middle plate for e-chains®/e-tubes	
unassembled	288
assembled	289



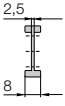
Vertical separator for e-chains®/e-tubes	
unassembled	281.S.57
assembled	282.S.57



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



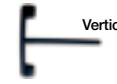
Side plate 286



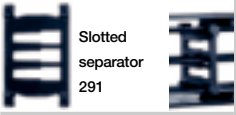
Middle plate 288



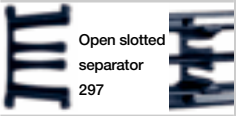
Vertical separator 281.S.57



Vertical separator 281.S.45



Slotted separator 291

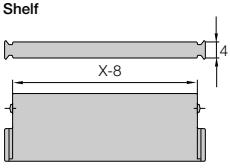


Open slotted separator 297



Shelf 386.X

Shelf



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**

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▶ page 7.317

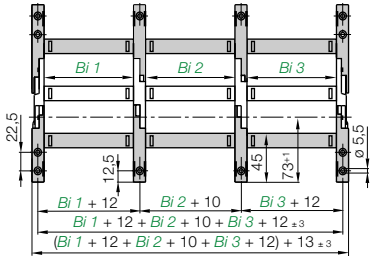




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





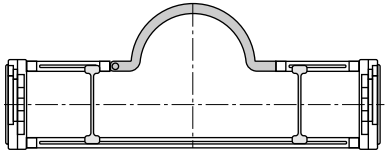
Part No. structure
2828.10 /20 /10. 200 .0
2828.*Bi1*/*Bi2*/*Bi3*. R .0



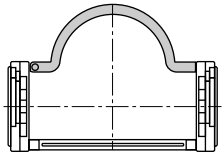
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed 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



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap assembled directly on the side section

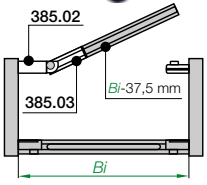
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	105	○	–	+
385.18.RD115	105	○	+	–

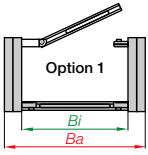
○ = round + = yes / – = no

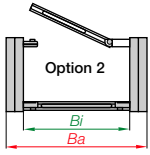


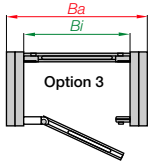
Hinged crossbars

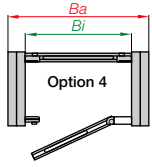
- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): *Bi*-37,5 mm **Part No. 385.03**
- Please consult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











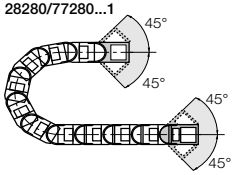
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The Standard - Option KMA* - pivoting

- 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

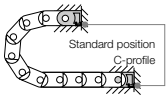
Moving end
28280/77280...1



Fixed end
28280/77280...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



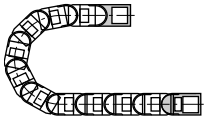
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

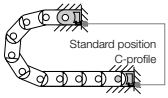
Moving end
29280/78280...1



Fixed end
29280/78280...2

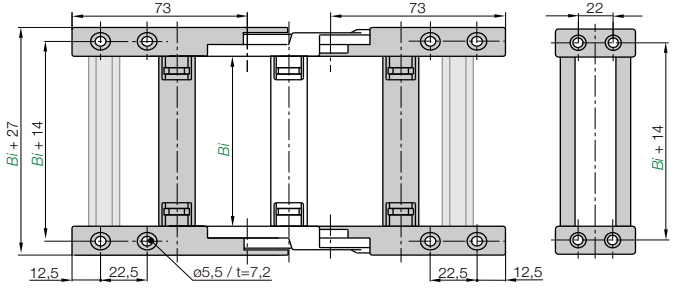


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
28280/77280...2 (pivoting)
29280/78280...2 (locking)

Moving end
(pivoting) 28280/77280...1
(locking) 29280/78280...1



Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.05.	28280/77280	29280/78280	.05.12.C	50
.06.	28280	29280	.06.12.C	68
.07.	28280/77280	29280/78280	.07.12.C	75
.087.	28280	29280	.087.12.C	87
.10.	28280/77280	29280/78280	.10.12.C	100
.11.	28280/77280	29280/78280	.11.12.C	108
.112.	28280	29280	.112.12.C	112
.12.	28280/77280	29280/78280	.12 .12.C	125
.137.	28280	29280	.137.12.C	137
.15.	28280/77280	29280/78280	.15 .12.C	150
.162.	28280	29280	.162.12.C	162
.17.	28280/77280	29280/78280	.17.12.C	168
.18.	28280	29280	.18.12.C	175
.187.	28280	29280	.187.12.C	187
.20.	28280/77280	29280/78280	.20.12.C	200
.212.	28280	29280	.212.12.C	212

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.23.	28280	29280	.23.12.C	225
.237.	28280	29280	.237.12.C	237
.25.	28280/77280	29280/78280	25.12.C	250
.262.	28280	29280	.262.12.C	262
.28.	28280	29280	.28.12.C	275
.29.	28280	29280	.29.12.C	287
.30.	28280/77280	29280/78280	.30.12.C	300
.312.	28280	29280	.312.12.C	312
.325.	28280	29280	.325.12.C	325
.337.	28280	29280	.337.12.C	337
.350.	28280	29280	.350.12.C	350
.362.	28280	29280	362.12.C	362
.375.	28280	29280	.375.12.C	375
.387.	28280	29280	.387.12.C	387
.400.	28280	29280	.400.12.C	400

Dimensions and order configurations

Part No. structure (pivoting)

28280.
77280.
05.
12.
C

- C: Optional with C-profile
- 12.: Full set
- 05.: Width
- 28280 = e-chain®, 77280 = e-tube

Part No. structure (locking)

29280.
78280.
05.
12.
C

- C: Optional with C-profile
- 12.: Full set
- 05.: Width
- 29280 = e-chain®, 78280 = e-tube

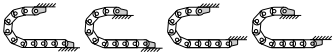
Full set, for both ends:
28280. 05. 12

Single-part order:
28280. 05. 1
Mounting bracket **moving end**
28280. 05. 2
Mounting bracket **fixed end**

▶ page 7.317





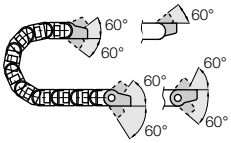


Possible installation conditions -
Further installation angles ▶ installation sketch

Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

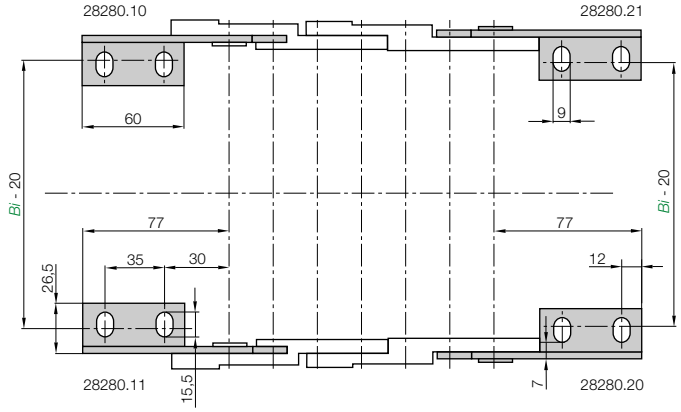
Moving end
28280.1



Fixed end
28280.2

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**

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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



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**

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-Profil

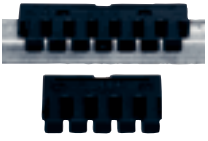
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiewrap 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**



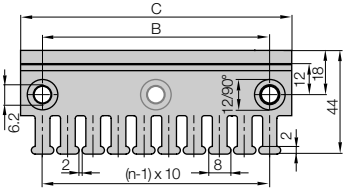
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

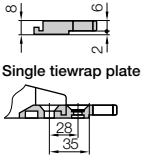
(– = no / + = yes)

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

Details about all strain relief option for this series ▶ chapter 10

▶ Chapter 10

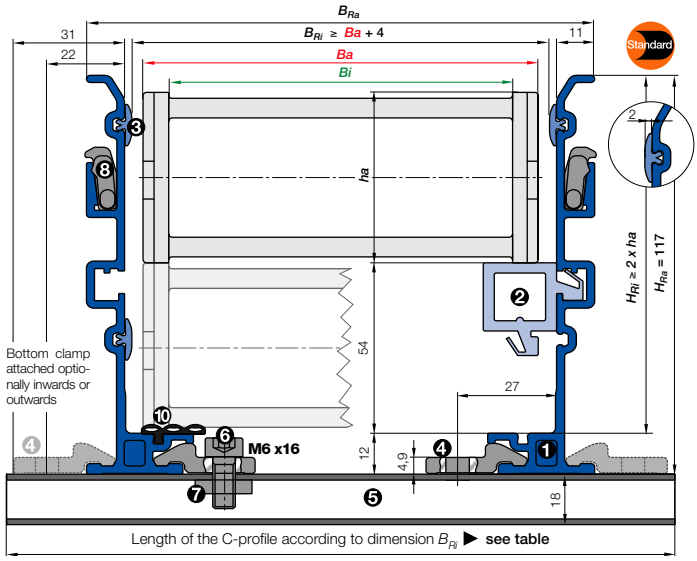
▶ page 7.317

Part No. 972.30.SL | 972.31.SL | Trough height: 117 mm
Aluminum "SuperTrough" | Basic Version

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 troughs sets (left/right)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile



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	Part No. 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

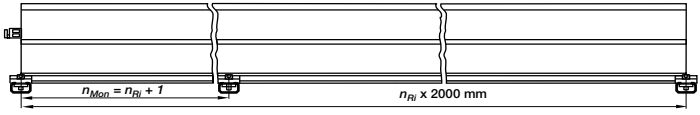
Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of **960.30.XXX** on the right column "attached outwards"



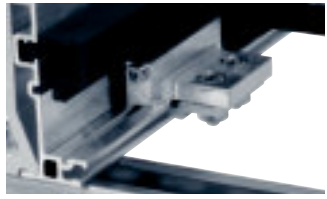
● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M6 x16 ❼ Sliding nut M6 ❽ 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**

Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

igus® GmbH
51147 Cologne
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
Internet: www.igus.eu
E-mail: info@igus.de





High unsupported lenghts and perfect suitability für circular movements (RBR-versions) are some features for the E4/4-System

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

▶ Chapter 9

▶ page 7.317

We recommend for new designs Series E4.42 ▶ page 7.60

E4/4 | Series 3838·3938·R7838

Price index

Series 3838 Series 3938 Series R7838

Side-mounted - unsupported

High torsional rigidity

ESD classification: Electrically conductive ESD/ATEX version upon request

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



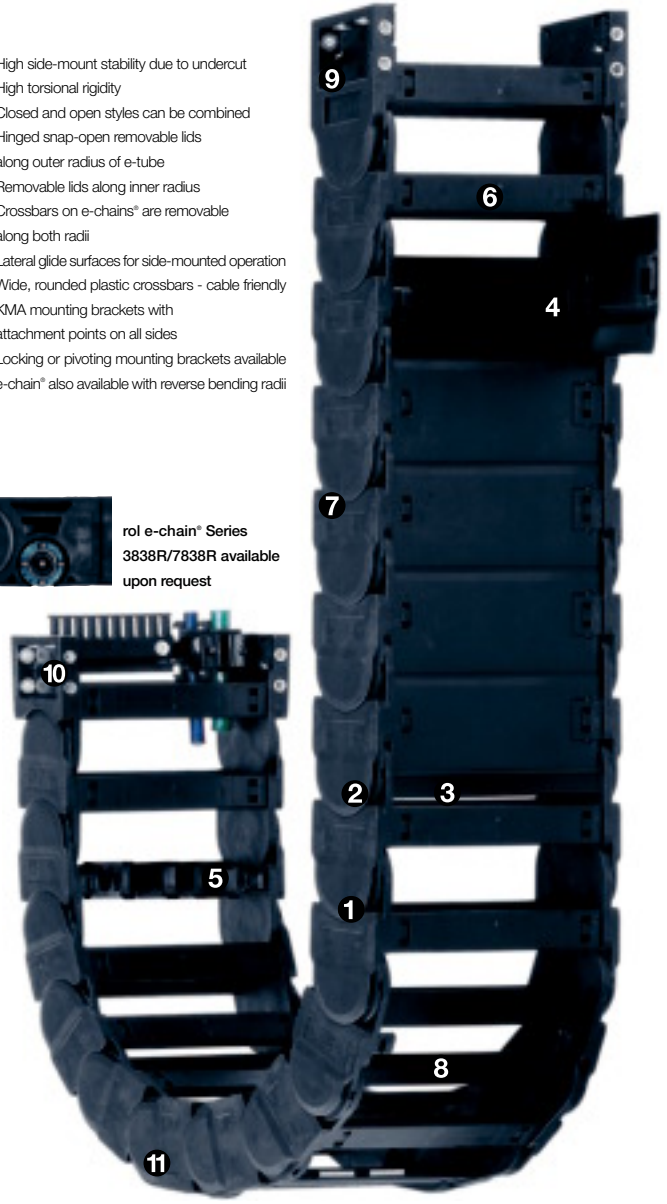
Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



rol e-chain® Series 3838R/7838R available upon request



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**

Order example complete e-chain®

Please indicate chain-lenghts or number of links **Example: 4 m or 60 links**

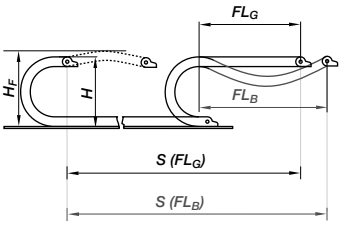
4 m **3838.30.300.0**	**e-chain®**
with 2 separators **382** assembled every 2nd link	**Interior separation**
1 set **38380.30.12C**	**Mounting bracket**

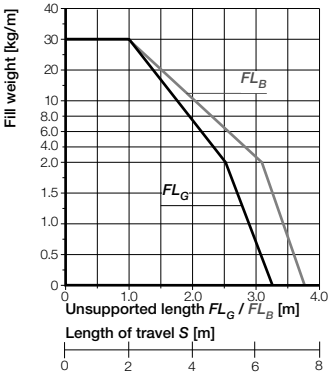
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

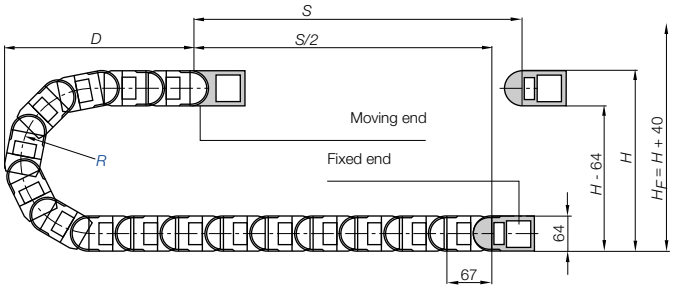
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Unsupported length

FL_G = with straight upper run
FL_B = with permitted sag
Further information ▶ **Design, page 1.12**







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^{-0}_{+25}	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

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
H_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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, unsupp. ≤ 2,5 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

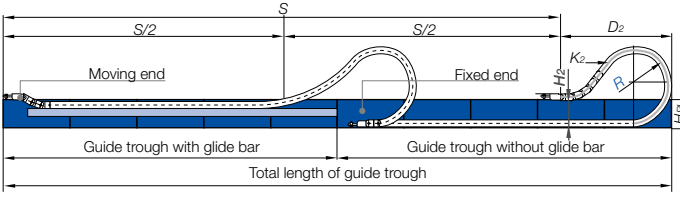
Short travels - unsupported

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. 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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

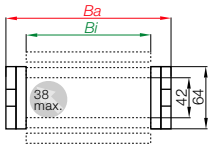
▶ page 7.317

igus® e-chainsystems®

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Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

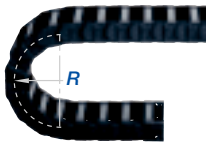
Internet: www.igus.eu
E-mail: info@igus.de



Part No. structure

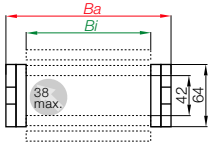
3838.	400.	300.	0
			Color black
		Bending radius	
	Width		
Series			

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



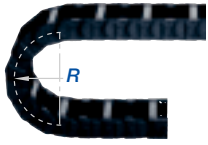


Part No. structure

3938.	400.	300.	0
			Color black
		Bending radius	
	Width		
Series			

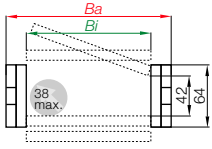
Standard

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

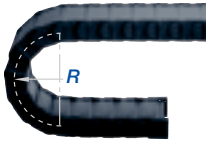




Part No. structure

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.		*Bi* [mm]	*Ba* [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 example:

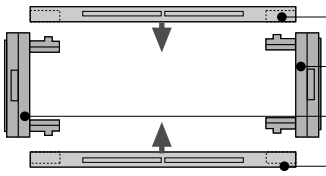
Full e-tube made of HT*:
7838.30.150.0.HT
Lids made of HT:
7838.30.HTE.150.0

*for long travels upon request

Further Information:
www.igus.de/en/HT
Delivery time up to 4 weeks!



Extender crossbar for large diameter hoses ▶ page 7.336

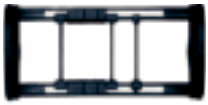


Part No. e-chain® - links, single parts

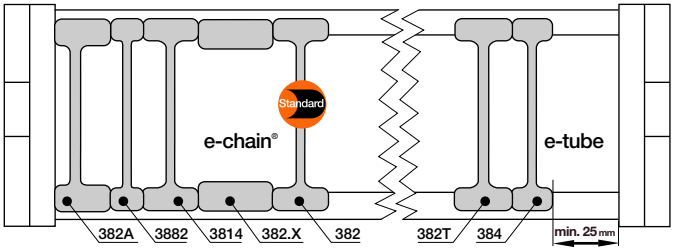
*View from the fixed point of the e-chain®/e-tube

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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 25 mm (e-tube)!

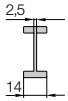




Standard

Vertical separator 381

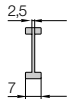
Vertical separator for e-chains®	
unassembled	381
assembled	382





Vertical separator with a narrow base 3881

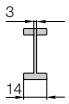
Vertical separator* for e-chains®	
unassembled	3881
assembled	3882





Vertical separator 381T

Vertical separator for e-tubes	
unassembled	381T
assembled	382T





Spacer 381.XX

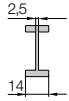
Spacer* for e-chains®	
unassembled	381.XX
assembled	382.XX





Locking separator 3804

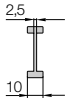
Locking separator for e-chains®	
unassembled	3804
assembled	3814





Locking separator 383

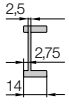
Locking separator for e-tubes	
unassembled	383
assembled	384





Asymmetric separator 381A

Asymmetric separator for e-chains®	
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)

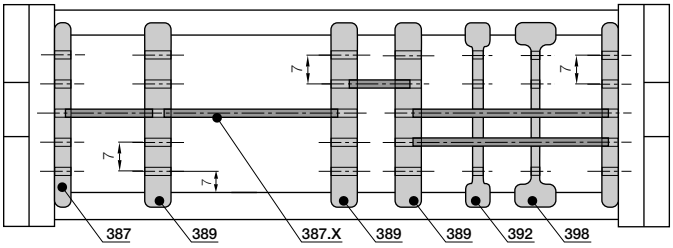
Additionally:

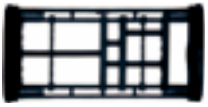
● **Locking separator 3804 for e-chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **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

igus® e-chainsystems®
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Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de





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.

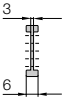
● The unilateral **open slotted separator 397 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



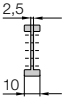
Side plate for e-chains®/e-tubes	
unassembled	**386**
assembled	**387**



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

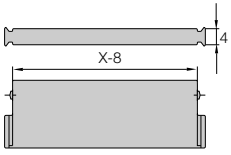


Open slotted separator 397



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**

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▶ page 7.317

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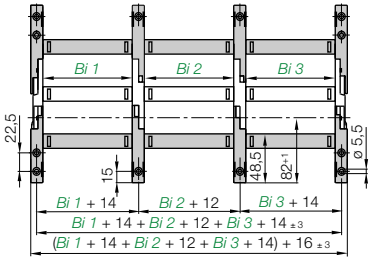




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





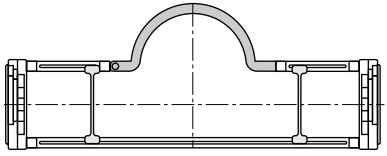
Part No. structure
3838.10 /20 /10. 200 .0
3838.*Bi1*/*Bi2*/*Bi3*. *R* .0



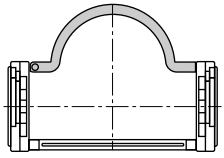
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed 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

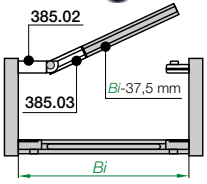
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	115	○	–	+
385.18.RD115	115	○	+	–

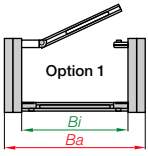
○ = round + = yes / – = no

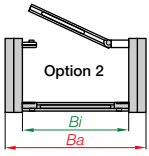


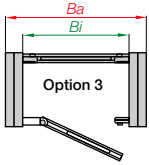
Hinged crossbars

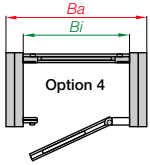
- Typically e-chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): *Bi*-37,5 mm **Part No. 385.03**
- Please consult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











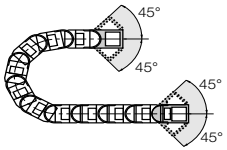
Standard

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

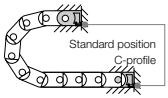


Fixed end
38380/78380...2





The attachment variants arising automatically by the choice of the KMA mounting bracket



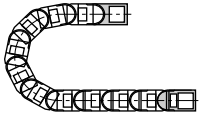
Option KMA - locking

- 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

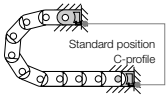


Fixed end
39380/79380...2



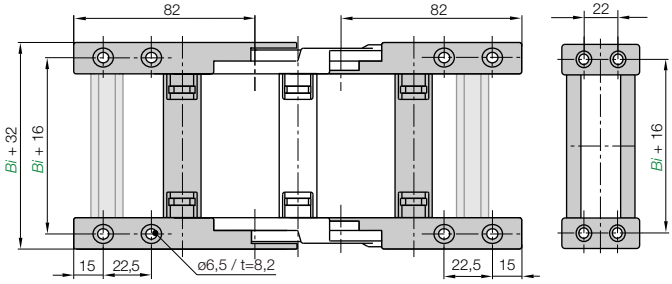


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
38380/78380...2 (pivoting)
39380/79380...2 (locking)

Moving end
(pivoting) 38380/78380...1
(locking) 39380/79380...1



Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.05.	38380/78380	39380/79380	.05.12.C	50
.06.	38380	39380	.06.12.C	68
.07.	38380/78380	39380/79380	.07.12.C	75
.087.	38380	39380	.087.12.C	87
.10.	38380/78380	39380/79380	.10.12.C	100
.11.	38380/78380	39380/79380	.11.12.C	108
.112.	38380	39380	.112.12.C	112
.12.	38380/78380	39380/79380	.12 .12.C	125
.137.	38380	39380	.137.12.C	137
.15.	38380/78380	39380/79380	.15 .12.C	150
.162.	38380	39380	.162.12.C	162
.17.	38380/78380	39380/79380	.17.12.C	168
.18.	38380	39380	.18.12.C	175
.187.	38380	39380	.187.12.C	187
.20.	38380/78380	39380/79380	.20.12.C	200
.212.	38380	39380	.212.12.C	212

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.23.	38380	39380	.23.12.C	225
.237.	38380	39380	.237.12.C	237
.25.	38380/78380	39380/79380	.25.12.C	250
.262.	38380	39380	.262.12.C	262
.28.	38380	39380	.28.12.C	275
.29.	38380	39380	.29.12.C	287
.30.	38380/78380	39380/79380	.30.12.C	300
.312.	38380	39380	.312.12.C	312
.325.	38380	39380	.325.12.C	325
.337.	38380	39380	.337.12.C	337
.350.	38380	39380	.350.12.C	350
.362.	38380	39380	.362.12.C	362
.375.	38380	39380	.375.12.C	375
.387.	38380	39380	.387.12.C	387
.400.	38380	39380	.400.12.C	400

Dimensions and order configurations

Part No. structure (pivoting)

38380.
78380.
05.
12.
C

Optional with C-profile
Full set
Width
38380 = e-chain®
78380 = e-tube

Part No. structure (locking)

39380.
79380.
05.
12.
C

Optional with C-profile
Full set
Width
38380 = e-chain®
77380 = e-tube

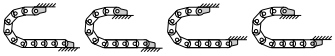
Full set, for both ends:
38380. 05. 12

Single-part order:
38380. 05. 1
Mounting bracket **moving end**
38380. 05. 2
Mounting bracket **fixed end**

▶ page 7.317





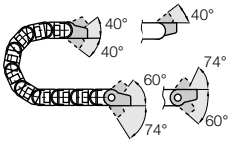


Possible installation conditions -
Further installation angles ▶ installation sketch

Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

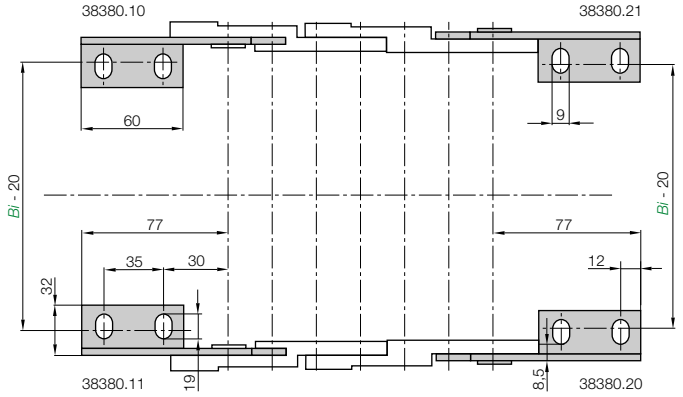
Moving end
38380.1



Fixed end
38380.2

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**

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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



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**

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-Profil

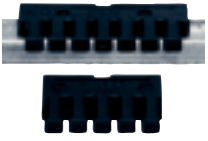
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiewrap 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**



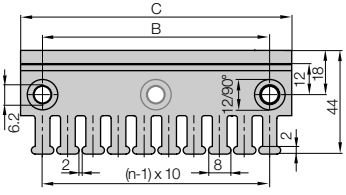
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

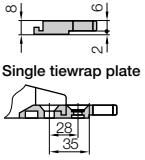
(– = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**







Details about all strain relief option for this series ▶ chapter 10

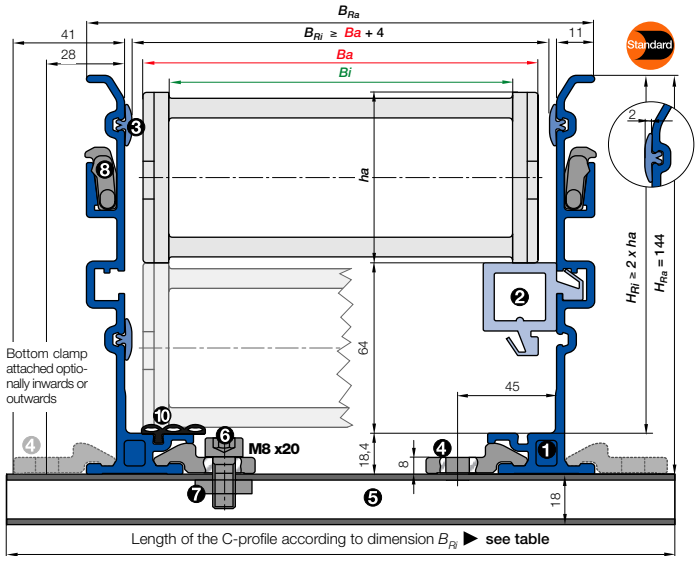
▶ Chapter 10
▶ page 7.317

Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm
Aluminum "SuperTrough" | Basic Version

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 troughs sets (left/right)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile



Installation set "Basic" with C-profile

Bottom Clamp attached optionally **inwards** or **outwards**

3838.05.300.0 ▶ Order example

	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.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

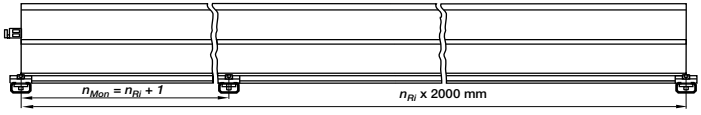
Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of (960.40.XXX) on the right column "attached outwards"



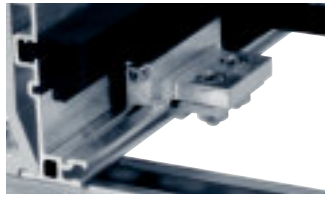
● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M8 x20 ❼ Sliding nut M8 ❽ 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**

Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

igus® GmbH
51147 Cologne
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
Internet: www.igus.eu
E-mail: info@igus.de





E4/4 as ZigZag version in this crane. The E4-Series guarantee very high availabily of the facility, so that the production of new truck can be started up on an average of every seven minutes

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▶ Chapter 9

▶ page 7.317

Price index

Series 4040 Series 4140 Series R8840

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 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-lenghts or number of links **Example: 5 m or 55 links**

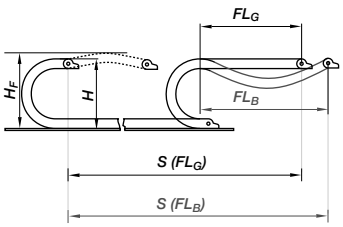
5 m **4040.30.300.0**	**e-chain®**
with 2 separators **411** assembled every 2nd link	**Interior separation**
1 set **40400.30.12C**	**Mounting bracket**

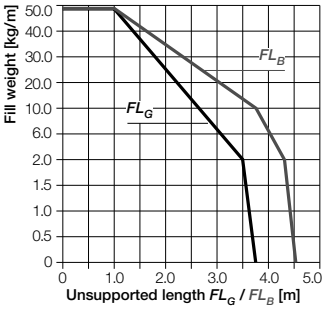
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

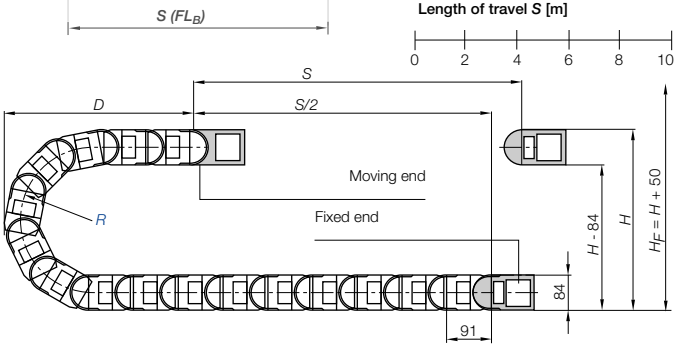
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

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^{-0}_{+25}	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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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, unsupp. ≤ 3 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

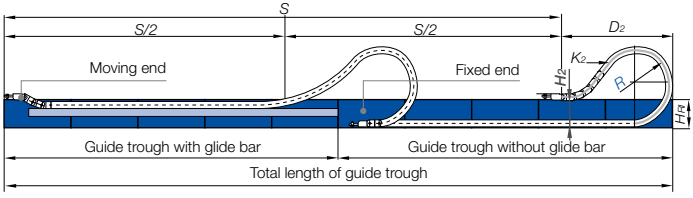
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

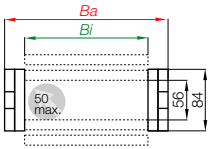
▶ page 7.317

igus® e-chainsystems®

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igus® GmbH
51147 Cologne

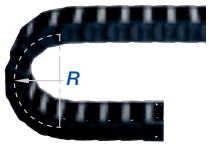
Internet: www.igus.eu
E-mail: info@igus.de



Part No. structure

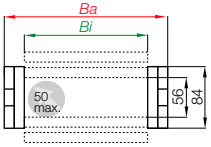
4040.	30.	250.	0
			Color black
			Bending radius
			Width
			Series

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

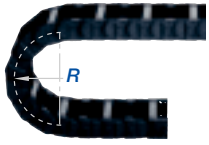




Part No. structure

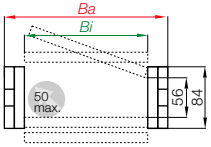
4140.	30.	250.	0
			Color black
			Bending radius
			Width
			Series

Standard 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

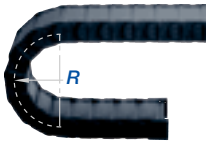




Part No. structure

8840.	30.	250.	0
			Color black
			Bending radius
			Width
			Series

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



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Fax +49- (0) 22 03-96 49-222

Part No.		Bi [mm]	Ba [mm]	4040 [kg/m]	4140 [kg/m]	R8840 [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 850ºC. 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.HTE.150.0
*for long travels upon request
Further Information:
www.igus.de/en/HT
Delivery time up to 4 weeks!



Extreme Glider...

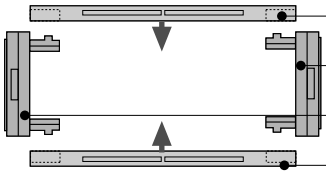
...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!
Order example:
4040.35G.250.0
4040.45G.250.0
Further information:
phone +49-(0) 22 03-96 49-800



* Removable lid only, no hinged option

** not available for R8840

Extender crossbar for large diameter hoses ▶ page 7.348



Single crossbar, e-chain®, **Part No. 450.*Bi***

Single lid, e-tube, **Part No. 885.*Bi***

Right side link*, single part, **Part No. 4040.02.R**

Left side link*, single part, **Part No. 4040.01.R**

Single bottom, e-tube, **Part No. 886.*Bi***

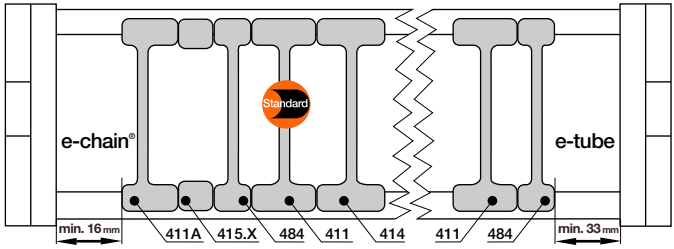
Part No. e-chain®-links, single parts

*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 33 mm (e-tube) and 16 mm (e-chain®)!





Vertical separator
401



Vertical separator
483



Spacer
405.XX



Locking separator
404

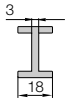


Vertical separator
406

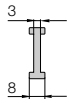


Asymmetric
separator 401A

Vertical separator for e-chains®/e-tubes	
unassembled	**401**
assembled	**411**



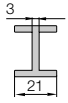
Vertical separator for e-chains®/e-tubes	
unassembled	**483**
assembled	**484**



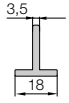
Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**



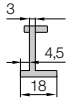
Locking separator for e-chains®	
unassembled	**404**
assembled	**414**



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)

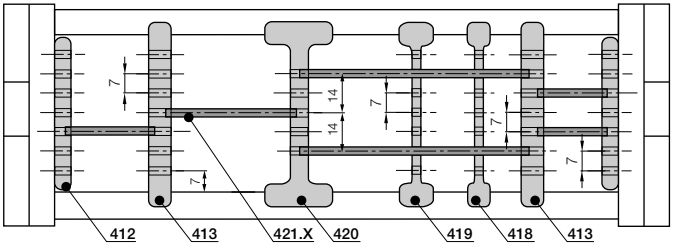
Additionally:

● **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.

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E-mail: info@igus.de





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.

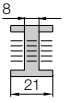
● The unilateral **open slotted separator 409 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



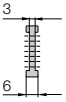
Side plate for e-chains®/e-tubes	
unassembled	402
assembled	412



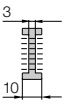
Middle plate for e-chains®/e-tubes	
unassembled	403
assembled	413



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



Side plate
402



Middle plate
403



Locking vertical separator
410



Slotted separator
408



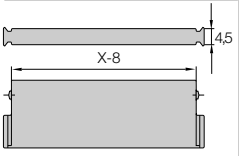


Open slotted separator
409





Shelf 420.X



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**

Additional elements for interior separation



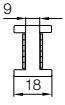
Center crossbar	
unassembled	405
assembled	415

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.

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

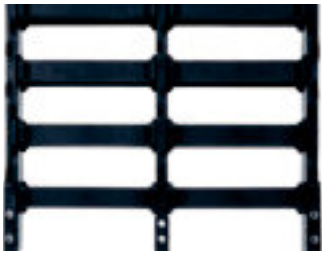
▶ page 7.317

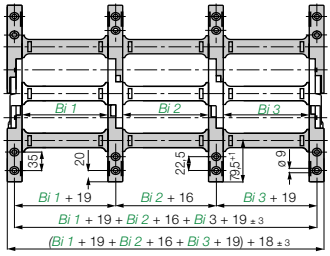




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





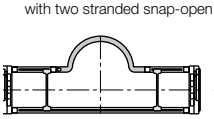
Part No. structure
4040.10 /20 /10. 200 .0
4040.*Bi1*/*Bi2*/*Bi3*. *R* .0



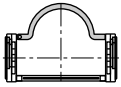
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed applications

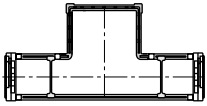
- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



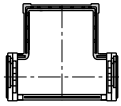
Round extender crossbar with snap-open crossbars



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

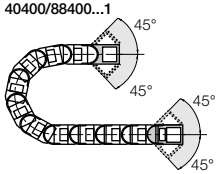
igus® GmbH
51147 Cologne
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
Internet: www.igus.eu
E-mail: info@igus.de

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

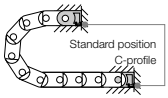
Moving end
40400/88400...1



Fixed end
40400/88400...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



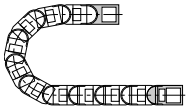
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

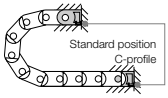
Moving end
41400/89400...1



Fixed end
41400/89400...2

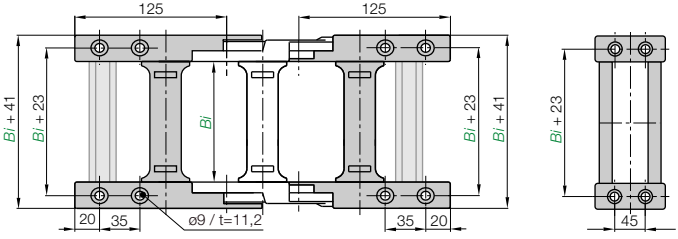


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
40400/88400...2 (pivoting)
41400/89400...2 (locking)

Moving end
(pivoting) 40400/88400...1
(locking) 41400/89400...1



Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.05.	40400	41400	.05.12.C	50
.06.	40400	41400	.06.12.C	65
.07.	40400/88400	41400/89400	.07.12.C	75
.08.	40400	41400	.08.12.C	87
.10.	40400/88400	41400/89400	.10.12.C	100
.11.	40400	41400	.11.12.C	112
.12.	40400/88400	41400/89400	.12.12.C	125
.13.	40400	41400	.13.12.C	137
.15.	40400/88400	41400/89400	.15.12.C	150
.16.	40400	41400	16.12.C	162
.17.	40400/88400	41400/89400	.17.12.C	175
.18.	40400	41400	.18.12.C	187
.20.	40400/88400	41400/89400	.20.12.C	200
.21.	40400	41400	.21.12.C	212
.22.	40400	41400	22.12.C	225
.23.	40400	41400	23.12.C	237
.25.	40400/88400	41400/89400	.25.12.C	250
.26.	40400	41400	.26.12.C	262
.27.	40400/88400	41400/89400	.27.12.C	275
.28.	440400	41400	.28.12.C	287
.30.	40400/88400	41400/89400	.30.12.C	300

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.31.	40400	41400	.31.12.C	312
.32.	40400	41400	.32.12.C	325
.33.	40400	41400	.33.12.C	337
.35.	40400/88400	41400/89400	.35.12.C	350
.36.	40400	41400	.36.12.C	362
.37.	40400	41400	.37.12.C	375
.38.	40400	41400	.38.12.C	387
.40.	40400/88400	41400/89400	.40.12.C	400
.41.	40400	41400	.41.12.C	412
.42.	40400	41400	.42.12.C	425
.43.	40400	41400	43.12.C	437
.45	40400	41400	.45.12.C	450
.46.	40400/88400	41400/89400	.46.12.C	462
.47.	40400	41400	.47.12.C	475
.48.	40400	41400	.48.12.C	487
.50.	40400	41400	.50.12.C	500
.51.	40400	41400	.51.12.C	512
.52.	40400	41400	.52.12.C	525
.53.	40400	41400	.53.12.C	537
.55.	40400	41400	.55.12.C	550
.60.	40400	41400	.60.12.C	600

Dimensions and order configurations

Part No. structure (pivoting)

40400.
88400.
07.
12.
C

- C: Optional with C-profile
- 12.: Full set
- 07.: Width
  - 40400 = e-chain®
  - 88400 = e-tube

Part No. structure (locking)

41400.
89400.
07.
12.
C

- C: Optional with C-profile
- 12.: Full set
- 07.: Width
  - 41400 = e-chain®
  - 89400 = e-tube

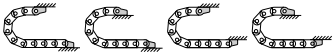
Full set, for both ends:
40400. 05. 12

Single-part order:
40400. 05. 1
Mounting bracket **moving end**
40400. 05. 2
Mounting bracket **fixed end**

▶ page 7.317







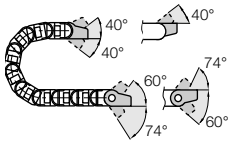
Possible installation conditions -
Further installation angles ▶ installation sketch



Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

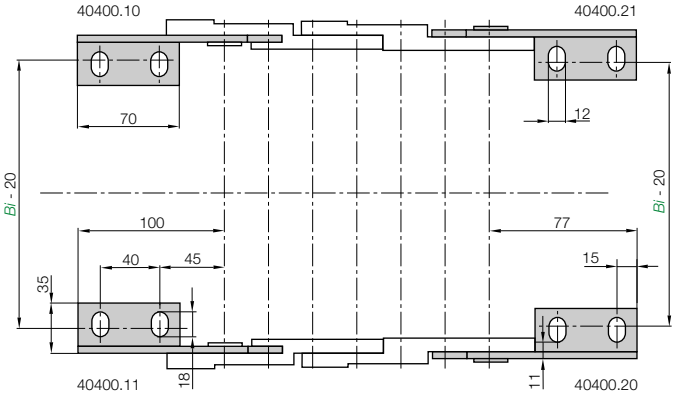
Moving end
40400.1



Fixed end
40400.2

Moving end
40400.1

Fixed end
40400.2



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

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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



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**

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-Profil

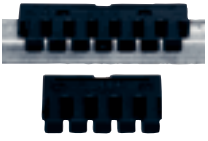
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiewrap 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**



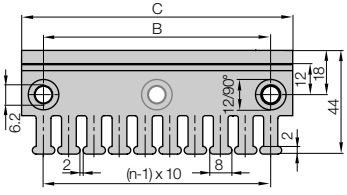
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

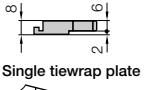
(– = no / + = yes)

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

Details about all strain relief option for this series ▶ chapter 10

▶ Chapter 10

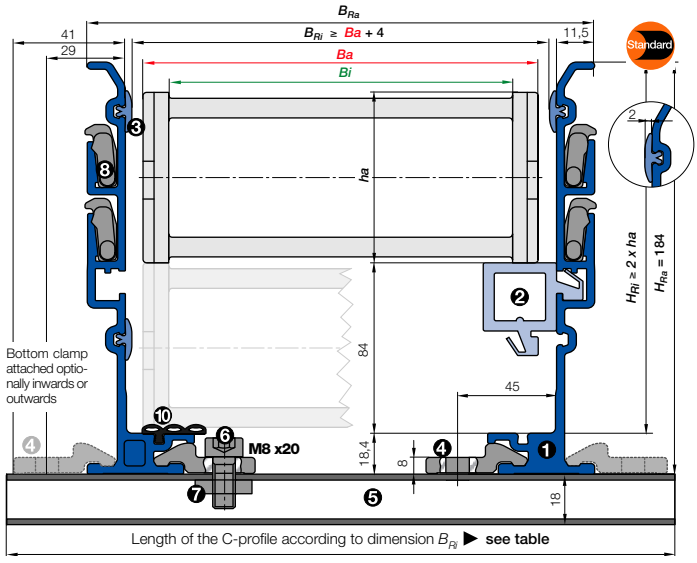
▶ page 7.317

Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm
Aluminum "SuperTrough" | Basic Version

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 troughs sets (left/right)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile





● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M8 x20 ❼ Sliding nut M8 ❽ Interface connector, plastic

Installation set "Basic" with C-profile

Bottom Clamp attached optionally **inwards** or **outwards**

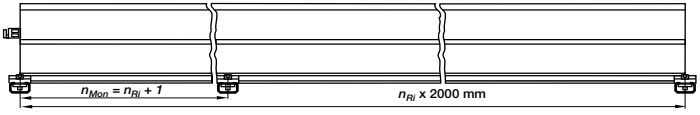
4040.**05**.200.0 ▶ Order example

	B_{Ri} [mm]	Part No. attached inwards	Part No. 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

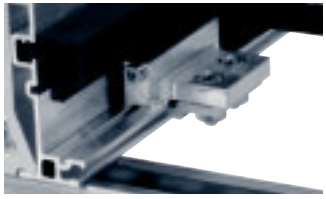
Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of (**960.50.XXX**) on the right column "attached outwards"

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**

Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

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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 agressive 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

▶ Chapter 9

▶ page 7.317

Heavy-Duty Verion - For very long travels or high tadditional loads
E4/4 | **Series 4040HD·R8840HD**

56 56

Price index

Series 4040HD Series R8840HD

"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



rol e-chain® Series 4040RHD and R8840RHD available upon request



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



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-lenghts or number of links **Example: 5 m or 55 links**

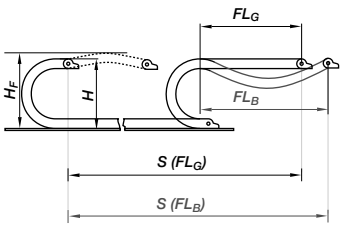
5 m **4040HD.30.300.0**	**e-chain®**
with 2 separators **411** assembled every 2nd link	**Interior separation**
1 set **40400HD.12.E**	**Mounting bracket**

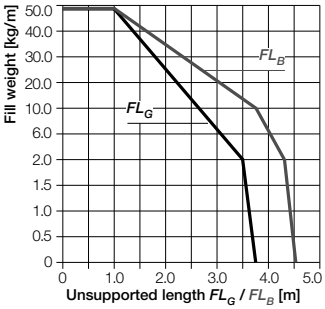
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

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Fax +49- (0) 22 03-96 49-222

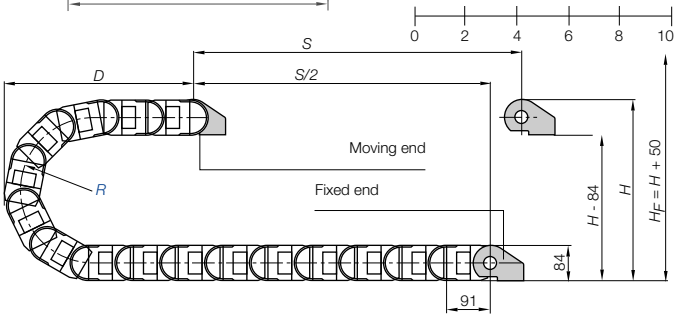
Unsupported length

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_{RI} = Trough inner height
D = Overlength e-chain®
radius in final position
K = $\pi \bullet R +$ "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



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

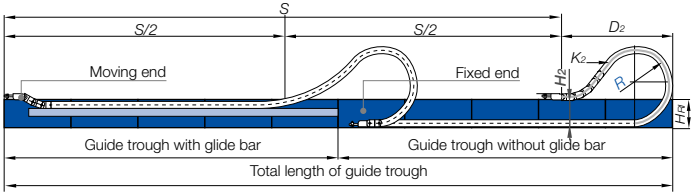
Short travels - unsupported

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.

Standard

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

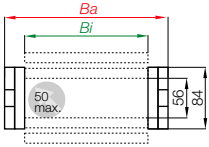
▶ page 7.317

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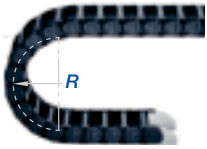


Part No. structure

4040HD.	30.	250.	0

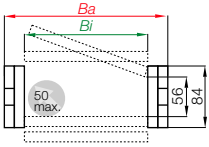
Color black
Bending radius
Width
Series

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



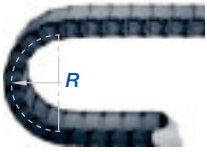


Part No. structure

8840HD.	30.	250.	0

Color black
Bending radius
Width
Series

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.		Bi [mm]	Ba [mm]	4040HD [kg/m]	R8840HD [kg/m]
4040HD.05.....	.0	50	104	≈ 5,03	–
4040HD.06.....	.0	65	119	≈ 5,12	–
4040HD/8840HD.07.	.0*	75	129	≈ 5,19	≈ 5,64
4040HD.08.....	.0	87	141	≈ 5,27	–
4040HD/8840HD.10.	.0	100	154	≈ 5,36	≈ 5,93
4040HD.11.....	.0	112	166	≈ 5,48	–
4040HD/8840HD.12.	.0	125	179	≈ 5,56	≈ 6,29
4040HD.13.....	.0	137	191	≈ 5,69	–
4040HD/8840HD.15.	.0	150	204	≈ 5,73	≈ 6,67
4040HD.16.....	.0	162	216	≈ 5,84	–
4040HD/8840HD.17.	.0	175	229	≈ 5,97	≈ 6,98
4040HD.18.....	.0	187	241	≈ 6,09	–
4040HD/8840HD.20.	.0	200	254	≈ 6,14	≈ 7,29
4040HD.21.....	.0	212	266	≈ 6,21	–
4040HD.22.....	.0	225	279	≈ 6,28	–
4040HD.23.....	.0	237	291	≈ 6,39	–
4040HD/8840HD.25.	.0	250	304	≈ 6,50	≈ 8,02
4040HD.26.....	.0	262	316	≈ 6,59	–
4040HD/8840HD.27.	.0	275	329	≈ 6,70	≈ 8,38
4040HD.28.....	.0	287	341	≈ 6,75	–
4040HD/8840HD.30.	.0	300	354	≈ 6,91	≈ 8,68
4040HD.31.....	.0	312	366	≈ 6,94	–
4040HD.32.....	.0	325	379	≈ 7,05	–
4040HD.33.....	.0	337	391	≈ 7,17	–
4040HD/8840HD.35.	.0	350	404	≈ 7,37	≈ 9,38
4040HD.36.....	.0	362	416	≈ 7,28	–
4040HD.37.....	.0	375	429	≈ 7,38	–
4040HD.38.....	.0	387	441	≈ 7,49	–
4040HD/8840HD.40.	.0	400	454	≈ 7,76	≈ 10,38
4040HD.41.....	.0	412	466	≈ 7,68	–
4040HD.42.....	.0	425	479	≈ 7,98	–
4040HD.43.....	.0	437	491	≈ 7,82	–
4040HD.45.....	.0	450	504	≈ 8,15	–
4040HD/8840HD.46.	.0	462	516	≈ 8,10	≈ 10,85
4040HD.47.....	.0	475	529	≈ 8,14	–
4040HD.48.....	.0	487	541	≈ 8,39	–
4040HD.50.....	.0	500	554	≈ 8,48	–
4040HD.51.....	.0	512	566	≈ 8,40	–
4040HD.52.....	.0	525	579	≈ 8,57	–
4040HD.53.....	.0	537	591	≈ 8,66	–
4040HD.55.....	.0	550	604	≈ 9,08	–
4040HD.60.....	.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

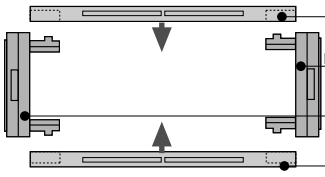
*for long travels upon request

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

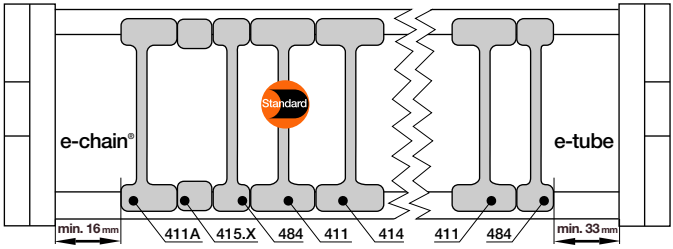
*View from the fixed point of the e-chain®/e-tube

▶ page 7.317

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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

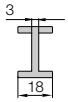


Vertical separator 406

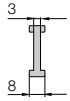


Asymmetric separator 401A

Vertical separator for e-chains®/e-tubes	
unassembled	**401**
assembled	**411**



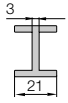
Vertical separator for e-chains®/e-tubes	
unassembled	**483**
assembled	**484**



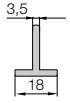
Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**



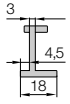
Locking separator for e-chains®	
unassembled	**404**
assembled	**414**



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)

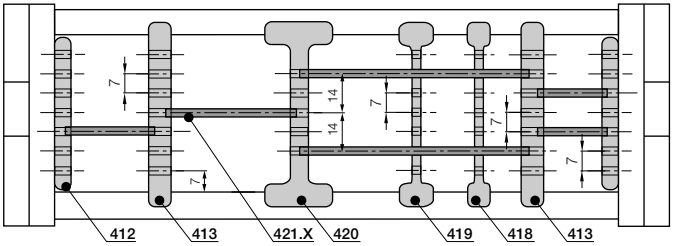
Additionally:

● **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.

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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.

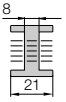
● The unilateral **open slotted separator 409 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



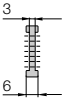
Side plate for e-chains®/e-tubes	
unassembled	**402**
assembled	**412**



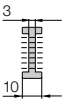
Middle plate for e-chains®/e-tubes	
unassembled	**403**
assembled	**413**



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**



Side plate
402



Middle plate
403



Locking vertical separator
410



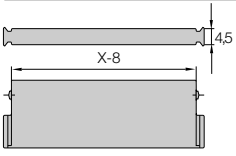
Slotted separator
408



Open slotted separator
409



Shelf 420.X



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**

Additional elements for interior separation



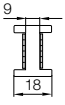
Center crossbar	
unassembled	**405**
assembled	**415**

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**

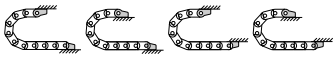
Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

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▶ page 7.317





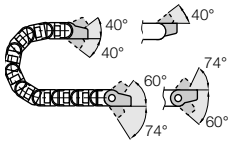


Possible installation conditions -
Further installation angles ▶ installation sketch

Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

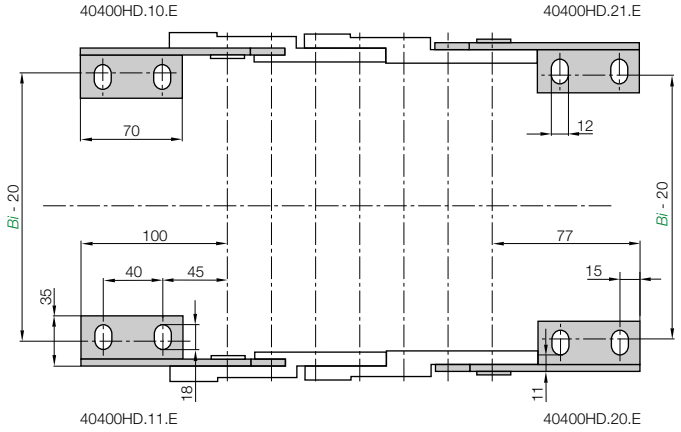
Moving end
40400HD.1.E



Fixed end
40400HD.2.E

Moving end
40400HD.1.E

Fixed end
40400HD.2.E



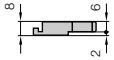
Part No.	Mounting bracket
40400HD.12.E	**Full set,** 4 parts, 2 with pin / 2 with bore
40400HD.1.E	Mounting bracket **moving end,** 1 part left / right
40400HD.2.E	Mounting bracket **fixed end**, 1 part left / right

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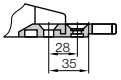
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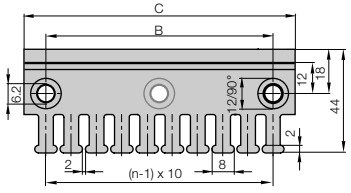
Single tiewrap plate



Shown assembled

Tiewrap plate as individual part

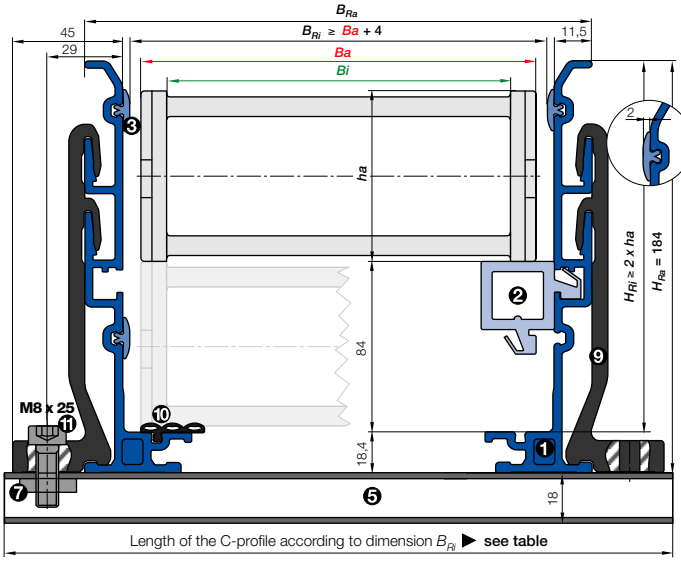
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



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)

Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm
Aluminum "SuperTrough" | Basic Version

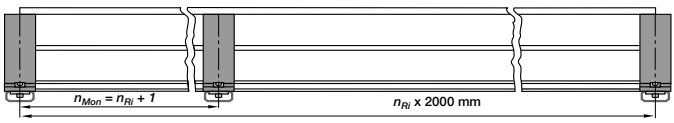




● **Components, trough "Heavy Duty":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Heavy Duty":** ❺ C-profile, steel galvanized ❼ Sliding nut M8 ❾ Installation angle bracket "Heavy Duty", Aluminium ⓫ 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**

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)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = 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

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▶ Chapter 10
▶ Chapter 9
▶ page 7.317

We recommend for new designs Series E4.80 ▶ page 7.96

E4/4 | Series 5050·5150·R9850

80 80

Price index

Series 5050 Series 5150 Series R9850

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-lenghts or number of links **Example: 5 m or 55 links**

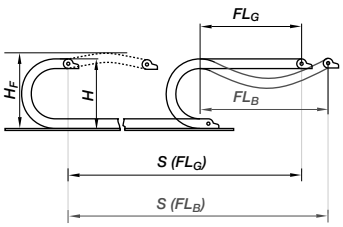
5 m **5050.30.300.0**	**e-chain®**
with 2 separators **511** assembled every 2nd link	**Interior separation**
1 set **50500.30.12C**	**Mounting bracket**

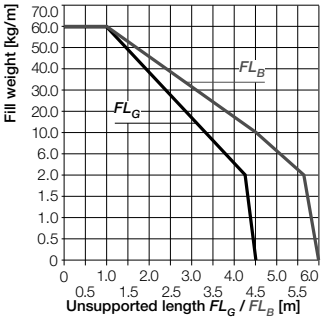
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

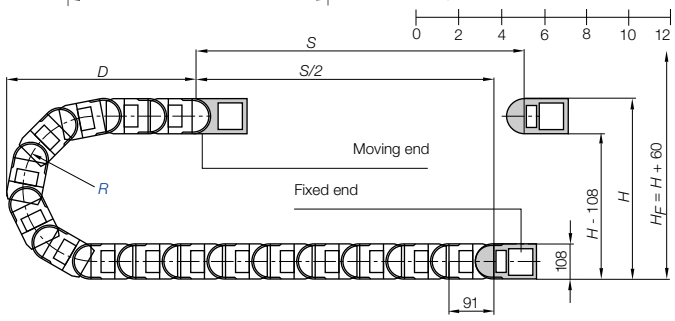
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Unsupported length

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^{-0}_{+25}	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_2^{+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_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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 ≤ 120 m
Vertical, standing ≤ 6 m
Side mounted, unsupp. ≤ 3 m
Rotary requires further calculation
Unsupported length of upper run = upon request

Standard

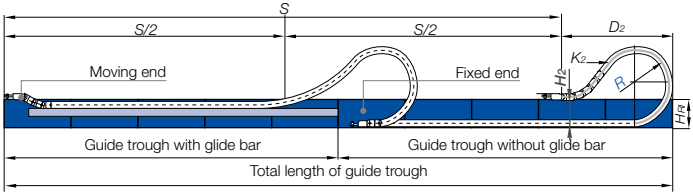
Short travels - unsupported

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

For support of the lower run - **Support Tray tool kit** available ▶ page 9.70

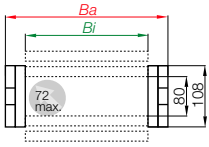
▶ page 7.317

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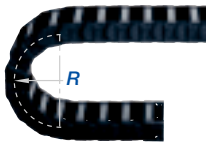
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Part No. structure

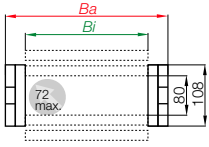
5050.	30.	300.	0
			Color black
		Bending radius	
	Width		
Series			

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



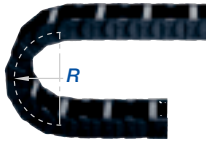


Part No. structure

5150.	30.	300.	0
			Color black
		Bending radius	
	Width		
Series			

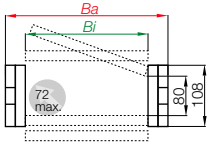
Standard

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

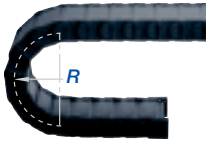




Part No. structure

9850.	30.	300.	0
			Color black
		Bending radius	
	Width		
Series			

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



3D-CAD files, pdf-downloads ▶ www.igus.de/en/5050 · www.igus.de/en/5150 · www.igus.de/en/r9850

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Part No.	*Bi* [mm]	*Ba* [mm]	5050 [kg/m]	5150 [kg/m]	R9850 [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® "igumid 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...

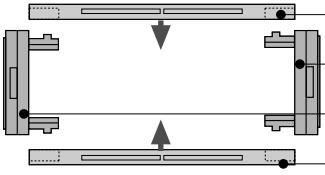
...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!

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



Single crossbar, e-chain®, **Part No. 450.*Bi***

Single lid, e-tube, **Part No. 885.*Bi***

Right side link*, single part, **Part No. 5050.02.** ☐ ***R***

Left side link*, single part, **Part No. 5050.01.** ☐ ***R***

Single bottom, e-tube, **Part No. 886.*Bi***

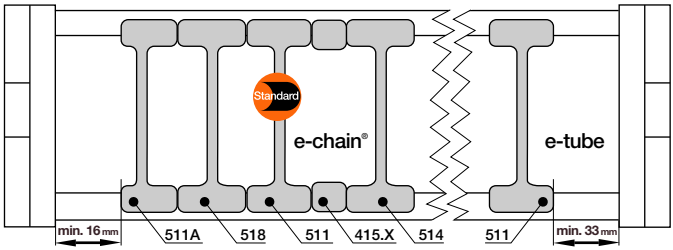
Part No. e-chain®-links, single parts

*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 33 mm (e-tube) and 16 mm (e-chain®)!





Standard

Vertical separator 501



Spacer 405.XX



Locking separator 504

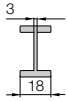


Locking separator 508



Asymmetric separator 501A

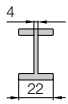
Vertical separator for e-chains®	
unassembled	501
assembled	511



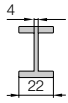
Spacer* for e-chains®	
unassembled	405.XX
assembled	415.XX



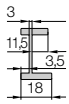
Locking separator for e-chains®	
unassembled	504
assembled	514



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)

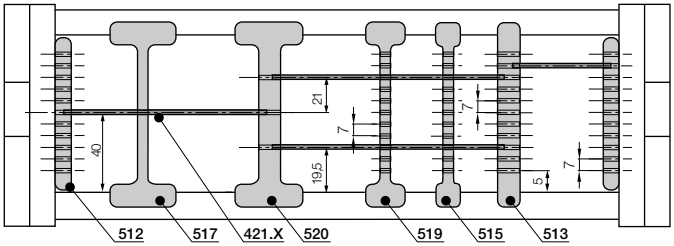
Additionally:

● **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.

igus® e-chainsystems®
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de





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.

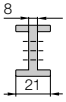
● The unilateral **open slotted separator 509 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



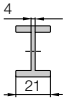
Side plate for e-chains®/e-tubes	
unassembled	502
assembled	512



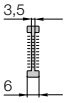
Middle plate for e-chains®/e-tubes	
unassembled	503
assembled	513



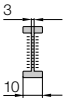
Locking vertical separator for e-chains®	
unassembled	510
assembled	520



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



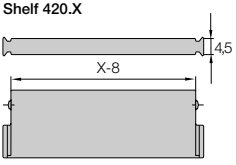
Open slotted separator
509

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**

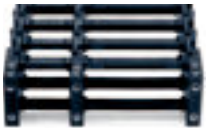
Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



System E4/4
Inner height: 80 mm

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

▶ page 7.317

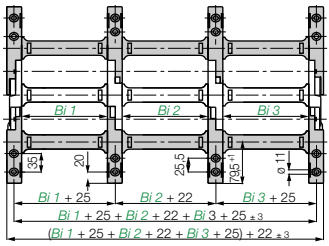




Extension links - for extremely wide e-chains® up to 3,0 m

- 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





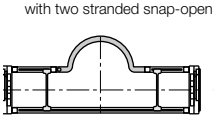
Part No. structure
5050.10 /20 /10. 200 .0
5050.*Bi1*/*Bi2*/*Bi3*. *R* .0



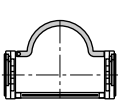
Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hosed applications

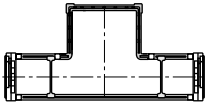
- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



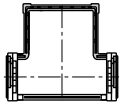
Round extender crossbar with snap-open crossbars



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	220	□	+	–
450.40.D300	270	□	+	–
450.20.HD150	150	□	–	+
450.25.HD200	200	□	–	+
450.30.HD250	220	□	–	+

○ = 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

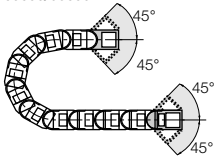
igus® GmbH
51147 Cologne
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
Internet: www.igus.eu
E-mail: info@igus.de

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

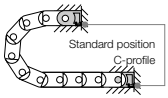
Moving end
50500/98500...1



Fixed end
50500/98500...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



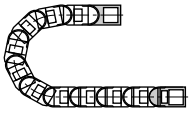
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universally mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

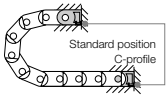
Moving end
51500/99500...1



Fixed end
51500/99500...2

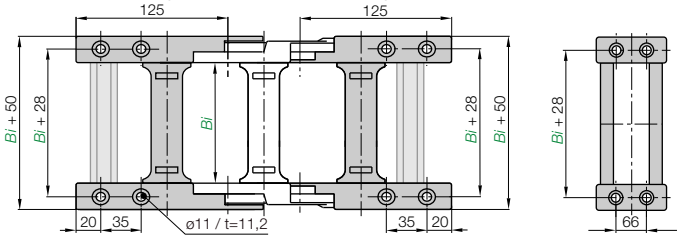


The attachment variants arising automatically by the choice of the KMA mounting bracket



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 pivoting	locking	C-profile option	Bi [mm]
.05.	50500	51500	.05.12.C	50
.06.	50500	51500	.06.12.C	65
.07.	50500/98500	51500/99500	.07.12.C	75
.08.	50500	51500	.08.12.C	87
.10.	50500/98500	51500/99500	.10.12.C	100
.11.	50500	51500	.11.12.C	112
.12.	50500/98500	51500/99500	.12.12.C	125
.13.	50500	51500	.13.12.C	137
.15.	50500/98500	51500/99500	.15.12.C	150
.16.	50500	51500	.16.12.C	162
.17.	50500/98500	51500/99500	.17.12.C	175
.18.	50500	51500	.18.12.C	187
.20.	50500/98500	51500/99500	.20.12.C	200
.21.	50500	51500	21.12.C	212
.22.	50500	51500	.22.12.C	225
.23.	50500	51500	.23.12.C	237
.25.	50500/98500	51500/99500	.25.12.C	250
.26.	50500	51500	.26.12.C	262
.27.	50500	51500	.27.12.C	275
.28.	50500	51500	.28.12.C	287
.30.	50500/98500	51500/99500	.30.12.C	300

Width index	Part No. full set pivoting	locking	C-profile option	Bi [mm]
.31.	50500	51500	.31.12.C	312
.32.	50500	51500	.32.12.C	325
.33.	50500	51500	33.12.C	337
.35.	50500/98500	51500/99500	.35.12.C	350
.36.	50500	51500	.36.12.C	362
.37.	50500	51500	.37.12.C	375
.38.	50500	51500	.38.12.C	387
.40.	50500/98500	51500/99500	.40.12.C	400
.41.	50500	51500	.41.12.C	412
.42.	50500	51500	.42.12.C	425
.43.	50500	51500	.43.12.C	437
.45	50500	51500	45.12.C	450
.46.	50500/98500	51500/99500	.46.12.C	462
.47.	50500	51500	.47.12.C	475
.48.	50500	51500	48.12.C	487
.50.	50500	51500	.50.12.C	500
.51.	50500	51500	51.12.C	512
.52.	50500	51500	.52.12.C	525
.53.	50500	51500	.53.12.C	537
.55.	50500	51500	.55.12.C	550
.60.	50500	51500	.60.12.C	600

Dimensions and order configurations

Part No. structure (pivoting)

50500.
98500. | 07. | 12. | C

- C: Optional with C-profile
- 12.: Full set
- 07.: Width
- 50500 = e-chain® 98500 = e-tube

Part No. structure (locking)

51500.
99500. | 07. | 12. | C

- C: Optional with C-profile
- 12.: Full set
- 07.: Width
- 51500 = e-chain® 99500 = e-tube

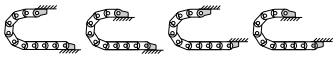
Full set, for both ends:
50500. 07. 12

Single-part order:
50500. 07. 1
Mounting bracket **moving end**
50500. 07. 2
Mounting bracket **fixed end**

▶ page 7.317





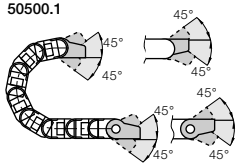


Possible installation conditions -
Further installation angles ▶ installation sketch

Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

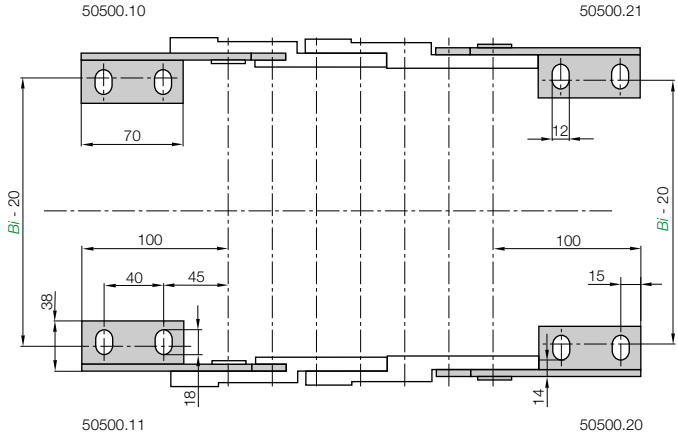
Moving end
50500.1



Fixed end
50500.2

Moving end
50500.1

Fixed end
50500.2



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

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

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222
igus® GmbH
51147 Cologne
Internet: www.igus.eu
E-mail: info@igus.de

3D-CAD files, pdf-downloads ▶ www.igus.de/en/5050 · www.igus.de/en/5150 · www.igus.de/en/r9850

Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222

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



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**

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-Profil

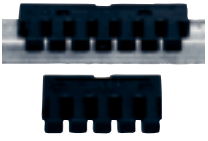
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

chainfix tiewrap 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**



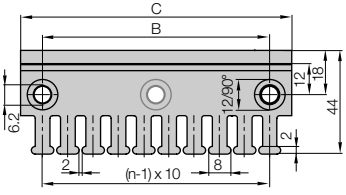
Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

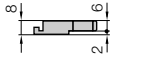
(– = no / + = yes)

Tiewrap plate as individual part

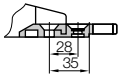
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**







Single tiewrap plate



Shown assembled

Details about all strain relief option for this series ▶ chapter 10

▶ Chapter 10

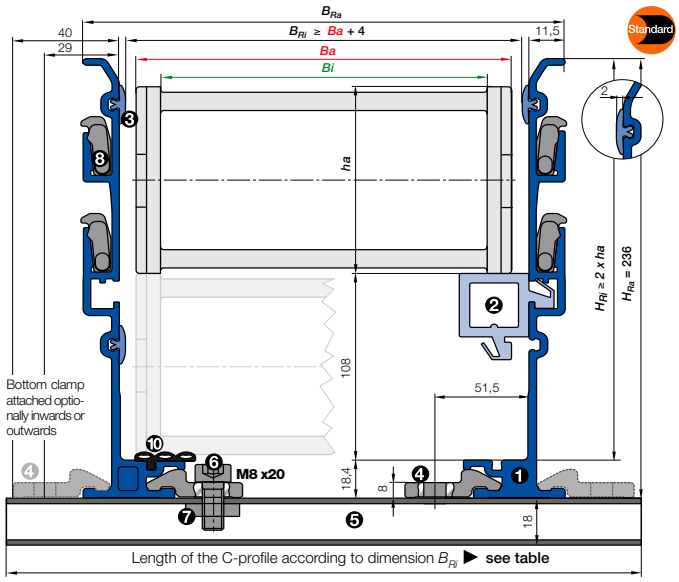
▶ page 7.317

Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm
Aluminum "SuperTrough" | Basic Version

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 troughs sets (left/right)

! $H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = Guide trough set ● = Glide bar
● = Installation set "Basic" ● = C-profile





● **Components, trough "Basic":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Basic":** ❹ Bottom clamp, aluminum ❺ C-profile, steel galvanized ❻ Screw M8 x20 ❼ Sliding nut M8 ❽ Interface connector, plastic

Installation set "Basic" with C-profile

Bottom Clamp attached optionally **inwards** or **outwards**

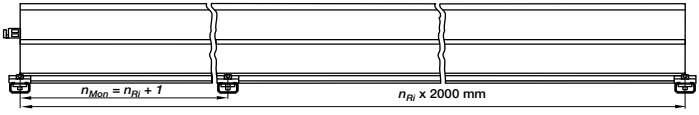
5050.**30**.300.0 ▶ Order example

	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	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

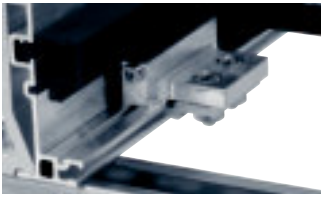
Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of (**960.50.XXX**) on the right column "attached outwards"

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 **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 "Basic" complete **(guide trough-sets + 1)** **Order text: 17 installation sets "Basic"**	Part No.	960.50.425
Module for the fixed end **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



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**

Details about Alu "SuperTrough" and further guidance possibilities ▶ chapter 9, Guide Troughs

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Internet: www.igus.eu
E-mail: info@igus.de

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Fax +49- (0) 22 03-96 49-222



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



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

Heavy-Duty Verion - For very long travels or high tadditional loads
E4/4 | **Series 5050HD·R9850HD**

80 80

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

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



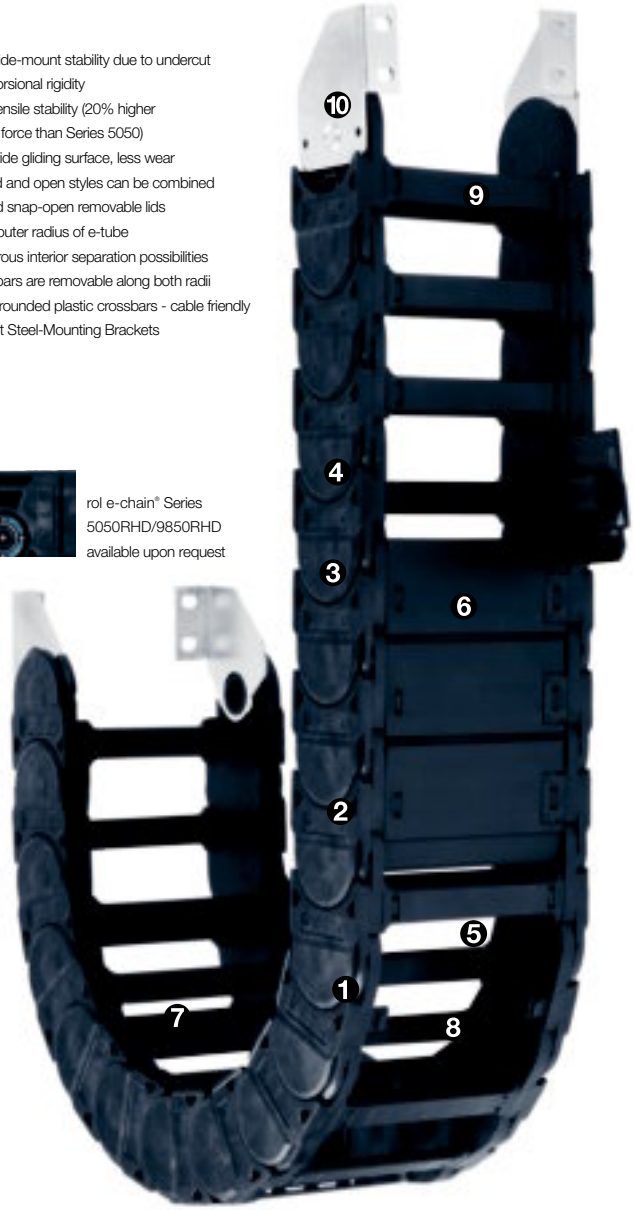
Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screw-driver into the slot, release by lever action



rol e-chain® Series 5050RHD/9850RHD available upon request



When to use the Series 5050HD/R9850HD:

- 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:

- 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**

Order example complete e-chain®

Please indicate chain-lenghts or number of links **Example: 5 m or 55 links**

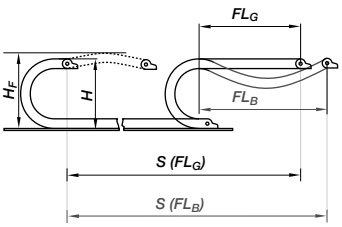
5 m **5050HD.30.300.0**	**e-chain®**
with 2 separators **511** assembled every 2nd link	**Interior separation**
1 set **50500HD.12.E**	**Mounting bracket**

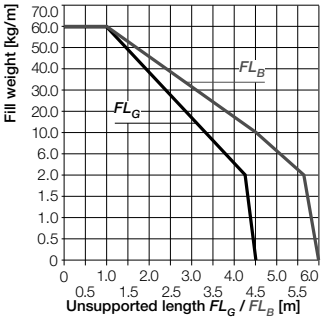
Available from stock. Delivery in 24h or today! (Delivery time means time until shipping of goods)

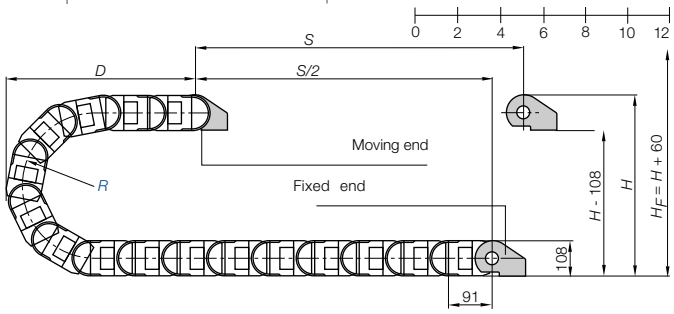
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Fax +49- (0) 22 03-96 49-222

Unsupported length

FL_G = with straight upper run
FL_B = with permitted sag
Further information ▶ **Design, page 1.12**







Pitch = 91 mm/Glied **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

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
H_{RI} = Trough inner height
D = Overlength e-chain® radius in final position
K = $\pi \bullet R$ + "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

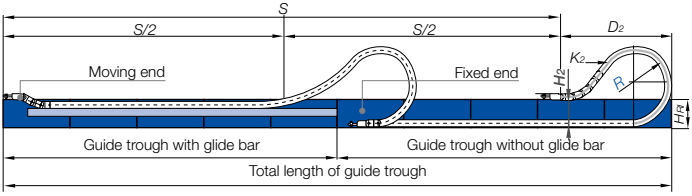
Short travels - unsupported

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. 500 m

Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.

Standard

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/s²]
Speed / acceleration FL_B	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

Details of material properties
▶ **page 1.38**

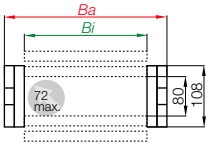
▶ page 7.317

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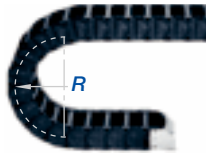


Part No. structure

5050HD.	30.	300.	0

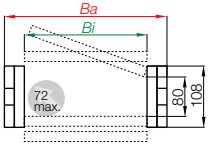
Color black
Bending radius
Width
Series

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



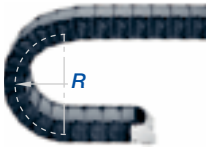


Part No. structure

9850HD.	30.	300.	0

Color black
Bending radius
Width
Series

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.		*Bi* [mm]	*Ba* [mm]	5050HD [kg/m]	R9850HD [kg/m]
5050HD.05.	.0	50	110	≈ 6,65	–
5050HD.06.	.0	65	125	≈ 6,74	–
5050HD/9850HD.07	.0	75	135	≈ 6,81	≈ 7,25
5050HD.08.	.0	87	147	≈ 6,89	–
5050HD/9850HD.10.	.0	100	160	≈ 6,99	≈ 7,55
5050HD.11.	.0	112	172	≈ 7,10	–
5050HD/9850HD.12.	.0	125	185	≈ 7,18	≈ 7,91
5050HD.13.	.0	137	197	≈ 7,32	–
5050HD/9850HD.15.	.0	150	210	≈ 7,35	≈ 8,29
5050HD.16.	.0	162	222	≈ 7,47	–
5050HD/9850HD.17.	.0	175	235	≈ 7,60	≈ 8,60
5050HD.18.	.0	187	247	≈ 7,71	–
5050HD/9850HD.20.	.0	200	260	≈ 7,77	≈ 8,91
5050HD.21.	.0	212	272	≈ 7,84	–
5050HD.22.	.0	225	285	≈ 7,91	–
5050HD.23.	.0	237	297	≈ 8,02	–
5050HD/9850HD.25.	.0	250	310	≈ 8,13	≈ 9,64
5050HD.26.	.0	262	322	≈ 8,22	–
5050HD/9850HD.27	.0	275	335	≈ 8,32	≈ 10,00
5050HD.28.	.0	287	347	≈ 8,38	–
5050HD/9850HD.30.	.0	300	360	≈ 8,53	≈ 10,30
5050HD.31.	.0	312	372	≈ 8,57	–
5050HD.32.	.0	325	385	≈ 8,67	–
5050HD.33.	.0	337	397	≈ 8,79	–
5050HD/9850HD.35.	.0	350	410	≈ 8,99	≈ 11,00
5050HD.36.	.0	362	422	≈ 8,90	–
5050HD.37.	.0	375	435	≈ 9,00	–
5050HD.38.	.0	387	447	≈ 9,11	–
5050HD/9850HD.40.	.0	400	460	≈ 9,38	≈ 12,00
5050HD.41.	.0	412	472	≈ 9,31	–
5050HD.42.	.0	425	485	≈ 9,60	–
5050HD.43.	.0	437	497	≈ 9,44	–
5050HD.45.	.0	450	510	≈ 9,55	–
5050HD/9850HD.46.	.0	462	522	≈ 9,72	≈ 12,47
5050HD.47.	.0	475	535	≈ 9,76	–
5050HD.48.	.0	487	547	≈ 10,01	–
5050HD.50.	.0	500	560	≈ 10,11	–
5050HD.51.	.0	512	572	≈ 10,02	–
5050HD.52.	.0	525	585	≈ 10,19	–
5050HD.53.	.0	537	597	≈ 10,29	–
5050HD.55.	.0	550	610	≈ 10,71	–
5050HD.60.	.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 example:

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

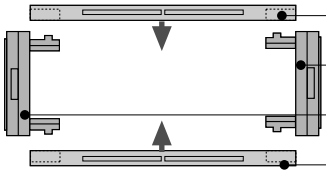
Further Information:
www.igus.de/en/HT

Delivery time up to 4 weeks!



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

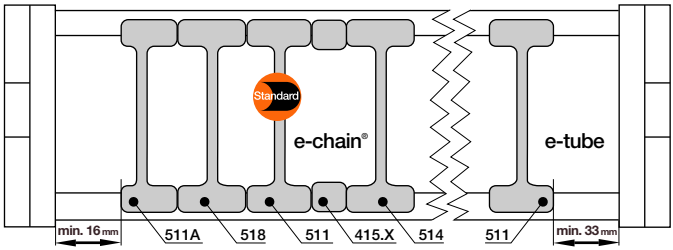
*View from the fixed point of the e-chain®/e-tube

▶ page 7.317

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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®)!

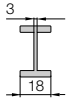




Standard

Vertical separator 501

Vertical separator for e-chains®	
unassembled	**501**
assembled	**511**





Spacer 405.XX

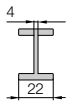
Spacer* for e-chains®	
unassembled	**405.XX**
assembled	**415.XX**





Locking separator 504

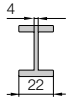
Locking separator for e-chains®	
unassembled	**504**
assembled	**514**





Locking separator 508

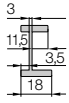
Locking separator for e-chains®	
unassembled	**508**
assembled	**518**





Asymmetric separator 501A

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®.

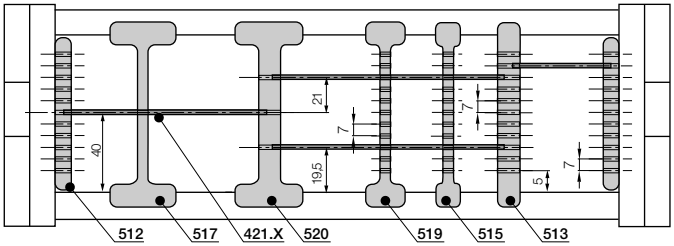
● **Asymmetric separator 501A for e-chains®** (not for e-tubes) with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.

igus® e-chainsystems®

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51147 Cologne

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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.

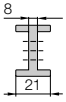
● The unilateral **open slotted separator 509 can be retrofitted** into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



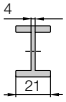
Side plate for e-chains®/e-tubes	
unassembled	502
assembled	512



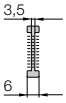
Middle plate for e-chains®/e-tubes	
unassembled	503
assembled	513



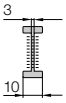
Locking vertical separator for e-chains®	
unassembled	510
assembled	520



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



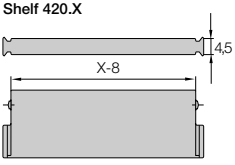
Open slotted separator
509

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.

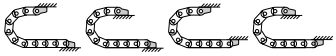


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▶ page 7.317





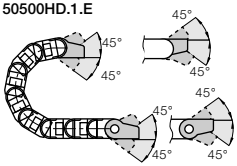


Possible installation conditions -
Further installation angles ▶ installation sketch

Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

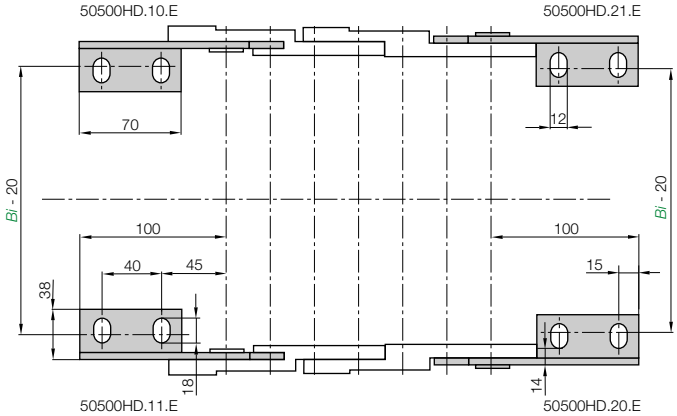
Moving end
50500HD.1.E



Fixed end
50500HD.2.E

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

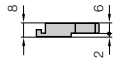
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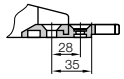
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E4/4 | **Series 5050HD·R9850HD** | **Accessories** | Strain Relief





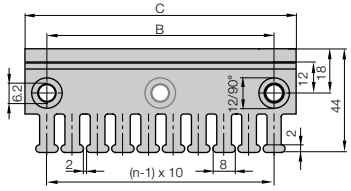
Single tiewrap plate



Shown assembled

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**

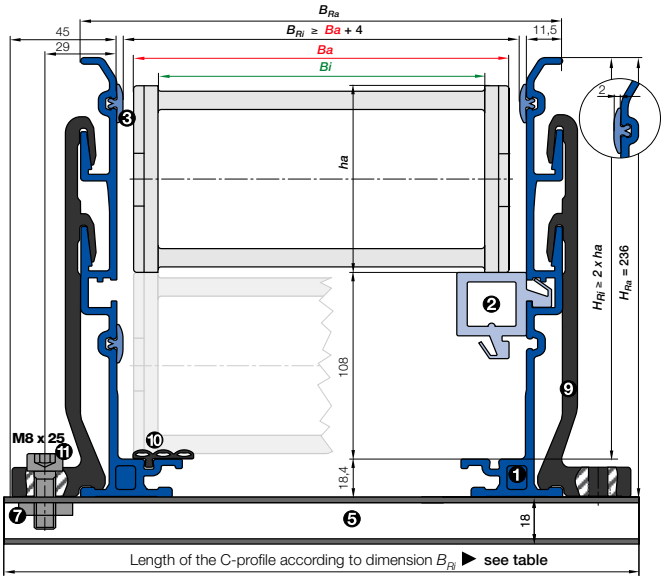


Tiewrap plate	No. of teeth *n*	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	–
3075.ZB	7	75	55	–
3100.ZB	10	100	80	–
3115.ZB	11	115	95	–
3125.ZB	12	125	105	–
3150.ZB	15	150	130	–
3175.ZB	17	175	155	–
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(– = no / + = yes)

Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm

Aluminum "SuperTrough" | "Heavy-Duty" Version

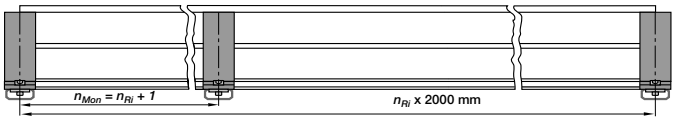




● **Components, trough "Heavy Duty":** ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❿ Optional: Silencer profile, rubber ● **Components, installation set "Heavy Duty":** ❺ C-profile, steel galvanized ❼ Sliding nut M6 ❾ Installation angle bracket "Heavy Duty", Aluminium ⓫ 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**

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 troughs sets (left/right)

$H_{Ri} \geq 2 \bullet ha$
$B_{Ri} \geq Ba + 4$

● = 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

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▶ Chapter 10
▶ Chapter 9
▶ page 7.317