



Price index

Cleanroom test
upon requestESD classification:
Electrically conductive ESD/ATEX
version upon request

Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action. Repeat action for the other side



When to use the Series 640:

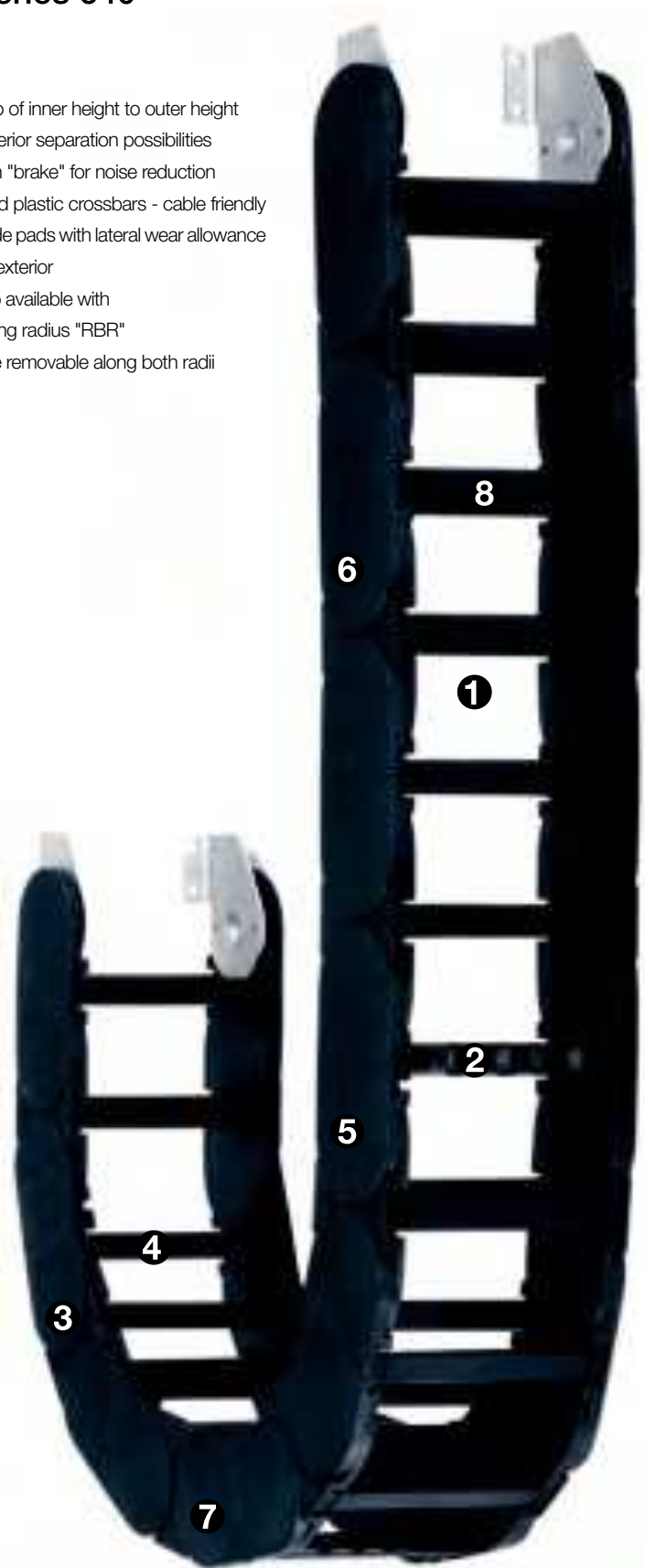
- If a low-noise version is required
- At very high speeds and/or accelerations
- For long travels
- For high additional loads



When not to use it:

- If a simple and low-cost solution is required
 - ▶ Series 1640, page 7.114
- If higher stability is required
 - ▶ Series 600/601/R608, page 7.294
- If an enclosed solution is required
 - ▶ Series R608, page 7.294

- ① Optimum ratio of inner height to outer height
- ② Numerous interior separation possibilities
- ③ Stop dog with "brake" for noise reduction
- ④ Wide, rounded plastic crossbars - cable friendly
- ⑤ Optimized glide pads with lateral wear allowance
- ⑥ Dirt-repellent exterior
- ⑦ e-chains® also available with reverse bending radius "RBR"
- ⑧ Crossbars are removable along both radii



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 4 m or 28 links

4 m 640.33.300.0



e-chain®

with 2 separators 6411 assembled every 2nd link

Interior separation

1 set 6000.1.12



Mounting bracket

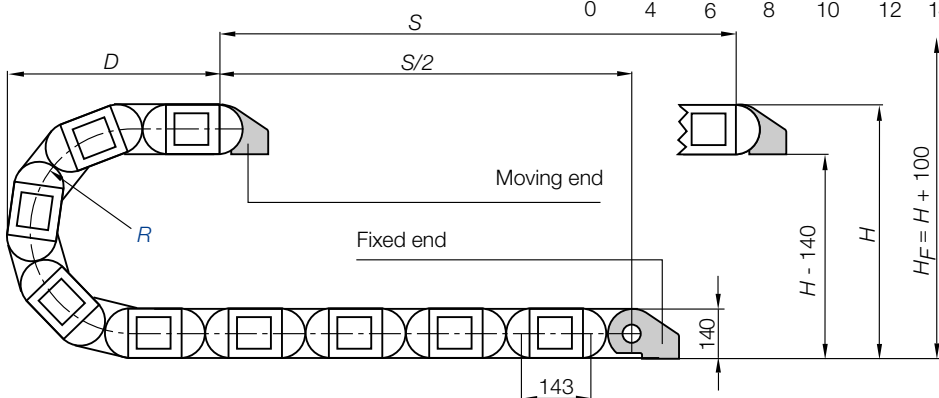
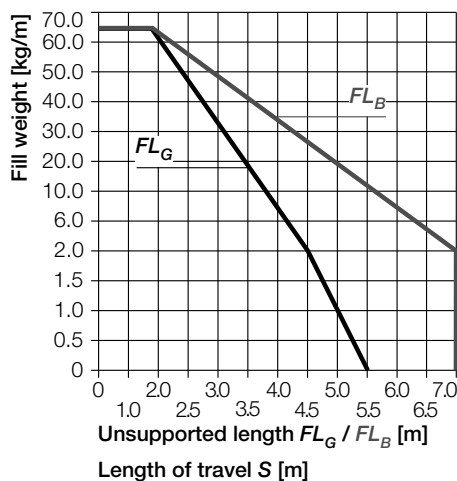
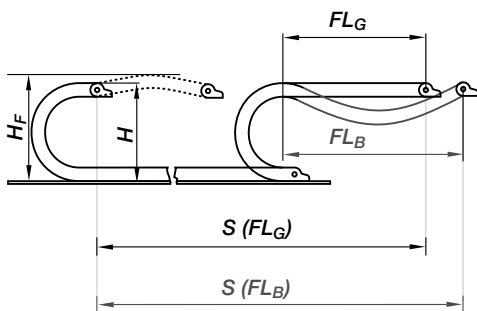


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► Design, page 1.12



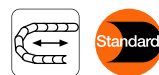
Pitch = 143 mm/link Links/m = 7 (1001 mm) Chain length = $S/2 + K$

R	200	250	300	350	400	450	500	550	600	750	1000
H	545	645	745	845	945	1045	1145	1245	1345	1645	2145
D	415	465	515	565	615	665	715	765	815	965	1215
K	920	1080	1240	1400	1560	1720	1870	2020	2175	2660	3435
H ₂	325	325	325	325	325	325	325	325	325	325	-
D ₂ ⁺²⁵	800	900	1100	1200	1430	1580	1700	1850	2050	2850	-
K ₂	1287	1430	1859	2145	2574	2860	3146	3432	3861	5005	-

- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength e-chain* radius in final position
 - K = $\pi \cdot R$ + "safety"
 - D₂ = Over length - long travels, gliding
 - K₂ = *Further add-on
 - H₂ = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un_supp. ≤ 4 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

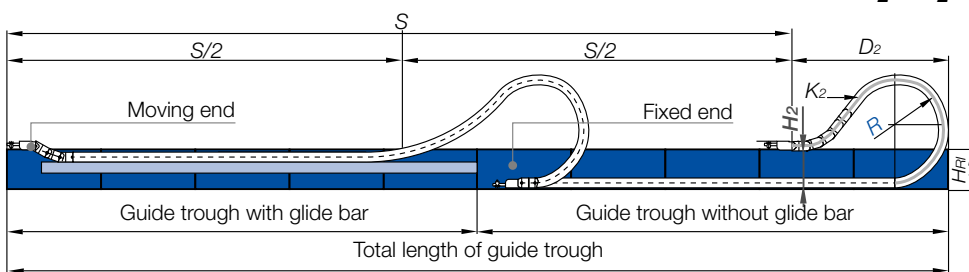


Short travels - unsupported

Unsupported e-chains* feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus* if space is particularly restricted.

The required clearance height:
H_F = H + 100 mm
 (with 5,0 kg/m fill weight)

Long travel lengths from 10 m to max. 450 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 450 m)

In this case the e-chain* upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



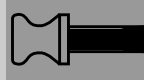
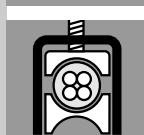
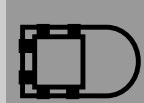
Details of material properties

► page 1.38

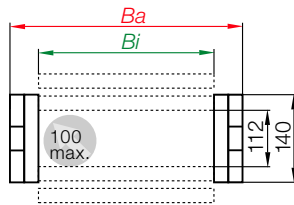
112

System E4/00
Inner height: 112 mm

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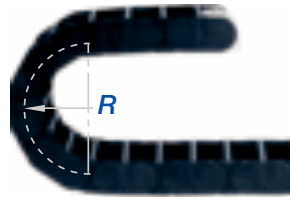
► page 7.255



Part No. structure

640.	33.	300.	0
			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



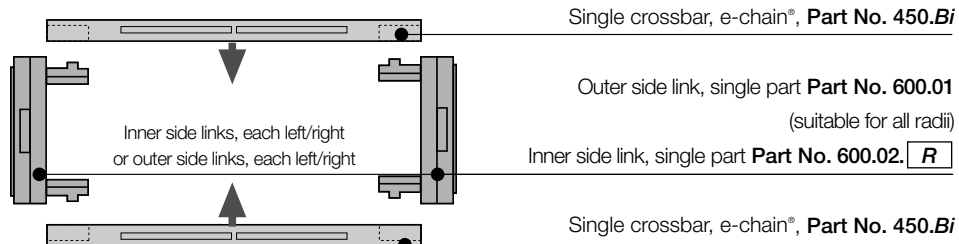
Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	Weight [kg/m]
640.12. <input type="text"/> .0	87	139	≈ 7,57
640.13. <input type="text"/> .0	100	152	≈ 7,66
640.15. <input type="text"/> .0	112	164	≈ 7,70
640.16. <input type="text"/> .0	125	177	≈ 7,77
640.17. <input type="text"/> .0	137	189	≈ 7,84
640.18. <input type="text"/> .0	150	202	≈ 7,91
640.20. <input type="text"/> .0	162	214	≈ 7,92
640.21. <input type="text"/> .0	175	227	≈ 7,99
640.22. <input type="text"/> .0	187	239	≈ 8,04
640.23. <input type="text"/> .0	200	252	≈ 8,12
640.25. <input type="text"/> .0	212	264	≈ 8,18
640.26. <input type="text"/> .0	225	277	≈ 8,23
640.27. <input type="text"/> .0	237	289	≈ 8,30
640.28. <input type="text"/> .0	250	302	≈ 8,32
640.30. <input type="text"/> .0	262	314	≈ 8,39
640.31. <input type="text"/> .0	275	327	≈ 8,46
640.32. <input type="text"/> .0	287	339	≈ 8,51
640.33. <input type="text"/> .0	300	352	≈ 8,62
640.35. <input type="text"/> .0	312	364	≈ 8,68
640.36. <input type="text"/> .0	325	377	≈ 8,72
640.37. <input type="text"/> .0	337	389	≈ 8,74
640.38. <input type="text"/> .0	350	402	≈ 8,79
640.40. <input type="text"/> .0	362	414	≈ 8,92
640.41. <input type="text"/> .0	375	427	≈ 9,02
640.42. <input type="text"/> .0	387	439	≈ 9,11
640.43. <input type="text"/> .0	400	452	≈ 9,16
640.45. <input type="text"/> .0	412	464	≈ 9,20
640.46. <input type="text"/> .0	425	477	≈ 9,21
640.47. <input type="text"/> .0	437	489	≈ 9,26
640.48. <input type="text"/> .0	450	502	≈ 9,30
640.50. <input type="text"/> .0	462	514	≈ 9,38
640.51. <input type="text"/> .0	475	527	≈ 9,39
640.52. <input type="text"/> .0	487	539	≈ 9,42
640.53. <input type="text"/> .0	500	552	≈ 9,52
640.55. <input type="text"/> .0	512	564	≈ 9,83
640.60. <input type="text"/> .0	562	614	≈ 9,95

Available bending radii

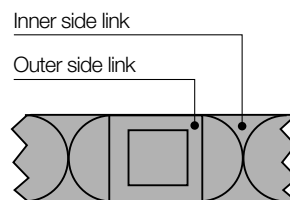
R [mm]

Supplement Part No. with required radius. Example: 640.33..0

0 = standard color, other colors ▶ page 1.39 · Pitch = 143 mm/link - Links/m = 7

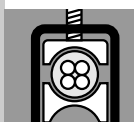


Part No. e-chain® links, single parts

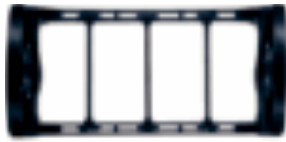


System E4/00
Inner height: 112 mm

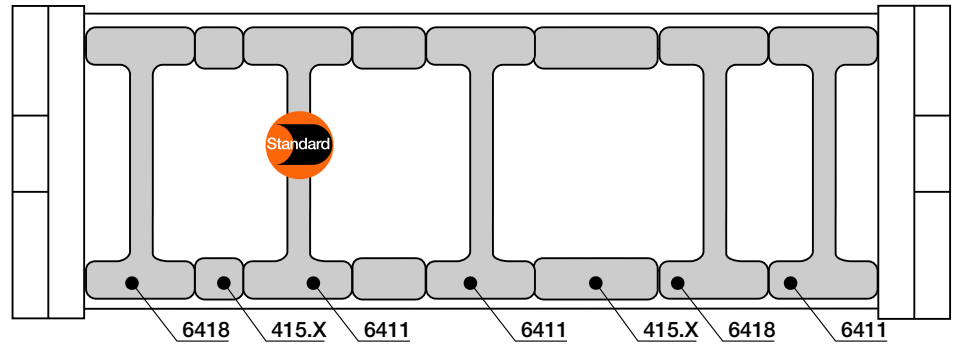
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▶ page 7.255



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link.



Vertical separator
6401



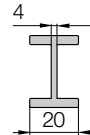
Spacer
405.XX



Locking separator
6408

Vertical separator for e-chains®

unassembled	6401
assembled	6411



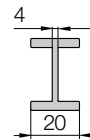
Spacer* for e-chains®

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)

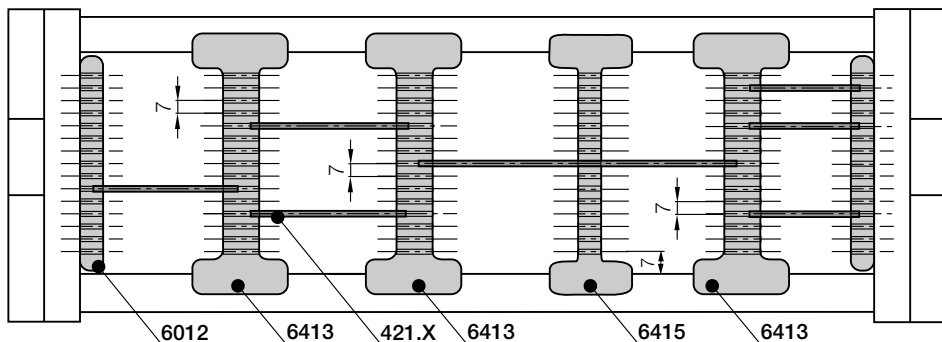
Additionally:

● 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®.

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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



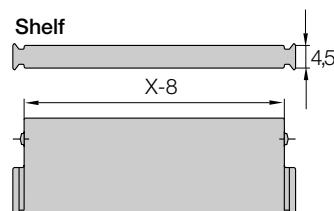
Middle plate 6403



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

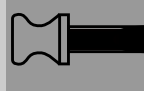
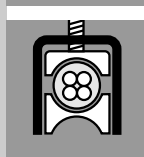
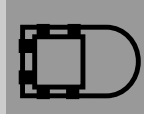
	Rollclip	
	unassembled	489.27
	assembled	490.27

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.



System E4/00
Inner height: 112 mm

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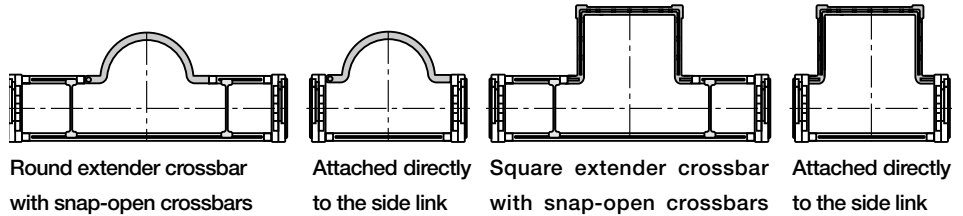




Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 300 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



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

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E4 snapclip

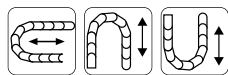
- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains®
- Stylish and economical
- One clip and one locking band are needed for each chain link
- Call us if you have any questions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

Internet: www.igus.eu
E-mail: info@igus.de

7.308

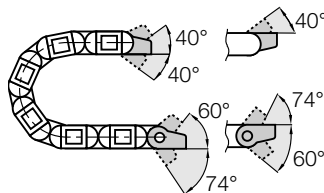
3D-CAD files, pdf-downloads and many online features ► www.igus.de/en/640



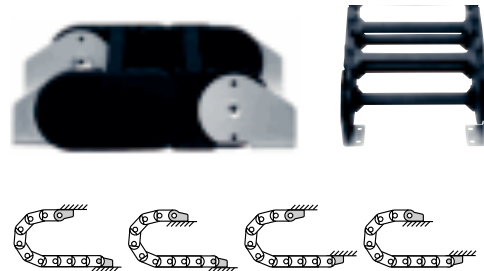
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
6000.1



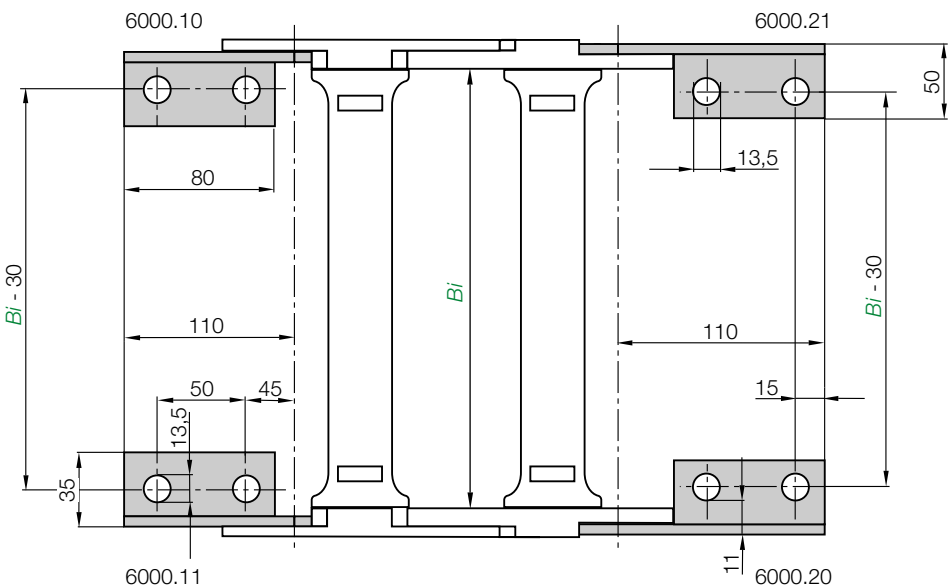
Fixed end
6000.2



Possible installation conditions -
Further installation angles ► installation sketch

Moving end
6000.1

Fixed end
6000.2



Dimensions and order configurations

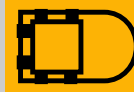
Part No. Mounting bracket

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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► chapter 10



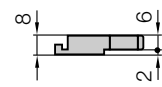
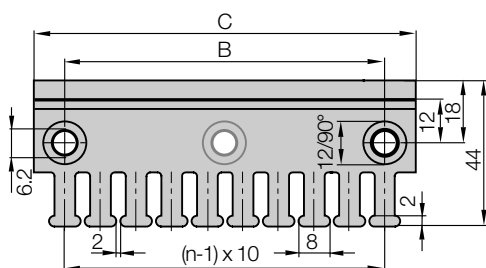
► page 7.255

E4/00 | Series 640 | Accessories | Strain Relief

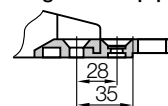
Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**

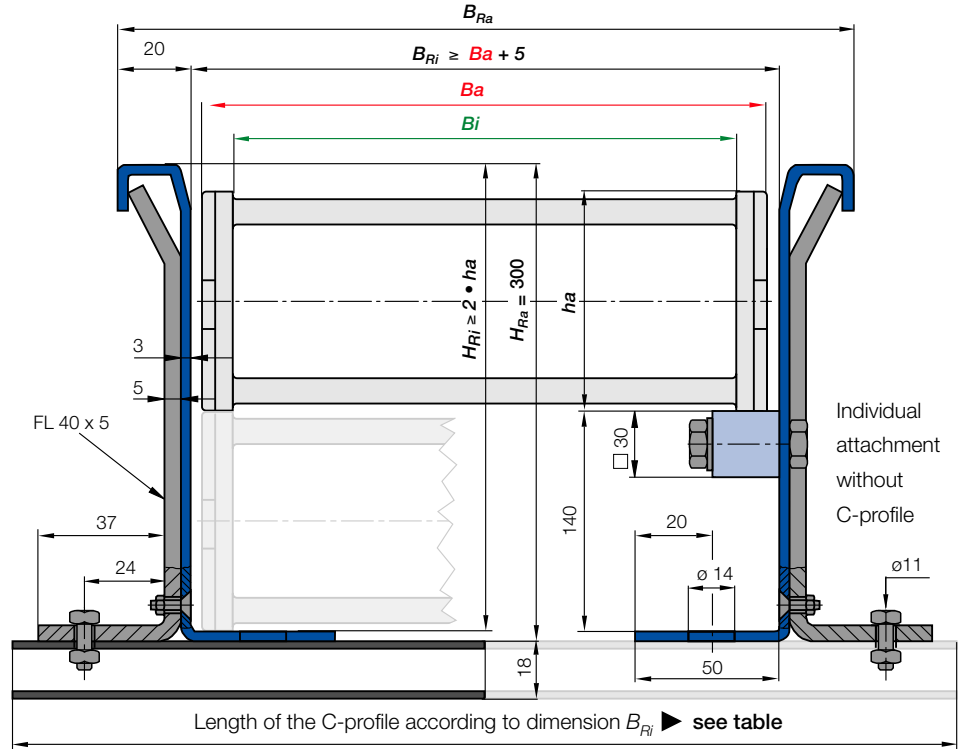


Single tiewrap plate



Shown assembled

- B_a = Outer width e-chains® / e-tube
- B_i = Inner width e-chains® / e-tube
- h_a = Outer height e-chains® / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- ▶ $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 5$
- = Guide trough set ● = Glide bar
- = Installation set ● = C-profile



Installation set with C-profile

640.12.300.0 ▶ Order example

	B_{Ri}	Installation set	Part No.
.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.



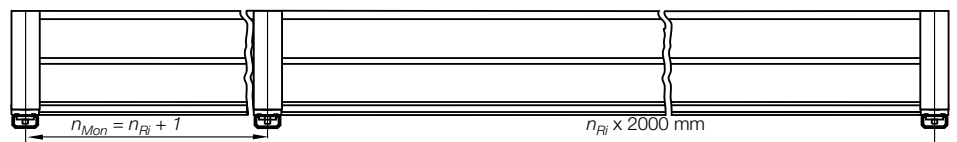
Illustration top: Guide trough with and without glide bar. Illustration bottom: installation set



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**



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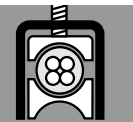
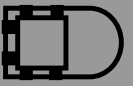
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System E4/00
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