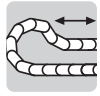


Price index



Series 4040HD Series R8840HD



"Heavy-Duty" version
for long travel applications



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Very high torsional rigidity
and and tensile force



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 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 7.62
- If a simple and low-cost solution is required
 - ▶ Series 14040/R18840, page 7.124

- 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



Rol E-Chain® Series 4040RHD and R8840RHD available upon request



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 4040HD.30.300.0



E-Chain®

with 2 separators 411 assembled every 2nd link



Interior separation

1 set 4040HD.12.E



Mounting bracket

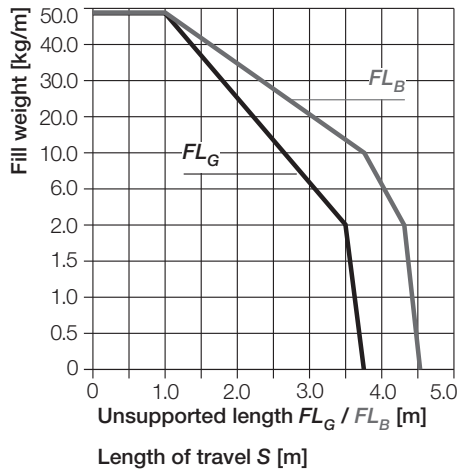
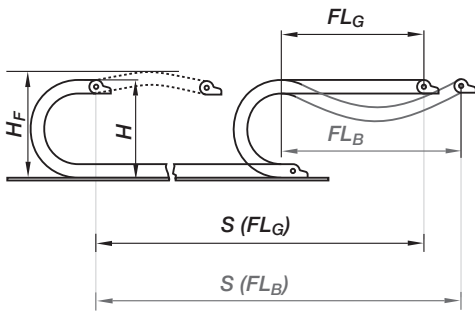


Unsupported length

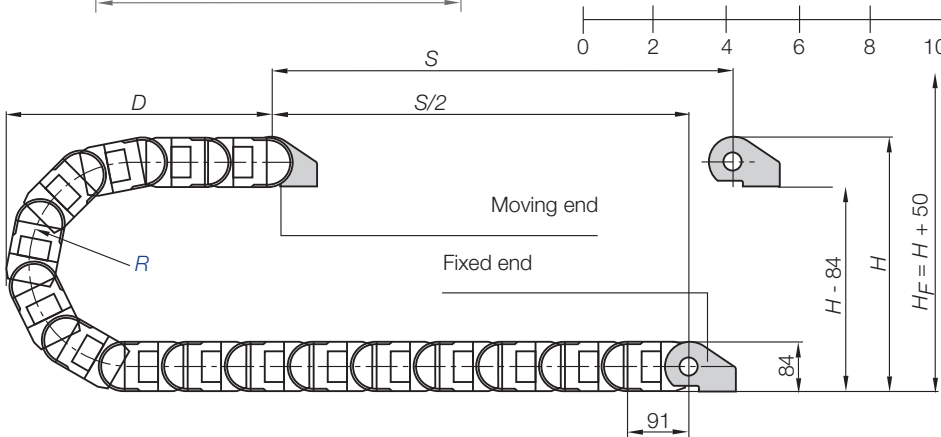
FL_G = with straight upper run

FL_B = with permitted sag

Further information ► Design, page 1.12



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength E-Chain® radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = *Further add-on
 - H_2 = *Mounting height
- *if the mounting bracket location is set lower



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

R	135	150	250	300
H	354	384	584	684
D	268	283	383	433
K	610	655	970	1125
H ₂	266	266	266	266
D ₂	390	450	920	1180
K ₂	728	819	1638	2002

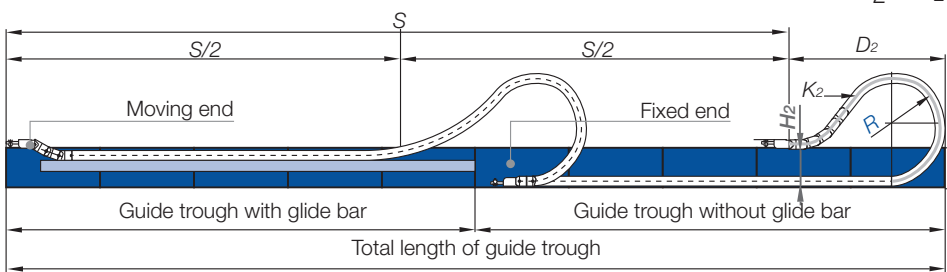


Short travels - unsupported

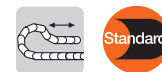
Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted.

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

Long travel lengths from 10 m to max. 350 m Chain length = $S/2 + K_2$



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



Gliding, long travel applications (max. 350 m)

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

Technical Data

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



Details of material properties
► page 1.38

56

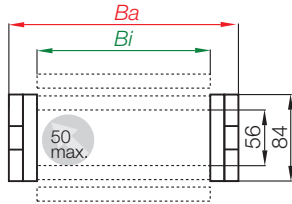
System E4/4
Inner height: 56 mm

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► page 7.223

igus® E-ChainSystems®

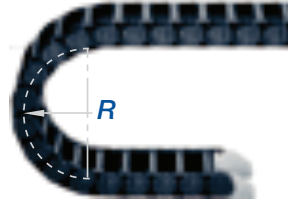


Part No. structure

4040HD.	30.	250.	0
---------	-----	------	---



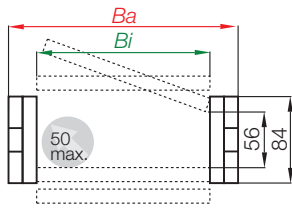
Series 4040HD - E-Chain® with crossbars every link



- Crossbars every link
- For highest additional loads
- For applications particularly demanding
- Can be opened from two sides



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Fax +49- (0) 22 03-96 49-222

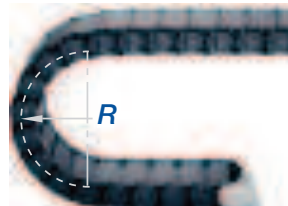


Part No. structure

8840HD.	30.	250.	0
---------	-----	------	---



Series R8840HD - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable



igus® GmbH
51147 Cologne

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

Rol 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



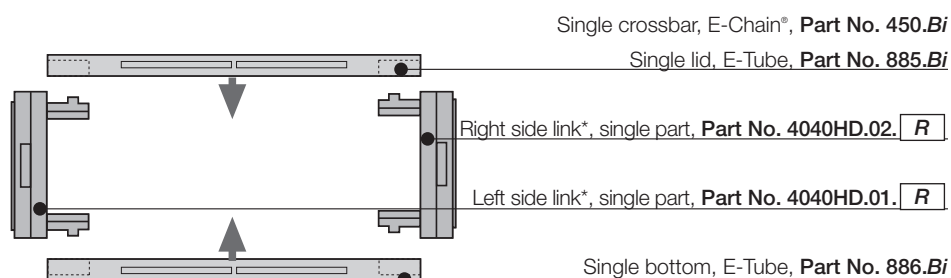
Part No.		<i>Bi</i>	<i>Ba</i>	4040HD	R8840HD
		[mm]	[mm]	[kg/m]	[kg/m]
4040HD.05.....	<input type="checkbox"/> .0	50	104	≈ 5,03	-
4040HD.06.....	<input type="checkbox"/> .0	65	119	≈ 5,12	-
4040HD/8840HD.07.	<input type="checkbox"/> .0*	75	129	≈ 5,19	≈ 5,64
4040HD.08.....	<input type="checkbox"/> .0	87	141	≈ 5,27	-
4040HD/8840HD.10.	<input type="checkbox"/> .0	100	154	≈ 5,36	≈ 5,93
4040HD.11.....	<input type="checkbox"/> .0	112	166	≈ 5,48	-
4040HD/8840HD.12.	<input type="checkbox"/> .0	125	179	≈ 5,56	≈ 6,29
4040HD.13.....	<input type="checkbox"/> .0	137	191	≈ 5,69	-
4040HD/8840HD.15.	<input type="checkbox"/> .0	150	204	≈ 5,73	≈ 6,67
4040HD.16.....	<input type="checkbox"/> .0	162	216	≈ 5,84	-
4040HD.17.....	<input type="checkbox"/> .0	175	229	≈ 5,97	-
4040HD.18.....	<input type="checkbox"/> .0	187	241	≈ 6,09	-
4040HD/8840HD.20.	<input type="checkbox"/> .0	200	254	≈ 6,14	≈ 7,29
4040HD.21.....	<input type="checkbox"/> .0	212	266	≈ 6,21	-
4040HD.22.....	<input type="checkbox"/> .0	225	279	≈ 6,28	-
4040HD.23.....	<input type="checkbox"/> .0	237	291	≈ 6,39	-
4040HD/8840HD.25.	<input type="checkbox"/> .0	250	304	≈ 6,50	≈ 8,02
4040HD.26.....	<input type="checkbox"/> .0	262	316	≈ 6,59	-
4040HD/8840HD.27.	<input type="checkbox"/> .0	275	329	≈ 6,70	≈ 8,38
4040HD.28.....	<input type="checkbox"/> .0	287	341	≈ 6,75	-
4040HD/8840HD.30.	<input type="checkbox"/> .0	300	354	≈ 6,91	≈ 8,68
4040HD.31.....	<input type="checkbox"/> .0	312	366	≈ 6,94	-
4040HD.32.....	<input type="checkbox"/> .0	325	379	≈ 7,05	-
4040HD.33.....	<input type="checkbox"/> .0	337	391	≈ 7,17	-
4040HD/8840HD.35.	<input type="checkbox"/> .0	350	404	≈ 7,37	≈ 9,38
4040HD.36.....	<input type="checkbox"/> .0	362	416	≈ 7,28	-
4040HD.37.....	<input type="checkbox"/> .0	375	429	≈ 7,38	-
4040HD.38.....	<input type="checkbox"/> .0	387	441	≈ 7,49	-
4040HD/8840HD.40.	<input type="checkbox"/> .0	400	454	≈ 7,76	≈ 10,38
4040HD.41.....	<input type="checkbox"/> .0	412	466	≈ 7,68	-
4040HD.42.....	<input type="checkbox"/> .0	425	479	≈ 7,98	-
4040HD.43.....	<input type="checkbox"/> .0	437	491	≈ 7,82	-
4040HD.45.....	<input type="checkbox"/> .0	450	504	≈ 8,15	-
4040HD/8840HD.46.	<input type="checkbox"/> .0	462	516	≈ 8,10	≈ 10,85
4040HD.47.....	<input type="checkbox"/> .0	475	529	≈ 8,14	-
4040HD.48.....	<input type="checkbox"/> .0	487	541	≈ 8,39	-
4040HD.50.....	<input type="checkbox"/> .0	500	554	≈ 8,48	-
4040HD.51.....	<input type="checkbox"/> .0	512	566	≈ 8,40	-
4040HD.52.....	<input type="checkbox"/> .0	525	579	≈ 8,57	-
4040HD.53.....	<input type="checkbox"/> .0	537	591	≈ 8,66	-
4040HD.55.....	<input type="checkbox"/> .0	550	604	≈ 9,08	-
4040HD.60.....	<input type="checkbox"/> .0	600	654	≈ 9,31	-

Available bending radii

R [mm] 135* 150 250 300

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 7.254

Part No. E-Chain® - links, single parts

*View from the fixed point of the E-Chain®/E-Tube

System E4/4
 Inner height: 56 mm

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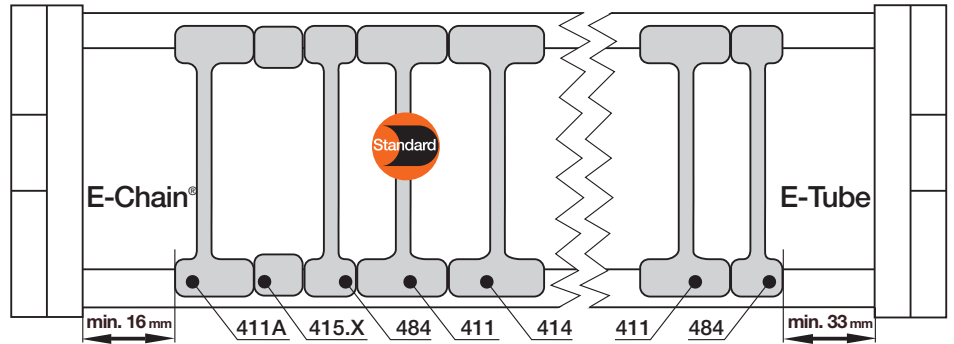


▶ page 7.223

igus® E-ChainSystems®



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)!



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igus® GmbH
51147 Cologne

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



Vertical separator 401



Vertical separator 483



Spacer 405.XX



Locking separator 404

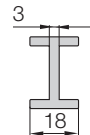


Vertical separator 406

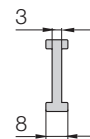


Asymmetric separator 401A

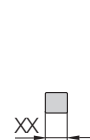
Vertical separator for E-Chains®/E-Tubes	
unassembled	401
assembled	411



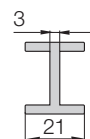
Vertical separator for E-Chains®/E-Tubes	
unassembled	483
assembled	484



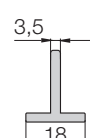
Spacer* for E-Chains®	
unassembled	405.XX
assembled	415.XX



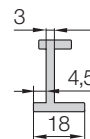
Locking separator for E-Chains®	
unassembled	404
assembled	414



Vertical separator for E-Tubes	
unassembled	406
assembled	416



Asymmetric separator for E-Chains®	
unassembled	401A
assembled	411A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 401 for E-Chains®/E-Tubes** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 483 with a narrow foot for E-Chains® and E-Tubes** with applications where a large number of small cables need to be individually separated.

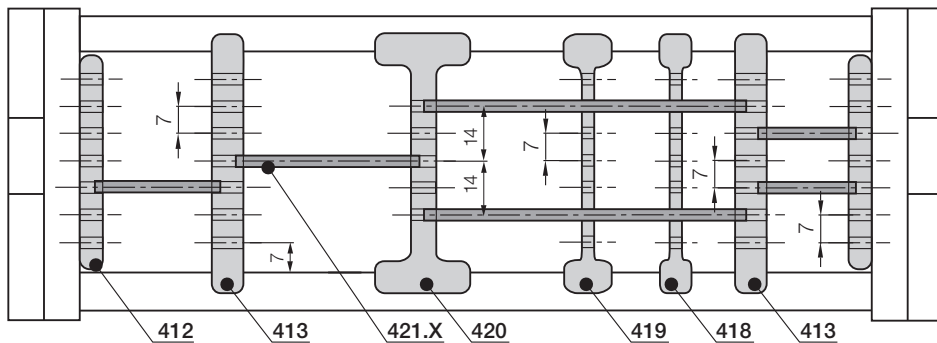
● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for E-Chains® 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment

● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width

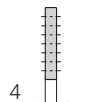
● **Asymmetric separator 401A for E-Chains®** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters. E-Chains® and E-Tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

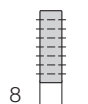
Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).



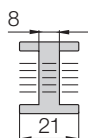
Side plate for E-Chains®/E-Tubes	
unassembled	402
assembled	412

● Locking vertical separator 410, slotted combined with shelves (only for E-Chains®).



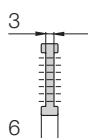
Middle plate for E-Chains®/E-Tubes	
unassembled	403
assembled	413

● 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.

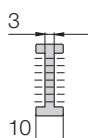


Locking vertical separator for E-Chains®	
unassembled	410
assembled	420

● 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.



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



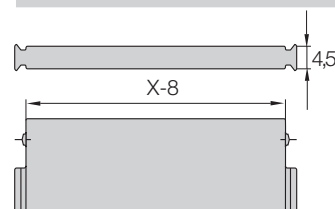
Slotted separator 408



Open slotted separator 409



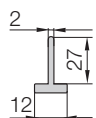
Shelf 420.X



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

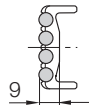
Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

Additional elements for interior separation



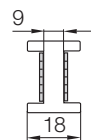
Center crossbar	
unassembled	405
assembled	415

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.

System E4/4
Inner height: 56 mm

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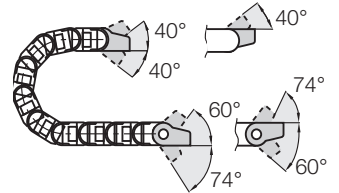




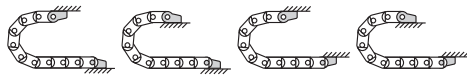
Option steel - pivoting

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

Moving end
40400HD.1.E



Fixed end
40400HD.2.E



Possible installation conditions -

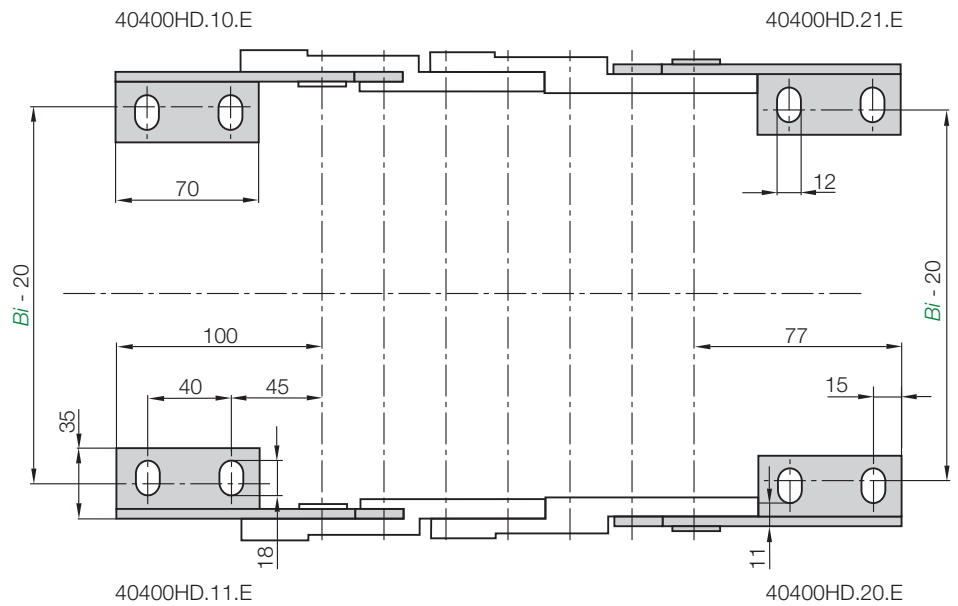
Further installation angles ► installation sketch

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51147 Cologne

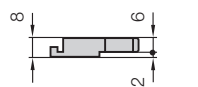
Moving end
40400HD.1.E

Fixed end
40400HD.2.E

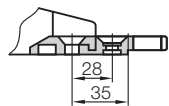


Part No.	Mounting bracket
40400HD.12.E	Full set, 4 parts, 2 with pin / 2 with bore
40400HD.1.E	Mounting bracket moving end, 1 part left / right
40400HD.2.E	Mounting bracket fixed end, 1 part left / right

E4/4 | Series 4040HD·R8840HD | Accessories | Strain Relief



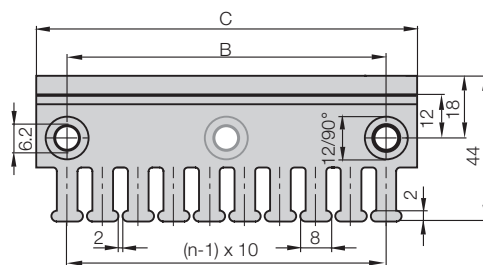
Single tie-wrap plate



Shown assembled

Tiewrap plate as individual part

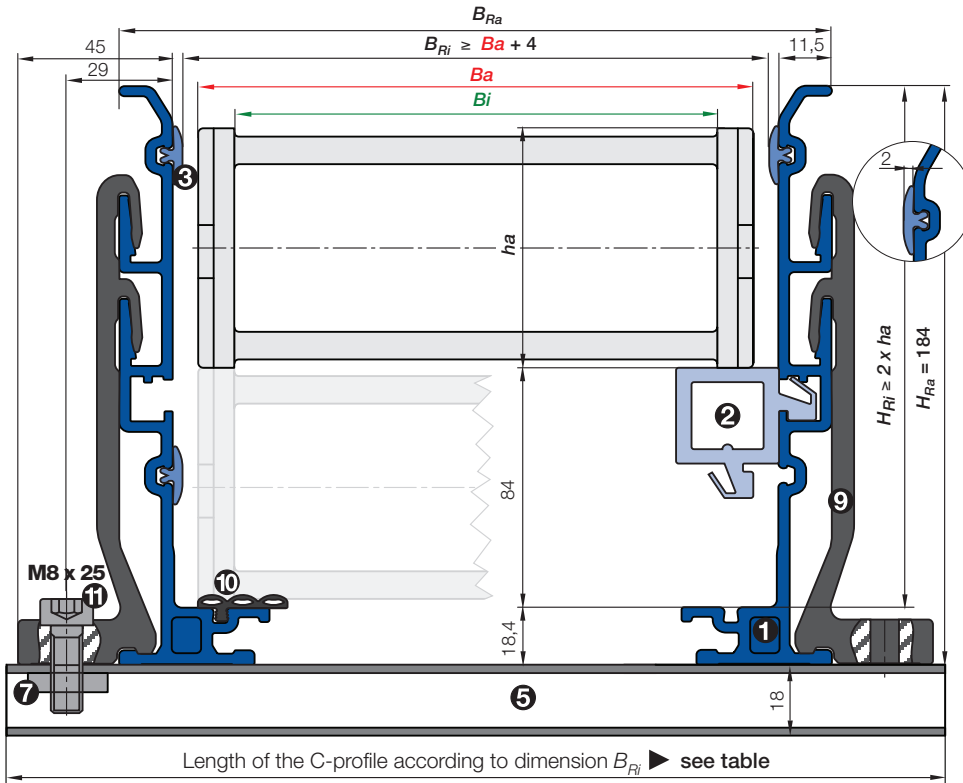
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



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)

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



- B_a = Outer width E-Chains® / E-Tube
- B_i = Inner width E-Chains® / E-Tube
- h_a = Outer height E-Chains® / E-Tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- ! $H_{Ri} \geq 2 \cdot h_a$
- ! $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Installation set "Basic"
- = Glide bar ● = C-profile

Installation set Heavy-Duty with C-profile

4040HD.05.250.0 ▶ Order example

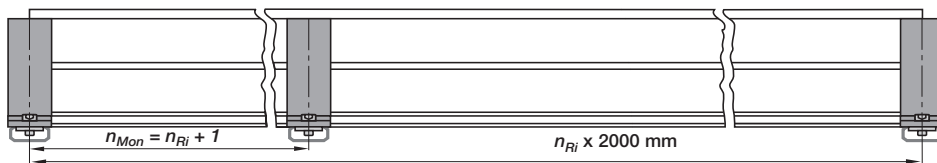
B_{Ri} [mm]	Part No. assembled
.05	108 974.50.225
.06	123 974.50.250
.07	133 974.50.250
.08	145 974.50.275
.10	158 974.50.275
.11	170 974.50.300
.12	183 974.50.300
.13	195 974.50.325
.15	208 974.50.325
.16	220 974.50.350
.17	233 974.50.350
.18	245 974.50.375
.20	258 974.50.375
.21	270 974.50.400
.22	283 974.50.400
.23	295 974.50.425
.25	308 974.50.425
.26	320 974.50.450
.27	333 974.50.450
.28	345 974.50.475
.30	358 974.50.475
.31	370 974.50.500
.32	383 974.50.500
.33	395 974.50.525
.35	408 974.50.525
.36	420 974.50.550
.37	433 974.50.550
.38	445 974.50.575
.40	458 974.50.575
.41	470 974.50.600
.42	483 974.50.600
.43	495 974.50.625
.45	508 974.50.625
.46	520 974.50.650
.47	533 974.50.650
.48	545 974.50.675
.50.^\	558 974.50.675
.51	570 974.50.700
.52	583 974.50.700
.53	595 974.50.725
.55	608 974.50.725
.60	658 974.50.775



- **Components, trough "Heavy Duty":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Heavy Duty":** ⑤ C-profile, steel galvanized ⑦ Sliding nut M8 ⑨ Installation angle bracket "Heavy Duty", Aluminium ⑪ Screw M8 x 25

Order example: Length of travel 30 m - Center mounted for Series 4040HD.10.250.0 with $B_{Ri} = 158$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 974.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 974.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" 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**

Phone +49- (0) 22 03-96 49-800
 Fax +49- (0) 22 03-96 49-222

Chapter 10

Chapter 9

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