

Price index



Series 5050HD Series R9850HD



"Heavy-Duty" version
for long travel applications



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Very high
torsional rigidity



Opening E-Chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (E-Tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 5050HD/R9850HD:

- For high (tensile-)charges at long travel applications
- When high torsional forces are expected
- For long-term operation in very moist environments
- Also available as Rol E-Chain®



When not to use them:

- At short travels or medium additional loads
 - ▶ Series E4.80, page 7.76
- If a simple and low-cost solution is required
 - ▶ Series 15050/15150/R19850, page 7.144

- ① High side-mount stability due to undercut
- ② High torsional rigidity
- ③ High tensile stability (20% higher tensile force than Series 5050)
- ④ Very wide gliding surface, less wear
- ⑤ Closed and open styles can be combined
- ⑥ Hinged snap-open removable lids along outer radius of E-Tube
- ⑦ Numerous interior separation possibilities
- ⑧ Crossbars are removable along both radii
- ⑨ Wide, rounded plastic crossbars - cable friendly
- ⑩ Robust Steel-Mounting Brackets



Rol E-Chain® Series 5050RHD/9850RHD available upon request



Order example complete E-Chain®

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

5 m **5050HD.30.300.0**



E-Chain®

with 2 separators **511** assembled every 2nd link



Interior separation

1 set **5050HD.12.E**



Mounting bracket

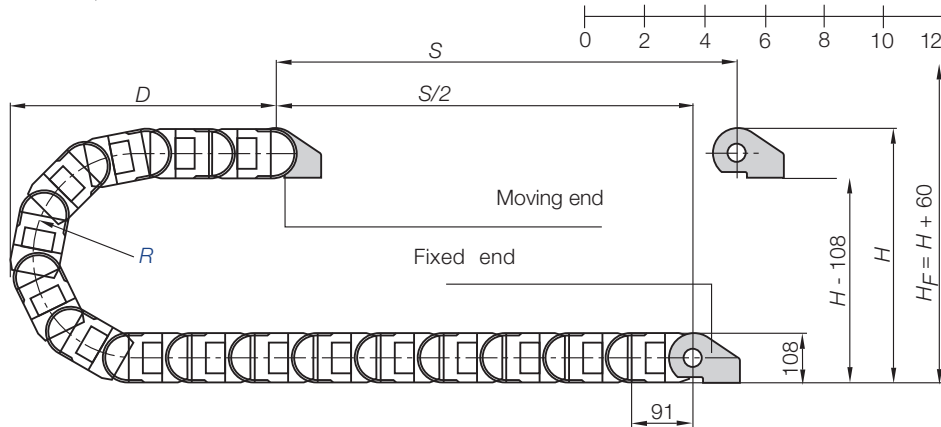
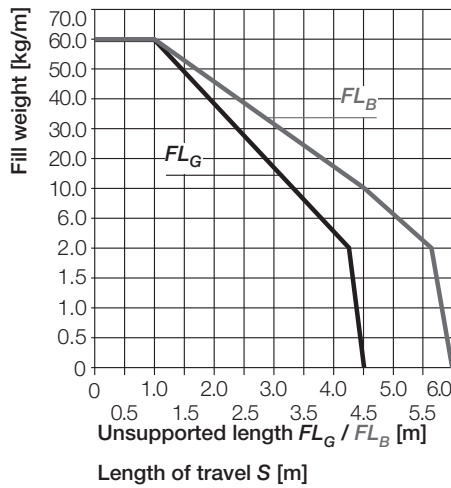
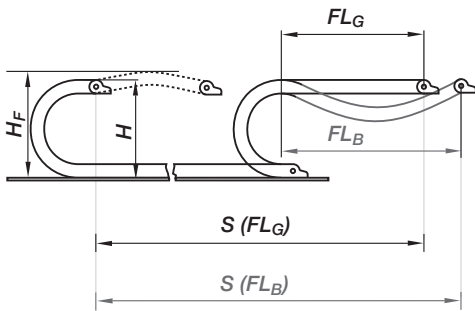


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

Further information ► Design, page 1.12



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 = $\pi \cdot R$ + "safety"
 - D₂ = Over length - long travels, gliding
 - K₂ = *Further add-on
 - H₂ = *Mounting height
- *if the mounting bracket location is set lower

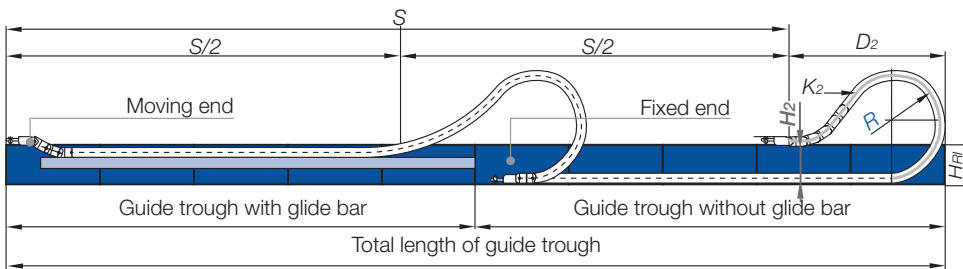


Short travels - unsupported

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.



Gliding, long travel applications (max. 500 m)

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

Technical Data

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



Details of material properties
► page 1.38

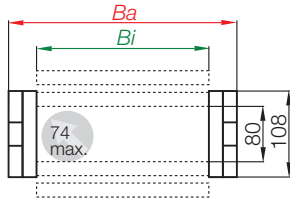


System E4/4
Inner height: 80 mm

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



► page 7.223

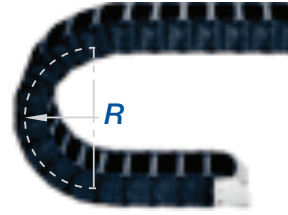


Part No. structure

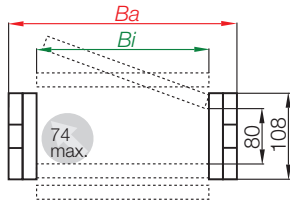
5050HD.	30.	300.	0
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Serie 5050HD - E-Chain® with crossbars every link



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

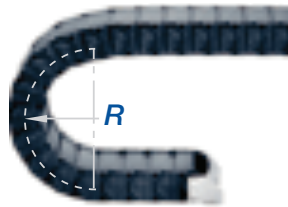


Part No. structure

9850HD.	30.	300.	0
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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



RoI instead of gliding: RoI E-Chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® RoI 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



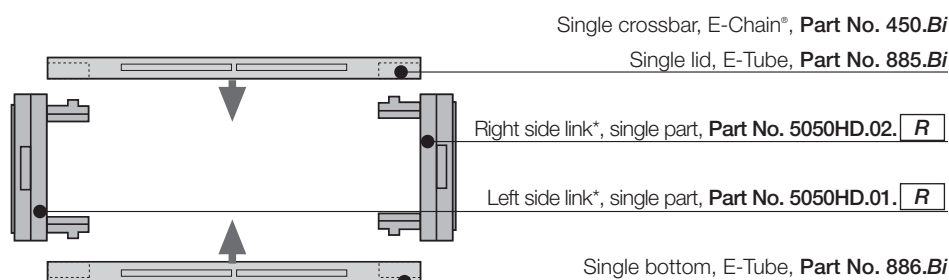
Part No.		<i>Bi</i>	<i>Ba</i>	5050HD	R9850HD
		[mm]	[mm]	[kg/m]	[kg/m]
5050HD.05.....	<input type="checkbox"/> .0	50	110	≈ 6,65	-
5050HD.06.....	<input type="checkbox"/> .0	65	125	≈ 6,74	-
5050HD/9850HD.07...	<input type="checkbox"/> .0	75	135	≈ 6,81	≈ 7,25
5050HD.08.....	<input type="checkbox"/> .0	87	147	≈ 6,89	-
5050HD/9850HD.10...	<input type="checkbox"/> .0	100	160	≈ 6,99	≈ 7,55
5050HD.11.....	<input type="checkbox"/> .0	112	172	≈ 7,10	-
5050HD/9850HD.12...	<input type="checkbox"/> .0	125	185	≈ 7,18	≈ 7,91
5050HD.13.....	<input type="checkbox"/> .0	137	197	≈ 7,32	-
5050HD/9850HD.15...	<input type="checkbox"/> .0	150	210	≈ 7,35	≈ 8,29
5050HD.16.....	<input type="checkbox"/> .0	162	222	≈ 7,47	-
5050HD.17.....	<input type="checkbox"/> .0	175	235	≈ 7,60	-
5050HD.18.....	<input type="checkbox"/> .0	187	247	≈ 7,71	-
5050HD/9850HD.20...	<input type="checkbox"/> .0	200	260	≈ 7,77	≈ 8,91
5050HD.21.....	<input type="checkbox"/> .0	212	272	≈ 7,84	-
5050HD.22.....	<input type="checkbox"/> .0	225	285	≈ 7,91	-
5050HD.23.....	<input type="checkbox"/> .0	237	297	≈ 8,02	-
5050HD/9850HD.25...	<input type="checkbox"/> .0	250	310	≈ 8,13	≈ 9,64
5050HD.26.....	<input type="checkbox"/> .0	262	322	≈ 8,22	-
5050HD/9850HD.27...	<input type="checkbox"/> .0	275	335	≈ 8,32	≈ 10,00
5050HD.28.....	<input type="checkbox"/> .0	287	347	≈ 8,38	-
5050HD/9850HD.30...	<input type="checkbox"/> .0	300	360	≈ 8,53	≈ 10,30
5050HD.31.....	<input type="checkbox"/> .0	312	372	≈ 8,57	-
5050HD.32.....	<input type="checkbox"/> .0	325	385	≈ 8,67	-
5050HD.33.....	<input type="checkbox"/> .0	337	397	≈ 8,79	-
5050HD/9850HD.35...	<input type="checkbox"/> .0	350	410	≈ 8,99	≈ 11,00
5050HD.36.....	<input type="checkbox"/> .0	362	422	≈ 8,90	-
5050HD.37.....	<input type="checkbox"/> .0	375	435	≈ 9,00	-
5050HD.38.....	<input type="checkbox"/> .0	387	447	≈ 9,11	-
5050HD/9850HD.40...	<input type="checkbox"/> .0	400	460	≈ 9,38	≈ 12,00
5050HD.41.....	<input type="checkbox"/> .0	412	472	≈ 9,31	-
5050HD.42.....	<input type="checkbox"/> .0	425	485	≈ 9,60	-
5050HD.43.....	<input type="checkbox"/> .0	437	497	≈ 9,44	-
5050HD.45.....	<input type="checkbox"/> .0	450	510	≈ 9,55	-
5050HD/9850HD.46...	<input type="checkbox"/> .0	462	522	≈ 9,72	≈ 12,47
5050HD.47.....	<input type="checkbox"/> .0	475	535	≈ 9,76	-
5050HD.48.....	<input type="checkbox"/> .0	487	547	≈ 10,01	-
5050HD.50.....	<input type="checkbox"/> .0	500	560	≈ 10,11	-
5050HD.51.....	<input type="checkbox"/> .0	512	572	≈ 10,02	-
5050HD.52.....	<input type="checkbox"/> .0	525	585	≈ 10,19	-
5050HD.53.....	<input type="checkbox"/> .0	537	597	≈ 10,29	-
5050HD.55.....	<input type="checkbox"/> .0	550	610	≈ 10,71	-
5050HD.60.....	<input type="checkbox"/> .0	600	660	≈ 10,94	-

Available bending radii

R [mm] 200 300 350 500

Supplement Part No. with required radius. Example: 5050HD.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link - Links/m = 11



Heiße Späne bis 850°C

E-Rohre, an denen 850 °C heiße Späne abprallen, als Sonderanfertigung. Manche Anwendungen im Spänebereich hinterließen Brand- und Schmelzspuren. Mit dem igus®-Werkstoff igumid HT ist Schluss damit.

Bestellbeispiele:

Komplettes E-Rohr aus HT*:

9850HD.40.350.0.HT

Nur Deckel aus HT:

9850HD.40.HTE.350.0

*für lange Verfahrlänge nach Rücksprache

Weitere Informationen:

www.igus.de/de/HT

Lieferzeit bis 4 Wochen!

System E4/4
Inner height: 80 mm

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▶ page 7.223



Extender crossbar for large diameter hoses ▶ page 7.274

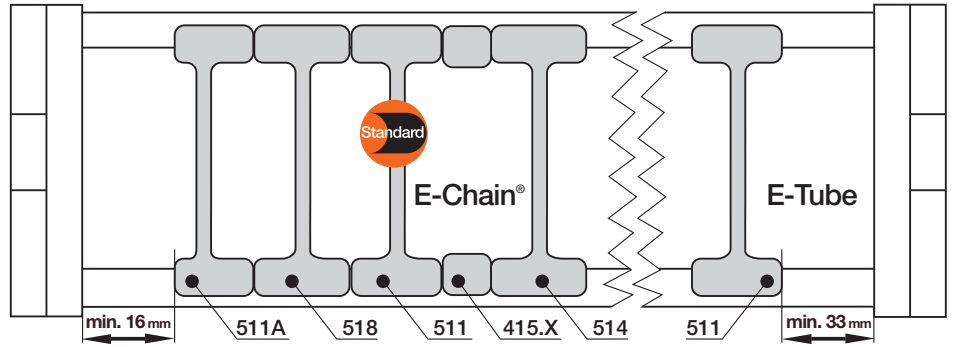
Part No. E-Chain® links, single parts

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

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

igus® GmbH
51147 Cologne

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



Vertical separator
501



Spacer
405.XX



Locking separator
504

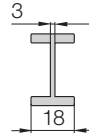


Locking separator
508

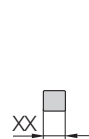


Asymmetric
separator 501A

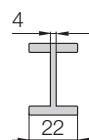
Vertical separator for E-Chains®	
unassembled	501
assembled	511



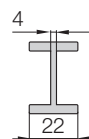
Spacer* for E-Chains®	
unassembled	405.XX
assembled	415.XX



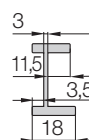
Locking separator for E-Chains®	
unassembled	504
assembled	514



Locking separator for E-Chains®	
unassembled	508
assembled	518



Asymmetric separator for E-Chains®	
unassembled	501A
assembled	511A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 501 for E-Chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

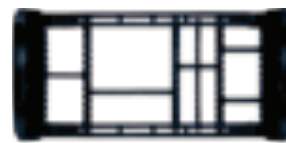
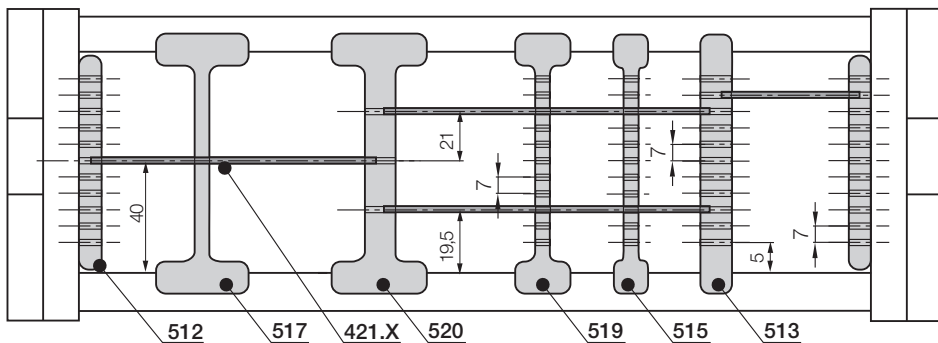
● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available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

Additionally:

● **Locking separator for E-Chains® 504-** with increased retention force for applications exposed to very high humidity or extreme loads. If locking separators are used, the E-Chain® is more difficult to open

● The **locking separator for E-Chains® 508** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the E-Chain®.

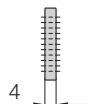
● **Asymmetric separator 501A for E-Chains®** (not for E-Tubes) with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



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

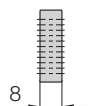
Option 2: Shelves

● **Side plates 502, middle plates 503 and shelves 420.X** form the basic pattern of a shelf system. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments).



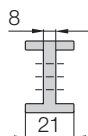
Side plate for E-Chains®/E-Tubes	
unassembled	502
assembled	512

● **Locking vertical separator 510** combined with shelves. Triple slots (only for E-Chains®).



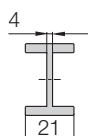
Middle plate for E-Chains®/E-Tubes	
unassembled	503
assembled	513

● **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.



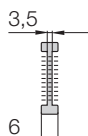
Locking vertical separator for E-Chains®	
unassembled	510
assembled	520

● **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.

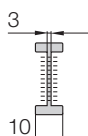


Locking separator for E-Chains®	
unassembled	507
assembled	517

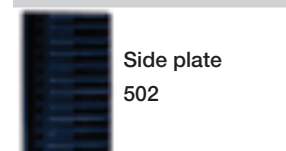
● The unilateral **open slotted separator 509** can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



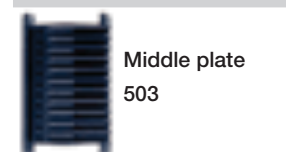
Slotted separator for E-Chains®/E-Tubes	
unassembled	505
assembled	515



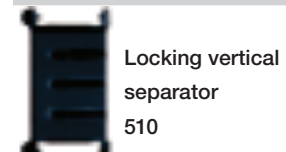
Open slotted separator for E-Chains®/E-Tubes	
unassembled	509
assembled	519



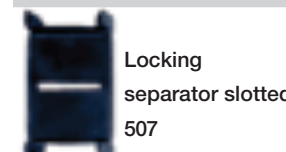
Side plate 502



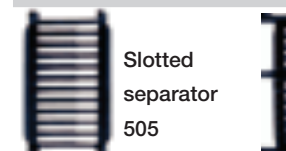
Middle plate 503



Locking vertical separator 510



Locking separator slotted 507



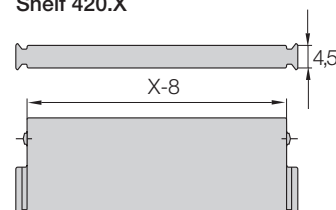
Slotted separator 505



Open slotted separator 509



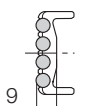
Shelf 420.X



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

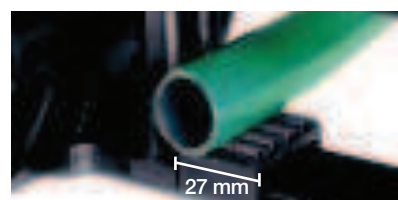
Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

Additional elements for interior separation



Rollclip	
unassembled	489.27
assembled	490.27

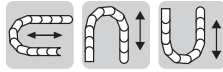
Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



System E4/4
Inner height: 80 mm

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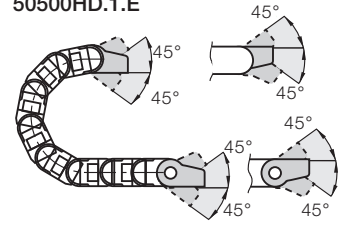




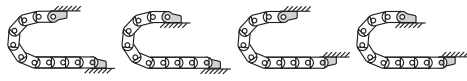
Option steel - pivoting

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

Moving end
50500HD.1.E



Fixed end
50500HD.2.E



Possible installation conditions -

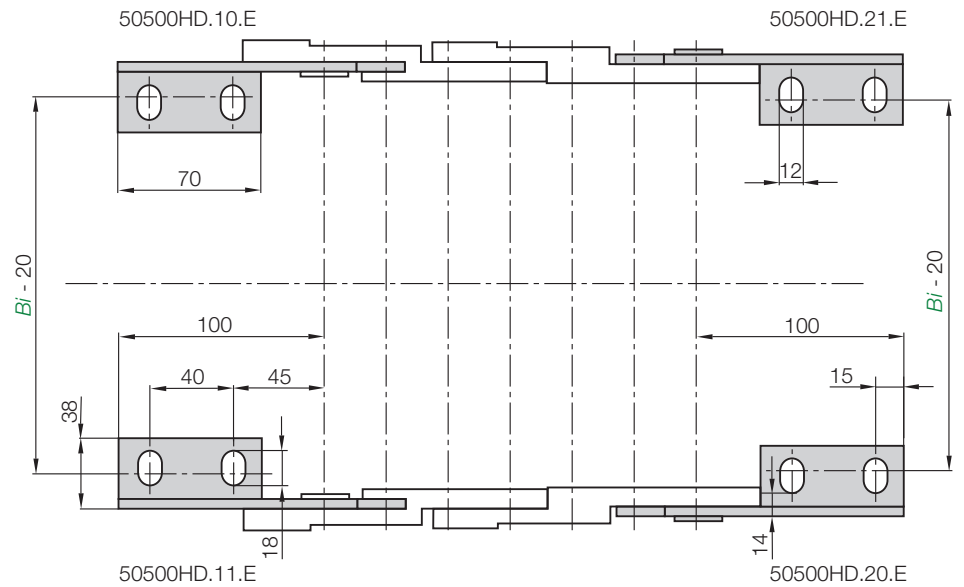
Further installation angles ► installation sketch

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

igus® GmbH
51147 Cologne

Moving end
50500HD.1.E

Fixed end
50500HD.2.E

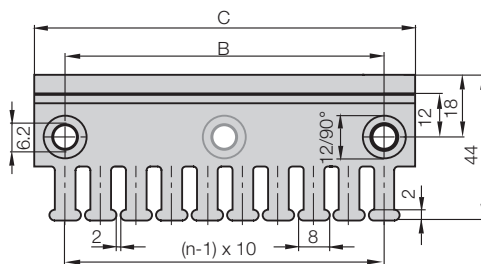
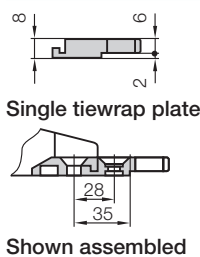


Part No.	Mounting bracket
50500HD.12.E	Full set, 4 parts, 2 with pin / 2 with bore
50500HD.1.E	Mounting bracket moving end, 1 part left / right
50500HD.2.E	Mounting bracket fixed end, 1 part left / right

E4/4 | Series 5050HD·R9850HD | Accessories | Strain Relief

Tiewrap plate as individual part

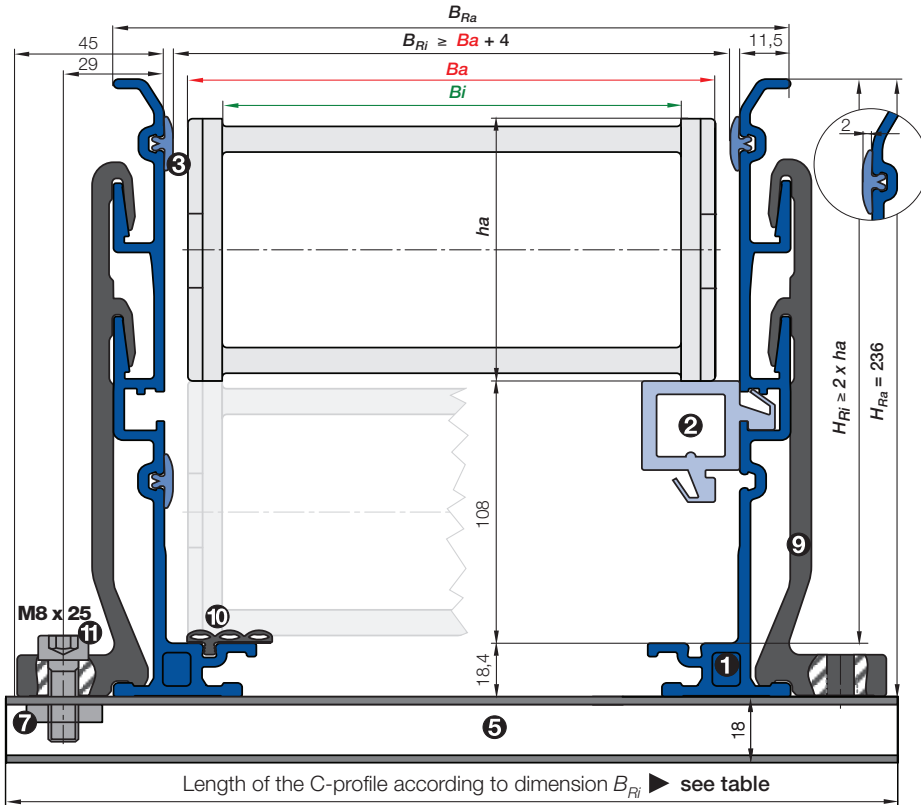
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



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)

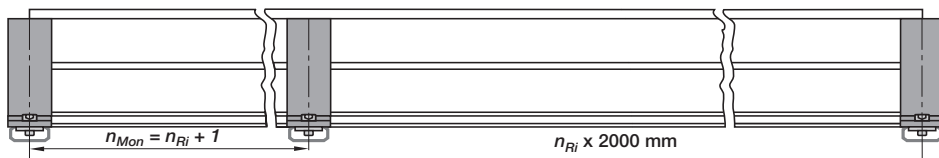
Internet: www.igus.eu
E-mail: info@igus.de



- **Components, trough "Heavy Duty":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Heavy Duty":** ⑤ C-profile, steel galvanized ⑦ Sliding nut M6 ⑨ Installation angle bracket "Heavy Duty", Aluminium ⑪ Screw M8 x 25

Order example: Length of travel 30 m - Center mounted for Series 5050HD.30.300.0 with $B_{Ri} = 364$

Guide trough set (set of 2 trough side parts, incl. glide strips) without glide bar		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	975.30.SL
Guide trough set (set of 2 trough side parts, incl. glide strips) with glide bar		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets "Basic"	Part No.	960.50.500
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**

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

Installation set Heavy-Duty with C-profile

5050HD.30.300.0 ▶ Order example

	B_{Ri} [mm]	Part No. assembled
.05	114	974.50.250
.06	129	974.50.250
.07	139	974.50.275
.08	151	974.50.275
.10	164	974.50.300
.11	176	974.50.300
.12	189	974.50.325
.13	201	97450.325
.15	214	97450.350
.16	226	974.50.350
.17	239	97450.375
.18	251	974.50.375
.20	264	974.50.400
.21	276	974.50.400
.22	289	974.50.425
.23	301	974.50.425
.25	314	974.50.450
.26	326	974.50.450
.27	339	974.50.475
.28	351	974.50.475
.30	364	974.50.500
.31	376	974.50.500
.32	389	974.50.525
.33	401	974.50.525
.35	414	974.50.550
.36	426	974.50.550
.37	439	974.50.575
.38	451	974.50.575
.40	464	974.50.600
.41	476	974.50.600
.42	489	974.50.625
.43	501	974.50.625
.45	514	974.50.650
.46	526	974.50.650
.47	539	974.50.675
.48	551	974.50.675
.50	564	974.50.700
.51	576	974.50.700
.52	589	974.50.725
.53	601	974.50.725
.55	614	974.50.750
.60	664	974.50.800

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▶ Chapter 10



▶ Chapter 9



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