

● ● ● Price index



IPA Qualification Certificate Air
Cleanless Class ISO Class 3
(at v = 2 m/s) upon request



ESD classification:
Electrically conductive ESD/ATEX
version upon request



UL94 V2 classifications
upon request

- ❶ Snap-open, hinged to left or right, accessible from the top
- ❷ Lateral glide surfaces for side-mounted operation
- ❸ Large pins for long service life
- ❹ Introduction bevel - easy assembly
- ❺ Small pitch for very quiet operation
- ❻ Integrated strain relief possible
- ❼ Smooth interior for long cable life
- ❽ Dirt-repellent exterior
- ❾ Modular interior separation



1. To open crossbars press screwdriver into tab on top of link, lever screwdriver until crossbar opens. 2. Repeat step 1 on other side.



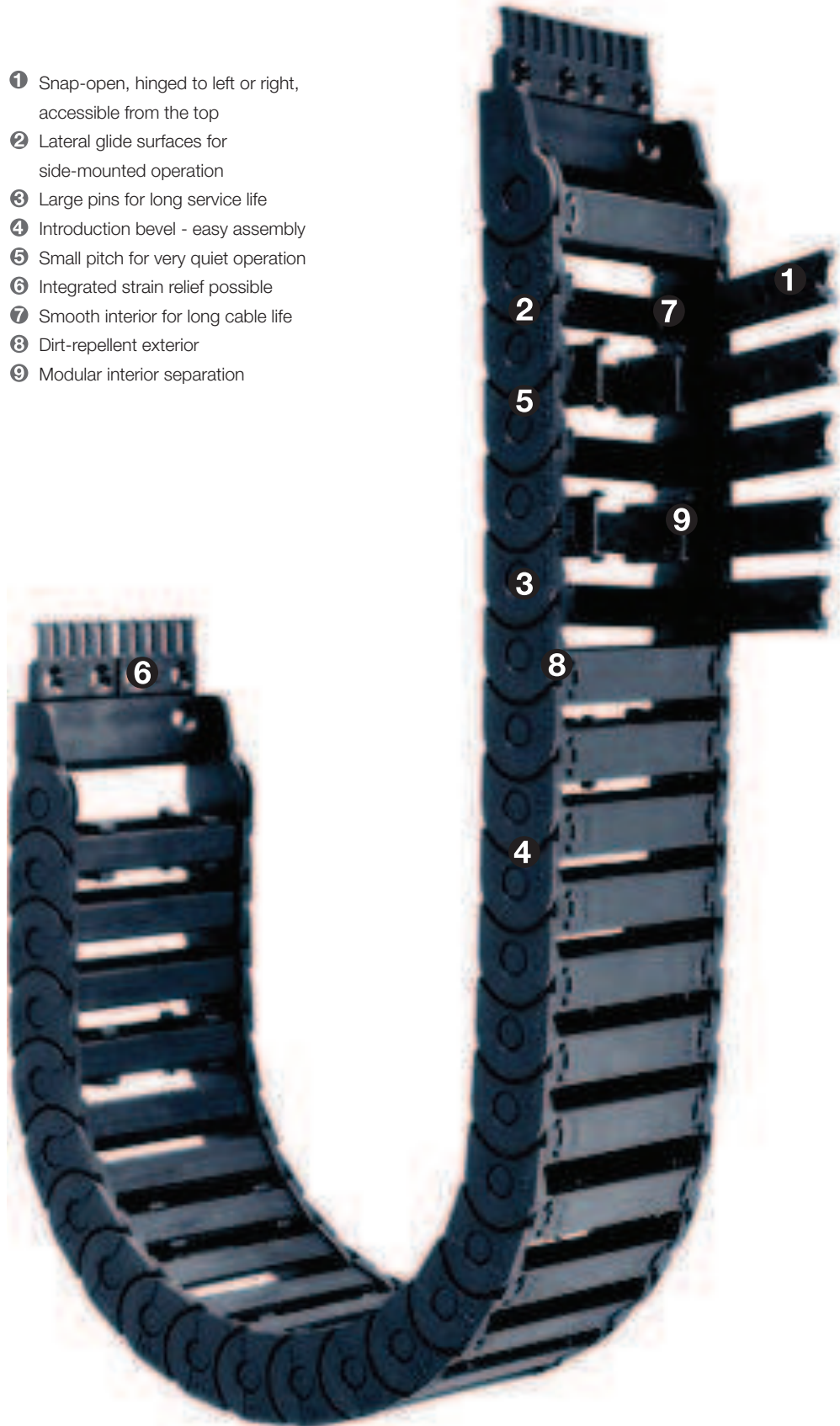
When to use the Series 255:

- If quieter operation at very high speeds is required
- If integrated strain relief is required at the connection point
- If modular interior separation required
- If easy installation is required



When not to use it:

- If each link requires snap-open accessibility on both sides
 - ▶ System E4.1, Series E4.21, page 7.16
- If maximum stability is required
 - ▶ System E4.1, Series E4.21, page 7.16
- If the application is very simple
 - ▶ Easy Chain®, Series E200, page 3.36



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 2 m or 72 links

2 m 255.10.100.0



E-Chain®

with 2 separators 2552 assembled every 2nd link



Interior separation

1 set 2100.34PZ1B

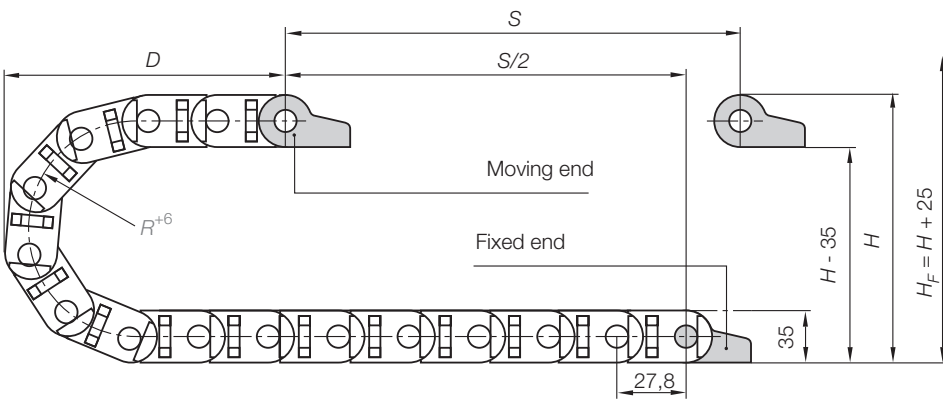
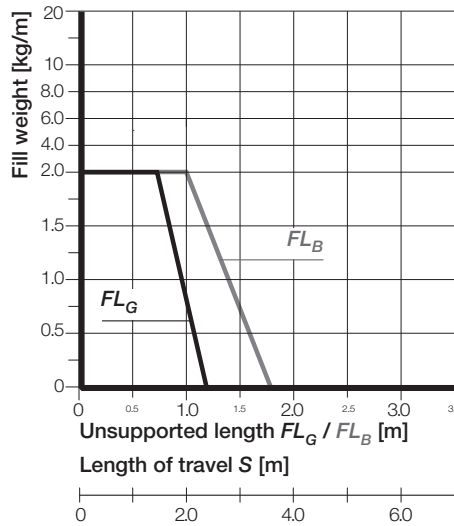
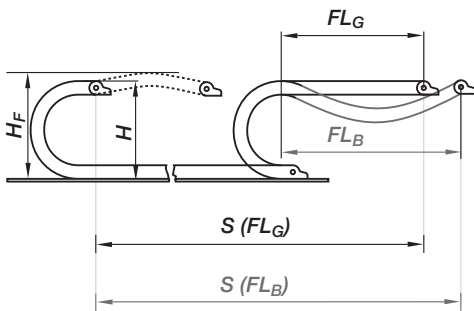


Mounting bracket



Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



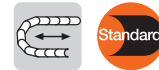
Pitch = 27,8 mm/link Links/m = 36 (1000,8 mm) Chain length = $S/2 + K$

R	055	075	100	125	150	175	200	225	250
$H+4_0$	145	185	235	285	335	385	435	485	535
D	108	133	153	178	203	228	253	278	303
K	242	312	380	462	544	626	708	780	886
H_2	145	185	100	100	100	100	100	100	100
D_2+25	108	133	380	495	570	665	740	1040	1130
K_2	242	312	612	806	945	1112	1223	1610	1779

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

Other installation methods

- Vertical, hanging ≤ 40 m
- Vertical, standing ≤ 3 m
- Side mounted, unupp. ≤ 1 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request

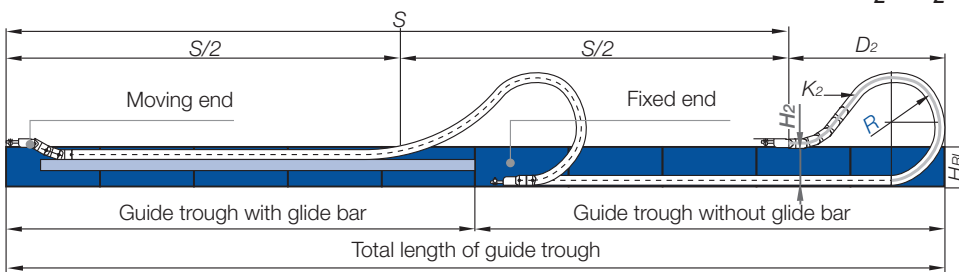


Short travels - unsupported

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:
 $H_F = H + 25$ mm
 (with 1,5 kg/m fill weight)

Long travel lengths from 10 m to max. 100 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. 100 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

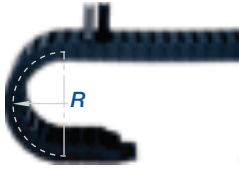
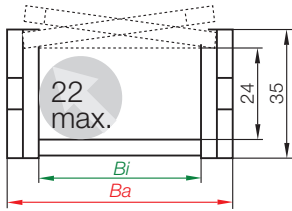


E2 medium
 Inner height: 24 mm

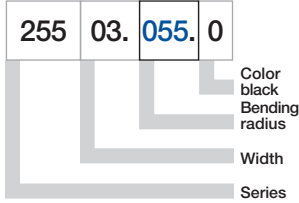
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Part No. structure



Series 255 - snap-open along outer radius

Part No.	B_i [mm]	B_a [mm]	R [mm]	Bending radii									Weight [kg/m]
255.03. <input type="text"/> .0	38	54	055	075	100	125	150	175	200	225	250	≈ 0,81	
255.05. <input type="text"/> .0	57	73	055	075	100	125	150	175	200	225	250	≈ 0,90	
255.07. <input type="text"/> .0	77	93	055	075	100	125	150	175	200	225	250	≈ 1,01	
255.10. <input type="text"/> .0	103	119	055	075	100	125	150	175	200	225	250	≈ 1,15	

Supplement Part No. with required radius. Example: 255.03. .0

0 = standard color, other colors ► page 1.39 · Pitch = 27,8 mm/link - Links/m = 36

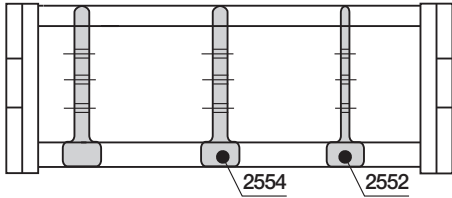


Option 1: Vertical Separators

Vertical Separators are used if a vertical subdivision of the E-Chain® interior is required -

By standard Vertical Separators are assembled every other E-Chain® link

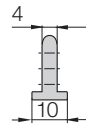
- **Standard** subdivision with **Vertical Separator, slotted 2552** or **Vertical Separator, slotted 2554** for combinations with **Full-Width Shelf 221.X** (Determining which type of separator to use is dependent on any potential retrofit requirements.)



Vert. Separator, slotted	
unassembled	2551
assembled	2552



Vert. Separator, slotted	
unassembled	2553
assembled	2554

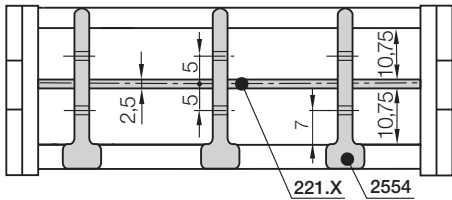


E2 medium
Inner height: 24 mm

Option 2: Full-Width Shelves

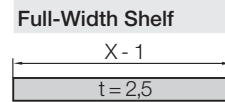
For applications involving many thin cables with similar or identical diameters

- **Vertical Separator, slotted 2552** oder **Vertical Separator, slotted 2554** -
for applications with **Full-Width Shelf 221.X**



Width X [mm]	Part No. unassembled	Part No. assembled
038	220.38	221.38
057	220.57	221.57

Width X [mm]	Part No. unassembled	Part No. assembled
077	220.77	221.77
103	220.103	221.103

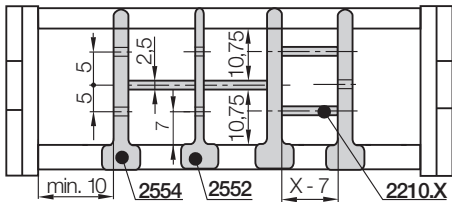


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Option 3: Shelves

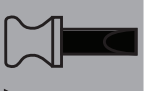
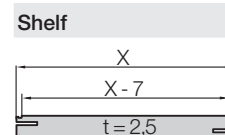
For applications involving many cables with similar or identical diameters. Partial separation into individual chambers can be achieved and the entire width $B_i - 10$ mm can be used

- **Shelf 2210.X** can be combined with **Vertical Separator, slotted 2552** (also as adjustable vertical separators without shelves) or **Vertical Separator, slotted 2554**
- Option 3 "Shelves" can also be combined with option 1 "Vertical Separators".

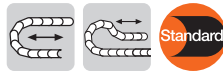


Width X [mm]	Part No. unassembled	Part No. assembled
018	2200.18	2210.18
023	2200.23	2210.23
028	2200.28	2210.28
033	2200.33	2210.33
038	2200.38	2210.38
043	2200.43	2210.43

Width X [mm]	Part No. unassembled	Part No. assembled
048	2200.48	2210.48
058	2200.58	2210.58
068	2200.68	2210.68
073	2200.73	2210.73
088	2200.88	2210.88



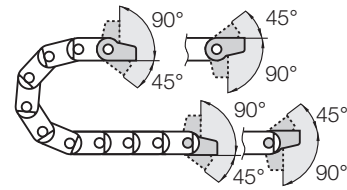
► page 5.91



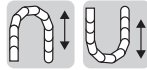
The Standard - option polymer - pivoting

- Recommended for unsupported and gliding applications
- Well suited for tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle for flexible assembly
- The twistability of the E-Chain® and the option to assemble the mounting brackets on the fixed end and/or the moving end, enable various installation options

Moving end with bore (outer link) 2...3PZ1(B)



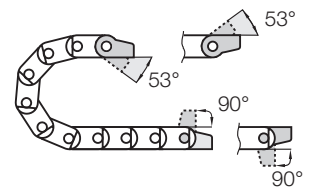
2...4PZ1(B) Fixed end with pin (inner link)



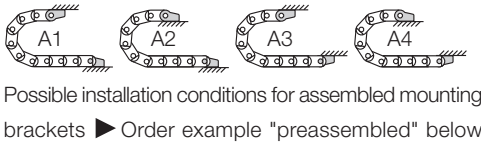
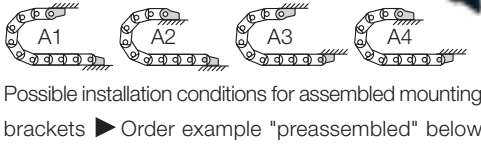
Option polymer - locking

- Recommended for unsupported and gliding applications
- Furthermore:
 - At very high speed and/or acceleration
 - If space is limited for height (the H_F measurement)
 - The twistability of the E-Chain® and the option to assemble the mounting brackets on the fixed end and/or the moving end, enable various installation options

Moving end with bore (outer link) 2...1PZ1(B)



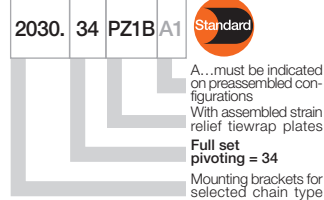
2...2PZ1(B) Fixed end with pin (inner link)



Dimensions and order configurations

Strain relief is possible on the moving end and/or the fixed end.

Part No. structure (pivoting)



Full set, for both ends:

2030. 34 PZ1B +tiewrap plate

Single-part order:

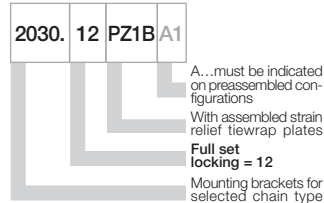
2030. 3 PZ1B +tiewrap plate

Mounting bracket with bore

2030. 4 PZ1B +tiewrap plate

Mounting bracket with pin

Part No. structure (locking)



Full set, for both ends:

2030. 12 PZ1B +tiewrap plate

Single-part order:

2030. 1 PZ1B +tiewrap plate

Mounting bracket with bore

2030. 2 PZ1B +tiewrap plate

Mounting bracket with pin

2...3PZ1(B) Standard! (pivoting)

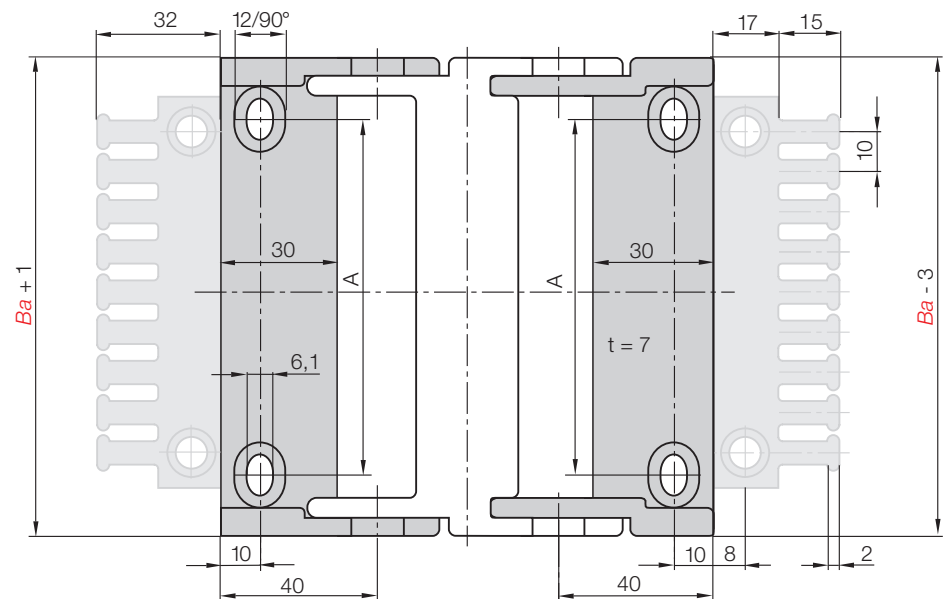
2...1PZ1(B) (locking)

Moving end

Standard! (pivoting) 2...4PZ1(B)

(locking) 2...2PZ1(B)

Fixed end



For E-Chain®	Part No. full set with tiewrap plate	Part No. with tiewrap plate + 10 cable tiewraps	Part No. full set without tiewrap plate	Dim. A [mm]
255.03 ▶	2030. [] PZ1B	2030. [] PZ1BK1	2030. [] PZ1	25
255.05 ▶	2050. [] PZ1B	2050. [] PZ1BK1	2050. [] PZ1	44
255.07 ▶	2070. [] PZ1B	2070. [] PZ1BK1	2070. [] PZ1	64
255.10 ▶	2100. [] PZ1B	2100. [] PZ1BK1	2100. [] PZ1	90

Please add the Part No. with the requested index - 34 for the pivoting configuration

e.g. 2030. 34 PZ1B or 12 for the locking configuration e.g. 2030. 12 PZ1B

For the preassembled mode please add the index A1...A4 e.g. 2030. 34 PZ1B A1

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Strain Relief for polymer mounting brackets (pivoting or locking)

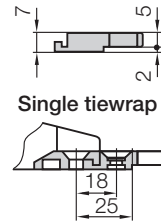
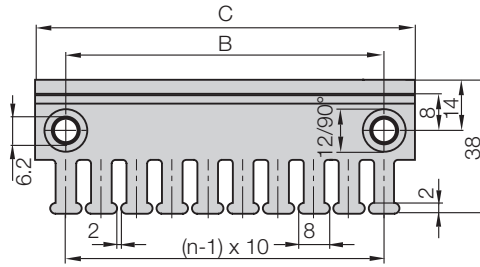
The strain relief plates can be snapped directly onto the mounting bracket without additional hardware. When the mounting brackets are bolted into place, the strain relief plates are also firmly connected to the machine surface. No separate installation is necessary. Cable ties secure cables using the "teeth" of the tie-wrap plate for time-saving, effective strain relief. **Details ▶ chapter 10**



Tiewrap plate	No. of teeth <i>n</i>	Dim. C [mm]	Dim. B [mm]
2020.ZB	3	30	15
2030.ZB	4	40	20
2040.ZB	5	50	30
2050.ZB	6	60	40
2070.ZB	8	80	60
2090.ZB = (2030.ZB + 2040.ZB)	9	90	-
2100.ZB	10	100	80
2125.ZB = (2050.ZB + 2050.ZB)	12	120	-

Tiewrap plate as individual part

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



Single tie-wrap plate

Shown assembled

Cable tiewraps as individual part

Cable tiewraps (100-piece bag)	Width x length	max. Ø	Tensile strength
CFB.001	4,8 x 150 mm	36 mm	222 N



Other strain relief elements - optional ▶ chapter 10

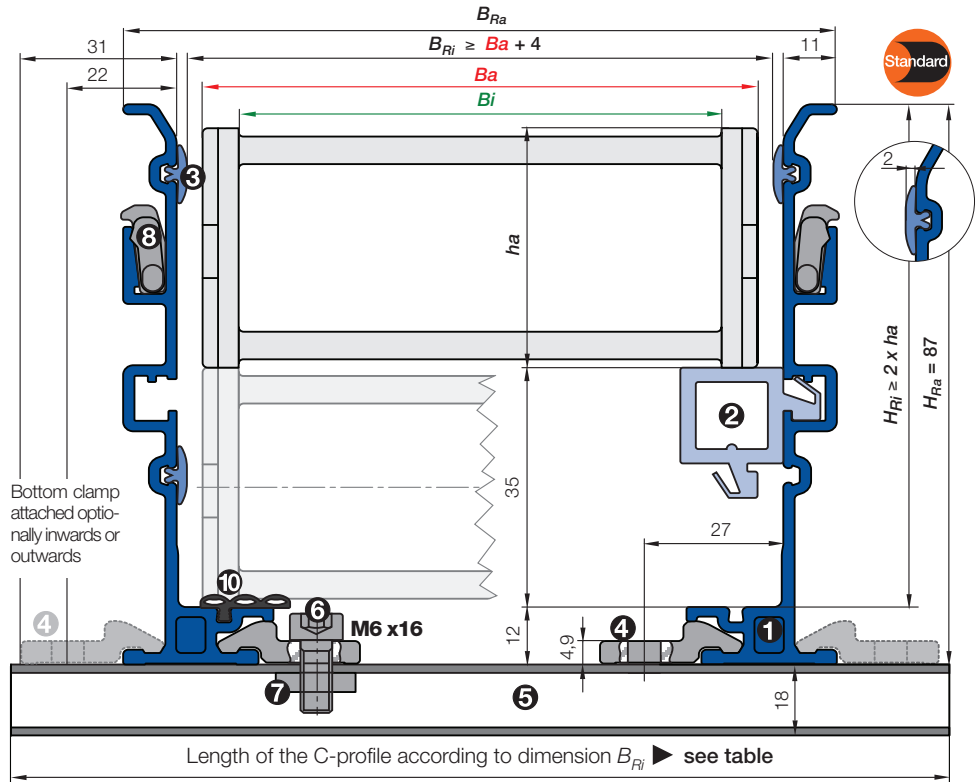
E2 medium
Inner height: 24 mm

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▶ page 5.91

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



- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M6 x16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Installation set "Basic" with C-Profile

Bottom Clamp attached optionally inwards or outwards

255.05.200.0 ▶ Order example

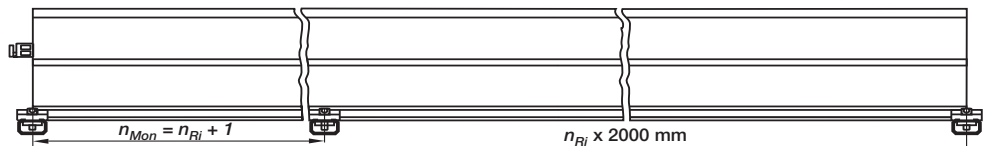
	B_{Ri} [mm]	Part No.	
		attached inwards	attached outwards
.03	58	-	960.30.150
.05	77	960.30.125	960.30.175
.07	97	960.30.150	960.30.200
.10	123	960.30.175	960.30.225

"Heavy-Duty": **971.50.XXX**
 instead of (**960.30.XXX**) on the right column "attached outwards"



Order example: Length of travel 30 m - Center mounted for Series 255.05.200.0 with $B_{Ri} = 77$

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. 971.30.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. 971.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	Order text: 17 installation sets "Basic"	Part No. 960.30.150
Option: For an additional noise dampening with silencer profile, please add Index A - Example:		Part No. 971.30.SLA



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

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