

Price index



ESD classification:
Electrically conductive ESD/ATEX version upon request



High torsional rigidity



Side-mounted - unsupported



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 14040/14140/R18840:

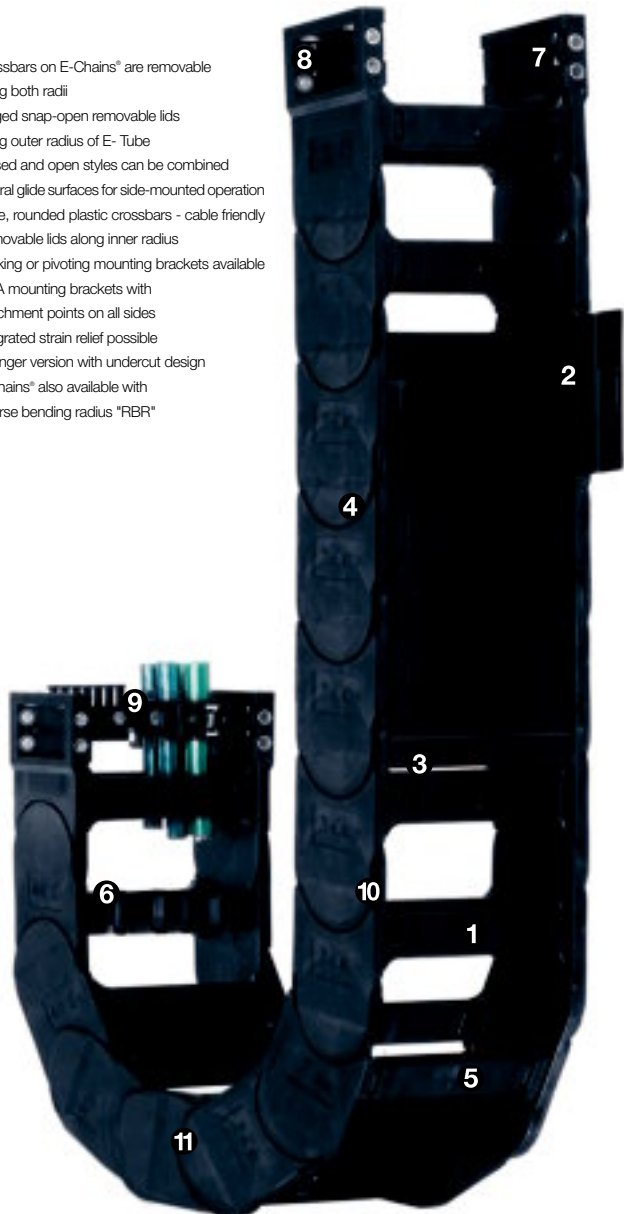
- For achieving simple, economical solutions
- For minimizing a chain's external width at any given internal width
- For use if Series 400 proves too large



When not to use it:

- If a quieter version is required
▶ Series E4.56, page 7.62
- If long side-mounted, unsupported length is required
▶ Series E4.56, page 7.62

- ❶ Crossbars on E-Chains® are removable along both radii
- ❷ Hinged snap-open removable lids along outer radius of E- Tube
- ❸ Closed and open styles can be combined
- ❹ Lateral glide surfaces for side-mounted operation
- ❺ Wide, rounded plastic crossbars - cable friendly
- ❻ Removable lids along inner radius
- ❼ Locking or pivoting mounting brackets available
- ❽ KMA mounting brackets with attachment points on all sides
- ❾ Integrated strain relief possible
- ❿ Stronger version with undercut design
- ⓫ E-Chains® also available with reverse bending radius "RBR"



Order example complete E-Chain®

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

5 m 14040.30.300.0

E-Chain®

with 2 separators 411 assembled every 2nd link

Interior separation

1 set 141400.30.12.C

Mounting bracket

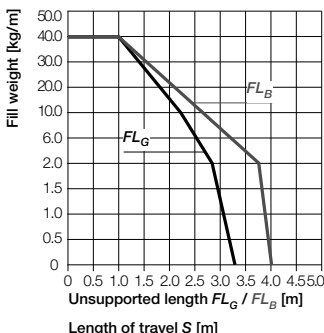
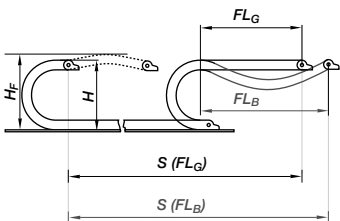


Unsupported length

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_{R1} = 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 ≤ 80 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 2 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



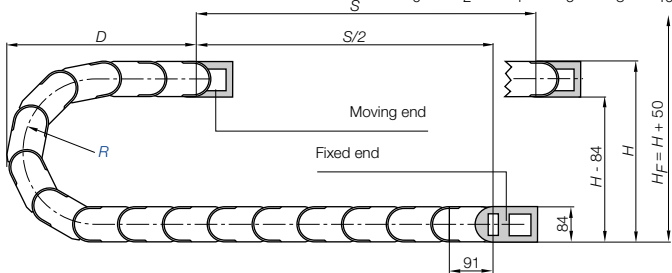
Short travels - unsupported

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:

$$H_F = H + 50 \text{ mm}$$

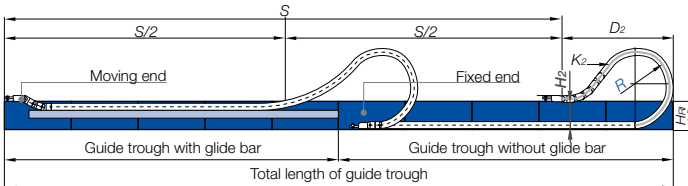
(with 2,0 kg/m fill weight)



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

R	135	150	175	200	250	300	400	500
H_{25}^0	360	385	435	485	585	685	885	1085
D	270	285	310	335	385	435	535	635
K	650	750	825	900	1050	1225	1450	1775
H_2	266	266	266	266	266	266	266	266
D_{25}^{+25}	390	450	530	710	920	1120	1530	1830
K_2	728	819	1001	1274	1638	1911	2548	3185

Long travel lengths from 10 m to max. 150 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. 150 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.

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

Technical Data



Details of material properties

► page 1.38

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System E4/light
Inner height: 56 mm

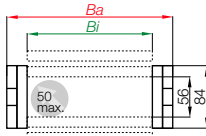
Phone +49- (0) 22 03-96 49-800
Fax +49- (0) 22 03-96 49-222



► page 7.123

For support of the lower run - **Support Tray tool kit** available ► page 9.70

7.125

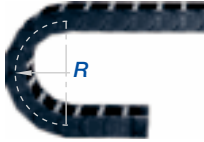


Part No. structure

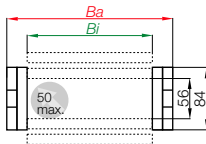
14040.13.250.0



Series 14040 - E-Chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

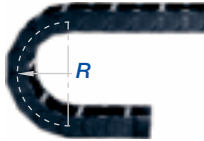


Part No. structure

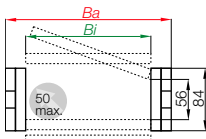
14140.13.250.0



Series 14140 - E-Chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



Part No. structure

18840.25.250.0



Series R18840 - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Part No.	<i>Bi</i>	<i>Ba</i>	14040	14140	R18840	
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]	
14040/14140.05.	.0	50	76	≈ 2,66	≈ 2,48	-
14040/14140.06.	.0	65	91	≈ 2,47	≈ 2,51	-
14040/14140/18840.07.	.0*	75	101	≈ 2,75	≈ 2,25	≈ 3,20
14040/14140.08.	.0	87	113	≈ 2,84	≈ 2,44	-
14040/14140/18840.10.	.0	100	126	≈ 2,93	≈ 2,61	≈ 3,49
14040/14140.11.	.0	112	139	≈ 3,06	≈ 2,67	-
14040/14140/18840.12.	.0	125	151	≈ 3,12	≈ 2,71	≈ 3,85
14040/14140.13.	.0	137	164	≈ 3,26	≈ 2,77	-
14040/14140/18840.15.	.0	150	176	≈ 3,32	≈ 2,81	≈ 4,28
14040/14140.16.	.0	162	189	≈ 3,43	≈ 2,86	-
14040/14140/18840.17.	.0	175	201	≈ 3,54	≈ 2,92	≈ 4,54
14040/14140.18.	.0	187	214	≈ 3,65	≈ 2,97	-
14040/14140/18840.20.	.0	200	226	≈ 3,67	≈ 2,98	≈ 4,85
14040/14140.21.	.0	212	239	≈ 3,78	≈ 3,04	-
14040/14140.22.	.0	225	251	≈ 3,85	≈ 3,07	-
14040/14140.23.	.0	237	264	≈ 3,98	≈ 3,14	-
14040/14140/18840.25.	.0	250	276	≈ 4,07	≈ 3,18	≈ 5,58
14040/14140.26.	.0	262	289	≈ 4,16	≈ 3,22	-
14040/14140/18840.27.	.0	275	301	≈ 4,27	≈ 3,28	≈ 5,85
14040/14140.28.	.0	287	314	≈ 4,29	≈ 3,29	-
14040/14140/18840.30.	.0	300	326	≈ 4,51	≈ 3,40	≈ 6,24
14040/14140.31.	.0	312	339	≈ 4,57	≈ 3,42	-
14040/14140.32.	.0	325	351	≈ 4,60	≈ 3,44	-
14040/14140.33.	.0	337	364	≈ 4,77	≈ 3,53	-
14040/14140/18840.35.	.0	350	376	≈ 4,93	≈ 3,61	≈ 6,99
14040/14140.36.	.0	362	389	≈ 4,94	≈ 3,61	-
14040/14140.37.	.0	375	401	≈ 4,95	≈ 3,62	-
14040/14140.38.	.0	387	414	≈ 5,04	≈ 3,66	-
14040/14140/18840.40.	.0	400	426	≈ 5,24	≈ 3,76	≈ 7,94
14040/14140.41.	.0	412	439	≈ 5,39	≈ 3,84	-
14040/14140.42.	.0	425	451	≈ 5,54	≈ 3,92	-
14040/14140.43.	.0	437	464	≈ 5,61	≈ 3,95	-
14040/14140.45.	.0	450	476	≈ 5,68	≈ 3,98	-
14040/14140/18840.46.	.0	462	489	≈ 5,70	≈ 3,99	≈ 8,40
14040/14140.47.	.0	475	501	≈ 5,83	≈ 4,06	-
14040/14140.48.	.0	487	514	≈ 5,86	≈ 4,08	-
14040/14140.50.	.0	500	526	≈ 5,96	≈ 4,13	-
14040/14140.51.	.0	512	539	≈ 5,98	≈ 4,14	-
14040/14140.52.	.0	525	551	≈ 6,03	≈ 4,16	-
14040/14140.53.	.0	537	564	≈ 6,18	≈ 4,24	-
14040/14140.55.	.0	550	576	≈ 6,67	≈ 4,48	-
14040/14140.60.	.0	600	626	≈ 6,98	≈ 4,58	-

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:

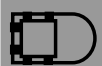
Full E-Tube made of HT:
18840.40.150.0.HT
Lids made of HT:
18840.40.HTE.150.0

*for long travels. Upon request.
Further Information:
www.igus.de/en/HT
Delivery time
up to 4 weeks!



System E4/light
Inner height: 56 mm

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► page 7.123

Available bending radii

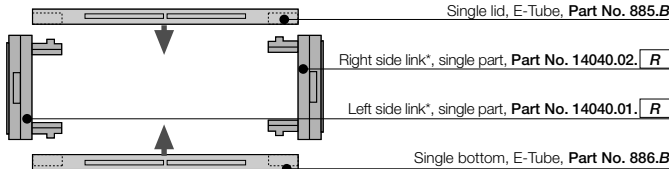
R [mm] 135 150 175 200 250 300 400 500

Supplement Part No. with required radius. Example: 14040.30.300.0

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

Single crossbar, E-Chain®, Part No. 450.Bi

Single lid, E-Tube, Part No. 885.Bi



* Removable lid only, no hinged option

** not available for R18840



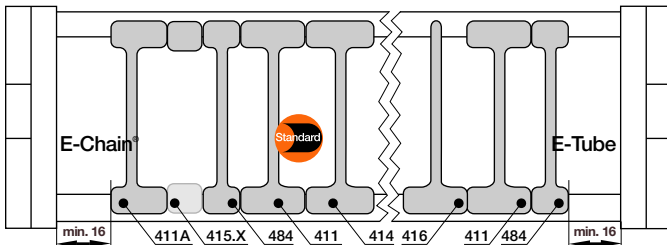
Extender crossbar for large diameter hoses ► page 7.130

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

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



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 16 mm!



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.



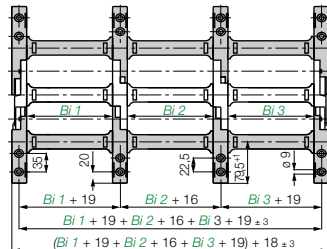
Part No. structure

14040.10 /20 /10. _0

14040.Bi1/Bi2/Bi3. _0

Extension links - for extremely wide E-Chains® up to 3,0 m

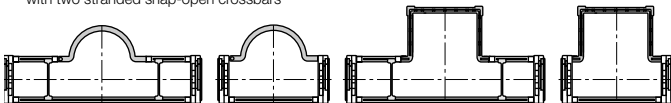
- For applications in which particularly high fill weights necessitate extremely wide E-Chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with E-Chains®, E-Tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- E-Chains® with extension links are attached with KMA or steel mounting brackets



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



Round extender crossbar with snap-open crossbars Attached directly to the side link Square extender crossbar with snap-open crossbars Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	180	□	+	-
450.35.D250	195	□	+	-
450.40.D300	245	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	180	□	-	+
450.30.HD250	195	□	-	+

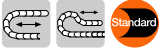
○ = round □ = square + = yes / - = no



E4 clip-on cable binder

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

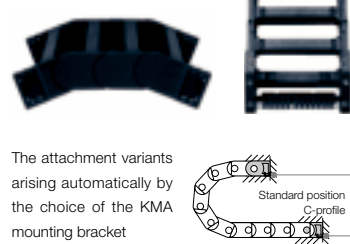
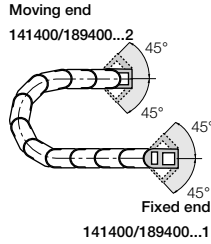
Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm



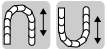
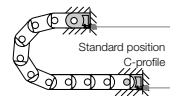
The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with Chainfix clip or strain relief tiwrap plates
- Corrosion resistant
- Universal mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

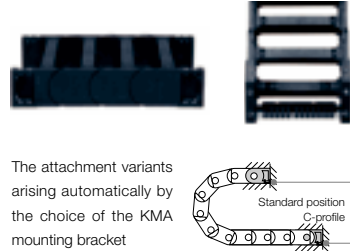
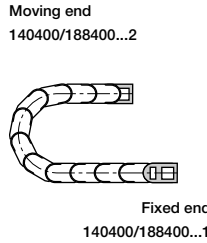


The attachment variants arising automatically by the choice of the KMA mounting bracket

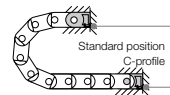


Option KMA - locking

- Recommended for vertical hanging / standing applications
- Additionally:**
- Universal mountable
 - C-profile option
 - Corrosion resistant
 - Locked connections
 - At very high acceleration

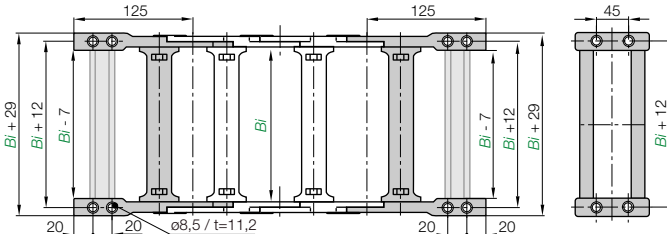


The attachment variants arising automatically by the choice of the KMA mounting bracket



Moving end 141400/189400...2 (pivoting)
140400/188400...2 (locking)

Fixed end (pivoting) 141400/189400...1
(locking) 140400/188400...1



Dimensions and order configurations

Part No. structure (pivoting)

141400/189400	07. 12. C	Optional with C-profile
		Full set
		Width 141400 = E-Chain* 188400 = E-Tube

Part No. structure (locking)

140400/188400	07. 12. C	Optional with C-profile
		Full set
		Width 140400 = E-Chain* 188400 = E-Tube

Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi	Width index	Part No. full set pivoting	Part No. full set locking	C-profile option [mm]	Bi
.05.	▶ 141400	140400	05.12. C	50	.31.	▶ 141400	140400	31.12. C	312
.06.	▶ 141400	140400	06.12. C	65	.32.	▶ 141400	140400	32.12. C	325
.07.	▶ 141400/189400	140400/188400	07.12. C	75	.33.	▶ 141400	140400	33.12. C	337
.08.	▶ 141400	140400	08.12. C	87	.35.	▶ 141400/189400	140400/188400	35.12. C	350
.10.	▶ 141400/189400	140400/188400	10.12. C	100	.36.	▶ 141400	140400	36.12. C	362
.11.	▶ 141400	140400	11.12. C	112	.37.	▶ 141400	140400	37.12. C	375
.12.	▶ 141400/189400	140400/188400	12.12. C	125	.38.	▶ 141400	140400	38.12. C	387
.13.	▶ 141400	140400	13.12. C	137	.40.	▶ 141400/189400	140400/188400	40.12. C	400
.15.	▶ 141400/189400	140400/188400	15.12. C	150	.41.	▶ 141400	140400	41.12. C	412
.16.	▶ 141400	140400	16.12. C	162	.42.	▶ 141400	140400	42.12. C	425
.17.	▶ 141400/189400	140400/188400	17.12. C	175	.43.	▶ 141400	140400	43.12. C	437
.18.	▶ 141400	140400	18.12. C	187	.45.	▶ 141400	140400	45.12. C	450
.20.	▶ 141400/189400	140400/188400	20.12. C	200	.46.	▶ 141400/189400	140400/188400	46.12. C	462
.21.	▶ 141400	140400	21.12. C	212	.47.	▶ 141400	140400	47.12. C	475
.22.	▶ 141400	140400	22.12. C	225	.48.	▶ 141400	140400	48.12. C	487
.23.	▶ 141400	140400	23.12. C	237	.50.	▶ 141400	140400	50.12. C	500
.25.	▶ 141400/189400	140400/188400	25.12. C	250	.51.	▶ 141400	140400	51.12. C	512
.26.	▶ 141400	140400	26.12. C	262	.52.	▶ 141400	140400	52.12. C	525
.27.	▶ 141400/189400	140400/188400	27.12. C	275	.53.	▶ 141400	140400	53.12. C	537
.28.	▶ 141400	140400	28.12. C	287	.55.	▶ 141400	140400	55.12. C	550
.30.	▶ 141400/189400	140400/188400	30.12. C	300	.60.	▶ 141400	140400	60.12. C	600

Full set, for both ends:

141400. [05. 12]

Single-part order:

141400. [05. 1 2]

Mounting bracket moving end

141400. [05. 1]

Mounting bracket fixed end



igus® Chainfix steel clamps and Chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ► chapter 10**

Chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



Chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® E-ChainSystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ► chapter 10**

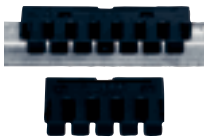
Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C



Chainfix Nugget for the C-Profile

Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ► chapter 10**

Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52	30	16,8
CFN.20.N35	20	20,0



Chainfix tiwrap plates with clip-on connection for the C-profile

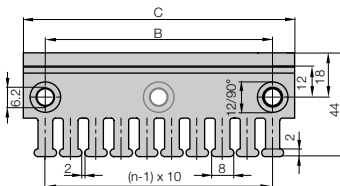
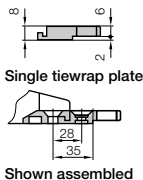
Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all E-Chains® with KMA and integrated C-profile. **Details ► chapter 10**

Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7



Tiwrap plate as individual part

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



Tiwrap 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)

