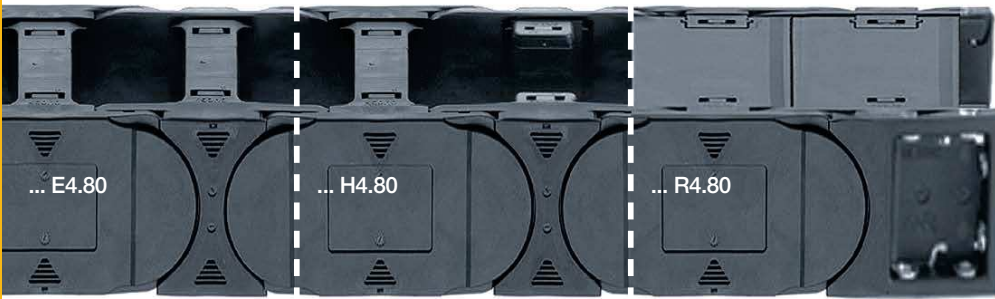


# E4.1 | Series E4.80·H4.80·R4.80 | Product range

Strong due to undercut design, new very large inner height



**e-chains®** Series E4.80 **Crossbars every link** (crossbars removable along the inner and outer radius)  
**e-chains®** Series H4.80 **Crossbars every 2<sup>nd</sup> link** (crossbars removable along the inner and outer radius)  
**e-tubes** Series R4.80 **Fully enclosed** (lids openable along the outer radius, from one side)

Part No.	Bi	Ba	E4.80	H4.80	R4.80	Part No.	Bi	Ba	E4.80	H4.80	R4.80
e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]	e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]
E4. H4. -	80.05	R.0 50 100	≈ 5.73	≈ 5.72	-	E4. H4. -	80.28	R.0 287 338	≈ 7.14	≈ 6.42	-
E4. H4. -	80.055	R.0 55 105	≈ 5.77	≈ 5.74	-	E4.▲ H4. R4. 80.30	R.0 300 350	≈ 7.27	≈ 6.49	≈ 9.22	
E4. H4. -	80.06	R.0 65 115	≈ 5.80	≈ 5.76	-	E4. H4. -	80.31	R.0 312 363	≈ 7.30	≈ 6.50	-
E4.▲ H4. -	80.07	R.0 75 125	≈ 5.86	≈ 5.78	-	E4. H4. -	80.32	R.0 325 375	≈ 7.38	≈ 6.54	-
E4. H4. -	80.08	R.0 87 137	≈ 5.93	≈ 5.82	-	E4. H4. -	80.33	R.0 337 388	≈ 7.48	≈ 6.59	-
E4. H4. R4. 80.10	R.0 100 150	≈ 6.00	≈ 5.85	≈ 6.70	E4. H4. R4. 80.35	R.0 350 400	≈ 7.59	≈ 6.65	≈ 9.90		
E4. H4. -	80.11	R.0 112 163	≈ 6.10	≈ 5.90	-	E4. H4. -	80.36	R.0 362 413	≈ 7.61	≈ 6.66	-
E4.▲ H4. -	80.12	R.0 125 175	≈ 6.16	≈ 5.93	-	E4. H4. -	80.37	R.0 375 425	≈ 7.71	≈ 6.71	-
E4. H4. -	80.13	R.0 137 188	≈ 6.27	≈ 5.99	-	E4. H4. -	80.38	R.0 387 438	≈ 7.74	≈ 6.73	-
E4.▲ H4. R4. 80.15	R.0 150 200	≈ 6.30	≈ 6.01	≈ 7.34	E4. H4. R4. 80.40	R.0 400 450	≈ 7.84	≈ 6.77	≈ 10.52		
E4. H4. -	80.16	R.0 162 213	≈ 6.39	≈ 6.05	-	E4. H4. -	80.41	R.0 412 463	≈ 7.90	≈ 6.80	-
E4. H4. -	80.169	R.0 169 220	≈ 6.46	≈ 6.08	-	E4. H4. -	80.42	R.0 425 475	≈ 8.00	≈ 6.85	-
E4. H4. -	80.17	R.0 175 225	≈ 6.50	≈ 6.11	-	E4. H4. -	80.43	R.0 437 488	≈ 8.07	≈ 6.89	-
E4. H4. -	80.182	R.0 182 233	≈ 6.54	≈ 6.12	-	E4. H4. -	80.45	R.0 450 500	≈ 8.23	≈ 6.97	-
E4. H4. -	80.18	R.0 187 238	≈ 6.59	≈ 6.15	-	E4. H4. R4. 80.46	R.0 462 513	≈ 8.26	≈ 6.99	≈ 11.33	
E4.▲ H4. R4. 80.20	R.0 200 250	≈ 6.64	≈ 6.17	≈ 8.09	E4. H4. -	80.47	R.0 475 525	≈ 8.29	≈ 7.00	-	
E4. H4. -	80.207	R.0 207 258	≈ 6.68	≈ 6.20	-	E4. H4. -	80.48	R.0 487 538	≈ 8.35	≈ 7.03	-
E4. H4. -	80.21	R.0 212 263	≈ 6.70	≈ 6.20	-	E4. H4. -	80.50	R.0 500 550	≈ 8.48	≈ 7.09	-
E4. H4. -	80.22	R.0 225 275	≈ 6.76	≈ 6.23	-	E4. H4. -	80.51	R.0 512 563	≈ 8.52	≈ 7.11	-
E4. H4. -	80.23	R.0 237 288	≈ 6.84	≈ 6.28	-	E4. H4. -	80.52	R.0 525 575	≈ 8.63	≈ 7.17	-
E4.▲ H4. R4. 80.25	R.0 250 300	≈ 6.94	≈ 6.32	≈ 8.47	E4. H4. -	80.53	R.0 537 588	≈ 8.70	≈ 7.21	-	
E4. H4. -	80.26	R.0 262 313	≈ 7.01	≈ 6.36	-	E4. H4. -	80.55	R.0 550 600	≈ 9.05	≈ 7.38	-
E4. H4. -	80.27	R.0 275 325	≈ 7.09	≈ 6.40	-	E4. H4. -	80.60	R.0 600 650	≈ 9.23	≈ 7.47	-

▲ ESD version (Electro Static Discharge) available from stock. More information ▶ From page 142

\*Radius not available for e-tubes

Available bend radii

R [mm] | 150\* | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1,000 |

Complete Part No. with required radius (R). Example:

E4.80.30.300.0 = crossbars every link / H4.80.30.300.0 = crossbars every 2<sup>nd</sup> link / R4.80.30.300.0 = fully enclosed

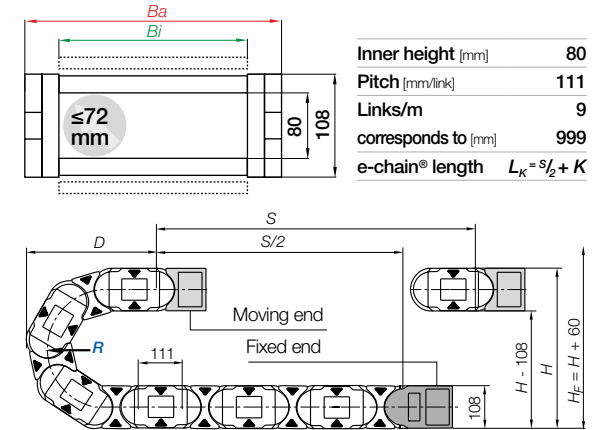
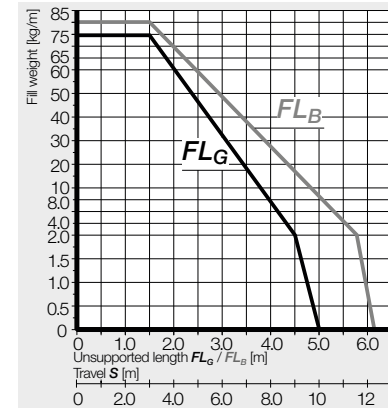
## ESD - many sizes from stock

- Standardised product made from Iguimid ESD
  - ESD material tested for over 10 million cycles for the toughest requirements
  - Short delivery times including mounting brackets and interior separation; 24hrs, from stock
- More information and the complete product range ▶ From page 142



# E4.1 | E4.80·H4.80·R4.80 | Installation dimensions

Unsupported applications | Short travels

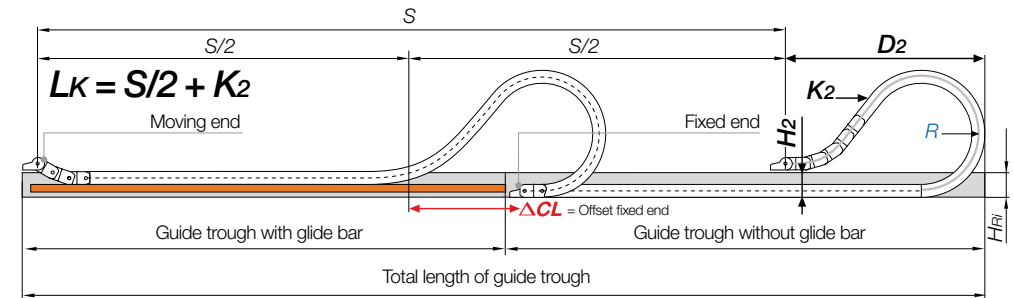


R	150*	200	250	300	350	400	500	550	600	1,000
H <sub>25</sub> <sup>0</sup>	408	508	608	708	808	908	1,108	1,208	1,308	2,108
D	371	421	471	521	571	621	721	771	821	1,221
K	695	855	1,010	1,165	1,325	1,480	1,795	1,950	2,110	3,365

The required clearance height:  $H_f = H + 60\text{mm}$  (with 3.0kg/m fill weight)

\*Radius not available for e-tubes

## Gliding applications | For travel lengths from 12m to max. 400m



**Note:** We recommend the project planning of such a system to be carried out by igus®.

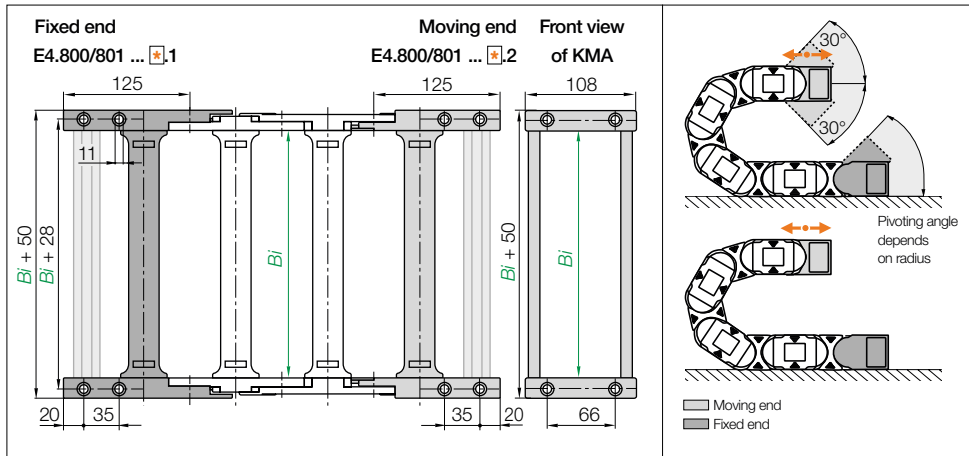
In case of travels between 10 and 12m we recommend an e-chain® with a longer unsupported length.

R	150*	200	250	300	350	400	500	550	600	1,000
H <sub>2</sub>	242	242	242	242	242	242	242	-	-	-
D <sub>2</sub> <sup>+25</sup>	550	800	1,000	1,200	1,450	1,600	2,100	-	-	-
K <sub>2</sub>	890	1,330	1,665	2,000	2,330	2,660	3,440	-	-	-
ΔCL	189	389	539	689	889	989	1,389	-	-	-

\*Radius not available for e-tubes

# E4.1 | e-chains® E4.80·H4.80 | Accessories

KMA mounting brackets | Attachment from any side | Pivoting | Locking



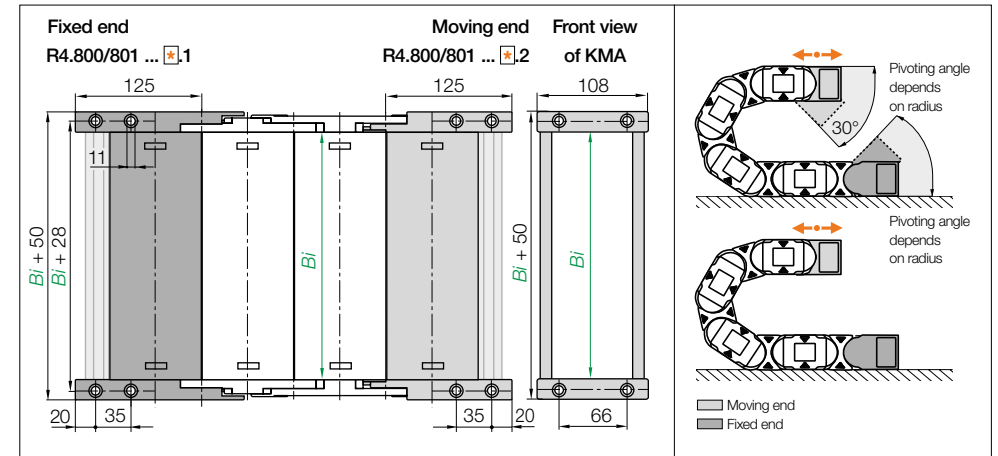
**KMA pivoting** | Recommended for unsupported and gliding applications  
**KMA locking** | Recommended for vertical hanging and standing applications

Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]	Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]
05.	E4.800.05	E4.801.05	50	28.	E4.800.28	E4.801.28	287
055.	E4.800.055	E4.801.055	55	30.	E4.800.30	E4.801.30	300
06.	E4.800.06	E4.801.06	65	31.	E4.800.31	E4.801.31	312
07.	E4.800.07	E4.801.07	75	32.	E4.800.32	E4.801.32	325
08.	E4.800.08	E4.801.08	87	33.	E4.800.33	E4.801.33	337
10.	E4.800.10	E4.801.10	100	35.	E4.800.35	E4.801.35	350
11.	E4.800.11	E4.801.11	112	36.	E4.800.36	E4.801.36	362
12.	E4.800.12	E4.801.12	125	37.	E4.800.37	E4.801.37	375
13.	E4.800.13	E4.801.13	137	38.	E4.800.38	E4.801.38	387
15.	E4.800.15	E4.801.15	150	40.	E4.800.40	E4.801.40	400
16.	E4.800.16	E4.801.16	162	41.	E4.800.41	E4.801.41	412
169.	E4.800.169	E4.801.169	169	42.	E4.800.42	E4.801.42	425
17.	E4.800.17	E4.801.17	175	43.	E4.800.43	E4.801.43	437
182.	E4.800.182	E4.801.182	182	45.	E4.800.45	E4.801.45	450
18.	E4.800.18	E4.801.18	187	46.	E4.800.46	E4.801.46	462
20.	E4.800.20	E4.801.20	200	47.	E4.800.47	E4.801.47	475
207.	E4.800.207	E4.801.207	207	48.	E4.800.48	E4.801.48	487
21.	E4.800.21	E4.801.21	212	50.	E4.800.50	E4.801.50	500
22.	E4.800.22	E4.801.22	225	51.	E4.800.51	E4.801.51	512
23.	E4.800.23	E4.801.23	237	52.	E4.800.52	E4.801.52	525
25.	E4.800.25	E4.801.25	250	53.	E4.800.53	E4.801.53	537
26.	E4.800.26	E4.801.26	262	55.	E4.800.55	E4.801.55	550
27.	E4.800.27	E4.801.27	275	60.	E4.800.60	E4.801.60	600

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C

# E4.1 | e-tubes R4.80 | Accessories

KMA mounting brackets | Attachment from any side | Pivoting | Locking

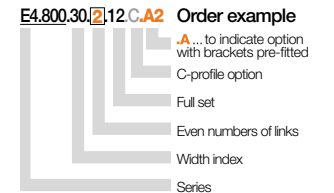
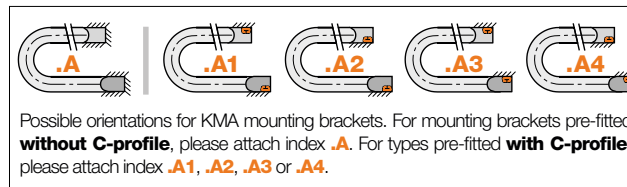
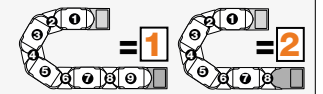


**KMA pivoting** | Recommended for unsupported and gliding applications  
**KMA locking** | Recommended for vertical hanging and standing applications

Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]	Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]
10.	R4.800.10	R4.801.10	100	30.	R4.800.30	R4.801.30	300
15.	R4.800.15	R4.801.15	150	35.	R4.800.35	R4.801.35	350
20.	R4.800.20	R4.801.20	200	40.	R4.800.40	R4.801.40	400
25.	R4.800.25	R4.801.25	250	46.	R4.800.46	R4.801.46	462

(KMA = polymer metal mounting bracket) For the C-profile option please add index .C

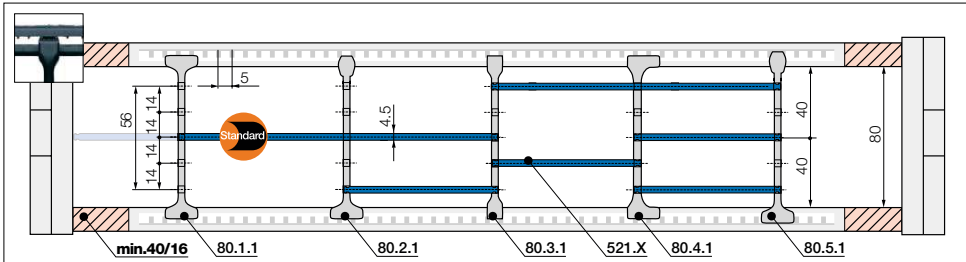
**Note:** The e-chains® may end with either an inner or an outer side link. An outer side link should always be the first e-chain® link at the moving end. Please specify the index 1 (for odd) or 2 (for even) depending on an even or odd number of links required.



**Strain relief** e.g. clamps, tiewrap plates, nuggets and clips are available from stock. The complete chainfix range with ordering options ► From page 1392

Interior separation | Increase cable service life

Previous generation of interior separation with other options ► [www.igus.co.uk/E4.80](http://www.igus.co.uk/E4.80)



**Note:** Please be aware of the minimum lateral gap to the side links! **e-tube: 40mm | e-chain®: 16mm**  
As standard separators are fitted every 2<sup>nd</sup> e-chain® link!

		4		<b>Standard separator, wide base</b>
		18		unassembled <b>80.1</b> assembled <b>80.1.1</b>

**Standard - for any application**  
Separator with a wide base for maximum holding force.

		8		<b>Separator, narrow top</b>
		18		unassembled <b>80.2</b> assembled <b>80.2.1</b>

**For even faster installation**  
Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

		4		<b>Separator, narrow</b>
		8		unassembled <b>80.3</b> assembled <b>80.3.1</b>

**For small cables**  
Separator with a narrow base for a large number of small cables side by side. Saves space.

		4		<b>Separator, asymmetrical</b>
		18		unassembled <b>80.4</b> assembled <b>80.4.1</b>

**For side-mounted applications**  
Asymmetrical separator, for defined gap distance. No additional spacers required.

		8		<b>Notch separator for notched crossbar</b>
		18		unassembled <b>80.5</b> assembled <b>80.5.1</b>

**Locks securely in preset increments**  
Notch separator for exact positioning. Recommended for side-mounted applications.

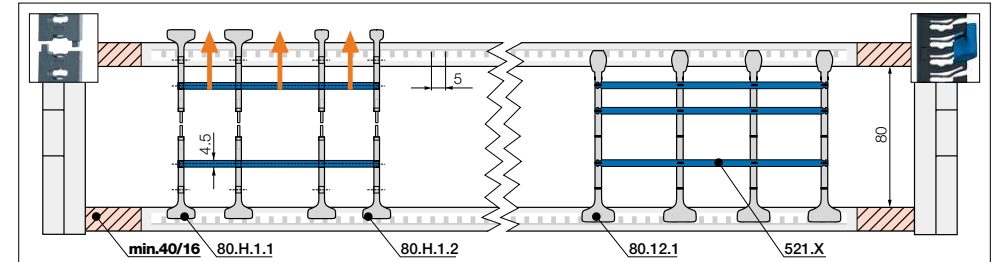
		125		<b>Shelf, lockable</b>
		18		unassembled <b>520.X</b> assembled <b>521.X</b>

**Horizontal separation**  
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X [mm]	X [mm]	unassembled		assembled		X [mm]	unassembled		assembled	
		X [mm]	unassembled	assembled	X [mm]		unassembled	assembled		
	050	520.050	521.050	150	520.150	521.150	300	520.300	521.300	
	065	520.065	521.065	175	520.175	521.175	350	520.350	521.350	
	075	520.075	521.075	200	520.200	521.200	375	520.375	521.375	
	100	520.100	521.100	225	520.225	521.225	387	520.387	521.387	
	125	520.125	521.125	250	520.250	521.250	450	520.450	521.450	



Interior separation | To allow faster filling



**Note:** Please be aware of the minimum lateral gap to the side links! **e-tube: 40mm | e-chain®: 16mm**  
As standard separators are fitted every 2<sup>nd</sup> e-chain® link!

		4		<b>Split separator, wide base/top</b>
		18		unassembled <b>80.H.1</b> assembled <b>80.H.1.1</b>

**Split separators**  
In order to fill e-chains® more easily and effectively, these separators can be split in the middle. This allows easier access to middle shelf partitions. Fast assembly and easy retrofit. 2 types available: with wide or narrow top.

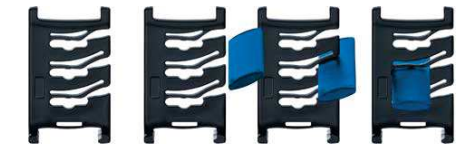
		8		<b>Split separator, narrow top</b>
		18		unassembled <b>80.H.2</b> assembled <b>80.H.2.1</b>

		8		<b>Lean separator<sup>1)</sup></b>
		18		unassembled <b>80.12</b> assembled <b>80.12.1</b>

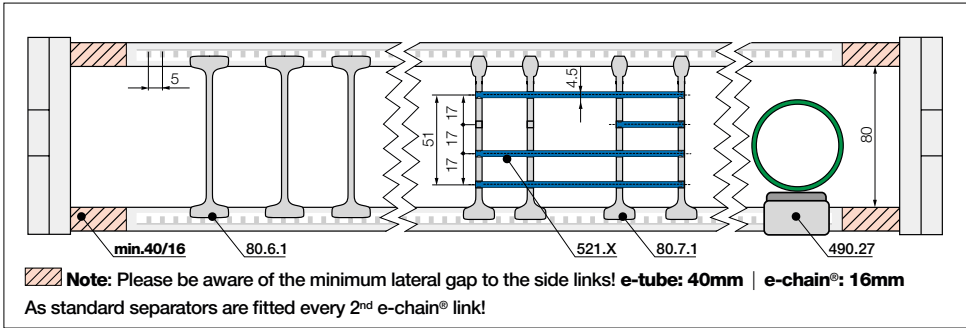
**Lean separators<sup>1)</sup>**  
For quick fitting of shelves in several layers.  
**1) Note: Please combine maximum 4 lean separators with one shelf. Not suitable for side-mounted e-chains®!**

With the lean separator you can quickly insert several layers of cables into the e-chain® and reduce the installation time by up to 50%<sup>2)</sup>.

<sup>2)</sup> Lean interior separation vs. Standard separator - measured on a 4m long e-chain® fitted with 12 cables in the igus® readychain® factory



More interior separation options



		<b>Notch locking separator*, lockable for e-chains®</b>
	unassembled	80.6
	assembled	80.6.1

**Notch locking separator\* for increased holding force**  
Notch locking separators offer higher crossbar opening forces for high humidity and/or large hydraulic hoses. They can be positioned precisely and then locked in position.

		<b>Separator, one end locking</b>
	unassembled	80.7
	assembled	80.7.1

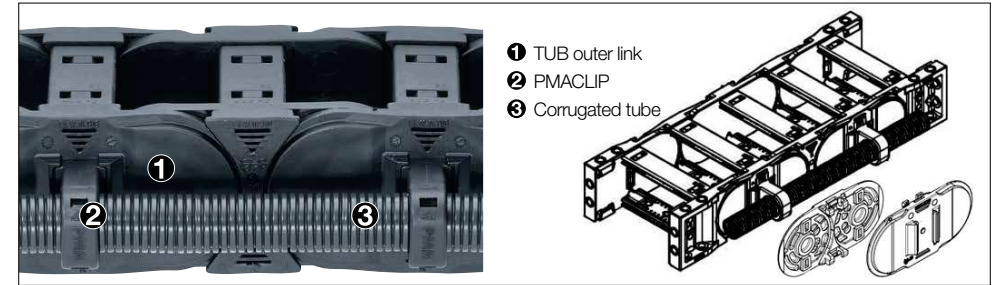
**Separator, one end locking**  
Offset slots for more variability in horizontal subdivisions.

		<b>Rollclip*, for e-chains®</b>
	unassembled	489.27
	assembled	490.27

**Rollclip\***  
Minimises abrasion of sensitive hoses. Simply clamps onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

\*Only suitable for e-chains®

TUB



**TUB | Safe guidance for corrugated tubes parallel to the e-chain®**

- Additional, simple guidance for corrugated tubes on the outside of the e-chain®
- PMACLIP support to be easily clipped on corrugated tubes with nominal widths 17, 23, 29, 36, 48mm
- Easy access to the corrugated tubes, fast replacement of the hoses
- Reduce assembly time and cost - easy to assemble, without any additional screws or tools
- The part number includes the e-chain® with TUB side sections; the PMACLIP support and the hose are ordered separately

Part No. TUB	Part No. TUB	Part No. TUB	For corrugated tube nominal diameter
Outer link right*	Outer link left*	Outer link at both ends*	Ø [mm]
E4.80.XXXTUBR.R.0	E4.80.XXXTUBL.L.0	E4.80.XXXTUB.R.0	17 / 23 / 29 / 36 / 48

\*As viewed from the fixed end

Complete Part No. with the width index **XXX** of **Bi** and the minimum bend radius (**R**). Example:  
E4.80.10TUBR.150.0 = with TUB outer sections every 2<sup>nd</sup> right hand link

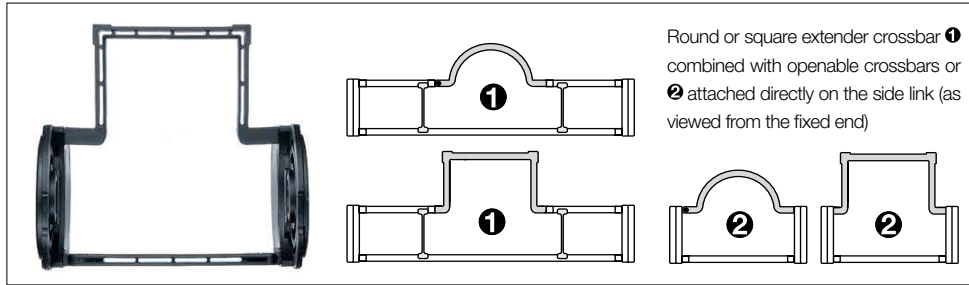
**Product range | PMACLIP | Support, one-piece, with safety clip**



Part No.	NW	A	B	C	H	E	M
PMACLIP	Ø [mm]	mm	mm	mm	mm	mm	mm
I-BFH-17-0	17	30.0	20.0	34.0	20.0	68.0	M6
I-BFH-23-0	23	38.5	20.0	42.0	24.0	85.0	M6
I-BFH-29-0	29	45.5	20.0	48.0	27.0	99.0	M6
I-BFH-36-0	36	55.5	20.0	56.0	31.0	119.0	M6
I-BFH-48-0	48	67.5	20.0	68.0	37.0	143.0	M6



Extender crossbar with fixed width



Extender crossbars with fixed width | Safe guiding for large hoses

- Suitable for hoses with a maximum outer diameter of 270mm
- Option 1 extender crossbars with fixed width to combine with openable crossbars
- Option 2 extender crossbars with fixed width attached directly on the side link
- Optionally openable along the inner "Z" or the outer radius "E"
- Gliding with crossbars assembled along the outer radius and a special guide trough

Part No. extender crossbar with fixed width, as individual parts	Hose $\varnothing \leq$ [mm]	Extender crossbar shape	2 Fitted to side link	1 Combine with openable crossbars
450.15RHD115	115	○ round	No	Yes
450.17RD115	115	○ round	Yes	No
450.25D150	150	□ square	Yes	No
450.30D200	200	□ square	Yes	No
450.35D250	220	□ square	Yes	No
450.40D300	270	□ square	Yes	No
450.20HD150	150	□ square	No	Yes
450.25HD200	200	□ square	No	Yes
450.30HD250	220	□ square	No	Yes

Order example: 1 combined with openable crossbars

To receive extender crossbar RHD115 pre-fitted along the outer radius of the-chain®, please add index **E: E4.80.10/15RHDE115/10.R.0**

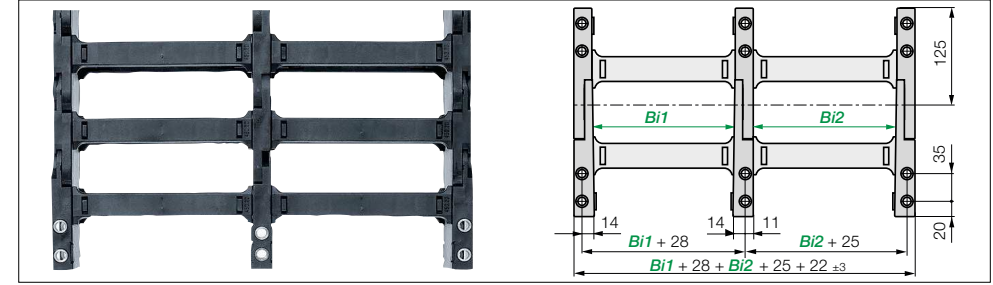
To receive extender crossbar RHD115 pre-fitted along the inner radius of the-chain®, please add index **Z: E4.80.10/15RHDZ115/10.R.0**

Order example: 2 fitted to side link

To receive extender crossbar RD115 pre-fitted along the outer radius of the-chain®, please add index **E: E4.80.17RDE115.R.0**

To receive extender crossbar RD115 pre-fitted along the inner radius of the-chain®, please add index **Z: E4.80.17RDZ115.R.0**

Extension links

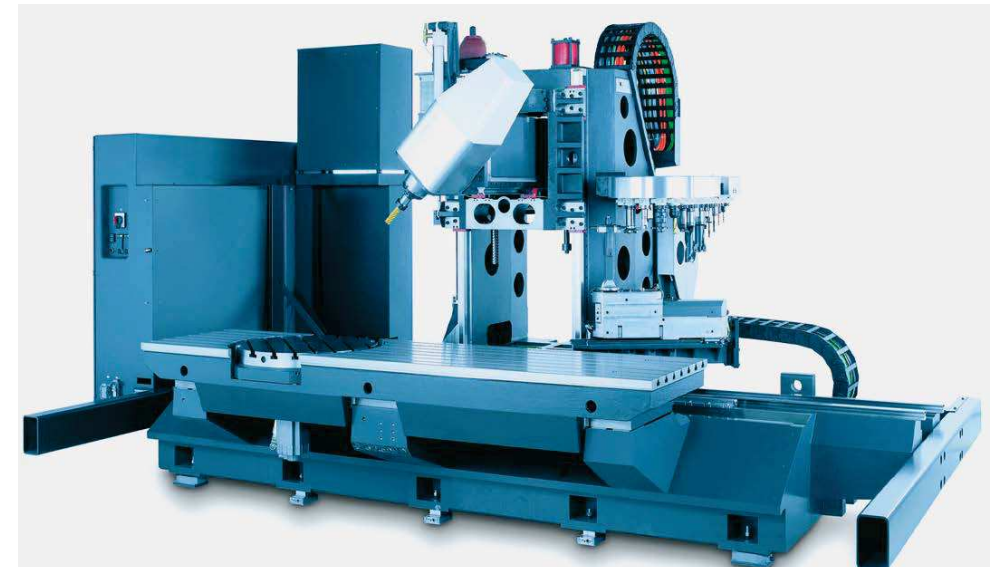


Extension links | For extremely wide e-chains® up to 3.0m

- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3000mm
- Unsupported length  $FL_G$  max. can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

Part No. Extension link e-chain®	Part No. Extension link e-tube	Part No. extension link as an individual part	
		Outer link	Inner link
E4.80.Bi1/Bi2/Bi3.R.0	R4.80.Bi1/Bi2/Bi3.R.0	E4.80M.01	E4.80M.02.R.

Complete Part No. with the width index *Bi1/Bi2/Bi3/etc.* and the radius (R). Example: **E4.80.10/20/10.200.0**



Due to the undercut design igus® E4.1 series feature high lateral stability. High lateral accelerations of up to 8m/s<sup>2</sup> can be managed on this milling machine for bicycles

**E4 snapclip - clip-on tiewrap**

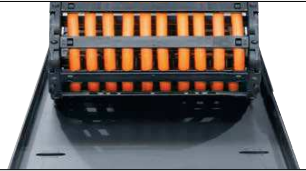
- For side-mounted applications, compatible with many E4 e-chains®
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required

More information ► [www.igus.co.uk/E4.80](http://www.igus.co.uk/E4.80)

**Steel support tray for support of the lower run**

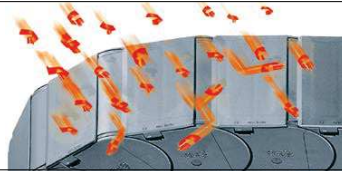
- Simple one-piece support trays for the lower run
- To your requirements and specification
- 4 options available

More information ► From page 1356

**Hot swarf up to +850°C for e-tubes**

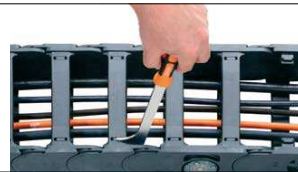
- Lids and shelves can repel swarf up to +850°C. Special production option with the igus® material igumid HT
- No hot swarf melting or embedding into the chain

More information ► [www.igus.co.uk/HT](http://www.igus.co.uk/HT)

**Reduce assembly time - E4 e-chain® opener**

- e-chain® opener tools for easy opening and closing of e-chains®
- Simple opening and closing of e-chain® crossbars
- Also for use in hard to reach locations
- Significant assembly time reduction

More information ► [www.igus.co.uk/E4savetime](http://www.igus.co.uk/E4savetime)

**Roller crossbars - increase the service life of cables and hoses**

- Significantly reduce jacket abrasion of very stiff cables and hoses with rolling contact surfaces equipped with tribo-optimised bearings
- For sensitive hoses in restricted space
- Usable along the inner and/or outer radius, retrofit possible

More information ► upon request



Also available for heavy-duty applications | Series 5050HD-R9850HD

**Heavy-duty version - for very long travels or heavy fill weights**

- High torsional rigidity and tensile strength
- Tough steel mounting brackets
- For long-term operation in very humid environments

Series 5050HD-R9850HD - more information ► [www.igus.co.uk/5050HD](http://www.igus.co.uk/5050HD)



igus® E4.1 in an earth drilling machine. Standing installation, it defies strong vibrations. Thanks to plastic, no loose parts such as rivets or screws

**Option: E4Q - the next generation of easy-to-assemble igus® e-chains®**

The latest E4Q e-chains® generation combines proven design features of the 12-year old, robust E4.1 e-chains® standard with new bionic design elements and a novel opening mechanism. This gives the E4Q an even longer service life and significantly improved ease of installation.

- Opening and closing completely without tools
- Greater strength and longer unsupported lengths
- Lighter e-chain® links due to material saving
- Optional noise dampening - new system for noise reduction

More information ► From page 580

