

e-chains® | Series E4.112 | Crossbars every link (crossbars removable along the inner and outer radius)
e-tubes | Series R4,112 | Fully enclosed (lids openable along the outer radius, from one side)

Part No.	Bi	Ba	E4.112	R4.112	Part No.	Bi	Ba	E4.112	R4.112
e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]	e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]
E4. - 112.05. R.0	50	102	≈ 7.78	-	E4. - 112.28. R.0	287	339	≈ 8.88	-
E4. - 112.055. R.0	55	107	≈ 7.81	-	E4. R4. 112.30. R.0	300	352	≈ 8.97	≈ 11.42
E4. - 112.06. R.0	65	117	≈ 7.84	-	E4. - 112.31. R.0	312	364	≈ 9.00	-
E4. - 112.07. R.0	75	127	≈ 7.88	-	E4. - 112.32. R.0	325	377	≈ 9.06	-
E4. - 112.08. R.0	87	139	≈ 7.94	-	E4. - 112.33. R.0	337	389	≈ 9.14	-
E4. - 112.10. R.0	100	152	≈ 7.99	-	E4. R4. 112.35. R.0	350	402	≈ 9.27	≈ 12.07
E4. - 112.11. R.0	112	164	≈ 8.07	-	E4. - 112.36. R.0	362	414	≈ 9.21	-
E4. - 112.12. R.0	125	177	≈ 8.12	-	E4. - 112.37. R.0	375	427	≈ 9.27	-
E4. - 112.13. R.0	137	189	≈ 8.20	-	E4. - 112.38. R.0	387	439	≈ 9.35	-
E4. - 112.15. R.0	150	202	≈ 8.23	-	E4. R4. 112.40. R.0	400	452	≈ 9.52	≈ 12.71
E4. - 112.16. R.0	162	214	≈ 8.30	-	E4. - 112.41. R.0	412	464	≈ 9.47	-
E4. - 112.169. R.0	169	222	≈ 8.35	-	E4. - 112.42. R.0	425	477	≈ 9.66	-
E4. - 112.17. R.0	175	227	≈ 8.38	-	E4. - 112.43. R.0	437	489	≈ 9.56	-
E4. - 112.182. R.0	182	235	≈ 8.41	-	E4. - 112.45. R.0	450	502	≈ 9.77	-
E4. - 112.18. R.0	187	239	≈ 8.45	-	E4. - 112.46. R.0	462	514	≈ 9.74	-
E4. R4. 112.20. R.0	200	252	≈ 8.49	≈ 10.15	E4. - 112.47. R.0	475	527	≈ 9.76	-
E4. - 112.207. R.0	207	260	≈ 8.52	-	E4. - 112.48. R.0	487	539	≈ 9.92	-
E4. - 112.21. R.0	212	264	≈ 8.53	-	E4. R4. 112.50. R.0	500	552	≈ 9.88	≈ 13.99
E4. - 112.22. R.0	225	277	≈ 8.58	-	E4. - 112.51. R.0	512	564	≈ 9.92	-
E4. - 112.23. R.0	237	289	≈ 8.65	-	E4. - 112.52. R.0	525	577	≈ 10.03	-
E4. R4. 112.25. R.0	250	302	≈ 8.72	≈ 10.79	E4. - 112.53. R.0	537	589	≈ 10.09	-
E4. - 112.26. R.0	262	314	≈ 8.78	-	E4. - 112.55. R.0	550	602	≈ 10.36	-
E4. - 112.27. R.0	275	327	≈ 8.84	-	E4. - 112.60. R.0	600	652	≈ 10.51	-

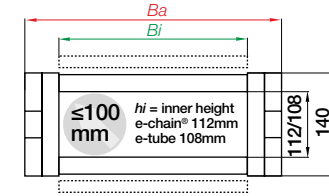
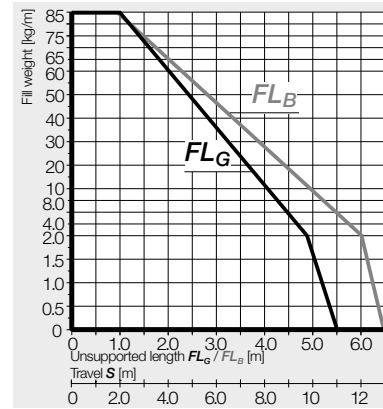
*Radius not available for e-tubes **Radius available for e-tubes with technical limitations, upon request

Available bend radii

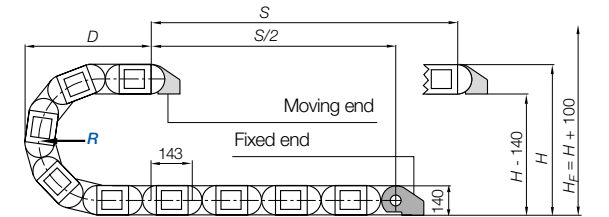
R [mm] | 200* | 250** | 300** | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1,000 |

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

E4.112.30.300.0 = crossbars every link / R4.112.30.300.0 = fully enclosed



E4.112 Inner height [mm]	112
R4.112 Inner height [mm]	108
Pitch [mm/link]	143
Links/m	7
corresponds to [mm]	1,001
e-chain® length $L_K = S/2 + K$	

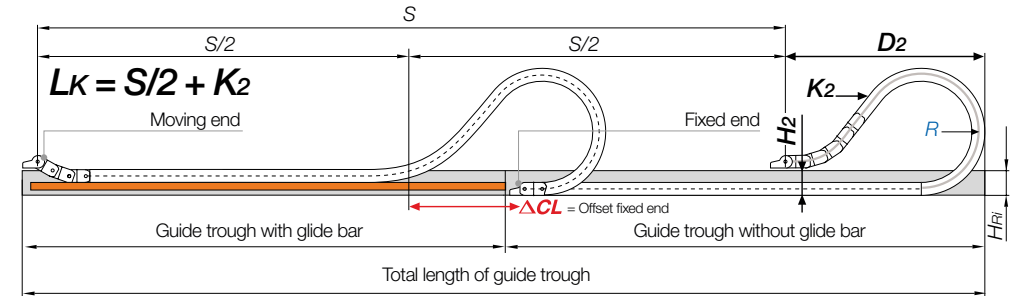


R	200*	250**	300**	350	400	450	500	550	600	750	1,000
H	545	645	745	845	945	1,045	1,145	1,245	1,345	1,645	2,145
D	415	465	515	565	615	665	715	765	815	965	1,215
K	915	1,075	1,230	1,390	1,545	1,700	1,860	2,015	2,175	2,645	3,430

The required clearance height: $H_f = H + 100\text{mm}$ (with 5.0kg/m fill weight)

*Radius not available for e-tubes **Radius available for e-tubes with technical limitations, upon request

Gliding applications | For travel lengths from 14m to max. 450m

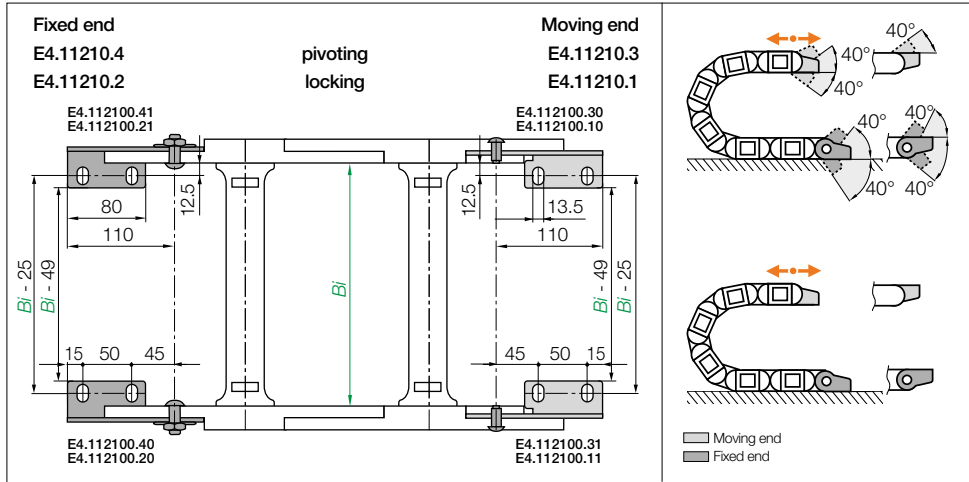


Note: We recommend the project planning of such a system to be carried out by igus®.

In case of travels between 11 and 14m we recommend an e-chain® with a longer unsupported length.

R	200*	250**	300**	350	400	450	500	550	600	750	1,000
H ₂	325	325	325	325	325	325	325	325	325	-	-
D ₂	900	1,000	1,100	1,250	1,450	1,600	1,700	1,900	2,050	-	-
K ₂	1,573	1,716	1,859	2,288	2,574	2,860	3,146	3,432	3,861	-	-
ΔCL	450	500	550	650	800	900	950	1,100	1,200	-	-

*Radius not available for e-tubes **Radius available for e-tubes with technical limitations, upon request

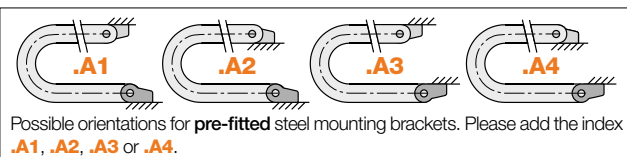
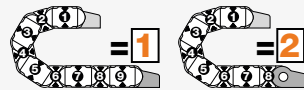


KMA pivoting | Recommended for unsupported and gliding applications
Steel locking | Recommended for vertical hanging and standing applications

Part No. full set steel pivoting	Part No. full set steel locking	Description
E4.11210. 1 .34.VS.E45	E4.11210. 1 .12.VS.E45	Full set (both ends) ending with outer side link, screwed - standard
E4.11210. 2 .34.VS.E45	E4.11210. 2 .12.VS.E45	Full set (both ends) beginning with outer side link (moving end) - ending with inner side link (fixed end), screwed - standard

Stainless steel version available. Please add the index **.E45!** (Material: AISI 316Ti stainless steel)

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. For the best appearance, make sure the e-chain® ends with **1** outer side links whenever possible. (with odd number of links)

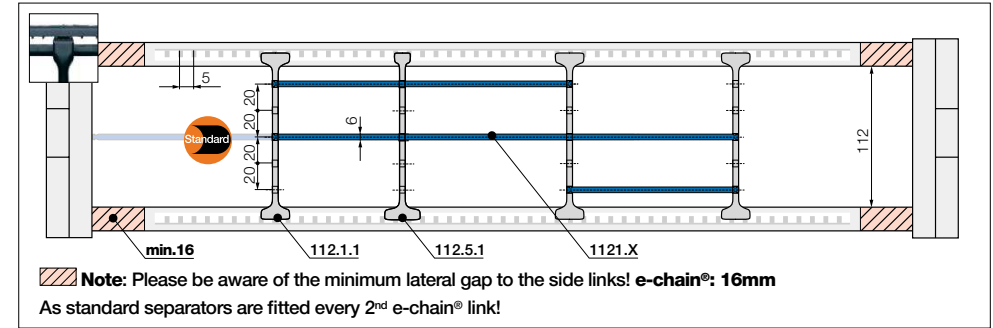


Possible orientations for **pre-fitted** steel mounting brackets. Please add the index **.A1, .A2, .A3** or **.A4**.

E4.11210.**1**.34.VS.**A2** Order example
.A... Please specify fastening variant
 Pre-assembled
 Full set, pivoting
 Odd numbers of links
 Series

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

Previous generation of interior separation with other options ▶ www.igus.co.uk/E4.112



		Standard separator, wide base unassembled 112.1 assembled 112.1.1	Standard - for any application Separator with a wide base for maximum holding force.
		Notch separator for notched crossbar unassembled 112.5 assembled 112.5.1	
		Shelf, lockable unassembled 1120.X assembled 1121.X	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

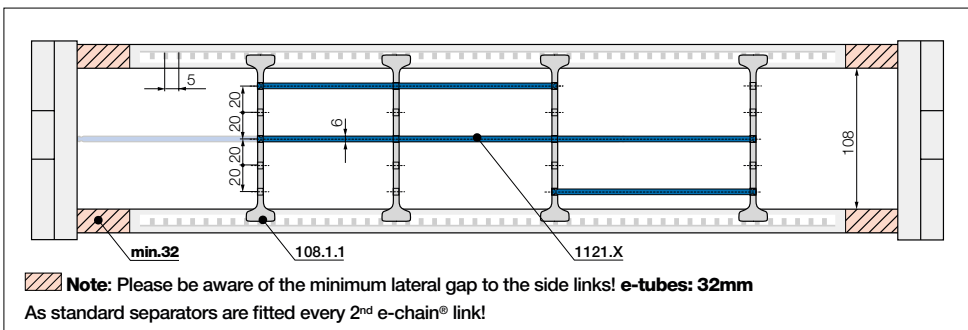
Width = X [mm]



X [mm]	unassembled	assembled	X [mm]	unassembled	assembled	X [mm]	unassembled	assembled
050	1120.050	1121.050	150	1120.150	1121.150	300	1120.300	1121.300
065	1120.065	1121.065	175	1120.175	1121.175	350	1120.350	1121.350
075	1120.075	1121.075	200	1120.200	1121.200	375	1120.375	1121.375
100	1120.100	1121.100	225	1120.225	1121.225	387	1120.387	1121.387
125	1120.125	1121.125	250	1120.250	1121.250	450	1120.450	1121.450

Interior separation | Increase cable service life | Only for e-tubes

Previous generation of interior separation with other options ► www.igus.co.uk/R4.112



	Standard separator, wide base unassembled 108.1 assembled 108.1.1	
	Shelf, lockable unassembled 1120.X assembled 1121.X	

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

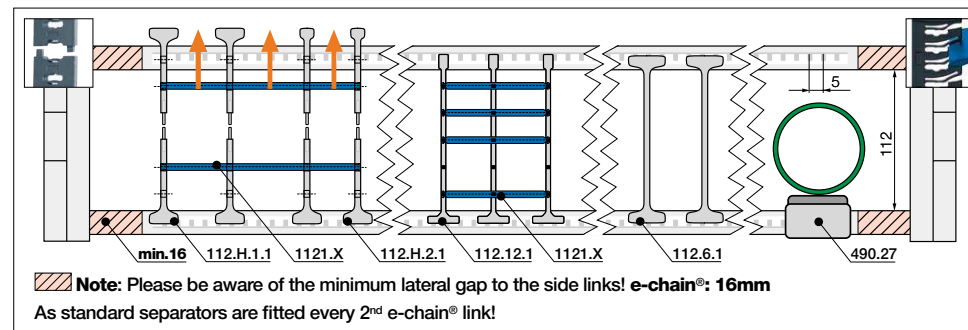
Horizontal separation
Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.

Shelves Width = X (mm)	X [mm]		X [mm]		X [mm]			
	unassembled	assembled	unassembled	assembled	unassembled	assembled		
050	1120.050	1121.050	150	1120.150	1121.150	300	1120.300	1121.300
065	1120.065	1121.065	175	1120.175	1121.175	350	1120.350	1121.350
075	1120.075	1121.075	200	1120.200	1121.200	375	1120.375	1121.375
100	1120.100	1121.100	225	1120.225	1121.225	387	1120.387	1121.387
125	1120.125	1121.125	250	1120.250	1121.250	450	1120.450	1121.450



Compact design, custom configuration: two nested E4.112 e-chains® each around 12m long carry very heavy fill weights

Interior separation | To allow faster filling



	Split separator, wide base/top* unassembled 112.H.1 assembled 112.H.1.1	
	Split separator, narrow top* unassembled 112.H.2 assembled 112.H.2.1	
	Lean separator*¹⁾ unassembled 112.12 assembled 112.12.1	

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.

Lean separators*¹⁾
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%²⁾.

2) 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 | Only for e-chains®

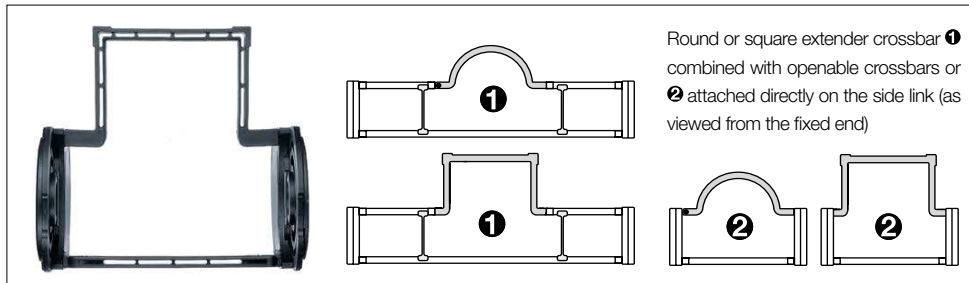
	Notch locking separator*, lockable for e-chains® unassembled 112.6 assembled 112.6.1	
	Rollclip*, for e-chains® unassembled 489.27 assembled 490.27	

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.

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®

Extender crossbar with fixed width



Round or square extender crossbar ❶ combined with openable crossbars or ❷ attached directly on the side link (as viewed from the fixed end)

Extender crossbars with fixed width | Safe guiding for large hoses

- Suitable for hoses with a maximum outer diameter of 270mm
- Option ❶ extender crossbars with fixed width to combine with openable crossbars
- Option ❷ 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	❷ Fitted to side link	❶ 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: ❶ combined with openable crossbars

To receive extender crossbar RHD115 pre-fitted along the outer radius of the chain®, please add index **E**: E4.112.10/15RHD**E**115/10.**R**.0

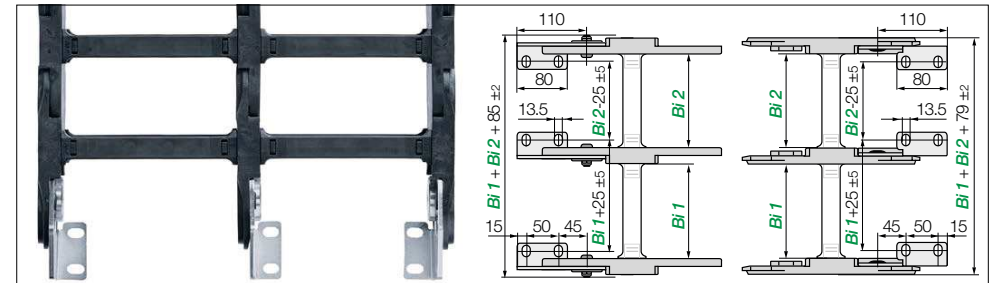
To receive extender crossbar RHD115 pre-fitted along the inner radius of the chain®, please add index **Z**: E4.112.10/15RHD**Z**115/10.**R**.0

Order example: ❷ fitted to side link

To receive extender crossbar RD115 pre-fitted along the outer radius of the chain®, please add index **E**: E4.112.17RD**E**115.**R**.0

To receive extender crossbar RD115 pre-fitted along the inner radius of the chain®, please add index **Z**: E4.112.17RD**Z**115.**R**.0

Extension links



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

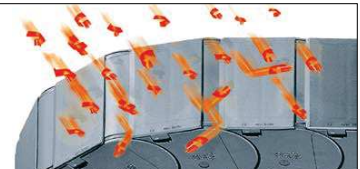
- Virtually unlimited side-by-side extension
- For extremely wide e-chains® up to 3000mm
- Unsupported length FL_G max. can be increased when heavy fill weights are required
- e-chains® and e-tubes can be combined
- Attached with KMA or steel mounting brackets

Part No.	Part No.	Part No.
Extension link e-chain®	Extension link e-tube	Extension link as an individual part
E4.112.Bi1/Bi2/Bi3. R .0	R4.112.Bi1/Bi2/Bi3. R .0	6022. R .

Complete Part No. with the width index *Bi1/Bi2/Bi3/etc.* and the radius (**R**). Example: E4.112.10/20/10.200.0

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



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



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

