

All-sides attachment

Optional with noise dampening pads ≤ 60 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

+ Stable due to undercut design, large inner height

When to use Series E4.56:

- If a robust e-chain®/e-tube with an inner height of 56 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 5,0 m and fill weights up to 62 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired



When to use a different igus® Series

- If an extremely **low-noise** and low-vibration e-chain® is required (≤ 46 dB(A))
 - ▶ **Series E6.52, page 8.66**
- If the e-chain® shall be used in **cleanroom applications** (ISO class 1)
 - ▶ **Series E6.52, page 8.66**
- If a less stable e-chain® can be used for economical reasons
 - ▶ **Series 14040/14140/R18840, page 7.164**



The new igus® E4 e-chain® opener reduces assembly time ▶ page 7.15



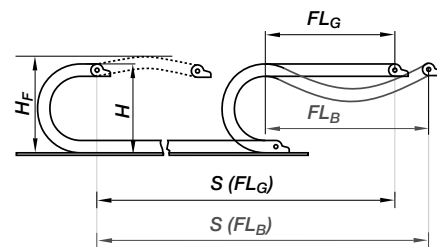
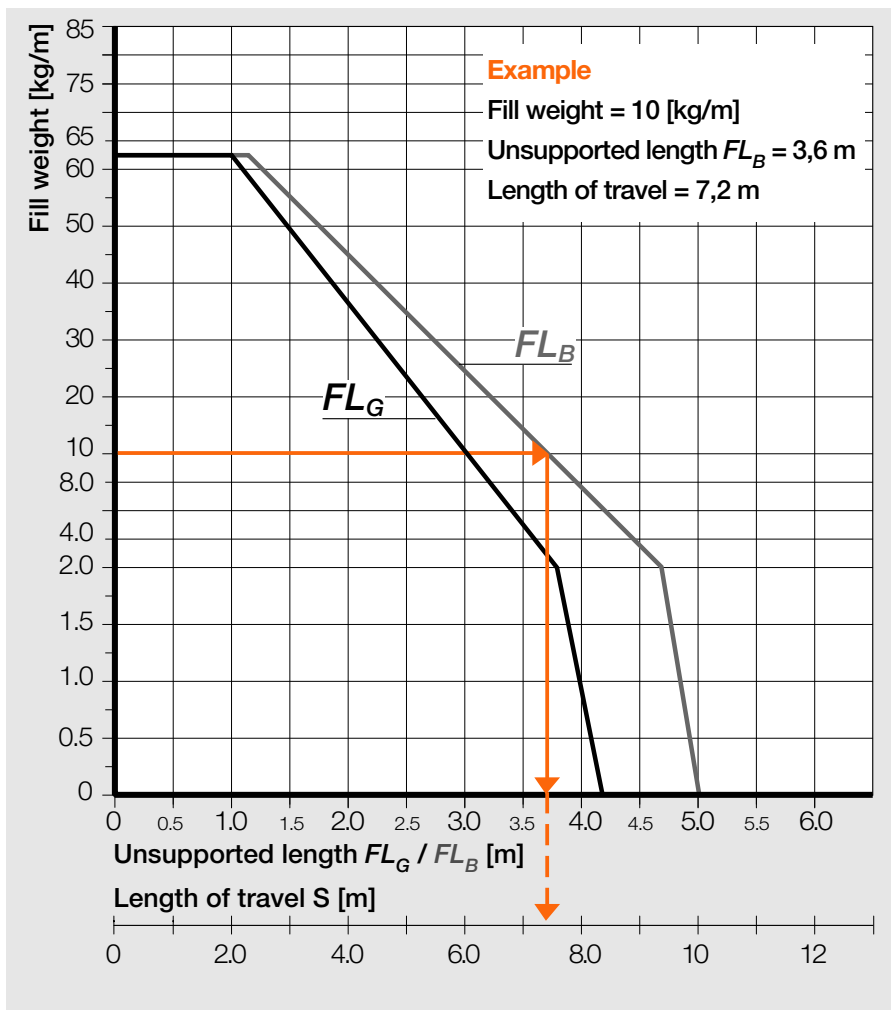
Available from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods



3D-CAD files, configurators, PDF ▶ www.igus.de/en/E4.56

E4.1 | Series E4.56 | Dimensions | Unsupported



Standard e-chain Unsupported applications

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. More information ► **Design, page 1.8**

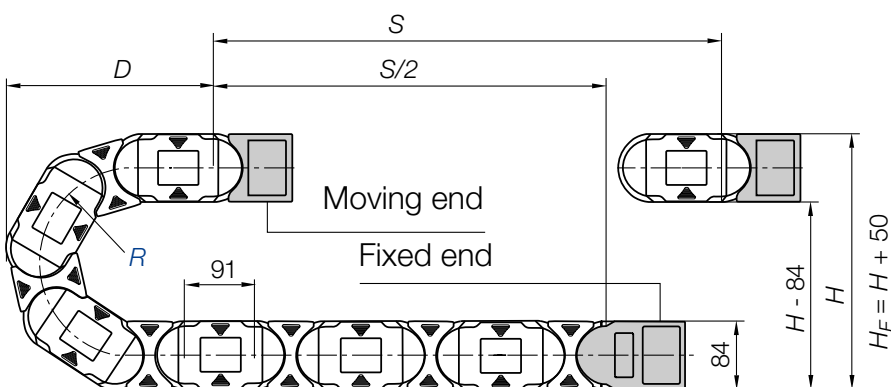
Gliding applications

Travels up to 400 m.
 More information ► **page 7.92**

Technical Data

Speed, material, temperature and flammability class ► **page 7.16**

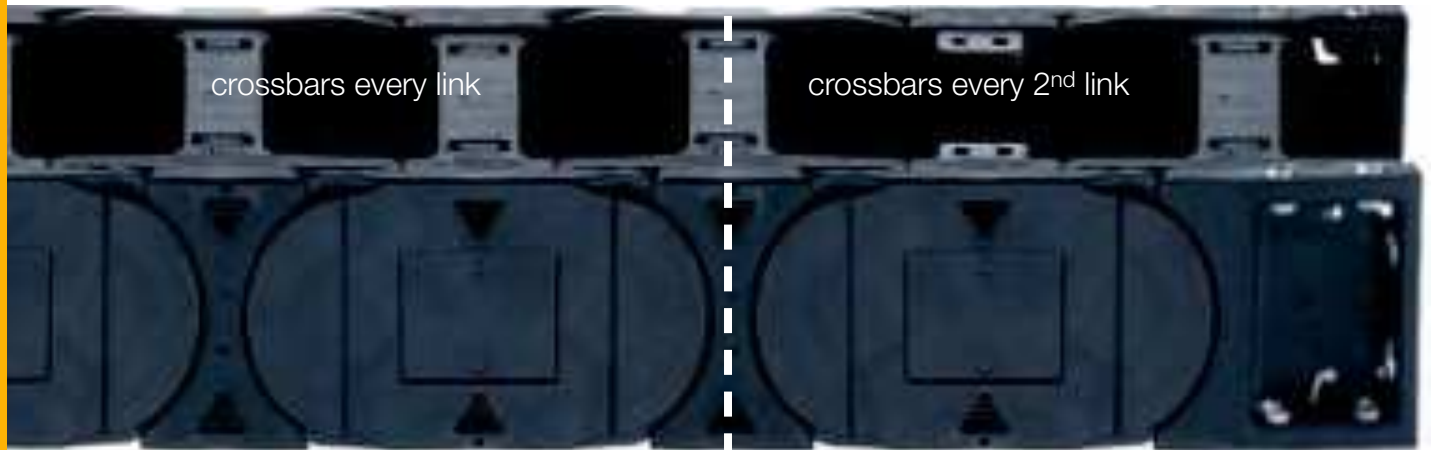
Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$



R	135	150	175	200	240	250	300	350	400	450	500
H_{-0}^{+25}	354	384	434	484	564	584	684	784	884	984	1084
D	268	283	308	333	373	383	433	483	533	583	633
K	610	655	735	815	940	970	1125	1285	1440	1600	1755

The required clearance height: $H_F = H + 50$ mm (with 3,0 kg/m fill weight)

i FL_G = with straight upper run S = Length of travel H = Nominal clearance height D = Overlength e-chain®, radius in final position
 FL_B = with permitted sag R = Bending radius H_F = Required clearance height K = $\pi \cdot R +$ "safety"



e-chains® | Series E4.56 crossbars every link | Series H4.56 crossbars every 2nd link

Part No.		<i>Bi</i>	<i>Ba</i>	E4.56	H4.56		
crossbars every link	crossbars every 2 nd link	[mm]	[mm]	[kg/m]	[kg/m]		
E4.56.	H4.56.	05.	R.0	50	84	3,301	3,158
E4.56.	H4.56.	06.	R.0	65	99	3,390	3,202
E4.56.	H4.56.	07.	R.0	75	109	3,458	3,236
E4.56.	H4.56.	08.	R.0	87	121	3,538	3,276
E4.56.	H4.56.	10.	R.0	100	134	3,633	3,323
E4.56.	H4.56.	11.	R.0	112	147	3,749	3,382
E4.56.	H4.56.	12.	R.0	125	159	3,827	3,420
E4.56.	H4.56.	13.	R.0	137	172	3,963	3,488
E4.56.	H4.56.	15.	R.0	150	184	4,000	3,507
E4.56.	H4.56.	16.	R.0	162	197	4,113	3,563
E4.56.	H4.56.	17.	R.0	175	209	4,245	3,630
E4.56.	H4.56.	18.	R.0	187	222	4,357	3,685
E4.56.	H4.56.	20.	R.0	200	234	4,413	3,713
E4.56.	H4.56.	21.	R.0	212	247	4,484	3,749
E4.56.	H4.56.	22.	R.0	225	259	4,553	3,784
E4.56.	H4.56.	23.	R.0	237	272	4,663	3,838
E4.56.	H4.56.	25.	R.0	250	284	4,774	3,894
E4.56.	H4.56.	26.	R.0	262	297	4,865	3,939
E4.56.	H4.56.	27.	R.0	275	309	4,967	3,990
E4.56.	H4.56.	28.	R.0	287	322	5,025	4,019
E4.56.	H4.56.	30.	R.0	300	334	5,177	4,095

Part No.		<i>Bi</i>	<i>Ba</i>	E4.56	H4.56		
crossbars every link	crossbars every 2 nd link	[mm]	[mm]	[kg/m]	[kg/m]		
E4.56.	H4.56.	31.	R.0	312	347	5,214	4,114
E4.56.	H4.56.	32.	R.0	325	359	5,317	4,166
E4.56.	H4.56.	33.	R.0	337	372	5,437	4,225
E4.56.	H4.56.	35.	R.0	350	384	5,639	4,326
E4.56.	H4.56.	36.	R.0	362	397	5,549	4,282
E4.56.	H4.56.	37.	R.0	375	409	5,646	4,330
E4.56.	H4.56.	38.	R.0	387	422	5,762	4,388
E4.56.	H4.56.	40.	R.0	400	434	6,031	4,523
E4.56.	H4.56.	41.	R.0	412	447	5,955	4,484
E4.56.	H4.56.	42.	R.0	425	459	6,247	4,630
E4.56.	H4.56.	43.	R.0	437	472	6,090	4,552
E4.56.	H4.56.	45.	R.0	450	484	6,420	4,717
E4.56.	H4.56.	46.	R.0	462	497	6,372	4,693
E4.56.	H4.56.	47.	R.0	475	509	6,412	4,713
E4.56.	H4.56.	48.	R.0	487	522	6,658	4,836
E4.56.	H4.56.	50.	R.0	500	534	6,755	4,885
E4.56.	H4.56.	51.	R.0	512	547	6,668	4,841
E4.56.	H4.56.	52.	R.0	525	559	6,842	4,928
E4.56.	H4.56.	53.	R.0	537	572	6,934	4,974
E4.56.	H4.56.	55.	R.0	550	584	7,355	5,184
E4.56.	H4.56.	60.	R.0	600	634	7,584	5,299

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (*R*). Example: E4.56.30.300.0

When to use e-chains® with crossbars every link: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)

When to use e-chains® with crossbars every 2nd link: ● Suitable for nearly all applications ● Lower price



Part No. of e-chain® links as single parts ► page 7.17



Standard e-chains® incl. accessories from stock. Delivery in 24h or today.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.56 | Product range | Standard



e-tubes | Series R4.56 - fully enclosed

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.56 [kg/m]
R4.56. 07. R.0*	75	109	3,910
R4.56. 10. R.0	100	134	4,200
R4.56. 12. R.0	125	159	4,560
R4.56. 15. R.0	150	184	4,940
R4.56. 17. R.0	175	209	5,250
R4.56. 20. R.0	200	234	5,560

Part No. fully enclosed	<i>Bi</i> [mm]	<i>Ba</i> [mm]	R4.56 [kg/m]
R4.56. 25. R.0	250	284	6,290
R4.56. 27. R.0	275	309	6,650
R4.56. 30. R.0	300	334	6,950
R4.56. 35. R.0	350	384	7,650
R4.56. 40. R.0	400	434	8,650
R4.56. 46. R.0	462	497	9,118

Available bending radii *R* [mm] 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

*Removable lid only, no hinged option

Supplement Part No. with required radius (*R*). Example: R4.56.30.300.0

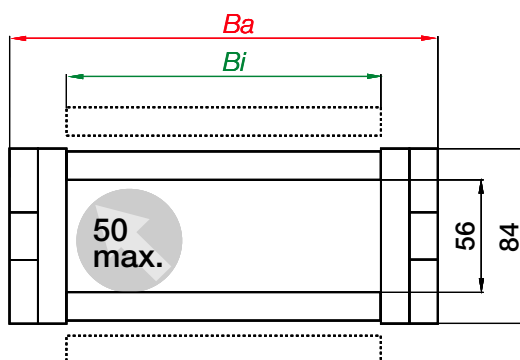
When to use fully enclosed e-tubes: ● Excellent cable protection against dirt ● Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the e-chain® or completely removable ● HT-Version optional, protection against hot chips up to 850°C (1562° F)



Order key for all types

- E4 .56. 30. 300. 0 e-chain® (crossbars every link)
 - H4 .56. 30. 300. 0 e-chain® (crossbars every 2nd link)
 - R4 .56. 30. 300. 0 Fully enclosed e-tube
-

Dimensioning



- E4.56.30.300.0 = e-chain® with crossbars every link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - H4.56.30.300.0 = e-chain® with crossbars every 2nd link, inner width *Bi* 300 mm, radius *R* 300 mm, color black
 - R4.56.30.300.0 = Fully enclosed e-tube, inner width *Bi* 300 mm, radius *R* 300 mm, color black
- More order examples, variations and configurations ► page 7.94



Standard e-tubes incl. accessories from stock. Delivery in 24h or today!*

*Delivery time means time until shipping of goods

E4.1 | Series E4.56 | Product range | Options



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No.	QuickLock crossbar for	<i>Bi</i>
crossbars every link	crossbars every 2 nd link	[mm]
	Inner radius	Outer radius
	Both radii	
E4.56.	H4.56. 15QZ.R.0 15QE.R.0 15Q.R.0	150
E4.56.	H4.56. 16QZ.R.0 16QE.R.0 16Q.R.0	162
E4.56.	H4.56. 17QZ.R.0 17QE.R.0 17Q.R.0	175
E4.56.	H4.56. 18QZ.R.0 18QE.R.0 18Q.R.0	187
E4.56.	H4.56. 20QZ.R.0 20QE.R.0 20Q.R.0	200
E4.56.	H4.56. 21QZ.R.0 21QE.R.0 21Q.R.0	212
E4.56.	H4.56. 22QZ.R.0 22QE.R.0 22Q.R.0	225
E4.56.	H4.56. 23QZ.R.0 23QE.R.0 23Q.R.0	237
E4.56.	H4.56. 25QZ.R.0 25QE.R.0 25Q.R.0	250
E4.56.	H4.56. 26QZ.R.0 26QE.R.0 26Q.R.0	262
E4.56.	H4.56. 27QZ.R.0 27QE.R.0 27Q.R.0	275
E4.56.	H4.56. 28QZ.R.0 28QE.R.0 28Q.R.0	287
E4.56.	H4.56. 30QZ.R.0 30QE.R.0 30Q.R.0	300
E4.56.	H4.56. 31QZ.R.0 31QE.R.0 31Q.R.0	312
E4.56.	H4.56. 32QZ.R.0 32QE.R.0 32Q.R.0	325
E4.56.	H4.56. 33QZ.R.0 33QE.R.0 33Q.R.0	337
E4.56.	H4.56. 35QZ.R.0 35QE.R.0 35Q.R.0	350
E4.56.	H4.56. 36QZ.R.0 36QE.R.0 36Q.R.0	362
E4.56.	H4.56. 37QZ.R.0 37QE.R.0 37Q.R.0	375
E4.56.	H4.56. 38QZ.R.0 38QE.R.0 38Q.R.0	387
E4.56.	H4.56. 40QZ.R.0 40QE.R.0 40Q.R.0	400

Part No.	QuickLock crossbar for	<i>Bi</i>
crossbars every link	crossbars every 2 nd link	[mm]
	Inner radius	Outer radius
	Both radii	
E4.56.	H4.56. 41QZ.R.0 41QE.R.0 41Q.R.0	412
E4.56.	H4.56. 42QZ.R.0 42QE.R.0 42Q.R.0	425
E4.56.	H4.56. 43QZ.R.0 43QE.R.0 43Q.R.0	437
E4.56.	H4.56. 45QZ.R.0 45QE.R.0 45Q.R.0	450
E4.56.	H4.56. 46QZ.R.0 46QE.R.0 46Q.R.0	462
E4.56.	H4.56. 47QZ.R.0 47QE.R.0 47Q.R.0	475
E4.56.	H4.56. 48QZ.R.0 48QE.R.0 48Q.R.0	487
E4.56.	H4.56. 50QZ.R.0 50QE.R.0 50Q.R.0	500
E4.56.	H4.56. 51QZ.R.0 51QE.R.0 51Q.R.0	512
E4.56.	H4.56. 52QZ.R.0 52QE.R.0 52Q.R.0	525
E4.56.	H4.56. 53QZ.R.0 53QE.R.0 53Q.R.0	537
E4.56.	H4.56. 55QZ.R.0 55QE.R.0 55Q.R.0	550
E4.56.	H4.56. 60QZ.R.0 60QE.R.0 60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (*R*). Example: E4.56.30QZ.300.0



For e-chains® with QuickLock crossbar supplement Part No. with required Index QZ / QE / Q

Part No. E4.56.30QZ.300.0 = QuickLock crossbar for inner radius

Part No. E4.56.30QE.300.0 = QuickLock crossbar for outer radius

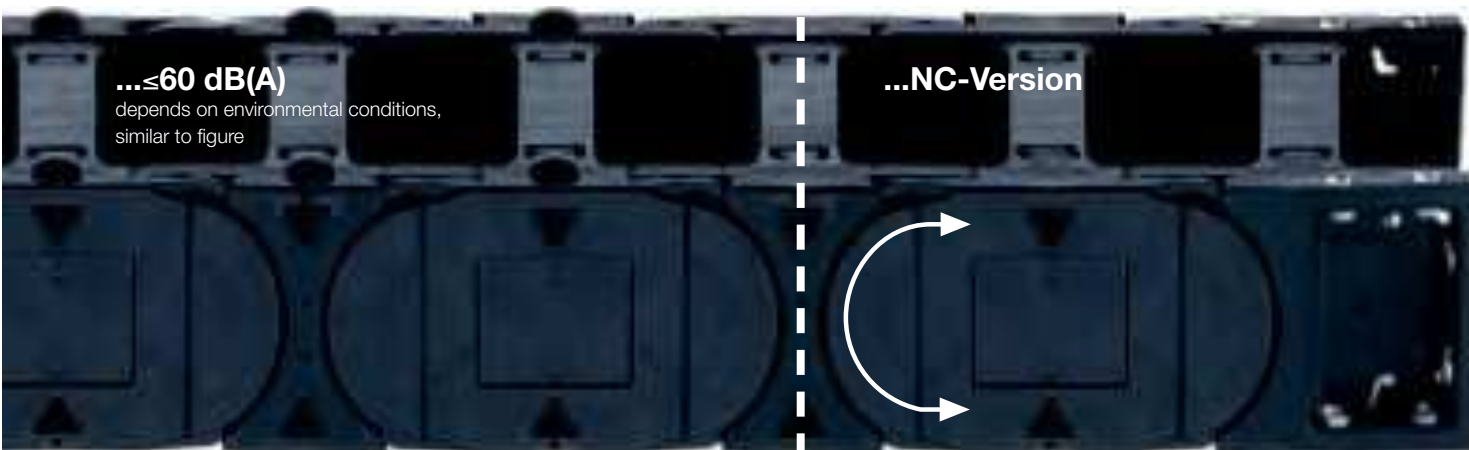
Part No. E4.56.30Q .300.0 = QuickLock crossbar for both radii



e-chain® with QuickLock crossbars - Delivery time: 3-5 work days.*

*Delivery time means time until shipping of goods

E4.1 | Series E4.56 | Product range | Options



Noise dampening | ≤ 60 dB(A)


NC-Version | Without pretension

With pads	<i>Bi</i>	With pads	<i>Bi</i>
crossbars every: link 1 2 nd	e-tube fully enclosed [mm]	crossbars every: link 1 2 nd	e-tube fully enclosed [mm]
ES4 HS4 – .56.05. R.0	50	ES4 HS4 – .56.31. R.0	312
ES4 HS4 – .56.06. R.0	65	ES4 HS4 – .56.32. R.0	325
ES4 HS4 RS4 .56.07. R.0	75	ES4 HS4 – .56.33. R.0	337
ES4 HS4 – .56.08. R.0	87	ES4 HS4 RS4 .56.35. R.0	350
ES4 HS4 RS4 .56.10. R.0	100	ES4 HS4 – .56.36. R.0	362
ES4 HS4 – .56.11. R.0	112	ES4 HS4 – .56.37. R.0	375
ES4 HS4 RS4 .56.12. R.0	125	ES4 HS4 – .56.38. R.0	387
ES4 HS4 – .56.13. R.0	137	ES4 HS4 RS4 .56.40. R.0	400
ES4 HS4 RS4 .56.15. R.0	150	ES4 HS4 – .56.41. R.0	412
ES4 HS4 – .56.16. R.0	162	ES4 HS4 – .56.42. R.0	425
ES4 HS4 RS4 .56.17. R.0	175	ES4 HS4 – .56.43. R.0	437
ES4 HS4 – .56.18. R.0	187	ES4 HS4 – .56.45. R.0	450
ES4 HS4 RS4 .56.20. R.0	200	ES4 HS4 RS4 .56.46. R.0	462
ES4 HS4 – .56.21. R.0	212	ES4 HS4 – .56.47. R.0	475
ES4 HS4 – .56.22. R.0	225	ES4 HS4 – .56.48. R.0	487
ES4 HS4 – .56.23. R.0	237	ES4 HS4 – .56.50. R.0	500
ES4 HS4 RS4 .56.25. R.0	250	ES4 HS4 – .56.51. R.0	512
ES4 HS4 – .56.26. R.0	262	ES4 HS4 – .56.52. R.0	525
ES4 HS4 RS4 .56.27. R.0	275	ES4 HS4 – .56.53. R.0	537
ES4 HS4 – .56.28. R.0	287	ES4 HS4 – .56.55. R.0	550
ES4 HS4 RS4 .56.30. R.0	300	ES4 HS4 – .56.60. R.0	600

NC-Version	<i>Bi</i>	NC-Version	<i>Bi</i>
crossbars every: link 1 2 nd	e-tube fully enclosed [mm]	crossbars every: link 1 2 nd	e-tube fully enclosed [mm]
E4 H4 – .56.05. R.0.NC	50	E4 H4 – .56.31. R.0.NC	312
E4 H4 – .56.06. R.0.NC	65	E4 H4 – .56.32. R.0.NC	325
E4 H4 R4 .56.07. R.0.NC	75	E4 H4 – .56.33. R.0.NC	337
E4 H4 – .56.08. R.0.NC	87	E4 H4 R4 .56.35. R.0.NC	350
E4 H4 R4 .56.10. R.0.NC	100	E4 H4 – .56.36. R.0.NC	362
E4 H4 – .56.11. R.0.NC	112	E4 H4 – .56.37. R.0.NC	375
E4 H4 R4 .56.12. R.0.NC	125	E4 H4 – .56.38. R.0.NC	387
E4 H4 – .56.13. R.0.NC	137	E4 H4 R4 .56.40. R.0.NC	400
E4 H4 R4 .56.15. R.0.NC	150	E4 H4 – .56.41. R.0.NC	412
E4 H4 – .56.16. R.0.NC	162	E4 H4 – .56.42. R.0.NC	425
E4 H4 R4 .56.17. R.0.NC	175	E4 H4 – .56.43. R.0.NC	437
E4 H4 – .56.18. R.0.NC	187	E4 H4 – .56.45. R.0.NC	450
E4 H4 R4 .56.20. R.0.NC	200	E4 H4 R4 .56.46. R.0.NC	462
E4 H4 – .56.21. R.0.NC	212	E4 H4 – .56.47. R.0.NC	475
E4 H4 – .56.22. R.0.NC	225	E4 H4 – .56.48. R.0.NC	487
E4 H4 – .56.23. R.0.NC	237	E4 H4 – .56.50. R.0.NC	500
E4 H4 R4 .56.25. R.0.NC	250	E4 H4 – .56.51. R.0.NC	512
E4 H4 – .56.26. R.0.NC	262	E4 H4 – .56.52. R.0.NC	525
E4 H4 R4 .56.27. R.0.NC	275	E4 H4 – .56.53. R.0.NC	537
E4 H4 – .56.28. R.0.NC	287	E4 H4 – .56.55. R.0.NC	550
E4 H4 R4 .56.30. R.0.NC	300	E4 H4 – .56.60. R.0.NC	600

Available bending radii *R* [mm] 135* | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500 *not available for e-tubes

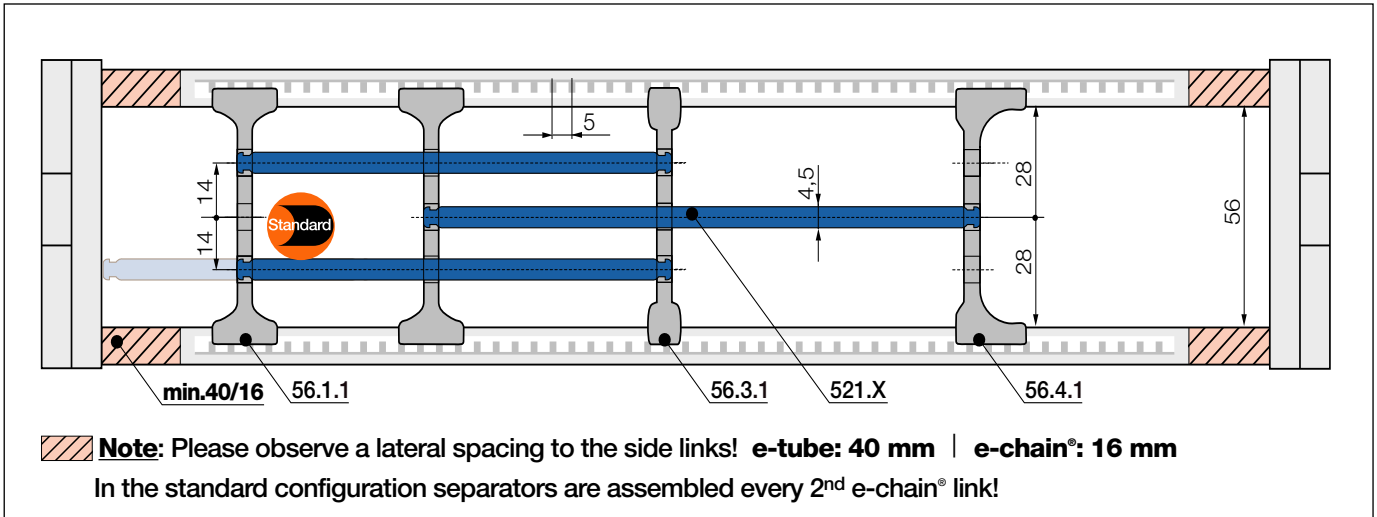

Supplement Part No. with required radius (*R*). Example: **ES4.56.30.300.0** or **E4.56.30.300.0.NC**

-  For e-chains® with noise dampening pads supplement Part No. with required index "S"
Example: Part No. **ES4.56.30.300.0** = e-chain® (crossbars every link) with noise dampening
- For NC-e-chains® without pretension supplement Part No. with required index "NC"
Example: Part No. **E4.56.30.300.0.NC** = e-chain® (crossbars every link) without pretension

 **e-chain® with noise dampening pads - Delivery time: 3-5 work days.**
NC-Version - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation





Standard separator, wide base

unassembled	56.1
assembled	56.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.




Separator, narrow base

unassembled	56.3
assembled	56.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.

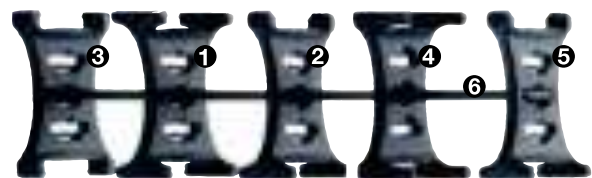
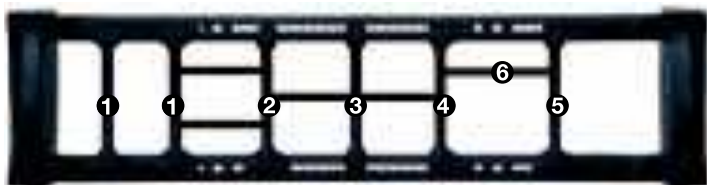


Asymmetrical separator

unassembled	56.4
assembled	56.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



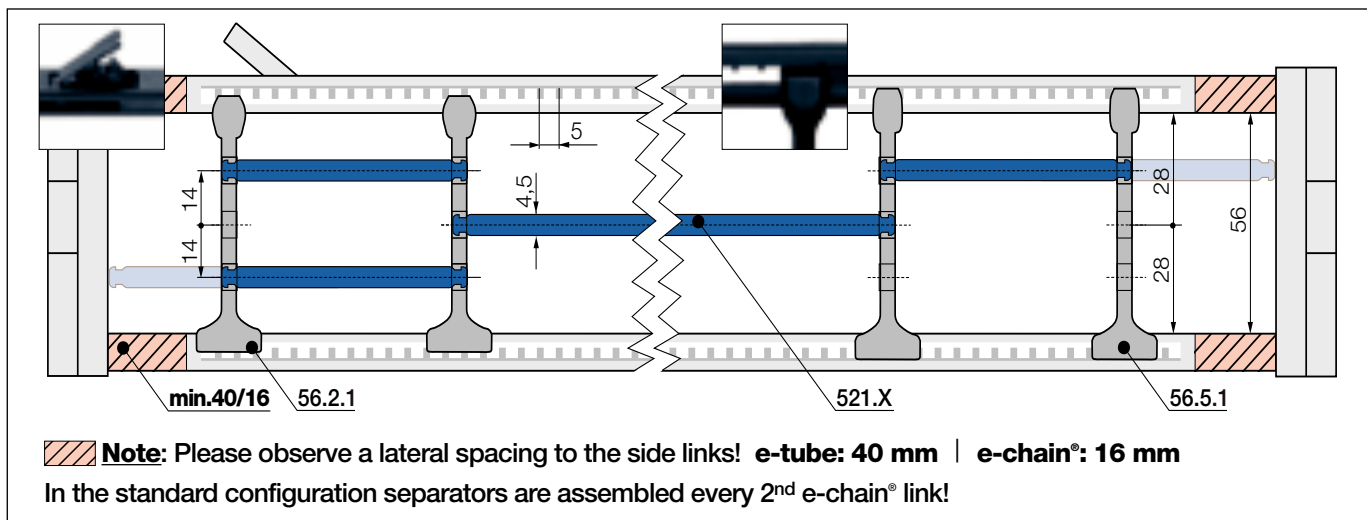
- ① Standard separator, wide base - Part No. 56.1
- ② Separator for QuickLock crossbar - Part No. 56.2
- ③ Separator, narrow base - Part No. 56.3
- ④ Separator, asymmetrical - Part No. 56.4
- ⑤ Notch separator - Part No. 56.5
- ⑥ Full-width self, lockable - Part No. 520.XX



Interior separation single-part order - Delivery in 24h or today!*

*Delivery time means time until shipping of goods

New generation interior separation



Separator for QuickLock crossbar
unassembled **56.2**
assembled **56.2.1**

For even faster installation

Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.

Notch separator for notch crossbar
unassembled **56.5**
assembled **56.5.1**

Locks safely onto in 5 mm increments

Notch separator for the new notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.

Full-width shelf, lockable
unassembled **520.X**
assembled **521.X**

Horizontal separation

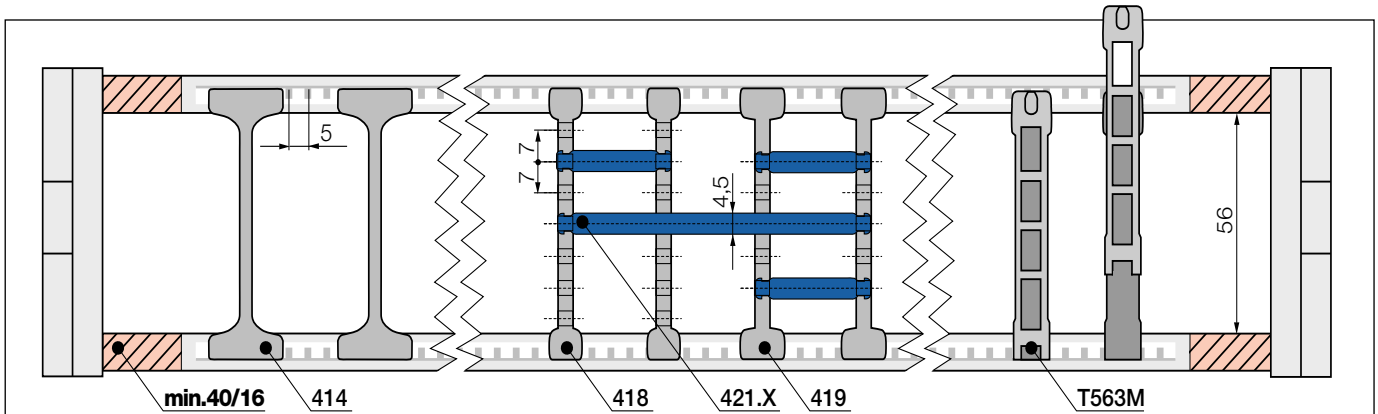
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Usable in 3 levels.



Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450

Previous interior separation All elements can still be ordered ► www.igus.de/en/E4.56



Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm | e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!

		Open slotted separator for e-chains®/e-tubes unassembled 409 assembled 419
		Slotted separator for e-chains®/e-tubes unassembled 408 assembled 418
		Split separator for e-chains® unassembled T563 assembled T563M
		Locking separator for e-chains® unassembled 404 assembled 414
		Shelf unassembled 420.X assembled 421.X

Open, slotted separator 409 (unilateral open)

Fast assembly - 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 408

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

Split separator T563 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

Locking separator 404 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

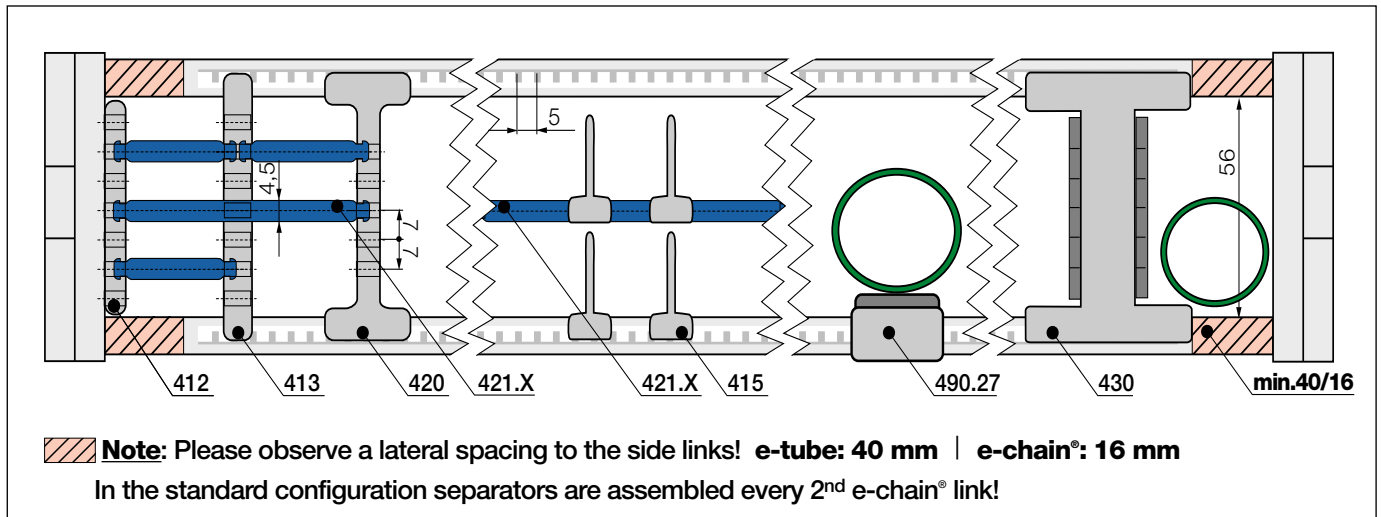
Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments). (not in combination with 404).

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

Previous interior separation All elements can still be ordered ▶ www.igus.de/en/E4.56



		Middle plate for e-chains® / e-tubes unassembled 403 assembled 413
		Locking vertical separator for e-chains® unassembled 410 assembled 420
		Side plate for e-chains® / e-tubes unassembled 402 assembled 412

Middle plate 403

Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).

Locking vertical separator 410 (e-chains® only)

Works like middle plate, for applications exposed to very high humidity (> 85%).

Side plate 402

Works like middle plate. Allows modular shelving close to the side links.

Additional elements for interior separation

		Center crossbar for e-chains® unassembled 405 assembled 415
		Rollclip for e-chains® unassembled 489.27 assembled 490.27
		Roller separator for e-chains® unassembled 429 assembled 430

Center crossbar

For applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain® independently into upper and lower halves.

Rollclip

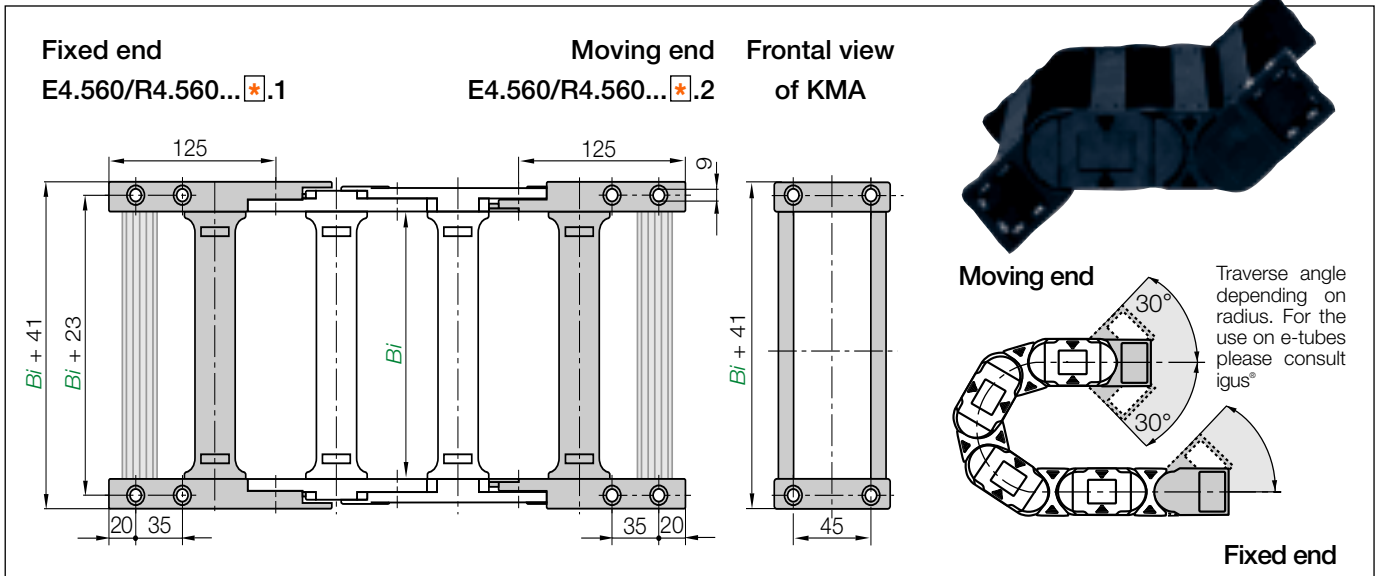
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Roller separator

Performs a similar function to the Rollclip, but doubles as a separator. For rigid cables and hoses.

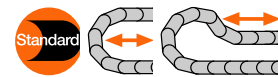
E4.1 | Series E4.56 | KMA mounting brackets **pivoting**

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment. Recommended for unsupported and gliding applications

Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]	Width index	Part No. full set pivoting (+ C-profile option)	Bi [mm]
05.	E4.560. - 05 .*.12.C 50	50	31.	E4.560. - 31 .*.12.C 312	312
06.	E4.560. - 06 .*.12.C 65	65	32.	E4.560. - 32 .*.12.C 325	325
07.	E4.560. R4.560. 07 .*.12.C 75	75	33.	E4.560. - 33 .*.12.C 337	337
08.	E4.560. - 08 .*.12.C 87	87	35.	E4.560. R4.560. 35 .*.12.C 350	350
10.	E4.560. R4.560. 10 .*.12.C 100	100	36.	E4.560. - 36 .*.12.C 362	362
11.	E4.560. - 11 .*.12.C 112	112	37.	E4.560. - 37 .*.12.C 375	375
12.	E4.560. R4.560. 12 .*.12.C 125	125	38.	E4.560. - 38 .*.12.C 387	387
13.	E4.560. - 13 .*.12.C 137	137	40.	E4.560. R4.560. 40 .*.12.C 400	400
15.	E4.560. R4.560. 15 .*.12.C 150	150	41.	E4.560. - 41 .*.12.C 412	412
16.	E4.560. - 16 .*.12.C 162	162	42.	E4.560. - 42 .*.12.C 425	425
17.	E4.560. R4.560. 17 .*.12.C 175	175	43.	E4.560. - 43 .*.12.C 437	437
18.	E4.560. - 18 .*.12.C 187	187	45.	E4.560. - 45 .*.12.C 450	450
20.	E4.560. R4.560. 20 .*.12.C 200	200	46.	E4.560. R4.560. 46 .*.12.C 462	462
21.	E4.560. - 21 .*.12.C 212	212	47.	E4.560. - 47 .*.12.C 475	475
22.	E4.560. - 22 .*.12.C 225	225	48.	E4.560. - 48 .*.12.C 487	487
23.	E4.560. - 23 .*.12.C 237	237	50.	E4.560. - 50 .*.12.C 500	500
25.	E4.560. R4.560. 25 .*.12.C 250	250	51.	E4.560. - 51 .*.12.C 512	512
26.	E4.560. - 26 .*.12.C 262	262	52.	E4.560. - 52 .*.12.C 525	525
27.	E4.560. R4.560. 27 .*.12.C 275	275	53.	E4.560. - 53 .*.12.C 537	537
28.	E4.560. - 28 .*.12.C 287	287	55.	E4.560. - 55 .*.12.C 550	550
30.	E4.560. R4.560. 30 .*.12.C 300	300	60.	E4.560. - 60 .*.12.C 600	600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.560.30.**2**.12.C



Single-part order:

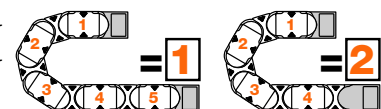
Mounting bracket **Moving end**

E4.560.30.**2**.2.C (even number of links)

Mounting bracket **Fixed end**

E4.560.30.**2**.1.C (even number of links)

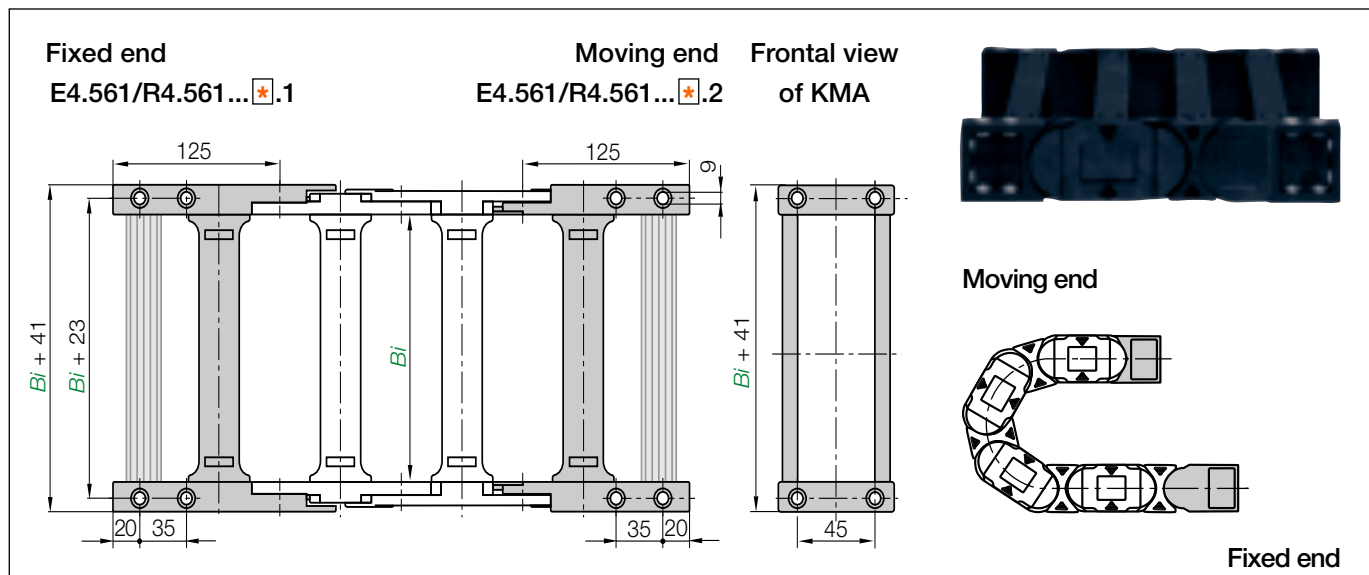
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1

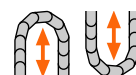
E4.1 | Series E4.56 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment. Recommended for vertical hanging and standing applications

Width index	Part No. full set locking (+ C-profile option)	Bi [mm]	Width index	Part No. full set locking (+ C-profile option)	Bi [mm]
05.	E4.561. - 05 .12.C 50	50	31.	E4.561. - 31 .12.C 312	312
06.	E4.561. - 06 .12.C 65	65	32.	E4.561. - 32 .12.C 325	325
07.	E4.561. R4.561. 07 .12.C 75	75	33.	E4.561. - 33 .12.C 337	337
08.	E4.561. - 08 .12.C 87	87	35.	E4.561. R4.561. 35 .12.C 350	350
10.	E4.561. R4.561. 10 .12.C 100	100	36.	E4.561. - 36 .12.C 362	362
11.	E4.561. - 11 .12.C 112	112	37.	E4.561. - 37 .12.C 375	375
12.	E4.561. R4.561. 12 .12.C 125	125	38.	E4.561. - 38 .12.C 387	387
13.	E4.561. - 13 .12.C 137	137	40.	E4.561. R4.561. 40 .12.C 400	400
15.	E4.561. R4.561. 15 .12.C 150	150	41.	E4.561. - 41 .12.C 412	412
16.	E4.561. - 16 .12.C 162	162	42.	E4.561. - 42 .12.C 425	425
17.	E4.561. R4.560. 17 .12.C 175	175	43.	E4.561. - 43 .12.C 437	437
18.	E4.561. - 18 .12.C 187	187	45.	E4.561. - 45 .12.C 450	450
20.	E4.561. R4.561. 20 .12.C 200	200	46.	E4.561. R4.561. 46 .12.C 462	462
21.	E4.561. - 21 .12.C 212	212	47.	E4.561. - 47 .12.C 475	475
22.	E4.561. - 22 .12.C 225	225	48.	E4.561. - 48 .12.C 487	487
23.	E4.561. - 23 .12.C 237	237	50.	E4.561. - 50 .12.C 500	500
25.	E4.561. R4.561. 25 .12.C 250	250	51.	E4.561. - 51 .12.C 512	512
26.	E4.561. - 26 .12.C 262	262	52.	E4.561. - 52 .12.C 525	525
27.	E4.561. R4.561. 27 .12.C 275	275	53.	E4.561. - 53 .12.C 537	537
28.	E4.561. - 28 .12.C 287	287	55.	E4.561. - 55 .12.C 550	550
30.	E4.561. R4.561. 30 .12.C 300	300	60.	E4.561. - 60 .12.C 600	600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.561.30.2.12.C



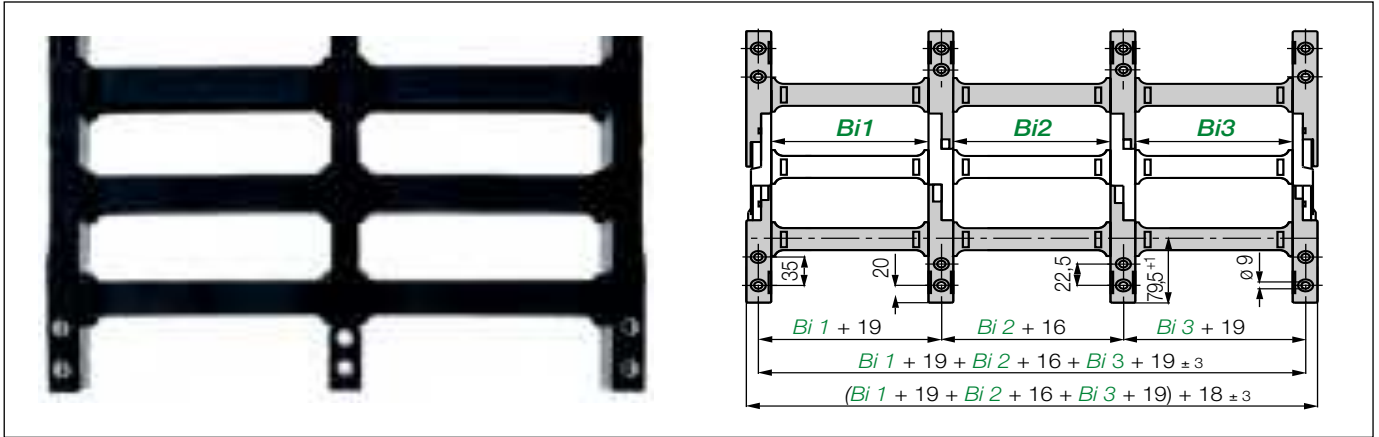
Single-part order:

Mounting bracket **Moving end**
E4.561.30.2.2.C (even number of links)
 Mounting bracket **Fixed end**
E4.561.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index **1** (for odd) or **2** (for even)!



Strain relief, e.g. clamps, tie-wrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 10.1



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachment with KMA or steel mounting brackets



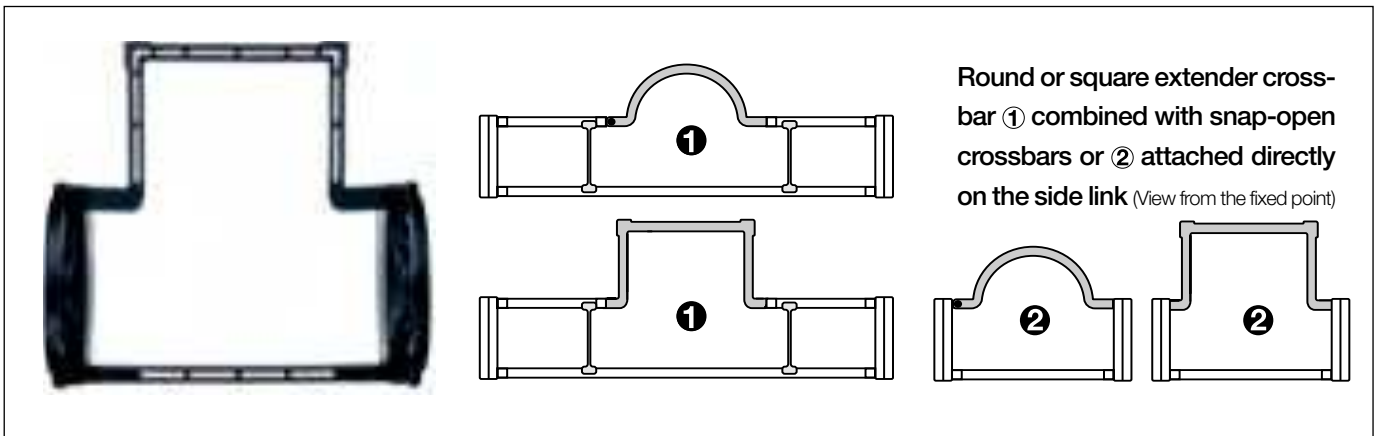
Order example - 3 chambers

E4.56.Bi1 / Bi2 / Bi3.R.0 =

E4.56.10 / 20 / 10.200.0

Extension link - single-part order

422.R. (please indicate radius)



Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link



Order examples - extender crossbar

① Combination with snap-open crossbars

RHD115 for outer radius "E" incl. e-chain®:

E4.56.10/15RHD**E**115/10.R.0

RHD115 for inner radius "Z" incl. e-chain®:

E4.56.10/15RHD**Z**115/10.R.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:

E4.56.17RD**E**115.R.0

RD115 for inner radius "Z" incl. e-chain®:

E4.56.17RD**Z**115.R.0

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	180	□ square	yes	no
450.35.D250	195	□ square	yes	no
450.40.D300	245	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	180	□ square	no	yes
450.30.HD250	195	□ square	no	yes

E4.1 | Series E4.56 | More options



E4 snapclip | 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 e-chain® link



Order example (here: inner width B_i 150)

Locking clip, to open along inner radius "Z":

E4.56.15.B12.200Z.R.0

Locking clip, to open along outer radius "E":

E4.56.15.B12.200E.R.0

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

E4.1 | Series E4.56 | e-chain® accessories



Strain relief system

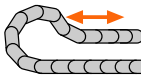
Clamps, tiwrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► **from page 10.1**



Support tray tool kit

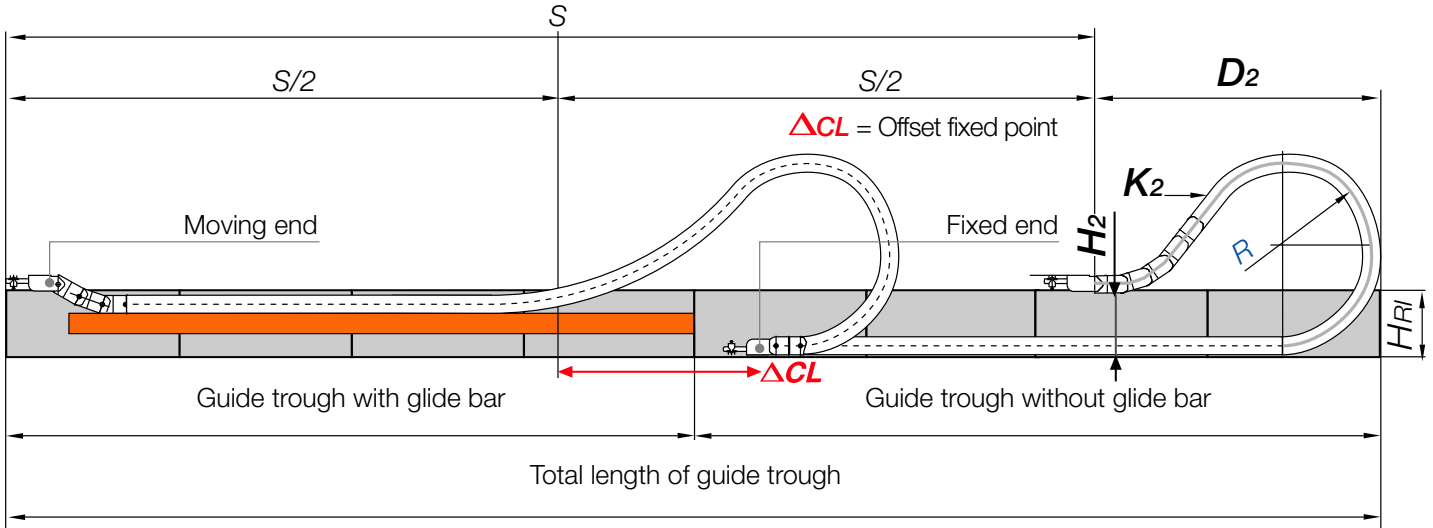
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► **from page 9.70**

E4.1 | Series E4.56 | Dimensions | Long travels



Gliding applications | For long travels from 12 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. **In case of travels between 10 and 12 m we recommend a longer unsupported length.** More information ► **Design, from page 1.16.**



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

R	135	150	175	200	240	250	300	350	400	450	500
H ₂	270	266	266	266	266	266	266	266	266	266	266
D ₂ ⁺²⁵	268	450	580	710	900	980	1180	1440	1530	1700	1850
K ₂	610	819	1092	1274	1547	1638	2002	2275	2548	2912	3276
ΔCL	-	159	259	359	509	559	709	909	959	1059	1159

More solutions | for long travels

System P4.56 - Profile rol e-chain®, low-noise **Travels up to 800 m** **v_{max} 10 m/s**

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life ► page 9.84

rol e-chain® 4040R - Rolling instead of gliding **Travels up to 800 m** **v_{max} 6,0 m/s**

Major reduction in drive power to less than 25 % for moving the e-chain® ► page 9.88

autoglide E4.56.Bi.R.0.AG - Self-guiding, no guide troughs **Travels ≤ 50 m** **v_{max} 1,5 m/s**

Self-guiding e-chainsystems® - No guide troughs required! ► page 9.92

Specialty:

guidelok horizontal - Upper run guide, unsupported **Travels ≤ 50 m**

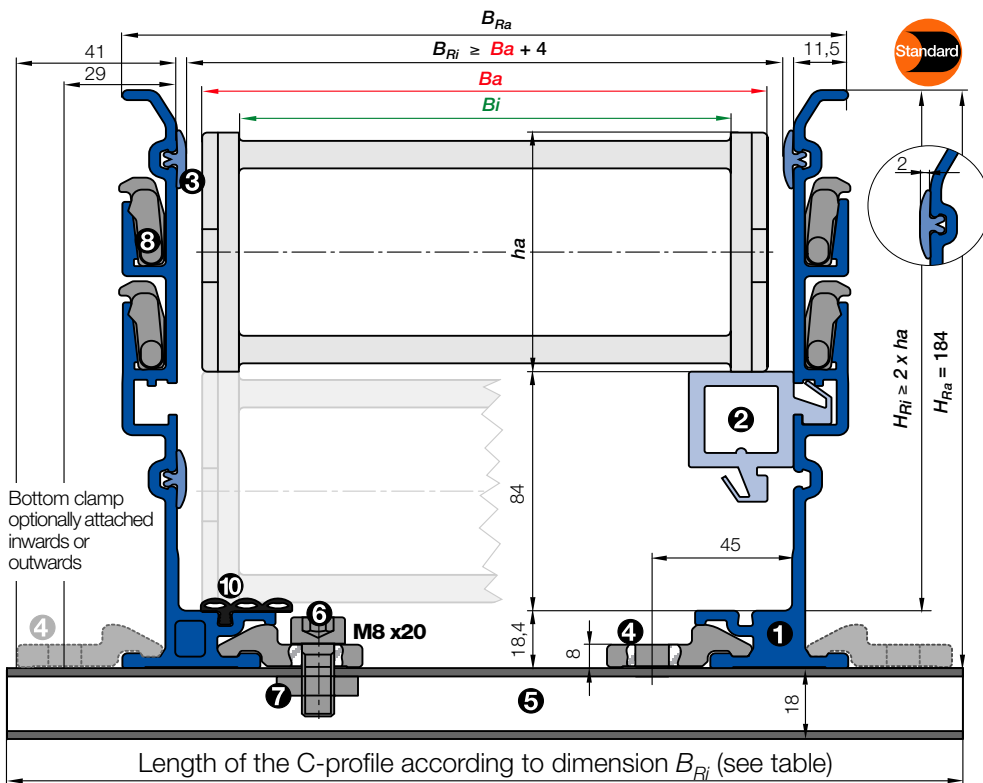
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains® ► page 9.97



The complete range of special solutions for long travel applications incl. order function ► from page 9.76



H₂ = Mounting height (if the moving end is set lower) K₂ = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D₂ = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel



- **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, galvanized steel ▶ table ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.56.10.200.0 with $B_{Ri} = 138$

Guide trough set **without glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 974.30.SL**

Guide trough set **with glide bar** (set of 2 trough side parts, incl. glide strips)

Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 974.31.SL**

Installation set "Basic" complete (guide trough-sets + 1)

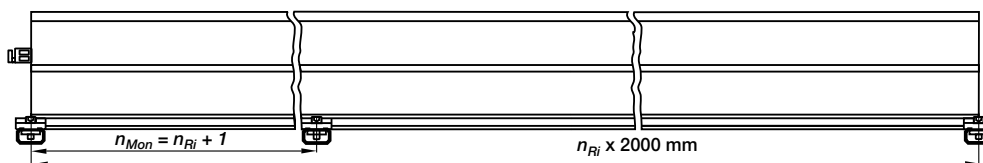
Order text: 17 installation sets **Part No. 960.50.200**

Module for the fixed end ▶ page 9.16

Order text: 1 set **Part No. 974.80**

Option: For an additional noise dampening

with silencer profile, please add Index A - Example: **Part No. 974.30.SLA**



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

Details about Alu "SuperTrough" and the "Heavy Duty" version for heavy machinery ▶ from page 9.35

- Trough set
- Installation set
- Glide bar
- C-Profile
- B_a = Outer width e-chains*
- B_i = Inner width e-chains*
- B_{Ri} = Inner trough width
- B_{Ra} = Outer trough width
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- n_{Mon} = Number of installation sets
- n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

E4.56.10.200.0 ▶ Order example

B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	88	-
.06	103	-
.07	113	-
.08	125	960.50.175
.10	138	960.50.200
.11	151	960.50.200
.12	163	960.50.225
.13	176	960.50.225
.15	188	960.50.250
.16	201	960.50.250
.17	213	960.50.275
.18	226	960.50.275
.20	238	960.50.300
.21	251	960.50.300
.22	263	960.50.325
.23	276	960.50.325
.25	288	960.50.350
.26	301	960.50.350
.27	313	960.50.375
.28	326	960.50.375
.30	338	960.50.400
.31	351	960.50.400
.32	363	960.50.425
.33	376	960.50.425
.35	388	960.50.450
.36	401	960.50.450
.37	413	960.50.475
.38	426	960.50.475
.40	438	960.50.500
.41	451	960.50.500
.42	463	960.50.525
.43	476	960.50.525
.45	488	960.50.550
.46	501	960.50.550
.47	513	960.50.575
.48	526	960.50.575
.50	538	960.50.600
.51	551	960.50.600
.52	563	960.50.625
.53	576	960.50.625
.55	588	960.50.650
.60	638	960.50.700

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of **960.50.XXX** on the right column "attached outwards"

E4.1 | Series E4.56 | Options and order key



Standard

Additional noise dampening with pads

QuickLock crossbar - reduce assembly time up to 25%

Part No.
Standard
e-chains®/e-tubes

Part No.
Low noise (with pads)
e-chains®/e-tubes

Part No. QuickLock crossbar for inner radius	Part No. QuickLock crossbar for outer radius	Part No. QuickLock crossbar for both radii
QuickLock crossbars: inner widths from Bi 15 (150 mm)!		



E4.56.30.R.0
Crossbar every link

ES4.56.30.R.0
Crossbar every link

E4.56.30QZ.R.0
Crossbar every link

E4.56.30QE.R.0
Crossbar every link

E4.56.30Q.R.0
Crossbar every link

H4.56.30.R.0
Crossbar every 2nd link

HS4.56.30.R.0
Crossbar every 2nd link

H4.56.30QZ.R.0
Crossbar every 2nd link

H4.56.30QE.R.0
Crossbar every 2nd link

H4.56.30Q.R.0
Crossbar every 2nd link

R4.56.30.R.0
e-tube, closed

RS4.56.30.R.0
e-tube, closed



Delivery in 24h or today!*

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Delivery time: 3-5 work days

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		ES4.56.30Q.R.0	ES4.56.30.R.0.NC	-	ES4.56.30.R.0.XXL	RS4.56.30.R.0.HT	ES4.56.30.R.0.ESD
QuickLock crossbar	ES4.56.30Q.R.0		E4.56.30Q.R.0.NC	E4.56.30Q.R1/R2.0	E4.56.30Q.R.0.XXL	-	E4.56.30Q.R.0.ESD
NC-Version	ES4.56.30.R.0.NC	E4.56.30Q.R.0.NC		-	-	R4.56.30.R.0.HT.NC	E4.56.30.R.0.ESD.NC
RBR-Version	-	E4.56.30Q.R1/R2.0	-		-	R4.56.30.R1/R2.0.HT	E4.56.30.R1/R2.0.ESD
XXL-Material	ES4.56.30.R.0.XXL	E4.56.30Q.R.0.XXL	-	-		-	-
HT-Material*	RS4.56.30.R.0.HT	-	R4.56.30.R.0.HT.NC	R4.56.30.R1/R2.0.HT	-		-
ESD-	ES4.56.30.R.0.ESD	E4.56.30Q.R.0.ESD	E4.56.30.R.0.ESD.NC	E4.56.30.R1/R2.0.ESD	-	-	

*for gliding applications please consult igus®

Extreme glider with up to 70% larger gliding surfaces. For high additional loads and high surface speeds. Gliding applications without additional elements as well as 150% more wear allowance and enhancement of service life by factor 4! Order example: E4.56.35G.250.0 / E4.56.45G.250.0

E4.1 | Series E4.56 | Options and order key

Simply turn outer side link without additional work

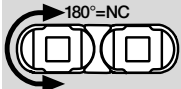
Reverse bending radius for circular movements

Unsupported lengths +25% possible


No burning-in of hot chips up to 850°C (1562° F)

ATEX/ESD classified e-chains® -
II 2 GD


Part No.
NC-Material
e-chains®/e-tubes



Part No.
RBR
e-chains®/e-tubes




Part No.
XXL-Material**
e-chains®/e-tubes



Part No.
HT-Material
only for e-tubes



Part No.
ESD-Material
e-chains®/e-tubes



E4.56.30.R.0.NC
Crossbar every link

E4.56.30.R1/R2.0
Crossbar every link

E4.56.30.R.0.XXL
Crossbar every link

R4.56.30.R.0.HT
Complete e-tube*

E4.56.30.R.0.ESD
Crossbar every link

H4.56.30.R.0.NC
Crossbar every 2nd link

H4.56.30.R1/R2.0
Crossbar every 2nd link

H4.56.30.R.0.XXL
Crossbar every 2nd link

R4.56.30.HT.R.0
Lid and bottom

H4.56.30.R.0.ESD
Crossbar every 2nd link

R4.56.30.R.0.NC
e-tube, closed

R4.56.30.R1/R2.0
e-tube, closed

R4.56.30.R.0.XXL
e-tube, closed

R4.56.30.HTZ.R.0
Bottom only

R4.56.30.R.0.ESD
e-tube, closed

R4.56.30.HTE.R.0
Lid only

Delivery in 24h or today!*

Delivery time: 10 work days

Delivery time: 1-2 weeks

Delivery time: 10 work days

Delivery time: 5 work days

(2-5 work days with express surcharge)

**Sidebands made from XXL-Material

*for gliding applications please consult igus®

Order example | Order key and color options

 **Order example for complete e-chain® (3,0 m, with crossbars every link), color black, mounting brackets and interior separation**

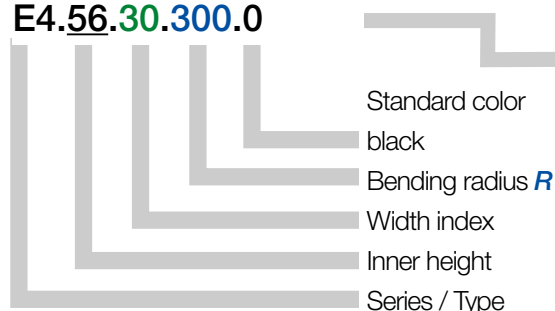
e-chain® (3,0 m) Please indicate e-chain® length or number of links: 3,0 m or 33 links **E4.56.30.300.0**

+ Mounting brackets 1 set (with odd number of links and integrated C-profiles) **E4.560.30.1.12.C**

+ Interior separation with 2 separators assembled every 2nd link **2 x 56.1.1**

Order text: 3,0 m E4.56.30.300.0 + E4.560.30.1.12.C + 2 x Part No. 56.1.1

 **Order key**
E4.56.30.300.0



Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
black	.0 from stock!	green*	.7
white*	.1	grey*	.3 for e-chains®
violet*	.5	dusty grey*	.3 for e-tubes
yellow*	.4	agate grey*	.11
orange*	.2	light grey*	.14
red*	.6	black grey*	.13
blue*	.8	yellow/black*	.9

Black e-chains® from stock! *Colored can be delivered in 15 work days (5 work days at an express surcharge).

 **Available from stock. Delivery in 24h or today!***

*Delivery time means time until shipping of goods