



# YE/YEHD

## Plastic-steel hybrid e-chains® and tubes

Combine the best properties of steel and plastic



### Benefits of the YE/YEHD system:

- Up to 50% lighter than a pure steel chain of comparable size
- Up to 50% longer unsupported length than a comparable plastic e-chain®
- Also available as HD version for maximum strength in combination with high fill weights and extreme environments
- Easy installation
- High ease of movement due to plastic-steel pin connection, high tensile force absorption
- Tough steel mounting brackets
- Wide range of cable- and hose-friendly interior separation
- Available as ready-to-install readychain® system with cables, hoses and hydraulic components



### When to use another e-chain® series:

- When pure plastic e-chains® are required
  - ▶ E4Q: [www.igus.eu/E4Q](http://www.igus.eu/E4Q)
- For travel lengths gliding
  - ▶ P4: [www.igus.eu/P4](http://www.igus.eu/P4) / P4.1: [www.igus.eu/P4.1](http://www.igus.eu/P4.1)
  - ▶ Rol e-chain®: [www.igus.eu/role](http://www.igus.eu/role)

Diagram shows YE.56 series



Robust:  
steel mounting brackets

YE series:  
with pure steel  
inner plates

50% less weight:  
than a pure steel chain of  
comparable size, thanks  
to plastic outer links

Up to 50% longer  
unsupported length  
than a comparable  
plastic e-chain®

Fast assembly:  
plastic outer links with  
flange for easy assembly  
of e-chain® links

Special feature:  
YEHD.108 with reinforced,  
screw-secured crossbars  
for even higher loads

Fast filling:  
plastic crossbars/lids  
removable along the  
inner and outer radius

Many variants:  
also available as fully  
enclosed e-tube  
series YRHD.108

# Combine the best properties of steel and plastic - YE and YEHD hybrid e-chains®

Approximately 50% stronger\* than pure plastic energy chains and up to 50% lighter\* than pure steel energy chains. e-chain® links openable quickly, for easy cable replacement. Steel or plastic does not have to be an either-or decision. In order to reach the highest possible unsupported length with the lowest possible weight, so-called hybrid e-chains® are ideal, combining the best properties of steel and plastic.

- High tensile strength
- Easy installation of plastic outer links with flange for easy e-chain® link assembly
- Smooth operation due to plastic pin connection
- Flexible interior separation thanks to proven E4 components
- Available as HD version for maximum stability in combination with high fill weights and extreme environments
- Available as ready-to-install readychain® system with cables, hoses and hydraulic components

\*Compared to plastic or steel energy chains of comparable sizes

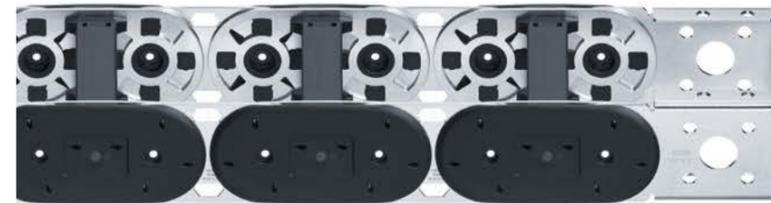
## Typical industries and applications

- YE:** ● Work platforms ● Construction machinery ● Breakdown vehicles ● Lifting platforms ● Telescopic loaders ● Vertical lifts ● Articulated telescopic platforms ● Horizontal drilling rigs ● Articulated arm systems ● Drilling and diaphragm wall rigs
- YEHD:** ● Drill rigs ● Large portal milling machines ● Deep drilling rigs ● Horizontal drilling rigs ● Steel mills ● Large unsupported lengths

More information ► [www.igus.eu/YE](http://www.igus.eu/YE)



Series	Inner height <i>hi</i> [mm]	Inner width <i>Bi</i> [mm]	Outer width <i>Ba</i> [mm]	Outer height <i>ha</i> [mm]	Bend radius <i>R</i> [mm]	Unsupported length ≤ [m]	Page
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**Plastic-steel hybrid e-chains®**  
Crossbars removable along the inner and outer radius.

YE.42	42	100 <sup>1)</sup> - 400	118 - 418	76	100 - 150 <sup>2)</sup>	<sup>3)</sup>	12
YE.56	56	100 <sup>1)</sup> - 600	124 - 624	90	100 - 500	<sup>3)</sup>	18



**Heavy-duty: plastic-steel hybrid HD e-chains®**  
Crossbars removable along the inner and outer radius.

YEHD.108	108	387 - 550	435 - 598	146	250 - 600	<sup>3)</sup>	24
YEHD.112	112	200 - 600	248 - 648	146	250 - 600	<sup>3)</sup>	24

YEHD.108 series with reinforced, screw-secured crossbars for even higher loads



**Heavy-duty: plastic-steel hybrid HD e-tubes**  
Lids removable along the inner and outer radius.

YRHD.108	108	200 - 500	248 - 548	146	250 - 600	<sup>3)</sup>	24
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1) Widths under *Bi* 100 available upon request. Here, an inspection and dimensioning via the igus® design is required in advance.

2) Radius *R* 125, 150 available upon request. Delivery time upon request.

3) Unsupported lengths depending on the angle of inclination ► see corresponding graphs on the series pages

Available from stock. Ready to ship in 48 - 72hrs.\*  
\*Average time before the ordered goods are dispatched.

## Free YE white paper: energy supply systems for machines with inclined axes

- Read this white paper to learn about the benefits of the YE hybrid chain for aerial work platforms and other machinery and applications
  - Components for telescopic work platforms
- Download whitepaper ► [www.igus.eu/YE](http://www.igus.eu/YE)



igus 3D CAD, configurators, service life calculation and more ► [www.igus.eu/YE](http://www.igus.eu/YE)



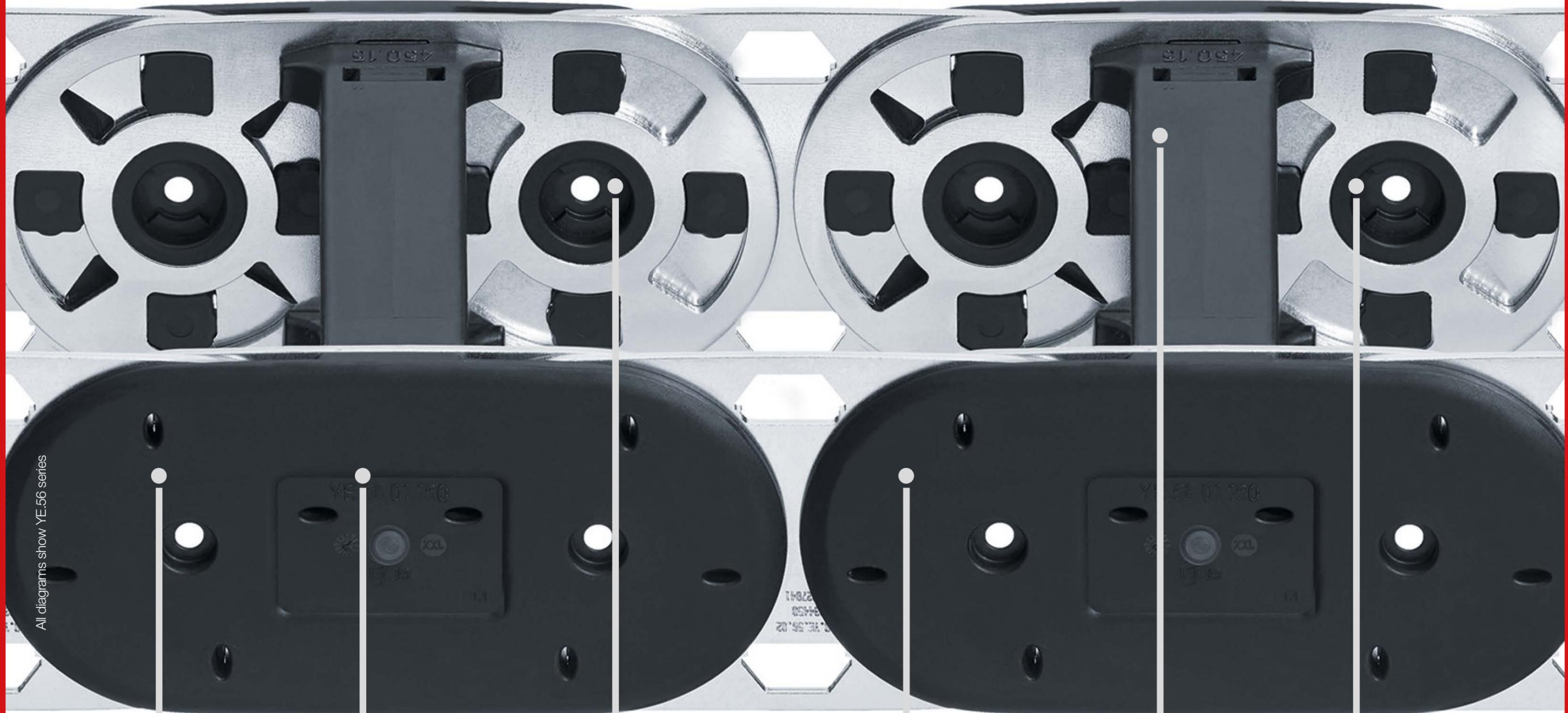
**Plastic outer links**

The plastic outer links of the YE system are made of glass fibre reinforced igumid G. Large pins result in a high tensile force. Due to rotation around the plastic pins, the e-chain® is very smooth in operation. A single outer link is necessary for the entire product range. This increases the flexibility and quick availability of various bending radii. The undercut design of the stop-dogs lock the steel links under load.



**Steel inner links**

The min. 2.5mm thick steel inner plates have recesses for the stop-dogs of the igumid G outer links. The YE system is designed in such a way that when loaded, force is exerted on the fixed stops from both sides through the steel links. This allows a higher load on the stop-dogs.



All diagrams show YE.56 series

Up to 50% less weight than a pure steel chain of comparable size, thanks to plastic outer links and plastic crossbars

Significantly lower assembly costs - e-chain® links can be assembled individually

High ease of movement due to plastic-steel pin connection, high tensile force absorption

Up to 50% longer unsupported length than a comparable plastic e-chain®

Strong notched crossbars with visible scale and double locking mechanism

No screws, rivets or bolts that can become loose under vibration (for YE series)

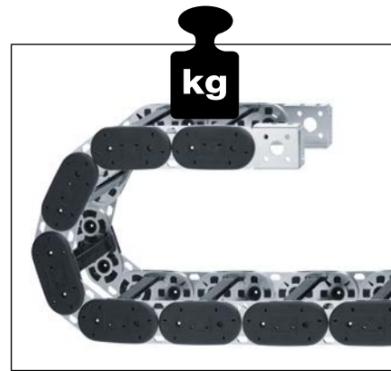




Plastic outer links - high tensile force absorption using plastic pins. Plastic outer links provide 50% less weight, quick installation and smooth running



Steel inner plates absorb the force of the stop-dogs of the plastic outer links and increase the stability by 50%



Strong and vibration-resistant - for heavy loads with compact dimensions and low weight. Advantage for work platforms: each saved gram increases the payload



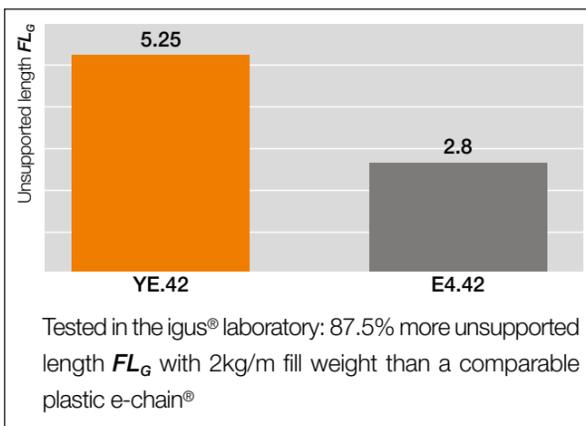
Variable widths - 100mm to 600mm inner width available. Crossbars openable and removable along the inner and outer radius



Standard interior separation from the proven E4 modular system available from stock



Tough steel mounting brackets



### Test - unsupported length of the igus® YE.42 series

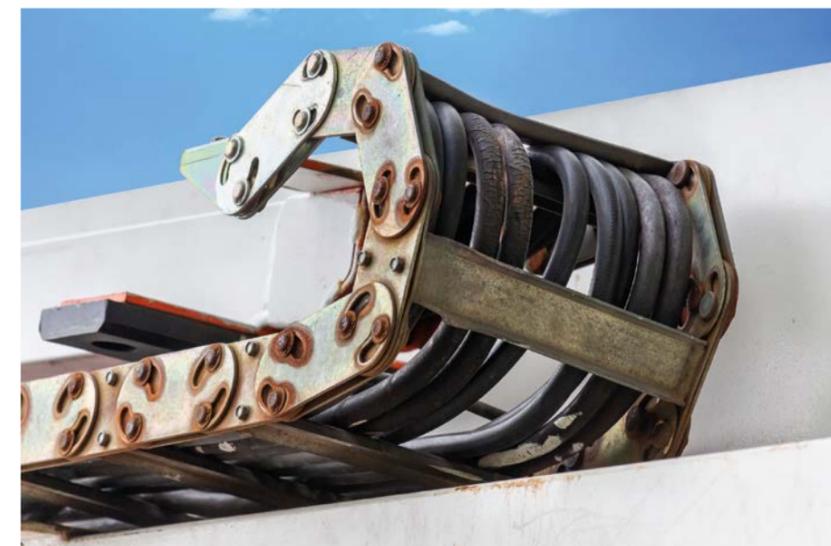
In a comparison test in its test laboratory, which is the largest in the industry, igus® compared the YE.42 and E4.42 series with each other. The two series were evaluated with regard to their unsupported length (*with straight upper run*) with a 2kg/m fill weight.

**Result:** with a fill weight of 2kg/m, the YE.42 series can be used unsupported for a distance of up to 5.25m and the E4.42 can achieve 2.8m. This corresponds to an 87.5% longer unsupported length (*with straight upper run*) with a 2kg/m fill weight for the YE.42 series compared to the E4.42 series.

## Why plastic-steel hybrid e-chains® ...

Standard steel chain vs. igus® YE hybrid e-chain®

Standard steel chain	igus® YE plastic-steel hybrid e-chain®
<b>Frequently observed problems with pure steel energy supply systems:</b>	<b>The problem solution:</b>
<ul style="list-style-type: none"> <li>● Screws, bolts and circlips can be lost over time and make the whole system unstable</li> </ul>	<ul style="list-style-type: none"> <li>● No screws or rivets connecting the e-chains® (in the YE series)</li> </ul>
<ul style="list-style-type: none"> <li>● e-chain® links of steel chains are non-openable and cannot be partially replaced</li> </ul>	<ul style="list-style-type: none"> <li>● e-chains® links are openable. If required, cables can be added or removed.</li> </ul>
<ul style="list-style-type: none"> <li>● Corrosion at the joints, resulting in stiffness of the entire energy supply</li> </ul>	<ul style="list-style-type: none"> <li>● Plastic-metal joints prevent seizure of the e-chain® links through corrosion</li> </ul>
<ul style="list-style-type: none"> <li>● Deformation of the crossbars leading to seizure/ twisting of the steely chain. Sharp edges can also damage the cables and hoses</li> </ul>	<ul style="list-style-type: none"> <li>● Plastic crossbars do not permanently deform. In addition, they can be replaced individually in the event of a defect. Rounded crossbars protect the cables and hoses</li> </ul>
<ul style="list-style-type: none"> <li>● Heavy, because of the metal energy supply system</li> </ul>	<ul style="list-style-type: none"> <li>● Up to 50% lighter hybrid energy chain</li> </ul>
<ul style="list-style-type: none"> <li>● Standard steel chains often have a rather loose design, which can lead to strong vibration of the steel chain</li> </ul>	<ul style="list-style-type: none"> <li>● The combination of high-performance plastic and steel prevents the e-chain® from vibrating and thus contributes to a longer service life</li> </ul>



Standard steel chains with their associated problems are a thing of the past with igus® YE plastic-steel hybrid e-chains®

Technical data

 Speed $FL_G$ / acceleration $FL_G$	$\leq 1$ [m/s] / $\leq 1$ [m/s <sup>2</sup> ]
 Speed $FL_B$ / acceleration $FL_B$	$\leq 1$ [m/s] / $\leq 1$ [m/s <sup>2</sup> ]
 Material - permitted temperature °C*	-40°C/+120°C
 Flammability class*	VDE 0304 IIC UL94-HB

$FL_G$  = unsupported with straight upper run  $FL_B$  = unsupported with permitted sag  
 \*Temperature data and flammability class refer to the plastic outer links made of igumid G

Order example | Based on YE.56 series

 Order example for complete e-chain® (1.0m), colour black, with mounting brackets and interior separation:

e-chain® (1.0m)	Please indicate e-chain® length or number of links: 1.0m or 11 links	YE.56.15.200.0
+ Mounting bracket	1 full set (odd number of links), pre-assembled moving end pivoting, fixed end locking	YE.562.R200.1.12.A
Interior separation	With 2 separators assembled every 2nd link	2 x 56.1.1
Order text:	1m YE.56.15.200.0 + YE.562.R200.1.12.A + 2 x 56.1.1 (2nd link each)	

Order key and colour examples | Examples based on series YE.56

 Order key  
 Plastic-steel hybrid e-chains® YE.56.15.200.0

- Series / Type
- Inner height
- Width index (depends on B)
- Bend radius R
- Colour index (standard black)



Work platforms, construction machinery and lifting platforms face an identical challenge: safe and compact vertical guidance of cables and hoses. For applications that require particularly high unsupported lengths at different angles of elevation, igus® has developed the plastic-steel hybrid e-chain® YE



The igus® YE system is ideal for construction machines and work platforms - no screws, rivets or bolts that can come loose under vibration. In addition, the YE system is easy to open and close



 Conversion of a work platform with igus® YE.42 hybrid e-chain®. Find a video online ► [www.igus.eu/YE](http://www.igus.eu/YE)

The first modular plastic-steel hybrid e-chain® made of steel and plastic from igus® easily manages long, unsupported travels, quick and easy to open and close. Safe guidance of cables and hoses - the YE system is 50% lighter than conventional steel chains due to its high-performance polymers and provides up to 50% longer unsupported length than plastic e-chains®



Series YE.42 | Crossbars removable along the inner and outer radius

Part No. e-chains®	Bi [mm]	Ba [mm]	YE.42 [kg/m]	Part No. e-chains®	Bi [mm]	Ba [mm]	YE.42 [kg/m]
YE.42.05.R.0*	50	68	≈ 4.020	YE.42.23.R.0	225	243	≈ 4.475
YE.42.06.R.0*	68	86	≈ 4.067	YE.42.237.R.0	237	255	≈ 4.506
YE.42.07.R.0*	75	93	≈ 4.085	YE.42.25.R.0	250	268	≈ 4.540
YE.42.087.R.0*	87	105	≈ 4.116	YE.42.262.R.0	262	280	≈ 4.571
YE.42.10.R.0	100	118	≈ 4.150	YE.42.28.R.0	275	293	≈ 4.605
YE.42.11.R.0	108	126	≈ 4.171	YE.42.29.R.0	287	305	≈ 4.636
YE.42.112.R.0	112	130	≈ 4.181	YE.42.30.R.0	300	318	≈ 4.670
YE.42.12.R.0	125	143	≈ 4.215	YE.42.312.R.0	312	330	≈ 4.701
YE.42.137.R.0	137	155	≈ 4.246	YE.42.325.R.0	325	343	≈ 4.735
YE.42.15.R.0	150	168	≈ 4.280	YE.42.337.R.0	337	355	≈ 4.766
YE.42.162.R.0	162	180	≈ 4.311	YE.42.350.R.0	350	368	≈ 4.800
YE.42.17.R.0	168	186	≈ 4.327	YE.42.362.R.0	362	380	≈ 4.831
YE.42.18.R.0	175	193	≈ 4.345	YE.42.375.R.0	375	393	≈ 4.865
YE.42.187.R.0	187	205	≈ 4.376	YE.42.387.R.0	387	405	≈ 4.896
YE.42.20.R.0	200	218	≈ 4.410	YE.42.400.R.0	400	418	≈ 4.930
YE.42.212.R.0	212	230	≈ 4.441				

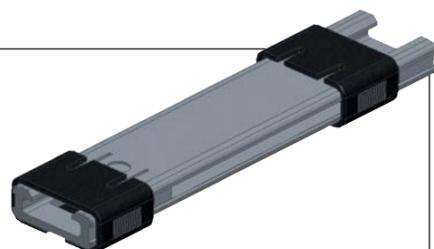
\* Widths under Bi 100 available upon request. Here, an inspection and dimensioning via the igus® design is required in advance.

\* Radius R 125, 150 available upon request. Delivery time upon request.

Available bend radii

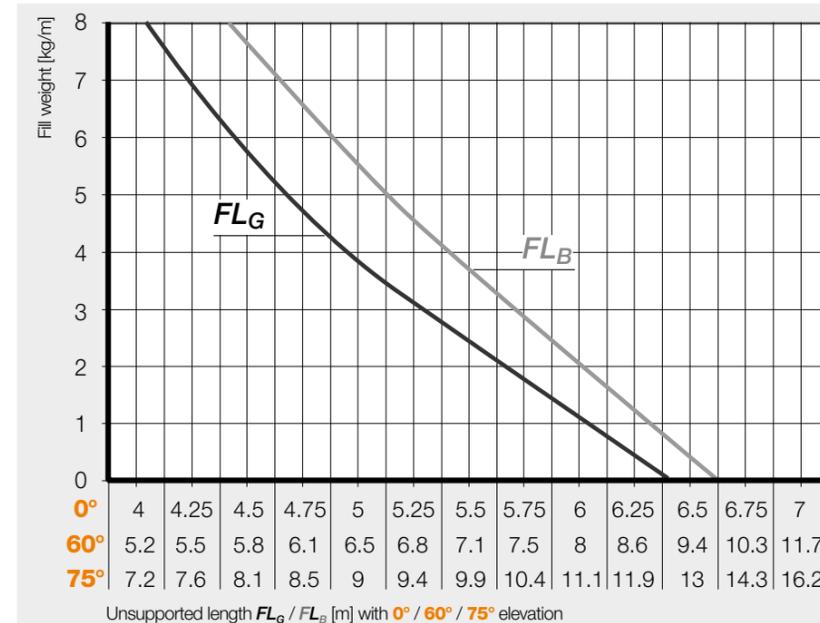
R [mm] | 100 | 125\* | 150\*

Complete Part No. with required radius (R). Example: YE.42.10.100.0

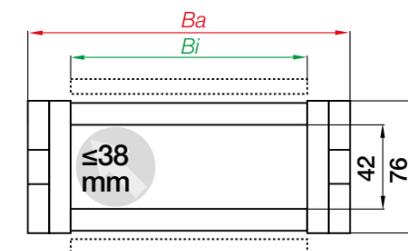
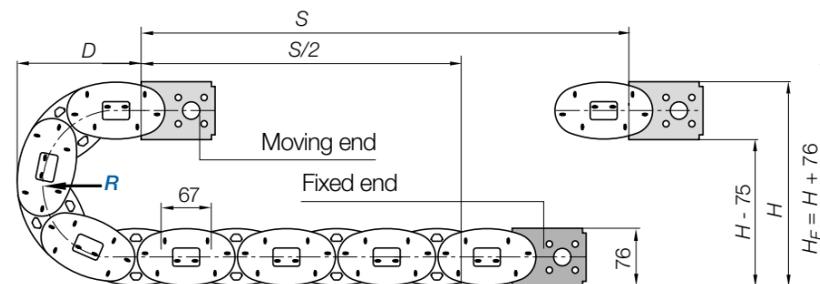


Lock the crossbars in place with 385.LOCK

- The 385.LOCK latches the crossbar and locks it securely
  - It is simply placed on the crossbar and pushed over the flange
- More information ► upon request



Unsupported length [m] with 0° / 60° / 75° elevation  
 FL<sub>G</sub> = unsupported with straight upper run  
 FL<sub>B</sub> = unsupported with permitted sag



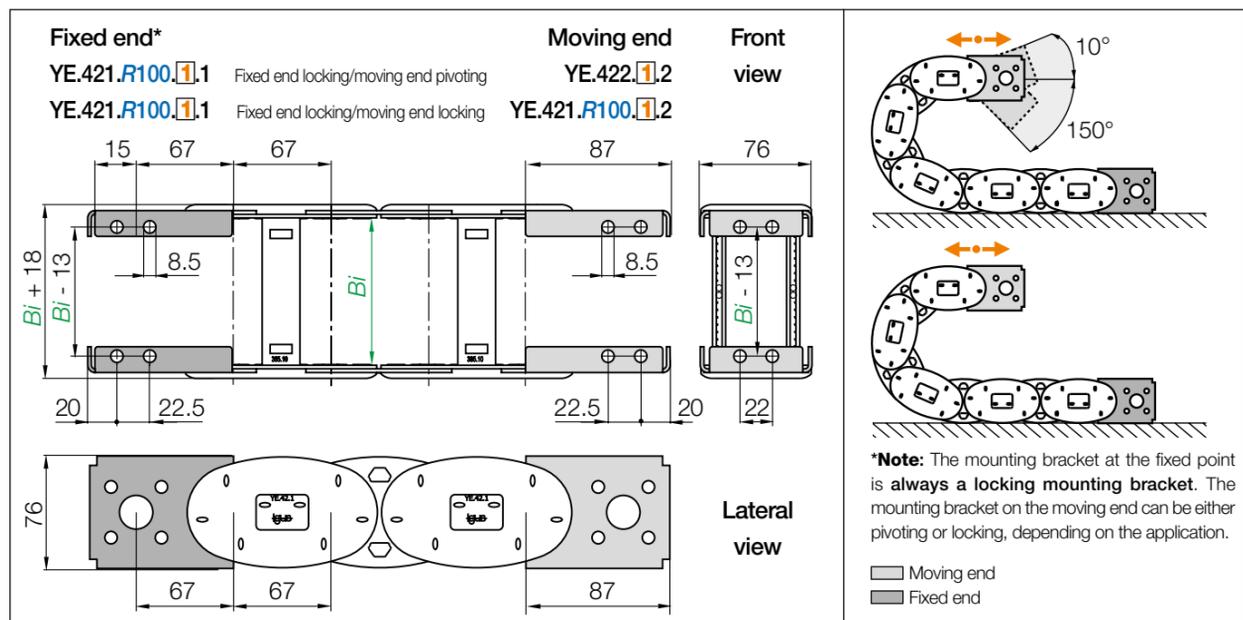
R	100	125*	150*
H	352	402	452
D	238.5	263.5	338.5
K	450	530	610

Inner height [mm]	42
Pitch [mm/link]	67
Links/m	15
corresponds to [mm]	1,005
e-chain® length	$L_K = S/2 + K$

The required clearance height:  $H_F = H + 76$ mm (with 2.5kg/m fill weight)

\* Radius R 125, 150 available upon request. Delivery time upon request.





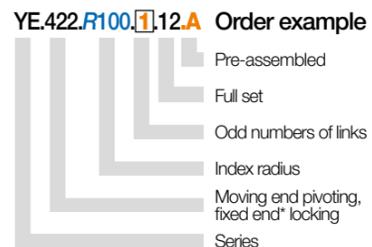
**Pivoting** | Recommended for unsupported applications  
**Locking** | Recommended for standing/vertical hanging applications

Part No. full set for moving end pivoting, fixed end* locking	Part No. full set for moving end locking, fixed end* locking	Description
YE.422.R100.1.12.A	YE.421.R100.1.12.A	Full set e-chains® always start and end with outer links, pre-assembled

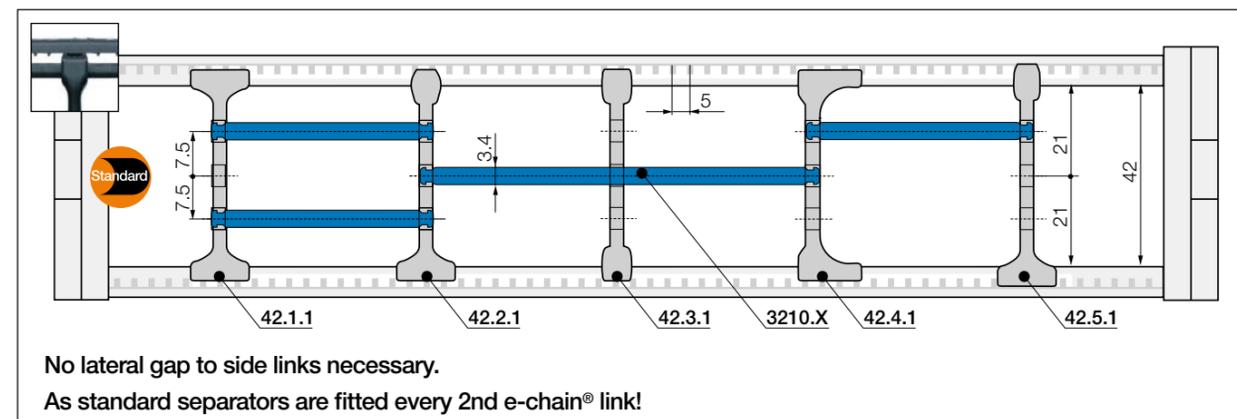
**Steel mounting brackets as individual parts**

Part number mounting bracket only fixed end*, steel fixed version	Part number mounting bracket only moving end, steel fixed version	Part number mounting bracket only moving end, steel pivoting
YE.421.R100.1.1.A	YE.421.R100.1.2.A	YE.422.1.2.A

**Note:** The YE plastic-steel hybrid e-chains® always end with outer links (odd number of links, index 1). The mounting brackets at the moving end and fixed end always form the end of the e-chain® and are inner links.



**Strain relief**, e.g. clamps, tiwrap plates, nuggets and clips are available from stock. Complete chainfix range with ordering options ► [www.igus.eu/chainfix](http://www.igus.eu/chainfix)



**Standard separator, wide base**

unassembled	42.1
assembled	42.1.1

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

**Separator, narrow top**

unassembled	42.2
assembled	42.2.1

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

**Separator, narrow**

unassembled	42.3
assembled	42.3.1

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

**Separator, asymmetrical**

unassembled	42.4
assembled	42.4.1

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

**Notch separator\* for notched crossbar**

unassembled	42.5
assembled	42.5.1

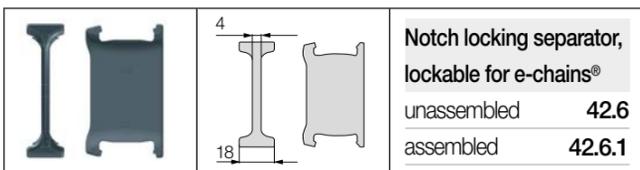
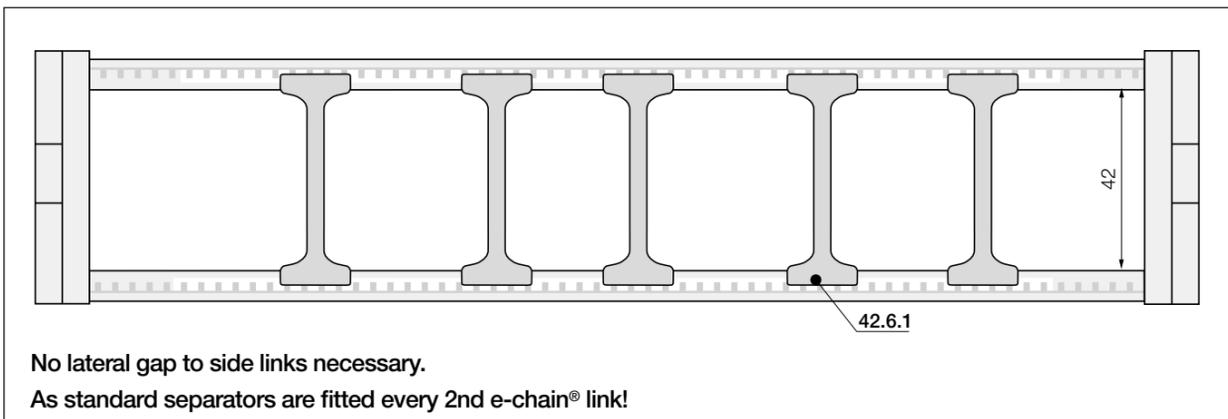
**Locks securely in preset increments**  
 Notch separator for exact positioning. Recommended for side-mounted applications.  
 (\*Suitable from Bi 75)

**Shelf, lockable**

unassembled	3200.X
assembled	3210.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]			X [mm]			X [mm]			
	unassembled	assembled		unassembled	assembled		unassembled	assembled		
050	3200.050	3210.050		125	3200.125	3210.125		225	3200.225	3210.225
075	3200.075	3210.075		150	3200.150	3210.150		250	3200.250	3210.250
100	3200.100	3210.100		175	3200.175	3210.175				
115	3200.115	3210.115		200	3200.200	3210.200				



**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.

**Here is a tip from the chainflex® cable world: fail-safe cables**

- 1,354 cable types - all tested
- With up to 36 months guarantee
- Calculate service life easily online

More information ► [www.igus.eu/chainflex](http://www.igus.eu/chainflex)

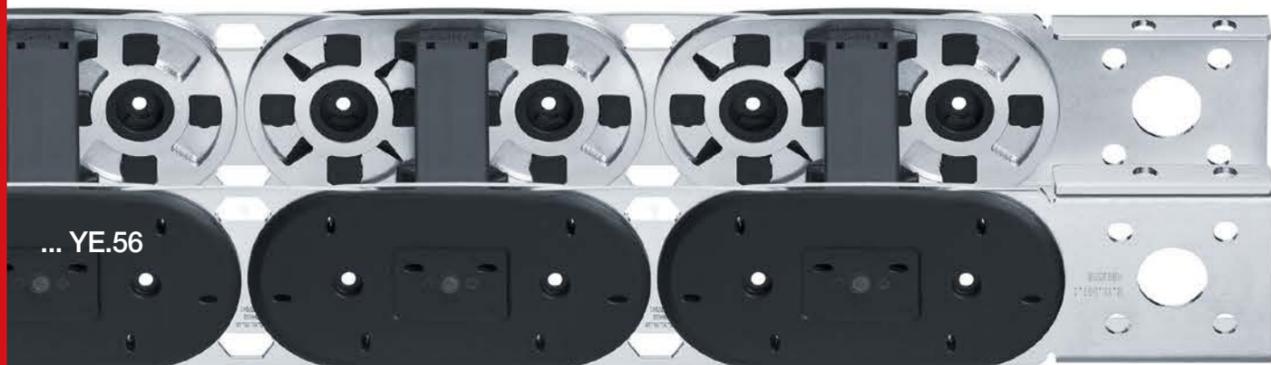


**Reduce assembly time - E4 e-chain® opener**

- 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.eu/E4savetime](http://www.igus.eu/E4savetime)



Narrow installation spaces, large unsupported lengths and lightweight: e-chains® and chainflex® cables are the ideal "cast" for the demanding part of energy supply for diagonal and telescopic applications



... YE.56

Series YE.556 | Crossbars removable along the inner and outer radius

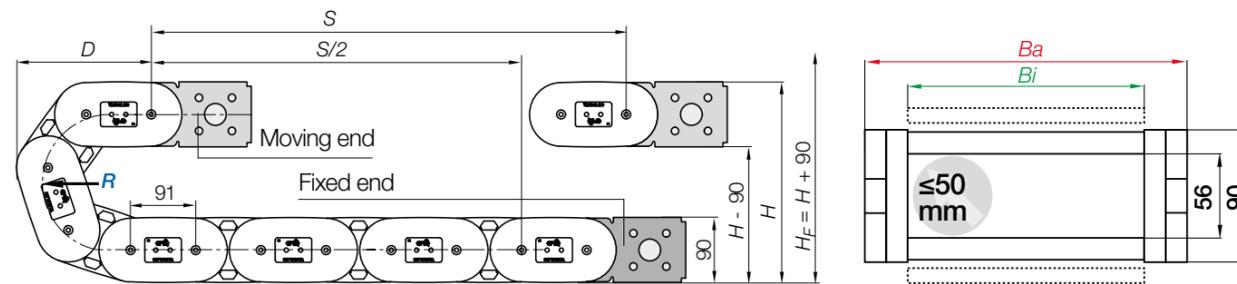
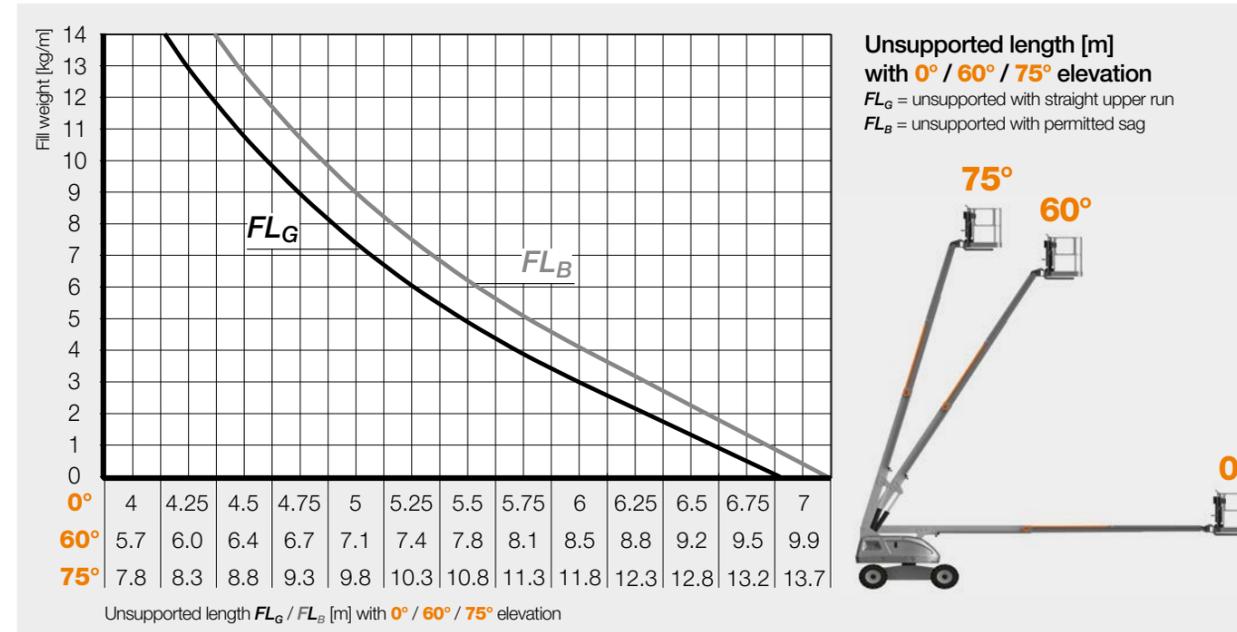
Part No. e-chains®	Bi [mm]	Ba [mm]	YE.56 [kg/m]	Part No. e-chains®	Bi [mm]	Ba [mm]	YE.56 [kg/m]
YE.56.05. R.0*	50	74	≈ 6.405	YE.56.30. R.0	300	324	≈ 7.344
YE.56.06. R.0*	65	89	≈ 6.455	YE.56.31. R.0	312	336	≈ 7.388
YE.56.07. R.0*	75	99	≈ 6.489	YE.56.32. R.0	325	349	≈ 7.436
YE.56.08. R.0*	87	111	≈ 6.530	YE.56.33. R.0	337	361	≈ 7.480
YE.56.10. R.0	100	124	≈ 6.574	YE.56.35. R.0	350	374	≈ 7.528
YE.56.11. R.0	112	136	≈ 6.614	YE.56.36. R.0	362	386	≈ 7.614
YE.56.12. R.0	125	149	≈ 6.658	YE.56.37. R.0	375	399	≈ 7.663
YE.56.13. R.0	137	161	≈ 6.698	YE.56.38. R.0	387	411	≈ 7.709
YE.56.15. R.0	150	174	≈ 6.742	YE.56.40. R.0	400	424	≈ 7.759
YE.56.16. R.0	162	186	≈ 6.824	YE.56.41. R.0	412	436	≈ 7.804
YE.56.169.R.0	170	194	≈ 6.853	YE.56.42. R.0	425	449	≈ 7.854
YE.56.17. R.0	175	199	≈ 6.871	YE.56.43. R.0	437	461	≈ 7.899
YE.56.182.R.0	183	207	≈ 6.901	YE.56.45. R.0	450	474	≈ 7.949
YE.56.18. R.0	187	211	≈ 6.915	YE.56.46. R.0	462	486	≈ 7.995
YE.56.20. R.0	200	224	≈ 6.962	YE.56.47. R.0	475	499	≈ 8.044
YE.56.207.R.0	208	232	≈ 7.004	YE.56.48. R.0	487	511	≈ 8.090
YE.56.21. R.0	212	236	≈ 7.019	YE.56.50. R.0	500	524	≈ 8.139
YE.56.22. R.0	225	249	≈ 7.067	YE.56.51. R.0	512	536	≈ 8.198
YE.56.23. R.0	237	261	≈ 7.111	YE.56.52. R.0	525	549	≈ 8.248
YE.56.25. R.0	250	274	≈ 7.159	YE.56.53. R.0	537	561	≈ 8.294
YE.56.26. R.0	262	286	≈ 7.203	YE.56.55. R.0	550	574	≈ 8.344
YE.56.27. R.0	275	299	≈ 7.251	YE.56.60. R.0	600	624	≈ 8.535
YE.56.28. R.0	287	311	≈ 7.296				

\* Widths under Bi 100 available upon request. Here, an inspection and dimensioning via the igus® design is required in advance.

Available bend radii

R [mm] | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 |

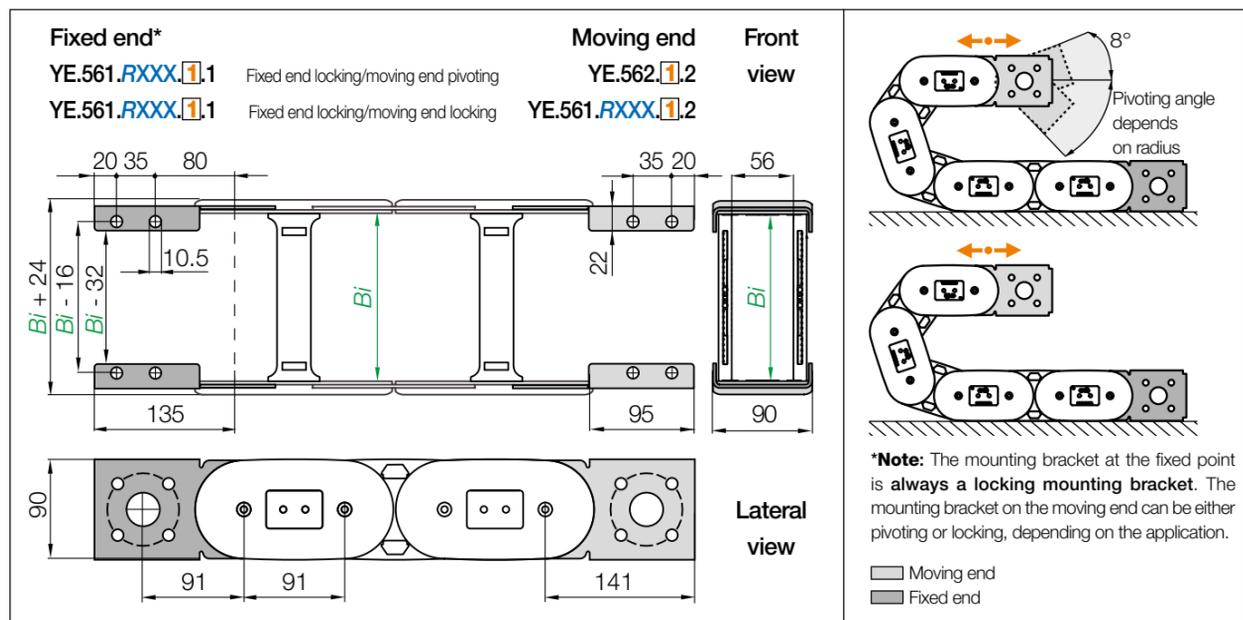
Complete Part No. with required radius (R). Example: YE.56.15.200.0



R	100	125	150	200	250	300	350	400	500
H	380	430	480	580	680	780	880	980	1,180
D	281.5	306.5	331.5	381.5	431.5	481.5	531.5	581.5	681.5
K	500	575	655	815	970	1,125	1,285	1,440	1.755

The required clearance height:  $H_F = H + 90\text{mm}$  (with 3.0kg/m fill weight)

Inner height [mm]	56
Pitch [mm/link]	91
Links/m	11
corresponds to [mm]	1,001
e-chain® length	$L_K = S/2 + K$



**Pivoting** | Recommended for unsupported applications  
**Locking** | Recommended for standing/vertical hanging applications

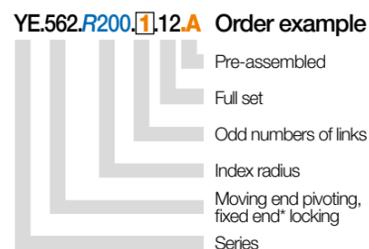
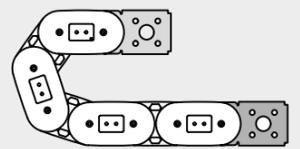
Part No. full set for moving end pivoting, fixed end* locking	Part No. full set for moving end locking, fixed end* locking	Description
YE.562.RXXX.1.12.A	YE.561.RXXX.1.12.A	Full set (both ends) e-chains® always start and end with outer links, pre-assembled

**Steel mounting brackets as individual parts**

Part number mounting bracket only fixed end*, steel fixed version	Part number mounting bracket only moving end, steel fixed version	Part number mounting bracket only moving end, steel pivoting
YE.561.RXXX.1.1.A	YE.561.RXXX.1.2.A	YE.562.1.2.A

Complete Part No. with required radius (R), e.g. YE.562.R200.1.12.A

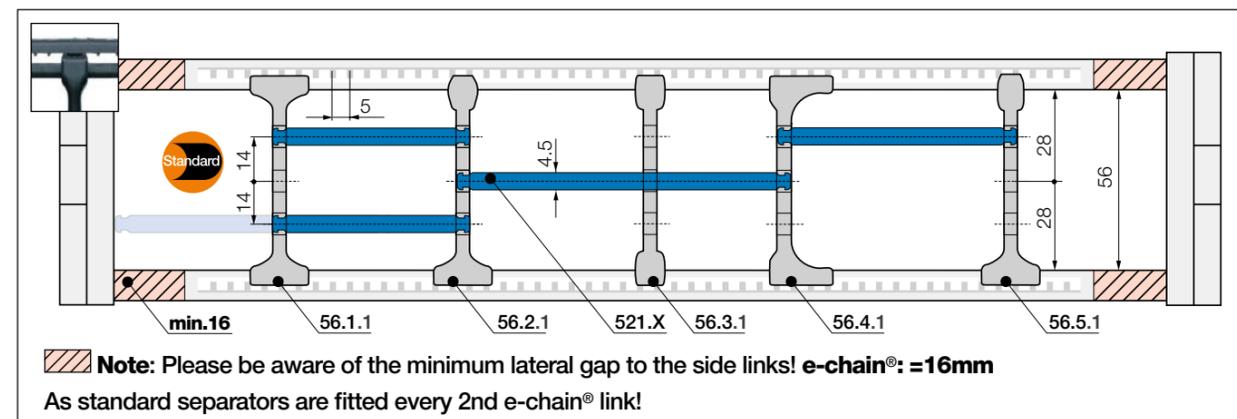
**Note:** The YE plastic-steel hybrid e-chains® always end with outer links (odd number of links, index 1). The mounting brackets at the moving end and fixed end always form the end of the e-chain® and are inner links.



**Strain relief**, e.g. clamps, tiwrap plates, nuggets and clips are available from stock. Complete chainfix range with ordering options ► [www.igus.eu/chainfix](http://www.igus.eu/chainfix)



Interior separation - to allow higher holding force ► next page



		<b>Standard separator, wide base</b> unassembled 56.1 assembled 56.1.1
		<b>Separator, narrow top</b> unassembled 56.2 assembled 56.2.1
		<b>Separator, narrow</b> unassembled 56.3 assembled 56.3.1
		<b>Separator, asymmetrical</b> unassembled 56.4 assembled 56.4.1
		<b>Notch separator for notched crossbar</b> unassembled 56.5 assembled 56.5.1
		<b>Shelf, lockable</b> unassembled 520.X assembled 521.X

**Standard - for any application**

Separator with a wide base for maximum holding force.

**For even faster installation**

Wide on one side for high holding force, narrow on opposite side for easy cable fitting.

**For a large number of thin cables**

Separator with a narrow base for a large number of thin cables side by side. Saves space.

**For side-mounted applications**

Asymmetrical separator, for defined gap distance. No additional spacers required.

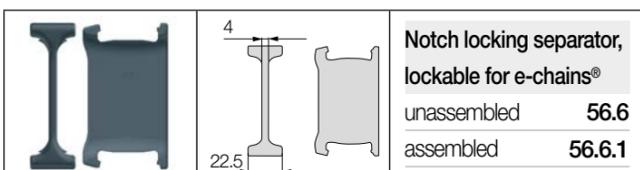
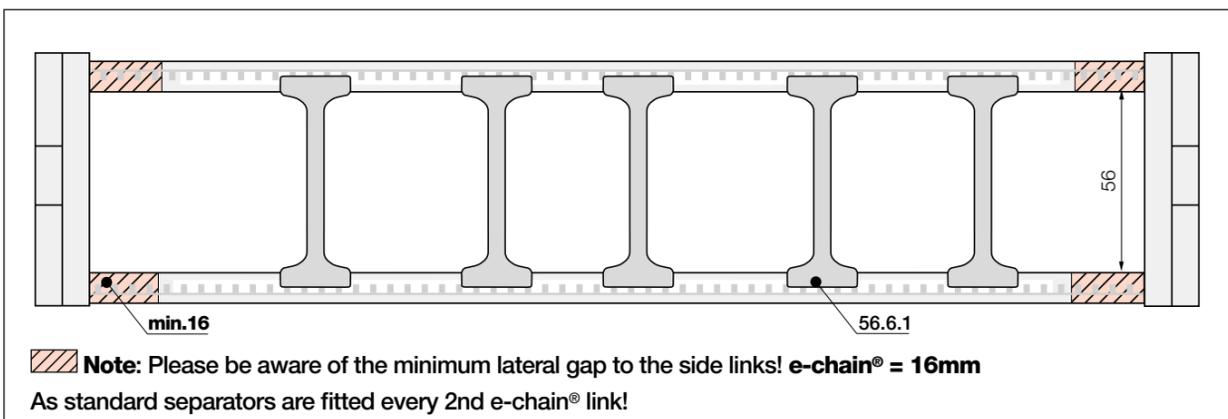
**Locks securely in preset increments**

Notch separator for exact positioning. Recommended for side-mounted applications.

**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	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



### 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.

### Here is a tip from the chainflex® cable world: fail-safe cables

- 1,354 cable types - all tested
- With up to 36 months guarantee
- Calculate service life easily online

More information ► [www.igus.eu/chainflex](http://www.igus.eu/chainflex)

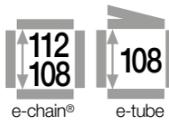


### Reduce assembly time - E4 e-chain® opener

- 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.eu/E4savetime](http://www.igus.eu/E4savetime)



The igus® YE system is ideal for construction machines and work platforms - no screws, rivets or bolts that can come loose under vibration



**e-chains®** YEHD.112 | **Crossbars every link** (Crossbars removable along the inner and outer radius)  
**e-chains®** YEHD.108 | **Crossbars every link** (Reinforced, screw-secured crossbars for extreme loads)  
**e-tubes** YRHD.108 | **Fully enclosed** (Lids openable along the outer radius from one side)

Part No.	Part No.	Bi	Ba	YEHD.112	YRHD.108	Part No.	Part No.	Bi	Ba	YEHD.112	YRHD.108
e-chains®	e-tubes	[mm]	[mm]	[kg/m]	[kg/m]	e-chains®	e-tubes	[mm]	[mm]	[kg/m]	[kg/m]
YEHD.112.20.R.0	YRHD.108.20.R.0	200	248	≈ 21.724	≈ 23.492	YEHD.108.387.R.0*	-	387	435	≈ 23.265	-
YEHD.112.207.R.0	-	207	255	≈ 21.780	-	YEHD.112.40.R.0	YRHD.108.40.R.0	400	448	≈ 22.737	≈ 26.190
YEHD.112.21.R.0	-	212	260	≈ 21.797	-	YEHD.112.41.R.0	-	412	460	≈ 22.795	-
YEHD.112.22.R.0	-	225	273	≈ 21.858	-	YEHD.112.42.R.0	-	425	473	≈ 22.858	-
YEHD.112.23.R.0	-	237	285	≈ 21.914	-	YEHD.112.43.R.0	-	437	485	≈ 22.916	-
YEHD.112.25.R.0	YRHD.108.25.R.0	250	298	≈ 21.976	≈ 24.165	YEHD.112.45.R.0	-	450	498	≈ 22.979	-
YEHD.112.26.R.0	-	262	310	≈ 22.032	-	YEHD.112.46.R.0	-	462	510	≈ 23.037	-
YEHD.112.27.R.0	-	275	323	≈ 22.093	-	YEHD.112.47.R.0	-	475	523	≈ 23.100	-
YEHD.112.28.R.0	-	287	335	≈ 22.150	-	YEHD.112.48.R.0	-	487	535	≈ 23.159	-
YEHD.112.30.R.0	YRHD.108.30.R.0	300	348	≈ 22.211	≈ 24.838	YEHD.112.50.R.0	YRHD.108.50.R.0	500	548	≈ 23.222	≈ 27.394
YEHD.112.31.R.0	-	312	360	≈ 22.267	-	YEHD.112.51.R.0	-	512	560	≈ 23.296	-
YEHD.112.32.R.0	-	325	373	≈ 22.328	-	YEHD.112.52.R.0	-	525	573	≈ 23.360	-
YEHD.112.33.R.0	-	337	385	≈ 22.385	-	YEHD.112.53.R.0	-	537	585	≈ 23.418	-
YEHD.112.35.R.0	YRHD.108.35.R.0	350	398	≈ 22.446	≈ 25.505	YEHD.112.55.R.0	-	550	598	≈ 23.482	-
YEHD.112.36.R.0	-	362	410	≈ 22.553	-	YEHD.108.550.R.0*	-	550	598	≈ 24.322	-
YEHD.112.37.R.0	-	375	423	≈ 22.616	-	YEHD.112.60.R.0	-	600	648	≈ 23.726	-
YEHD.112.38.R.0	-	387	435	≈ 22.674	-						

\*YEHD.108 series with reinforced, screw-secured crossbars for extreme loads

Available bend radii

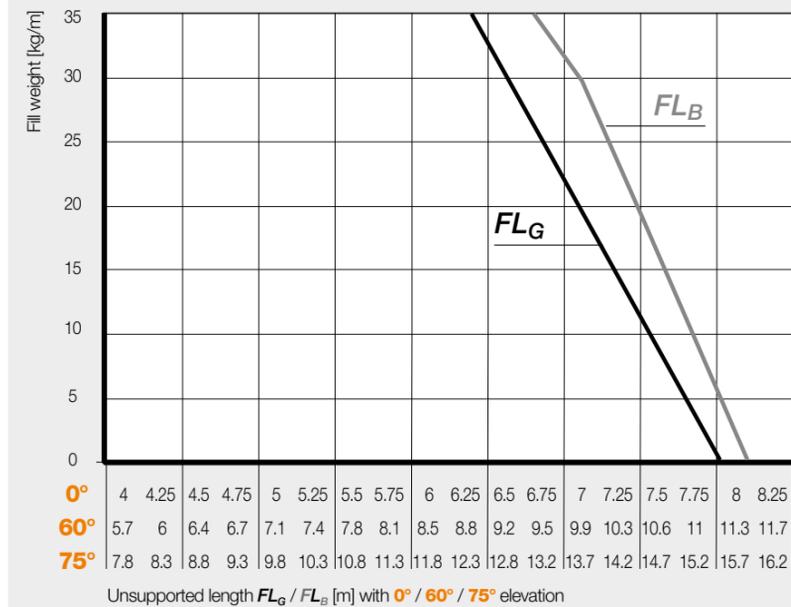
R [mm] | 250 | 400 | 500 | 600 |

Complete Part No. with required radius (R), e.g. YEHD.112.38.250.0

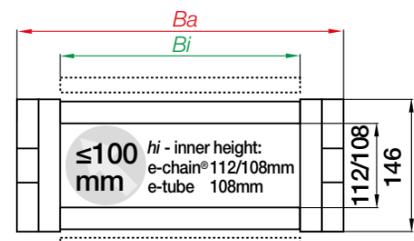
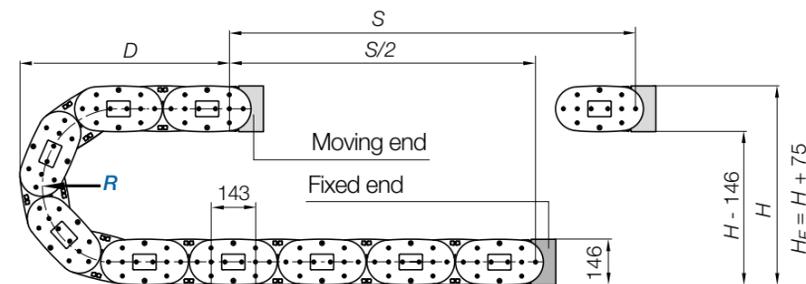
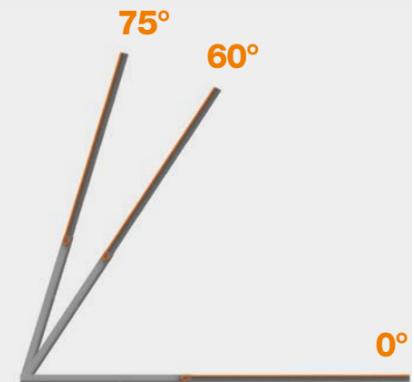
For extreme loads: YEHD.108 series

- With reinforced, screw-secured crossbars
- For extreme loads, e.g. vibrations. e.g. on drilling devices
- Greater inner height available with the same exterior dimensions

More information ► [www.igus.eu/YEHD.108](http://www.igus.eu/YEHD.108)



Unsupported length [m] with 0° / 60° / 75° elevation  
 $FL_G$  = unsupported with straight upper run  
 $FL_B$  = unsupported with permitted sag



R	250	400	500	600
H	720	1,020	1,220	1,420
D	537.5	687.5	787.5	887.5
K	1,071	1,543	1,857	2,171

The required clearance height:  $H_F = H + 75$ mm (with 10kg/m fill weight)

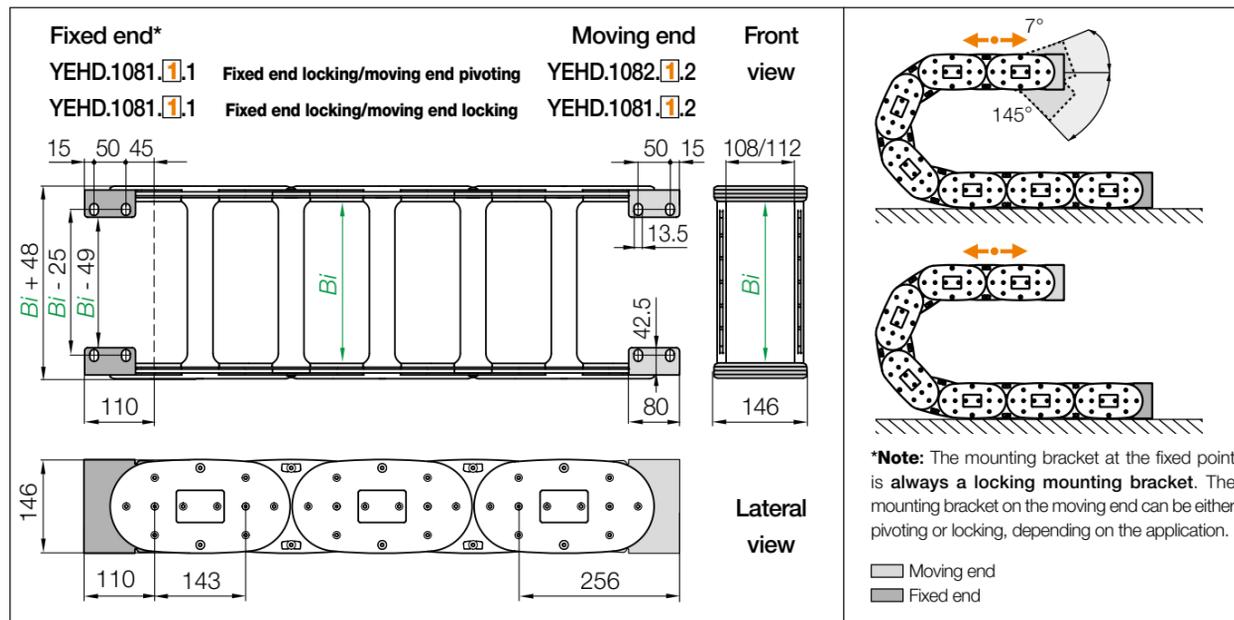
YEHD.112 e-chain® inner height	112
YEHD.108 e-chain® inner height	108
YRHD.108 e-tube inner height	108
Pitch [mm/link]	143
Links/m	7
corresponds to [mm]	1,001
e-chain® length	$L_K = S/2 + K$

Reduce assembly time: YEHD.112 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.eu/E4savetime](http://www.igus.eu/E4savetime)





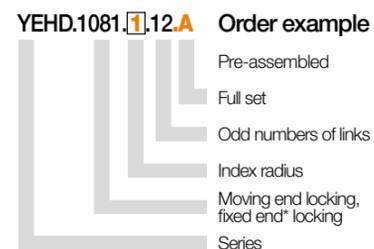
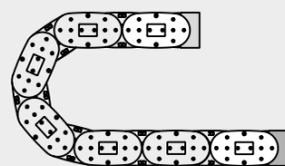
**Pivoting** | Recommended for unsupported applications  
**Locking** | Recommended for standing/vertical hanging applications

Part No. full set for moving end pivoting, fixed end* locking	Part No. full set for moving end locking, fixed end* locking	Description mounting bracket
YEHD.1082.1.12.A	YEHD.1081.1.12.A	Complete fastening set (moving end and fixed end) e-chains® always start and end with outer links, pre-assembled

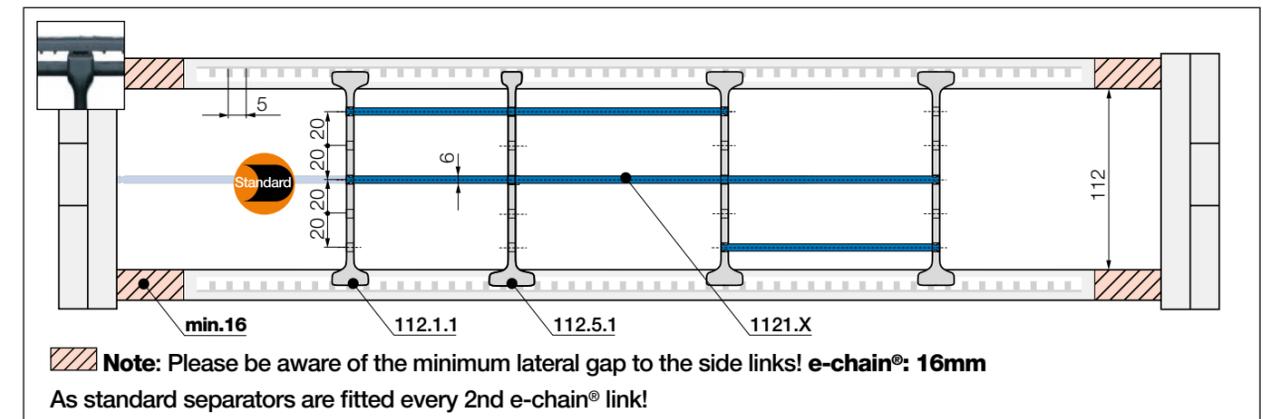
**Steel mounting brackets as individual parts**

Part number mounting bracket only fixed end*, steel fixed version	Part number mounting bracket only moving end, steel fixed version	Part number mounting bracket only moving end, steel pivoting
YEHD.1081.1.1.A	YEHD.1081.1.2.A	YEHD.1082.1.2.A

**Note:** The YE plastic-steel hybrid e-chains® always end with outer links (odd number of links, index 1). The mounting brackets at the moving end and fixed end always form the end of the e-chain® and are inner links.



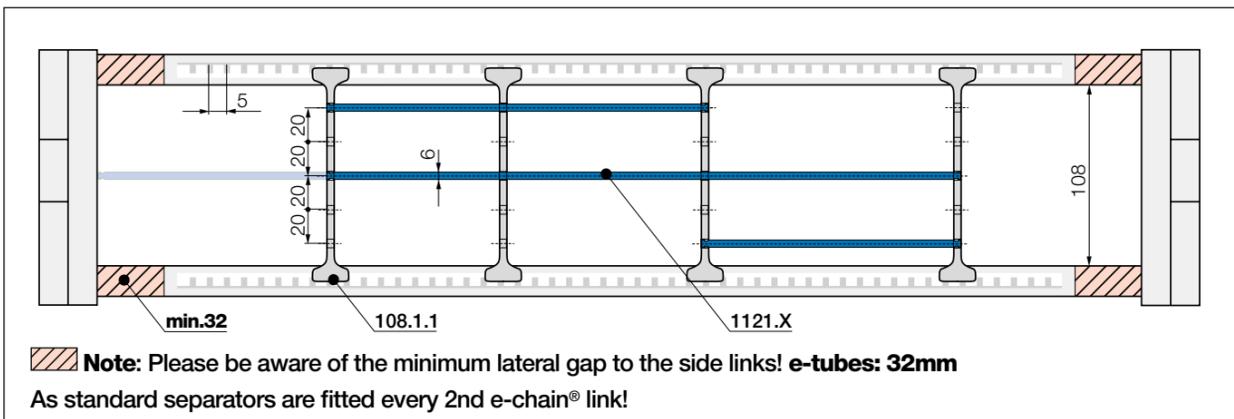
**Strain relief**, e.g. clamps, tiwrap plates, nuggets and clips are available from stock. Complete chainfix range with ordering options ► [www.igus.eu/chainfix](http://www.igus.eu/chainfix)



<b>Standard separator, wide base</b>	20 5.5 20	unassembled 112.1 assembled 112.1.1	<b>Standard - for any application</b> Separator with a wide base for maximum holding force.
<b>Notch separator for notched crossbar</b>	12 5.5 24	unassembled 112.5 assembled 112.5.1	
<b>Shelf, lockable</b>	X-1	unassembled 1120.X assembled 1121.X	<b>Locks securely in preset increments</b> Notch separator for exact positioning. Recommended for side-mounted applications.
			<b>Horizontal separation</b> Full-width shelf locks securely into separators at both ends, giving a fixed width. Can be used as full-width or partial shelf.



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



**Standard separator, wide base**

unassembled	108.1
assembled	108.1.1

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

**Shelf, lockable**

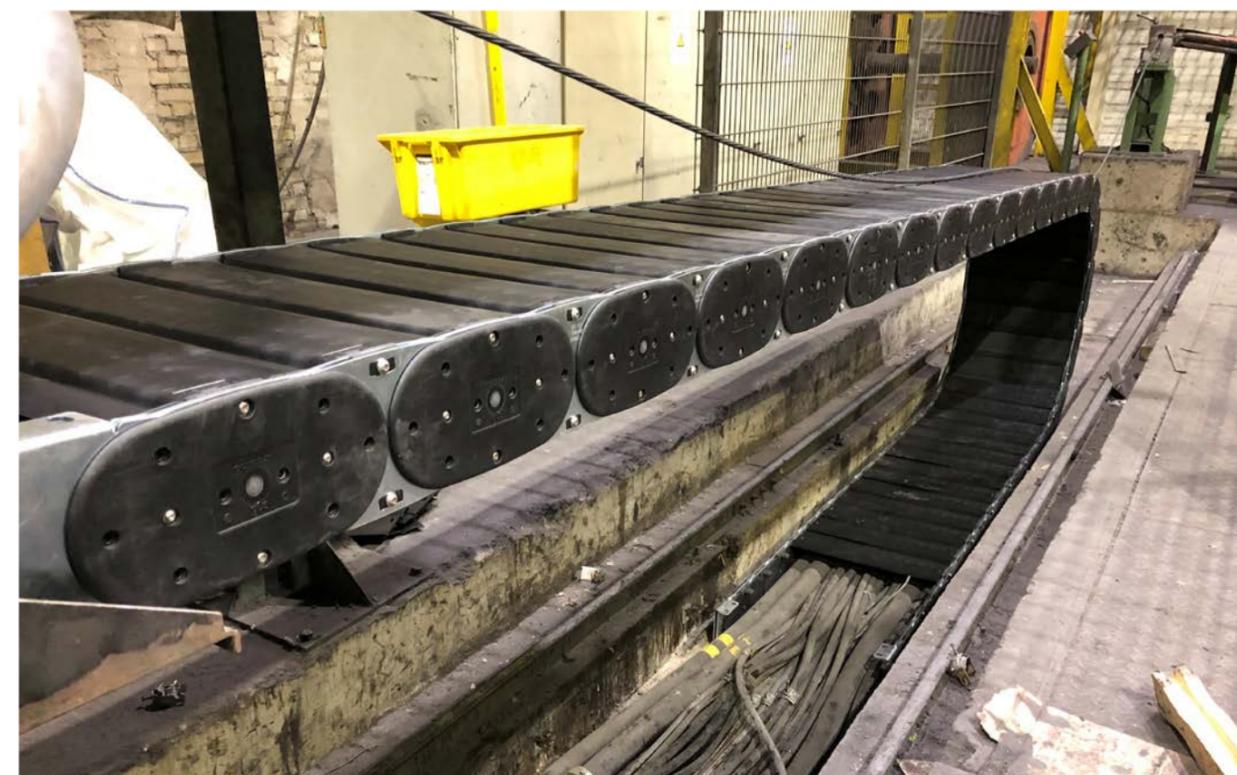
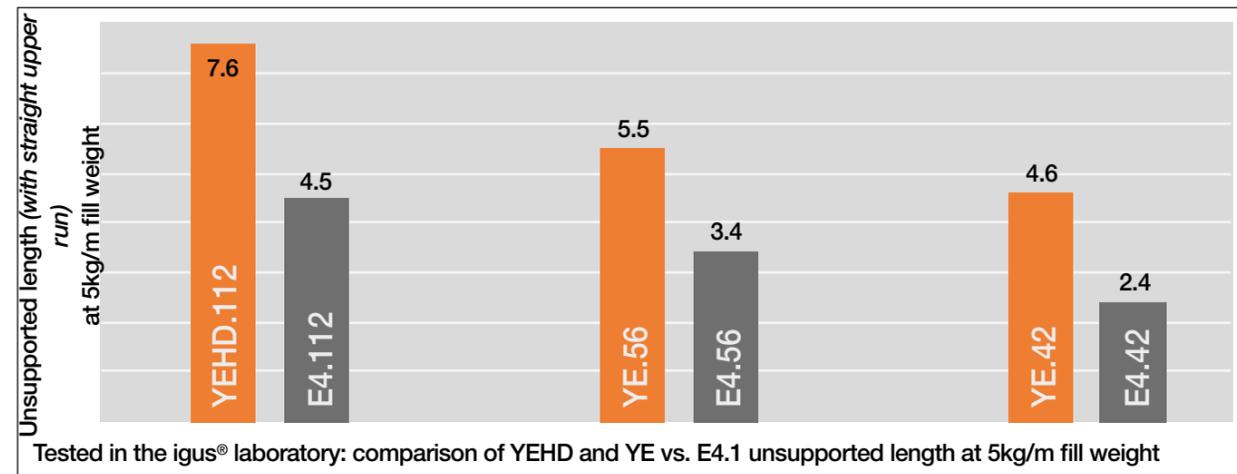
unassembled	1120.X
assembled	1121.X

**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



Ideal for large unsupported lengths, deep drilling rigs, horizontal drilling rigs, steel mills