

## Comparison sheet – igus E4.42, E4.48L and 3500



**igus E4.42**



**igus E4.48L**



**igus 3500**

Technical data	igus E4.42	igus E4.48L	igus 3500
Inner height	42mm	48mm	45mm
Outer height	64mm	64mm	64mm
Pitch	67mm	67mm	67mm
Weight per meter (150mm width)	2,46kg	1,97kg	2,17kg
Max. additional load for 1 m (according to catalogue)	37,5kg	26kg	12,5kg
Max. speed FL <sub>G</sub>	20 m/s	20 m/s	20 m/s
Max. acc. FL <sub>G</sub>	200 m/s <sup>2</sup>	200 m/s <sup>2</sup>	200 m/s <sup>2</sup>

### Optical comparison

The three e-chains all appear different with various assets. The igus e-chains are all made out of plastic.

The igus E4.1 and E4.1 light e-chains can be opened from both sides, the igus 3500 can only be opened at the outer radius. To open an igus chain only a screwdriver is needed and the e-chain link consists out of two (3500) or 4 (E4.1) pieces. The 3500 series can be opened with an opening tool.

The interior of all three igus e-chains is very smooth and cable friendly.

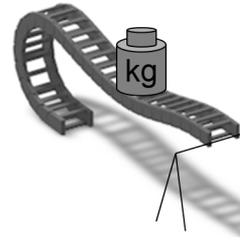
All e-chain have a two stop dog system.

It can be seen that the side parts of the three different types are different in their widths. The E4.42 has the thickest side parts, whereas the 3500 and the E4.48L have smaller side parts.

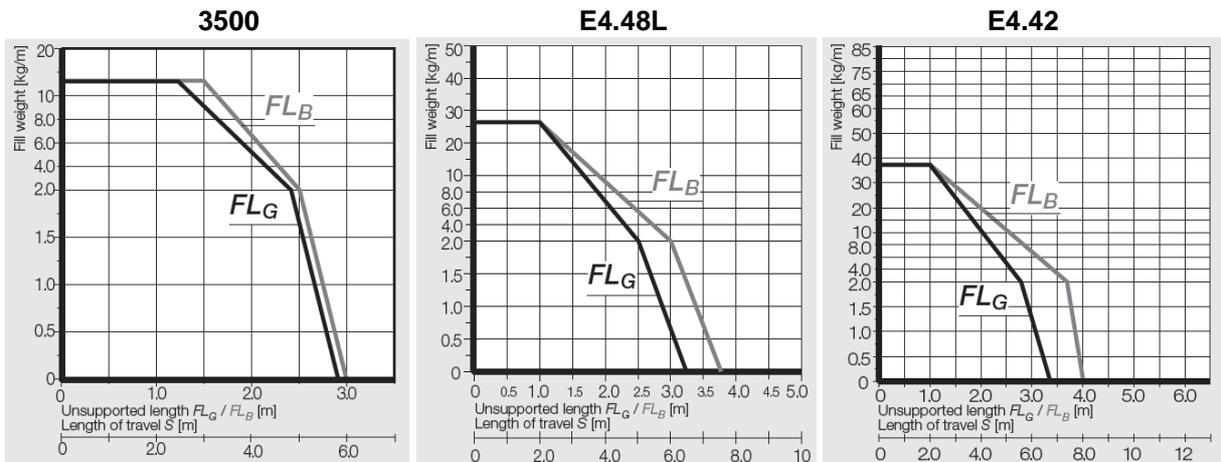
The outer height of the e-chain is for all three the same: 64mm. The outer dimensions of the E4.48L and the 3500 are the same in height and width.

**Comparison of unsupported travel length**

**Construction:** The three energy chains hang unsupported over a length of 2,5 m with an additional load of 6 kg/m.



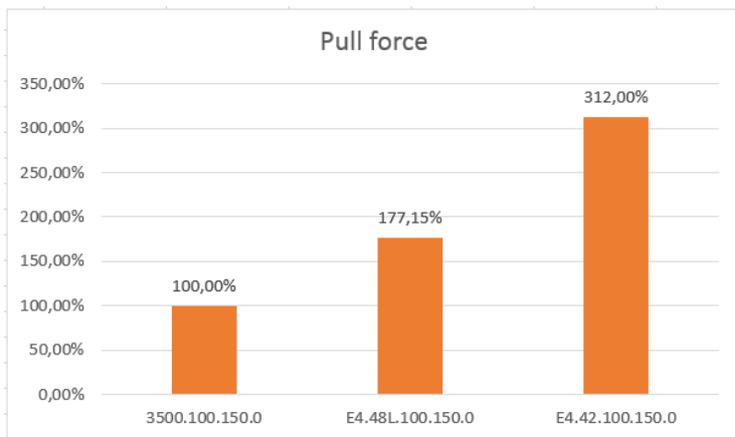
**Result:** The FL graphs were confirmed.



**Pull test**

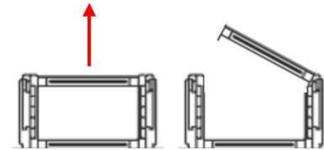
**Construction:** The energy chains are fixed in the “Zwick” test-machine, which pulls both ends until the links are torn apart.

**Result:**

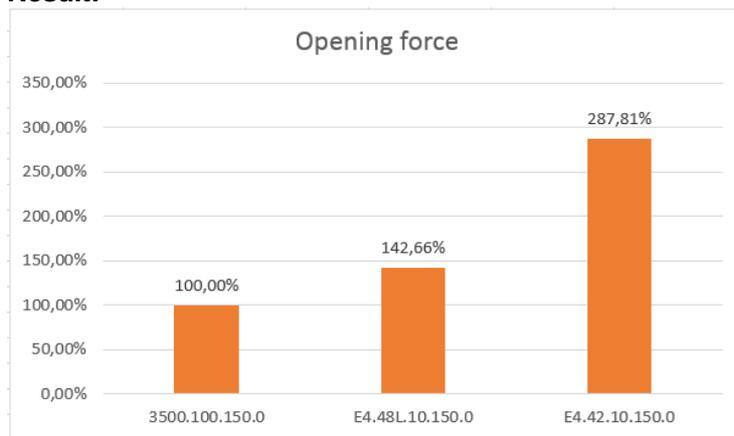


## Opening resistance of the crossbars

**Setup:** during this test, a chain link is fixed in the 'Zwick' test machine and then pulled at the opening crossbar with ever increasing force until this opens or breaks.



### **Result:**



\*The 3500 has been on the market for more than 15 years and there has never been any problems regarding crossbar opening.

## Conclusion

As expected is the E4.1 light e-chain with its strength between the E4.1 and the E2/000. This comparison shows it with the E4.48L size.

	<b>igus E4.42</b>	<b>igus E4.48L</b>	<b>igus 3500</b>
<b>Pull test</b>	288%	177%	100%
<b>Opening resistance of the crossbars</b>	312%	143%	100%