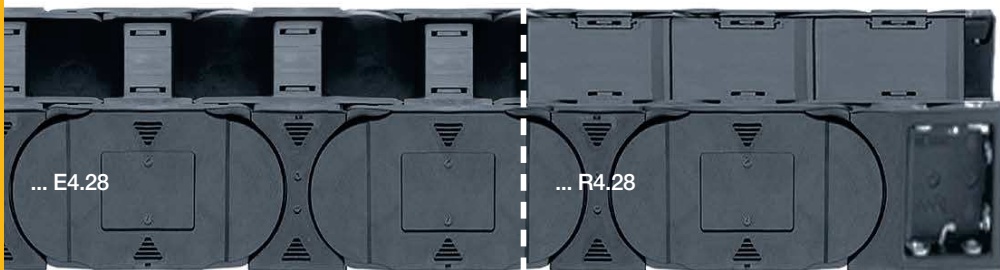
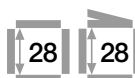


Strong due to undercut design, small inner height



e-chains® | Series E4.28 | Crossbars every link (crossbars removable along the inner and outer radius)
e-tubes | Series R4.28 | Fully enclosed (lids openable along the outer radius, from one side)

Part No.	Bi	Ba	E4.28	R4.28	Part No.	Bi	Ba	E4.28	R4.28
e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]	e-chains® / e-tubes	[mm]	[mm]	[kg/m]	[kg/m]
E4.▲ - 28.040.R.0	40	60	≈ 1.06	-	E4.▲ R4. 28.125.R.0	125	145	≈ 1.51	≈ 2.78
E4.▲ R4. 28.050.R.0	50	70	≈ 1.11	≈ 2.20	E4. R4. 28.150.R.0	150	170	≈ 1.61	≈ 3.02
E4. - 28.052.R.0	52	72	≈ 1.13	-	E4. R4. 28.175.R.0	175	195	≈ 1.71	≈ 3.26
E4.▲ - 28.062.R.0	62	82	≈ 1.17	-	E4. R4. 28.200.R.0	200	220	≈ 1.84	≈ 3.50
E4.▲ - 28.070.R.0	70	90	≈ 1.20	-	E4. R4. 28.225.R.0	225	245	≈ 1.99	≈ 3.82
E4.▲ R4. 28.075.R.0	75	95	≈ 1.23	≈ 2.32	E4. R4. 28.250.R.0	250	270	≈ 2.14	≈ 3.98
E4.▲ - 28.087.R.0	87	107	≈ 1.28	-	E4. - 28.275.R.0	275	295	≈ 2.27	-
E4.▲ R4. 28.100.R.0	100	120	≈ 1.37	≈ 2.54	E4. R4. 28.300.R.0	300	320	≈ 2.39	≈ 4.46

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

*Radius not available for e-tubes

Available bend radii

R [mm] | 055* | 063* | 075 | 100 | 125 | 150 | 175 | 200 | 250 |

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

E4.28.100.100.0 = crossbars every link / R4.28.105.100.0 = fully enclosed

ESD - many sizes from stock

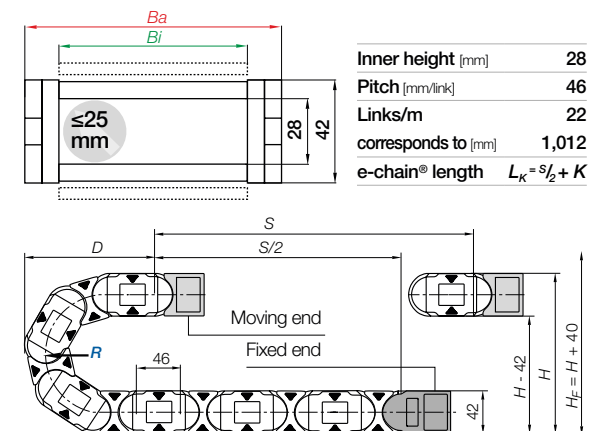
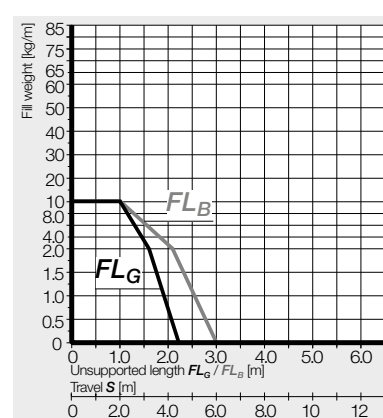
- Standardised product made from igumid ESD
- ESD material tested for over 10 million cycles for the toughest requirements
- Short delivery times including mounting brackets and interior separation; 24hrs, from stock

More information and the complete product range

▶ From page 142 or at ▶ www.igus.co.uk/esd



Unsupported applications | Short travels

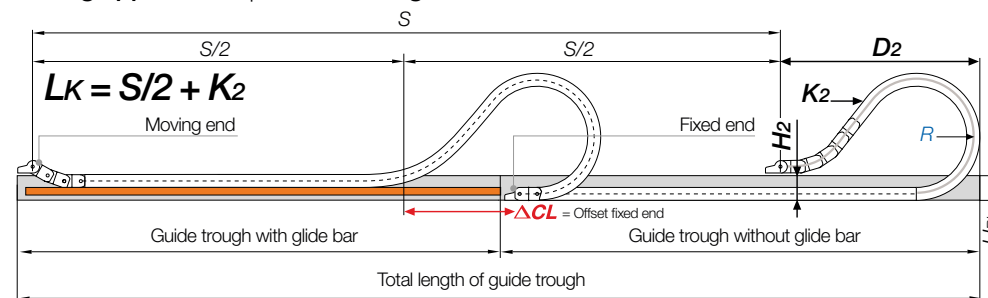


R	055*	063*	075	100	125	150	175	200	250
H	152	168	192	242	292	342	392	442	542
D	145	153	165	190	215	240	265	290	340
K	265	290	330	410	485	565	645	725	880

The required clearance height: $H_F = H + 40\text{mm}$ (with 1.0kg/m fill weight)

*Radius not available for e-tubes

Gliding applications | For travel lengths from 10m to max. 200m

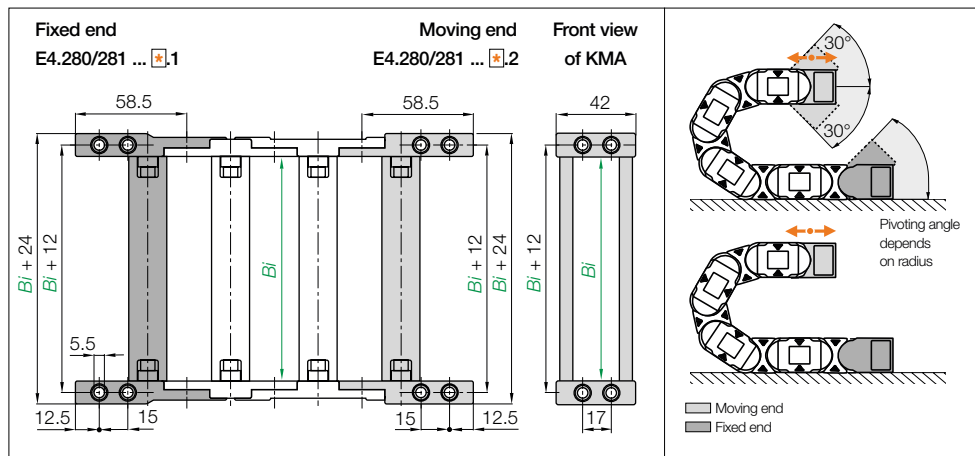


Note: We recommend the project planning of such a system to be carried out by igus®.

In case of travels between 5 and 10m we recommend an e-chain® with a longer unsupported length.

R	055*	063*	075	100	125	150	175	200	250
H ₂	110	126	150	158	158	158	158	158	158
D ₂ *25	122	130	142	350	490	530	665	730	935
K ₂	265	290	330	598	782	920	1,104	1,242	1,610
ΔCL	-	-	-	150	270	300	400	450	600

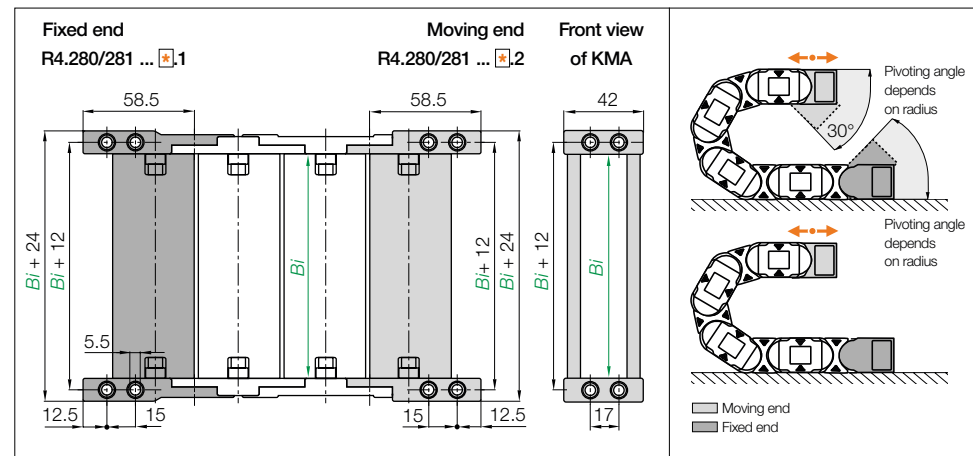
*Radius not available for e-tubes



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

Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]	Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]
040.	E4.280.040.12	E4.281.040.12	40	125.	E4.280.125.12	E4.281.125.12	125
050.	E4.280.050.12	E4.281.050.12	50	150.	E4.280.150.12	E4.281.150.12	150
052.	E4.280.052.12	E4.281.052.12	52	175.	E4.280.175.12	E4.281.175.12	175
062.	E4.280.062.12	E4.281.062.12	62	200.	E4.280.200.12	E4.281.200.12	200
070.	E4.280.070.12	E4.281.070.12	70	225.	E4.280.225.12	E4.281.225.12	225
075.	E4.280.075.12	E4.281.075.12	75	250.	E4.280.250.12	E4.281.250.12	250
087.	E4.280.087.12	E4.281.087.12	87	275.	E4.280.275.12	E4.281.275.12	275
100.	E4.280.100.12	E4.281.100.12	100	300.	E4.280.300.12	E4.281.300.12	300

(KMA = polymer metal mounting bracket)

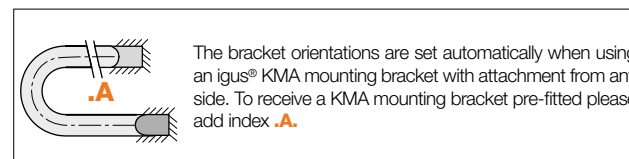
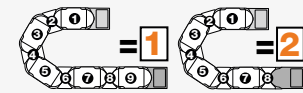


KMA pivoting | Recommended for unsupported and gliding applications
KMA locking | Recommended for vertical hanging and standing applications

Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]	Width index	Part No. full set KMA pivoting	Part No. full set KMA locking	Bi [mm]
050.	R4.280.050.12	R4.281.050.12	50	175.	R4.280.175.12	R4.281.175.12	175
075.	R4.280.075.12	R4.281.075.12	75	200.	R4.280.200.12	R4.281.200.12	200
100.	R4.280.100.12	R4.281.100.12	100	225.	R4.280.225.12	R4.281.225.12	225
125.	R4.280.125.12	R4.281.125.12	125	250.	R4.280.250.12	R4.281.250.12	250
150.	R4.280.150.12	R4.281.150.12	150	300.	R4.280.300.12	R4.281.300.12	300

(KMA = polymer metal mounting bracket)

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.

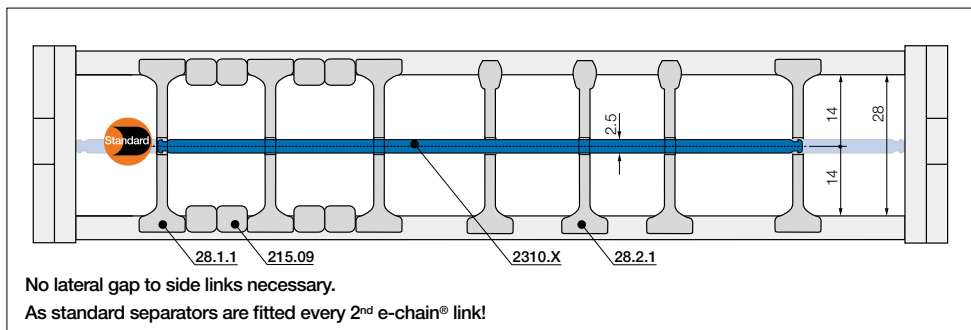


E4.280.100.2.12.A Order example



Strain relief e.g. clamps, tiewrap 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/E4.28



Standard separator, wide base

unassembled	28.1
assembled	28.1.1

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

Separator, narrow top

unassembled	28.2
assembled	28.2.1

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

Spacer for e-chains®

unassembled	205.09
assembled	215.09

Spacer
Separators can be fixed in position using spacers. The available interior height is reduced by 2mm per spacer (4mm when spacers are fitted on both sides). To avoid this, the parts can also be installed on the outside of the opening crossbar.

Shelf, lockable

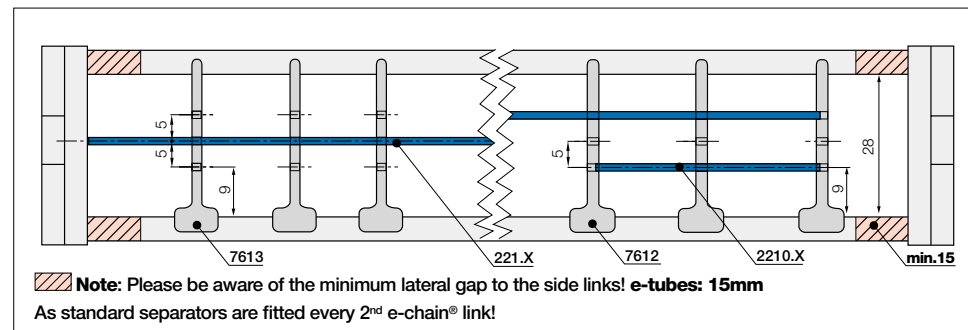
unassembled	2300.X
assembled	2310.X

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
015	2300.015	2310.015	060	2300.060	087	2300.087
025	2300.025	2310.025	062	2300.062	090	2300.090
030	2300.030	2310.030	065	2300.065	100	2300.100
038	2300.038	2310.038	070	2300.070	103	2300.103
040	2300.040	2310.040	075	2300.075	110	2300.110
050	2300.050	2310.050	077	2300.077	120	2300.120
057	2300.057	2310.057	080	2300.080	125	2300.125

Separator with integrated strain relief teeth

- Can be integrated into the mounting bracket or placed at any point
 - Combines strain relief and interior separation, for restricted space conditions
 - Strain relief separator is easy to assemble without any screws
- Part No. 28.Z (e-chain®) / Part No. 28.ZT (e-tube) - more information ► From page 1424



Slotted separator

unassembled	7603
assembled	7613

Option 1 | Full-width shelves Slotted separator

For a vertical subdivision. The slot allows basic vertical/horizontal shelving arrangements.

Full-width shelf for e-tubes

unassembled	220.X
assembled	221.X

Full-width shelf
This option is for applications with many small cables with similar diameters. For full-width separation.

Full-width shelves Width = X [mm]	X [mm]		X [mm]		X [mm]		X [mm]	
	unassembled	assembled	unassembled	assembled	unassembled	assembled	unassembled	assembled
040	220.40	221.40	075	220.75	221.75	150	220.150	221.150
050	220.50	221.50	087	220.87	221.87	175	220.175	221.175
062	220.62	221.62	100	220.100	221.100	200	220.200	221.200
070	220.70	221.70	125	220.125	221.125			

Slotted separator

unassembled	7602
assembled	7612

Option 2 | Shelves Slotted separator

Allows modular shelving arrangements.

Shelf for e-tubes

unassembled	2200.X
assembled	2210.X

Shelf
For applications involving many cables with different diameters, shelves can be fitted at different heights.

Shelves Width = X [mm]	X [mm]		X [mm]		X [mm]		X [mm]	
	unassembled	assembled	unassembled	assembled	unassembled	assembled	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.088
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.099
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			

Aluminium support tray

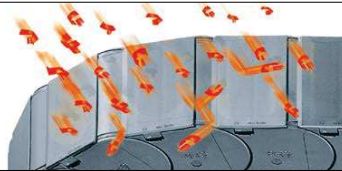
- Corrosion-resistant and seawater-resistant aluminium rails with adjustable width
- Noise-reducing glide strip integrated as standard
- Easy installation and connection of the e-tube
- Open design - dirt and debris fall through

More information ► [From page 1362](#)

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

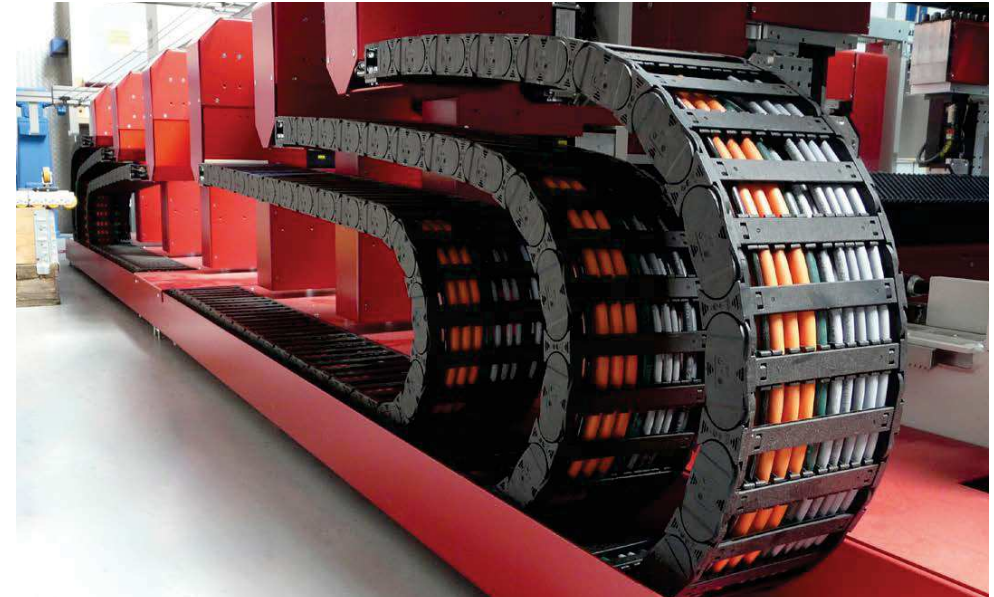
- Lids and shelves can repel swarf up to +850°C. Special production option with the igus® material igumid HT
- No hot swarf melting or embedding into the chain

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



E4.1 e-chains®, supplied as readychains®, reliably supply power and data to different axes of this machine tool